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THE CANADIAN LUMBERMAN



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PETERBOROUGH, ONT., MAY 1, 1884.

NO. 9.

LUMBER DOWN IN MAINE.

This winter's cut of lumber in Maine was very small in indeed. The few logs cut were secured at great expense, which will be increased before they reach the booms by the cost of driving, which may also be unusually difficult, not on account of lack of water, as in many years, but because of an overplus. On the Penobscot not over 85,000,000 or 90,000,000 feet will be put into the water this spring. This amount added to the old logs on hand will bring the total available stock of lumber at Bangor this year up to 125,000,000 feet, or 65,000,000 feet less than 1883. Many former years have seen a cut of 200,000,000 feet or more on the Penobscot, and less than a hundred million makes the old lumberman sigh and speak regretfully of the "palmy days" gone by.

The principal cause of the falling off of the late years in lumber operations is that, while it costs as much now as ever it did to conduct that work, lumber has been falling in price steadily for some years, and the margin of profit is exceedingly small. Another reason is that new sources of supply are being developed. As regards this particular season, the meteorological conditions were not favorable, there being no snow at all in the first of the season, and too much in the latter part. The teams which went in to save, if possible, some of the timber blown down in the cyclone last fall, came out immediately, reporting that none of the lumber could be reclaimed, as it was found inextricably entangled, trees heaped up for miles like rows of fallen bricks, just as the storm had left them. It would be difficult to estimate the loss caused to the lumber interests of Maine by that gale, but it must have been \$250,000.

Lumbermen have to go further for the logs every year, and the axe is making such fearful inroads on the lands near water courses as to cause apprehension among thinking men for the future, when, if things go on as at present, we shall have here on the Penobscot plenty of floods, but no trees.

THE LEAVES OF A TREE.

In a recent lecture Prof. Beal talked about leaves. Among other good things he said: As is well known, a tree cannot grow without leaves. These are put forth every year, and are a contrivance for vastly increasing the surface. An oak tree of good size exposes several acres of surface to the air during the growing season. It has been estimated that the Washington elm at Cambridge, Mass., not a very large tree, exposes about 5 acres of foliage, if we include both sides of the leaves. Leaves are more nearly comparable to stomachs than to lungs. A leaf is a laboratory for assimilating or manufacturing materials into plant fabric. The cellular structure of the leaves, wood and bark

of a tree is a complicated subject to treat in the popular way. It requires a vast surface of leaves to do a little work. By counting the leaves on a scolding oak, and estimating the surface on both sides of each, we can see how many inches are needed to build up the roots and stem for the first year. After the first year the old stem of the oak bears no leaves. It is dependent on the leaves of the branches, or its children for support. A tree is a sort of community, each part having its own duties to perform. The root hairs take up most of the nourishment. The young roots take this to the larger ones, and they in turn, like the branches of a river, pour the flood of crude sap into the trunk, which conveys it to the leaves. The assimilated or digested sap passes from the leaves to all growing parts of the plant, and a deposit is made where most needed. If a branch is much exposed to the winds, the base of it has a certain support or certain amount of nourishment. So with the trunk of a tree. If the base of a branch of the main trunk is much exposed to the winds and storms, a much thicker deposit of food is made there. The winds give a tree exercise, which seems good to help make it strong. Our toughest wood comes from trees growing in exposed places. The limbs of a tree are all the time striving with each other to see which shall have the most room and the most sunshine. While some perish in the attempt, or meet with only very indifferent success, the strongest of the strong buds survive.—*Lumberman's Gazette.*

THE LARGER PART.

Under this title the *Northwestern Lumberman* speaks as follows:—

The greater bulk of the lumber business is apt to be overlooked by the men who consider it from the white pine standpoint. Michigan, Wisconsin and Minnesota are emphatically lumber producing states, and these, in connection with the lumber regions of Pennsylvania and Maine, are erroneously thought by many to include about all there is of the lumber business. When a man has been looking at a mill that turns out 200,000 feet of lumber a day, a small one on some cross roads that cuts 15,000 to 20,000 feet cuts no figure in his estimation. When a person visits the leading lumber producing points in the Northwest and finds from a half dozen to a score, or more, of these large mills at every point, turning out daily enough lumber to build a small city, he is not in a condition to sit down and think seriously of the thousands of small mills scattered through the country. Take for instance the mills of Ohio, New York and Indiana, they outrank in lumber the mills of Michigan, Wisconsin and Minnesota, two to one, yet the first named states are never spoken of as lumber producing states. North Carolina has twice as many mills as Wisconsin, and four times as many as Min-

nesota. Kentucky has more than Wisconsin, and Illinois more than Minnesota. The Virginians, in the number of their mills, are ahead of Michigan, and have a mill and a half where the other two northwestern states have but one. Pennsylvania has nearly as many mills as the entire lumber district of the Northwest, yet but few of them turn out pine lumber.

Not to exceed one-third of the product of the mills of the United States is white pine lumber the remaining two-thirds being what is classed in this market as hardwood. Notwithstanding this fact we hear the question asked every day, What would the country do if we had no white pine? It would be in a sorrowful plight indeed, particularly if the supply were cut off at once; still a more pertinent question, and one that has a broader significance, is, What would the country do if it had no hardwood? It would be worse off than without pine, from the simple fact that where one foot of white pine lumber is used there are two feet of hardwood, and that while several kinds of hardwood would take the place of pine if necessary, pine for a thousand and one uses could not supplant hardwood. Houses constructed wholly of hardwood are not uncommon in several sections of the country, and might be built anywhere, but wagons, barrels, handles, and hundreds of other articles that might be named, if made of pine, would be worthless.

It is astonishing after seeing the fights between the bulls and bears in the Chicago market, and the hot competition between white pine dealers in other markets, to note the absence of fuss and feathers in the handling of the immense amount of lumber that represents two-thirds of the entire output. There are but few large hardwood markets in the whole country. Throw out less than half a dozen and there are none left. In these markets there are no hurly burly, break-your-neck business; no public high kicking matinees on the part of manufacturers to see who can elevate prices highest, and no caucuses held by dealers for the purpose of breaking values. Everything moves on in the even tenor of its way. The lumber is usually received and shipped in small quantities. In Chicago, the largest hardwood market in the world, a cargo of about 200,000 feet is about all that any man wants at his yard in a week. If a dealer get out of stock he quietly slides down into Indiana, Tennessee, Missouri, or some other state and picks up what he wants. One mill can stock a Chicago pine yard for a whole season, but the man who runs a hardwood yard must draw from hundreds of mills. There are hardwood yards in this city, the lumber in which came from as many as half of the states in the Union aside from some of the territories.

The methods of distributing hardwood are unlike those of pine. The handler of the latter ordinarily deals either with the retail dealer, or

contractor and builder. The hardwood dealer sells in every direction. His customers are builders, furniture manufacturers, agricultural implement and wagon makers, ship builders and a host of others. The pine dealer sells in large lots, and often on the track in his yard may be seen a whole train being loaded at once. The hardwood man can do business in no such way. A big wagon load is a good sale. The manufacturing establishment draw on him as they require a little stock to piece out. A car load is more than one in a dozen of the hardwood men sells at once, in a week.

In the matter of long shipments the hardwood men take the lead. It is not a rare occurrence for hardwood lumber to be shipped from this city to California. A representative of this journal recently saw a pile of walnut in a west side yard that will soon be on the way to Utah, the owner of which will pay \$70 per thousand feet for freight charges. A tow hundred miles is the maximum distance that supplies for the pine yards of Chicago are brought, while supplies for the hardwood yards are not unfrequently brought a thousand miles.

It is because the hardwood business is widely and generally diffused that it attracts so little attention and makes so little show. Hardwood lumber is needed in every hamlet and city in the country. Brick and stone may crowd out pine, but every wood working shop makes its complement of hardwood. The farmer who goes to town for building material may be induced to buy poplar, hemlock, spruce or yellow pine instead of white pine, but if he wants a new wagon pole, or a new beam, the hardwood pile is the only resort.

The proportion that the white pine output now bears to that of hardwoods will gradually decrease, for hardwood lumber is being used in building more and more every year, particularly in the older sections of the country, and the production of yellow pine lumber will increase rapidly.

Falling off in Lumber Production.

Advices from Maine and New Brunswick indicate that the yield of lumber in these districts this year will be very much less than that of last year. This year the cut compared with last year, has fallen off as follows: In the St. Croix River district, 20,000,000 feet; Penobscot river and branches, 65,000,000 feet; Arrows-took and Upper St. John, north shore of New Brunswick and Bay of Fundy shores, 183,000,000; in all a reduction of 268,000,000. Last year, owing to the dry season, a large portion of the lumber cut was not floated, but although this will be utilized this year it will not be sufficient to make up the deficiency.

EDDY BROS. have 4,000,000 feet of logs banked on the south branch of Pine river, and have not yet taken out a log.

GLANDERS.

During the recent session of the Ontario Legislature "An Act to prevent the spread of Contagious Diseases among horses and other domestic animals" was passed, and as its provisions are such that any one owning a horse should be acquainted with, we deem it advisable to place it before our readers entire.

1. In this Act—

"Disease," means glanders or farcy;

"Diseased," means affected with disease;

"Justice," means justice of the peace;

"Court of Summary Jurisdiction," means two or more justices sitting at a court or other public place appointed in that behalf, or a police, stipendiary, or other magistrate or officer however designated, having by law power to act for any purpose with the authority of two justices, and sitting at a police court or other place appointed on that behalf;

"Veterinarian," means a veterinary surgeon, duly registered by the Ontario Veterinary Association;

"Place," means and includes any public highway, street, road, lane, alley, way, or other communication, as well as any public place or square.

2. (1) Where it appears to any person that any horse or other animal is diseased, such person may notify any justice having jurisdiction in the municipality; and the justice, if in his opinion there is reasonable cause therefor, shall forthwith by writing under his hand, direct, a competent veterinarian to inspect the animal alleged to be diseased.

(2) The veterinarian on receiving such direction, shall with all practicable speed make an inspection, and report his opinion in writing to the justice.

3. Where it appears to a veterinarian that any horse or other animal is diseased, he shall forthwith notify the owner or other person in charge of the animal, and shall also give notice to a justice having jurisdiction as aforesaid.

4. All notices under this Act shall be in writing or print, or partly in writing and partly in print, and any notice given to a justice shall contain the name and residence of the owner of the animal or other person in charge thereof where the same are known.

5. (1) After the owner or other person in charge has received notice from a veterinarian that any animal is diseased it shall be unlawful to turn out, drive or lead, or to cause such animal to be turned out, driven or led through any place where it may be brought into contact with or be in danger of transmitting disease to other animals, until it has been determined by the Court of Summary Jurisdiction, as hereafter provided, that the animal to which the notice relates is free from disease.

(2) The justice upon receiving the report of a veterinarian that an animal is diseased may at once issue his order to a constable, directing him to seize and detain such animal, and cause the same to be kept in some place where it will not be brought in contact with, or be in danger of transmitting the disease to other animals, until the case has been determined by the court.

6. The justice, on receiving from any veterinarian a notice or report stating that any animal is or appears to be diseased, shall forthwith issue a summons, directed to the owner or other person in charge of the animal, requiring him to appear before a court of summary jurisdiction, at a time and place to be specified, in such summons, to show cause why the said animal should not be destroyed.

7. The proceedings on such notice and summons shall be regulated by the Act respecting summary convictions before Justices of the Peace, which shall apply to cases under this Act.

8. (1) In case it appears to the court of summary jurisdiction, by the evidence of one or more competent veterinarians, that the animal in respect of which the summons was issued is diseased, the Court shall make an order for the killing and burying or burning of the animal (described the same according to the tenor of the description given in the notice or report, and in the evidence) within twenty-four hours, and in default thereof may impose a fine not exceeding \$100, and a further sum of \$50 for every twelve hours thereafter until the same is killed and buried or burned; and all penalties

imposed under this section shall be applied to the use of the municipality.

(2) The Court may in any case require further evidence as to the disease, and may for that purpose appoint one or more veterinarians to report to them, and they may thereafter, with or without any further hearing, make such order as may seem just.

9. (1) Every person, having in his possession or under his charge any animal which is or appears to be diseased, but respecting which no notice has been given as aforesaid, shall, as far as practicable, keep such animal separate from other animals not so diseased and shall with all practicable speed give notice to a veterinarian of the existence or supposed existence of the disease.

(2) Any veterinarian shall, on receipt of such notice, with all practicable speed, inspect the said animal, and if the disease appears to exist shall notify the person in possession or charge of the animal, and a justice, as directed in other cases.

10. No owner, or other person in charge, thereof, shall turn out, lead or drive any horse or other animal, knowing such animal to have been kept in the same stable with any diseased animal, or otherwise exposed to contagion or infection, in, upon, or through any place without a license from a veterinarian first had and obtained, or without order from the Court in that behalf.

11. The Court may make an order on the treasurer of the municipality, in favour of any veterinarian acting hereunder, for the payment of such witness fees or other remuneration as may be deemed just, and the treasurer shall pay the sum mentioned in such order to such veterinarian out of such funds he may then have in the municipal treasury; Provided that the said witness fees or other remuneration shall not exceed four dollars each day on which the said veterinarian may be engaged in making any inspection or report, or in attendance at the Court for the purpose of giving evidence under this Act, together with necessary travelling expenses.

12. If any person obstructs or impedes a veterinarian, constable or other officer acting in execution of this Act, he, and every person aiding or assisting him therein, shall be guilty of an offence against this Act, and the veterinarian, constable or other officer, or any person whom he calls to his assistance, may seize the offender and detain him until he can conveniently be taken before a justice to be dealt with according to law.

13. For the purposes of proceeding under this Act, every offence against this Act shall be deemed to have been committed, and every case of complaint under this Act shall be deemed to have arisen, either in the place in which the same actually was committed or arose, or in any place in which the person charged or complained against happens to be.

14. Any person violating any of the provisions herein contained, respecting which no express penalty is provided herein, shall be guilty of an offence under this Act, and shall, on conviction, forfeit and pay a sum not exceeding \$100 for each offence.

LUMBERING IN WASHINGTON TERRITORY.

The only escape from the unbroken forest anywhere west of the mountains is to go out upon the water. As this forest is the main feature of the scenery, so it is the chief factor in local wealth. Yet it was not until 1853 that the first saw mill was built here. It had a daily capacity of from eight to ten thousand feet of lumber. Now the aggregate cutting of the mills is over a million feet every day. The area of these vast woods—counting nothing in passes or east of the Cascades—is nearly as large as the state of Iowa, and is estimated to hold 160,000,000,000 feet of timber, not more than three per cent. of which has been sawed or destroyed during the past twenty-five years.

This great timber tract is so penetrated by the ramifications of Puget Sound (as all these waters south of the Strait of Fuca are popularly termed, though originally the name was applied to only a portion) as to make more than 1,600 miles of coast-line, at almost any point of

which ships may approach very close to the land to be loaded. Through it, also, flow many navigable rivers, whose banks are not too abrupt to prevent easy handling of logs, which are often chuted down from the lofty ridges directly into the water, and rafted far inland at trifling expense.

The principal growths are fir of two kinds, three sorts of spruce, cedar of two species, larch, and hemlock; in addition to which, white oak, maple, cottonwood, ash, alder, etc., occur. The yellow or Douglas fir, a stately tree often 250 feet in height, exceeds in value and quantity all the others combined, the cedar ranking second. Then comes the pine, 120 to 160 feet in height; the silver-fir, 150 feet; white cedar (cypress), 100 feet; and black spruce, 150 feet. Cedars are known of 63 feet girth and 120 feet height.

The best timber flourish somewhat back from the mixed forest of the shore, where the foot-hills begin. In such localities the tall and vertically tapering firs, unsurpassed in all the world for size, length, toughness and durability, are peculiarly fitted for naval construction, equalling the Eastern white oak. Hence this wood is used exclusively for ship-building on the Pacific Coast, and is exported for the same purpose to an increasing extent. This is true not of hull material only, for the largest and finest masts and yards carried by the ships of England, France, Germany, China, South America, and to a growing degree in the Eastern United States come out of these forests. At Port Gamble the visitor is shown the base of the tree that nourished the spars of the Great Eastern; and he is told of the flag-staff, 185 ft in length, and straight as a plummet, which would have been sent to the Boston Peace Jubilee had not a crooked road prevented getting it out in time.

Spars and ship timbers, however, form only a fraction of the business of the mills. The principal demand is for building material of all kinds; and to supply this a vast capital is invested in securing the right to the forest, in cutting the trees, transporting the logs, and sawing the bright, fragrant planks and scantling.

The cutting and hauling out of the logs are usually committed to contractors, who receive about \$6 a thousand feet for logs delivered in navigable waters, the mills always buying logs in preference to encroaching on their own property. A contractor's method is to hire six or eight men, and provide several yoke of oxen. He builds a rude camp in the place chosen for chopping, and beards his crew who are paid from three to five dollars a day, and will produce perhaps \$0,000 feet of logs daily. These are hauled out of the woods by the ox teams, or by windlasses, or (in few localities) by short railways, and are slid into the water of river or sound, where they are made up into rafts, and towed by powerful tug-boats to the mill. The general length of the logs is twenty-four and thirty-two feet; but sometimes logs of one hundred feet are prepared for special purposes.

As fast as needed, the logs in a boom at the mill are seized by the iron grappling-dogs of an endless chain, and drawn up an incline into the mill, where cross-cut, rotary, circular, and gang saws, planing and lith machines, convert it into every variety of lumber. The slabs are utilized somewhat in making fence pickets for that sort of small palisade called in Louisiana *pien*; the sawdust and refuse, beyond what the engine furnaces can make away with, are burned, or stacked solidly at the water's edge, and underneath wharves as "filling."

The lumber that enters into the commerce of Puget Sound is mainly the product of eight mills, exclusive of those at Burrard Inlet, British Columbia, which saw enough to load 50 vessels a year, their cargoes aggregating over thirty millions of feet. Since the great depression in the lumber business a few years ago a powerful combination has closed many mills by subsidies. Of the largest, however, Port Discovery, Quialuddy, Port Madison, Port Blakeley, Seabeck, and Tacoma are all in operation. At Port Ludlow we found nearly ready for work a mill larger than any of the foregoing, or, for that matter, of any on the Pacific coast, since by the time this article meets the reader's eye

it will be able to turn out 250,000 feet of lumber daily.

All these mills are on tide-water, and own fleets of steam and sailing vessels for the carriage of their surplus product, while also supplying the cargoes of vessels sent hither. The largest of them will employ 160 or more men in and about the mill, and perhaps 250 in the logging camps, their combined patronage giving a livelihood to several thousand persons, and sustaining half a dozen villages, which otherwise would not exist, where trade thrives, agricultural centres, schools and churches arise, and the roots of a civilized community are planted.

In the case of ports Discovery, Ludlow, Gamble, Seabeck, Madison, and Blakeley, the villages are literally owned by the mill companies. The land was bought before the saws were set up, and houses built for the families of the force, with offices, shops, hotel, etc. These houses are rented, or else are furnished free, and less wages paid. The supply stores, too, are managed by the mill owners, who thus control everything in the settlement.—*Earnest Ingersoll, in Harper's Magazine.*

BUYING UP BLACK WALNUT.

Unusual quantities of black walnut lumber says a recent Buffalo, N. Y., telegram, have been piling up from points in Ohio, Indiana and Iowa for some weeks past. The shipments have attracted attention among lumber dealers, and it is learned that a company of English capitalists, with whom a wealthy combination in Indianapolis is co-operating, have been for a year and more quietly getting possession of all the black walnut timber it has been possible to buy, and are now shipping it to England. The writer's informant, who was a buyer for those parties, says that the traveller on the railroads through the walnut belts will see at nearly every important station portable steam saw mills at work early and late ripping up black walnut logs into planks of a convenient size for shipment.

The company has had buyers out all through the States mentioned gathering up walnut trees wherever they could be found. In many cases the farmers have disposed of their trees at prices far below their value, and it has only been recently that they have become aware of the scheme that is to take out of the country the most of the remaining black walnut timber in it. The consequence is that all the walnut the company now buy costs them double the price they were paying a few months ago.

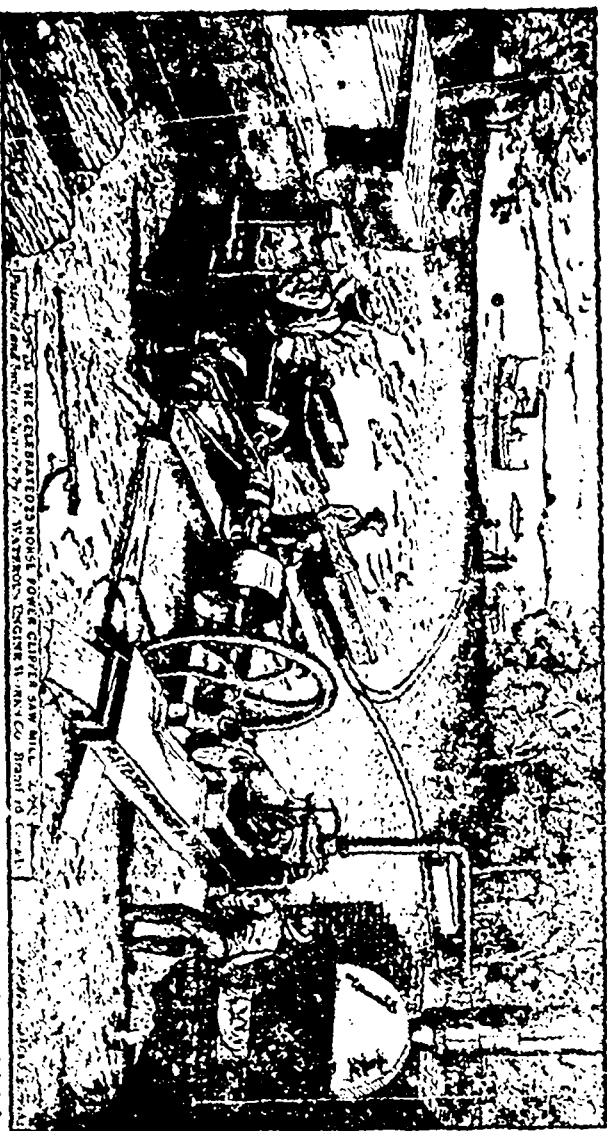
"If the original forests of Ohio and Indiana were now standing," says the gentleman referred to, "their valuation would be many times more than it is to-day under improvement. In making their farms the settlers in these States destroyed millions and millions of dollars' worth of black walnut, and the destruction ceased not more than 20 years ago. In searching for timber I visited more than one farm where miles of fence were laid with walnut rails and the fences are not old ones at that. This was in Bartholomew county, Ind., which, with Jennings county, contains about all the walnut forests that are left in that State. One old farmer told me that he worked almost incessantly for eight years to clear away the walnut trees on his farm, and that he burned up more than 80 acres of the finest kind of timber. His farm, after 30 years of cultivation, could not be sold for more than \$8,000. If it had its walnut trees back it would be worth more than \$100,000. This farmer was an old settler in the State, and only one among hundreds of others who, for more than 50 years, girdled and cut and burned the great forests they found occupying the land. The English company will send to England probably \$5,000,000 worth of walnut that they have purchased from the farmer at almost nominal prices."

The second volume of the census of Canada, for 1881, has just been issued. The number of lumbermen in the Dominion at that date was 9,930 against 8,094 in 1871.

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IMPROVED SAW FRAME

Using 4 to 12 inch Face Friction; Steel Mandrels; Reservoir Oil Bore; Double Leather Feed Belts, from 2 1/2 to 6 inches wide, takes 7 1/2 inch Saw and under. GARRAGES to cut any length desired, for slabbing or stock purposes, ship yards. See: Hatchet or Gandy's Friction Set Works, Eagle Claw Pegs, Tiger Dogs, Repeating Attachment, and special features.

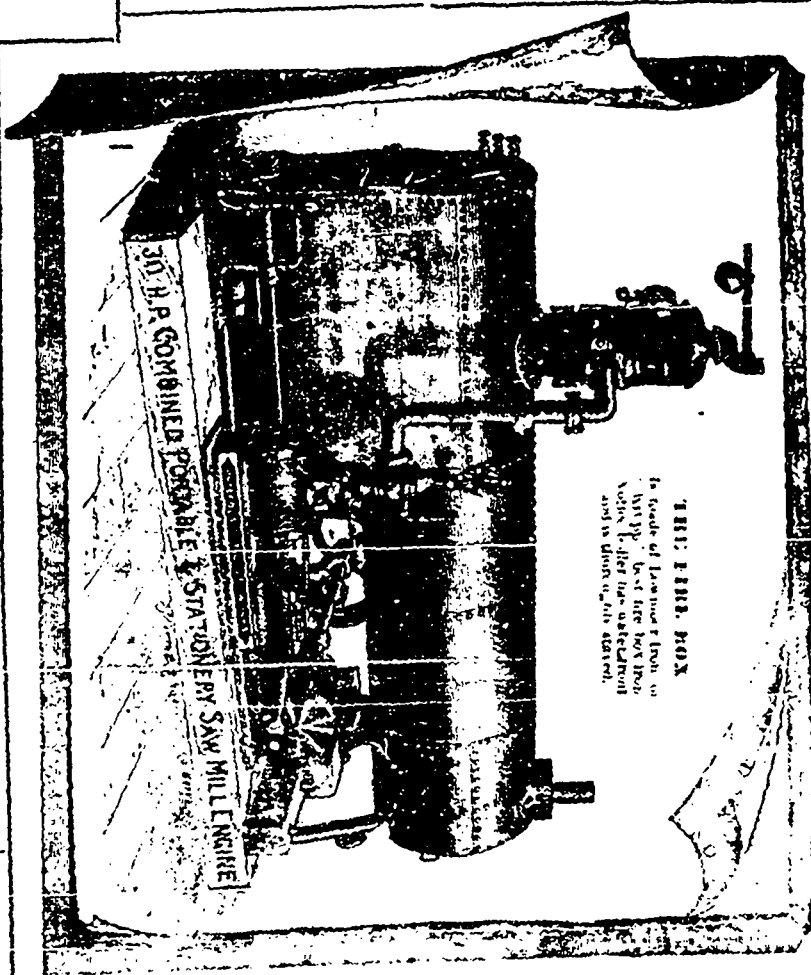


Double Edgers, 2, 3 and 4 saws; Automatic Lumber Trimmers, 5 to 9 saws each; Log Turners, Slash Tables, Log Jacks or Haul-up of all Capacities, Endless and Single Chain; Automatic Log Rollers, Transferers, Live Rolls, Shingle Machines, Drag Saws, Knee Bolters or Block Splitters, Shingle Packers, Gang Lath Mills, Stave Machines, Automatic Sawdust Feeders for Gangs of Boilers, Sawdust, Slab and Refuse Conveyors, Elevators, Pickering Governors, Worthington and Blake Steam Pumps, American Planing and Matching Machines, American Saws, Solid and Inserted Tooth, Extra Thin Circular Board Saws a specialty, Swages, Gunners, Emery Wheels, and all kinds of Saw Mill Furnishings kept in stock.

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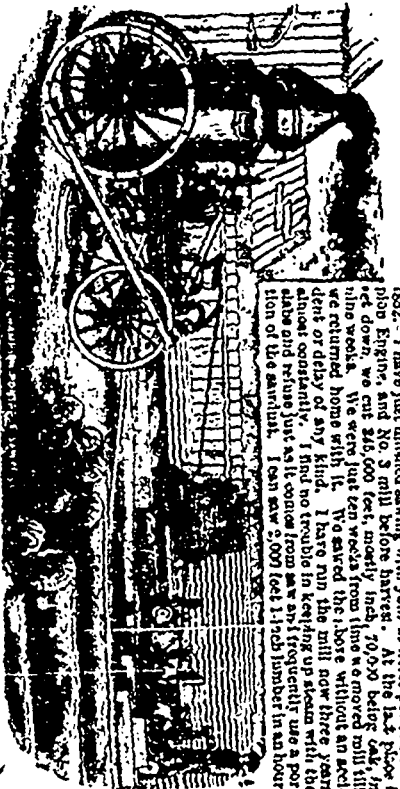
THIS 30 H.P. BOX is made of laminated iron to warp. In set the box has a valve after the water-tight and is then in its state.

This Cut represents the Engine furnished with Nos. 8, 12, 16 and 18 Saw Mills

A. & P. White, Pemiroke, have one of these 30 H. P. mills at Deux Rivières, C. P. R. R. G. O. V. Hall, Quebec, has one of these 3 H. P. mills at St. Agner, Quebec. Also, W. & R. Wallace, Gardner's Creek, N.B., with 60 foot Ship Yard Carriage.

Champion Portable Saw Mills

12, 16, and 20 H. P.



Greater than writes as follows:—"St. J. 1892. I have just finished making with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I cut 245,000 feet, mostly inch, 70,000 being cut in the week. We were just ten weeks from time we moved mill till we returned home with it. We saved the horse without an accident or delay of any kind. I have run the mill now three years almost continually. I find no trouble in keeping up steam with the mill and return just as it comes from sawing frequently in an hour. I can saw 2,000 feet 1 1/2 inch lumber in an hour."

The following are a few who have bought these mills:—

- Canada Pacific R. R. Co.
- G. E. Hall & Co., Que. (2)
- Douglas Land & O. Co., Que. (2)
- Sorel R. L. Co., Que. (2)
- Coelmao Lander Co., Que.
- Bow River, N. W. T.
- Nor. West. Mills—yard Mining Co.
- Bow River, N. W. T.
- Toronto and Nor. West Colonization Co., Near Brantford.
- Morton Dairy & Farming Co., Turville Mountain.
- Allan Grant, Ottawa.
- Geo. Parley, Ottawa.
- Michipicouin Native Copper Co.
- W. W. Sleser, Montreal

NEW WOODS FOR CAR BUILDING.

Under this head the *National Car Builder* says:—"We print on another page a description of some of the valuable wood products of Cuba, compiled from an elaborate article by Esteban D. Estrada, M. E., in the November and December numbers of *Van Nostrand's Magazine*, and including a series of tests made under the supervision of Professor Thurston at the Stevens Institute of Technology.

With the exception of mahogany, rosewood, satin wood, cocobolo and a few other varieties that are used in cabinet work in this country, our knowledge of tropical woods is very limited both as regards the distinctive qualities of many kinds and their peculiar fitness for constructive purposes. Mahogany is practically the only wood that is used to any extent in the United States for other than strictly ornamental purposes. Lignum vite, it is true, is used for sheaves of blocks and in other ways in which a hard, tough and durable wood is required to resist wear. Mr. Estrada's knowledge of the timber trees of Cuba probably enabled him to select for testing those only that could be imported to this country at prices that would admit of their being used with advantage and profit in our wood-consuming industries. The tests included a large variety of woods, many of which were more suitable for furniture and inside finish than for construction where strength and durability are the chief essentials. There were some, however, who exhibited these qualities to such a degree as to render the timber useful for car sills, especially as the trees are of a sufficiently large size. It is also probable that some of the varieties of smaller growth might be used for posts instead of ash or pine, since they have much greater strength and a little more weight.

The stiffest and largest of the timbers described is the *inquiu comun*, which has a specific gravity of 1.20. The tree grows to a height of from 50 to 70 feet, and the timber can be obtained with a maximum section of 18 inches square. It is very hard, fine-grained and compact, has a rosewood color and becomes harder and darker with age, while its strength is greater than that of any American woods used in the arts, and its resistance to compression is even greater than lignum vite.

Another of the Cuban trees which seems deserving of the car builder's attention is the *dagame*, which is found in great abundance in the forests. It grows straight, has but few branches and attains a height of 40 to 50 feet. The wood has a pale yellow color, is moderately heavy and its texture resembles boxwood, can be worked either across or with the grain and takes a good polish. The largest sized lengths that can be obtained are 12 inches square. It is very strong and rivals the *inquiu comun* in elasticity and stiffness, besides being much lighter. Its specific gravity is only .90, which is about the same as that of English oak and but little more than that of our own white oak, which is .86. So far as can be judged from the description it might be used with advantage for end-sills and posts in car work. We are not told how it behaves in drying. In Spain it is used for many of the purposes for which hickory is used in the United States.

The *baria* is a wood of a greenish-brown color, weighs 48 lbs. per cubic foot and has a specific gravity of .78. The tree grows to a height of 60 feet, and has a diameter of 18 inches. This timber is used in framing and carriage making, and might very probably be used to advantage in car construction.

The *tahicu* is described as one of the largest of the timber trees of Cuba. Although it attains colossal dimensions it is somewhat crooked, but yields an excellent timber 30 and 40 feet in length, and from 30 to 10 inches square. It is hard, heavy, strong and durable, works well either across or lengthwise the grain, and is used in Cuba, Spain and England for keelsons, engine bearers, ties, piles, posts, beams, etc. Its strength, or stiffness rather, is quite equal to that of any of the woods above mentioned, and although these are not the strongest nor in every case the stiffest of the Cuban woods, their characteristics are such as to invite further investigation.

Experiments were made with 15 varieties of wood, by subjecting the specimens to torsional

and compressive strains. The results are quite remarkable, and the only question seems to be whether these woods can be delivered at our ports at prices that will warrant their importation. Dealers in mahogany and other fancy woods can doubtless throw some light on the subject. At all events it would seem to be worth the trouble to find out what would be the cost of obtaining sample lots for trial. It should be noted that while the tests show that the weight of these Cuban woods considerably exceeds that of our native timber used in car construction, their average native strength is much greater, so that the alternative is presented of wing the same weight and obtaining more strength, or retaining the same strength by reducing the weight. The quality of some of the specimens is such as to make it probable that they might be used to good advantage for the draw-timbers of freight cars."

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing March 22, says:—"The vanishing of the snow and the breaking up of the ice-roads has put a stop to driving operations in the woods at an earlier period than usual. With the exception of the *Ljusna* and *Woxna* rivers (supplying Soderham district) I have strong reasons for asserting that the 'got' of logs will be considerably less this winter than that of the two winters immediately preceding; although it is probable the production of logs on the two rivers indicated may not have been large, my belief is that it has been greater than the prospects of business warranted.

I hinted in my last advice the probability of there being a scarcity of water for floating operations in spring. The weather of the past fortnight has considerably strengthened this probability. Under the combined influence of a high temperature and a sun more like May than March by far the larger portion of the snow has already disappeared from the forests, without being of any service to floating operations, which latter, as is well known, cannot be prosecuted until the ice has disappeared from the small inland lakes. A wet spring can, of course, neutralize the effects of a want of snow now, but the chances for the moment are decidedly against there being an average floating season.

The heavy consumption of sawn wood in London and small stocks is attracting considerable attention in the north of Sweden. Prices of the better qualities of redwood deals may be characterized as firmer, and although few sales of such goods at shippers' figures are reported, millowners have come to the conclusion that it is only a question of time when importers will be obliged to come into the market, i. e., supposing consignments are not resorted to. There is apparently some fear that consignments may be indulged in from the Sundswall and contiguous districts to London, and as long as this is supposed to hang like a Damocles' sword over the heads of importers, so long may they be expected to refrain from buying.

How far the rumour is warranted I am unable to say. The basis of £10 10s. for 1st quality red 9 in. deals and boards is being generally obtained for good Sundswall marks in France and Belgium, with the usual reduction for the lower qualities, but complaints are being made here and there that some of the agents are selling battens and small boards cheaper than the price list agreed upon, and proportionately lower than deals. Prices of whitewood are very irregular and more or less dependent upon the position of the seller. The price list for whitewood deals from Sundswall and Hornos and was originally 150 francs, as falling from saw, but large parcels have been quoted at considerably lower price than this, probably 15 francs loss. The stock of whitewood goods of all sizes is evidently and thus in a greater degree than redwood—far too large for the consumption. Very considerable sales of Finnish goods are now reported from France, but prices are understood to be low; as low, if not lower than last year. French buyers are, on the other hand, buying very sparingly of Swedish goods, and not the slightest sign of speculative purchases is to be discerned. Several cargoes of red deals from Soderham, Sundswall, and Ode-

district have lately been placed for Australia, and other parcels are in course of negotiation. Prices are said to be somewhat under list.

The great development of the trade in planed goods between Norway and Australia (principally Melbourne) is attracting attention amongst the Swedish owners of planing mills, and it is not unlikely that one or two of the latter may enter the field this season.

Australia is no doubt one of the most promising fields for the sale of manufactured wood, and is increasing its consumption annually far faster comparatively than any European country.

The market is quite glutted with steam tonnage of over 300 standards capacity, and it is just questionable whether the above figures can be again repeated for f.o.w. Small sailing bottoms of 100 standards and under are somewhat more in request for the outports, and whenever suitable sized vessels can be had for particular orders that may be on hand fair rates can be obtained. Several handy steamers of a carrying capacity of 200 to 250 standards deals, burning little coal and only drawing from 12 to 13 feet of water when loaded, are now being fitted out on the Clyde. These boats, which are very suitable for the deal-carrying trade can be bought cheap.

FOREST DESTRUCTION AND CONSERVATION OF MOISTURE.

The *Glens Falls Republican* of a late date contained the following:—

"Mr. William Moore, who lives at the head of Thirteenth pond, 10 miles above North creek, Adirondack region, and who has spent the better part of a lifetime in lumbering, says it is better for the forest to cut off all the larger trees once in 20 years, as they mature, so as to give the smaller growth a chance to live and thrive. He declares that the destruction of the woods is occasioned more by the fires of camping parties and hunters than by the axe of the choppers. These fires, spreading as they do over a vast extent of territory, not only burn the standing timber but the small trees and the underbrush as well, even reaching into the earth, destroying the roots and literally consuming the mould-covering which contains the seed-germs. These fires, lasting for days and sometimes weeks, consume the roots and fibres and seed absolutely, especially on the thin, rocky soil, down to the bedrock, and years upon years are required to reproduce the germinating material. 'Which do you think,' said Mr. Moore, 'will retain the most moisture, the tall forest or the underbrush? If there is a particularly thick growth of large timber to cut we leave it till the last—until the end of winter—and then going into it find a comparatively thin covering of snow. The balance, falling upon the tall trees, has been blown away by the wind or melted by the sun. So you see the small timber—the undergrowth—is the best protection to the snow and the rain, retaining the moisture and gradually allowing it to run into the large streams. I tell you, keep those who start fires from the wilderness and it will take care of itself.' 'What do you think of the project to build reservoirs and dam the lakes?' 'That is practicable. Indian lake alone could be made to furnish a vast supply of water in dry times, and without any harm. The idea that it would destroy timber and breed distempers is much of it nonsense.' These views, coming as they do from a practical, experienced lumberman, are worthy of consideration. There are always two sides to every question.

Forest Fires.

"When a forest fire occurs in the pineries of Michigan," said a lumber operator from the State, "the pine trees on the burned tracts must be cut within a year if the owner wants to get marketable lumber out of them. The heat of a spent forest fire is not yet out of the air before millions upon millions of large brownish-white moths appear. One hour there may not be a moth anywhere about; the next hour the air will be filled with them. They lay the eggs that produce a worm that bores into the pine trees, honey-combing them, with tunnels that ruin them in a few weeks. I have seen these millers covering an area of 10,000 acres of burned woods. 'When the rebellion breaks out

forest land could be bought in Michigan for less than \$3 an acre. I purchased 5,000 acres in 1860 for \$9,000. Last month I sold the tract for \$250,000. I think the biggest pine tree in Michigan is on that property. It is 11 feet through at the butt, and must be 150 high. A New York man once offered me \$100 for 15 feet of the trunk from the ground up. He wanted to exhibit it during the Centennial Exhibition in Philadelphia. I refused the offer. Michigan now produces one-quarter of the pine used in the country. Over \$160,000,000 a year is received by the operators for the product of her forests. In ten years from now, however, there will be very little, if any pine left in the state."

Failures in the States.

Business failures in the United States for the week ending March 31, as reported to *Bradstreet's*, numbered 143, against 162 in the preceding week and 190 in the corresponding week of 1883. About 83 per cent. were of small traders, whose capital was less than \$5,000, and if through the country the general character of these was similar to those reported from Chicago, trade is relieved from considerable of an incubus, in the wedding out of firms and companies who have been doing business of a doubtful legitimacy. Of the lines of trade mentioned as having contributed to the list the lumber interest proper is not considered worthy of mention; but the furniture trade is credited with four failures. In summary for the first three months of 1884 the lumber trade registers 23 failures. Of these the manufacturers contribute 11; one in the middle states, six in the southern states and four in the western states. Of wholesalers, one in the eastern states, three in the middle states and two in the western states. The retail trade, the country over, during the same period contributed eight.

World's Fair at New Orleans.

The work in the construction of the main building for the World's exposition to be held at New Orleans is progressing very rapidly the lumber being delivered on the grounds at the rate of 100,000 feet daily. It is estimated that the main building will be finished in four months. The management announces that exhibits will be received on the 1st of August. Applications for space have been received from England, Russia, Germany, Austria, Italy, Mexico, Canada, Venezuela, Guatemala, Honduras, etc. Florida's commissioner has applied for 50,000 feet of space for horticultural exhibits, and for 100,000 feet of space for a Florida garden and a special building. Colorado's commissioner brought the first instalment of Colorado's mineral display, consisting of 400 specimens from various mines in Colorado. The fair will open next fall and continue through the winter.

Jarrah Timber Again.

Jarrah timber, which has been coming into public notice lately, is by no means a new introduction, the wood having been employed for many purposes by cabinet makers and others, with whom it has a high reputation. Its principal use, however, is the making of curves for house and marine architectural drawing, etc.; in fact, no other wood is considered its equal in this respect. The resistance to atmospheric influences in all delicately made material of this description, where accuracy is so vital, is one of the greatest importance, and the attributes of Jarrah timber seem to give it special advantages for this work over all other kinds.—*Lumberman's Gazette*.

THE Province of New Brunswick intends to make a fine display of native woods at the International Forestry Exhibition to be held in Edinburgh this summer.

THE legislators of the United States are becoming increasingly alive to the duty resting upon them of preserving the forests. The Edmonds Bill provides that a tract in Montana of nearly 7,000 acres shall be forever set apart for the keeping of the forests in which arise the sources of the main stream of the Missouri and of Clark's Fork of the Columbia, and their tributaries. Provision is also made for placing the region under executive custody, and for the punishment of depredations on it.

THE ENGLISH MARKET.

Robert Coltart & Co.'s Liverpool circular of April 1, says:—The most satisfactory feature in our trade, is that in spite of the continued complaints about dull trade and poor demand, the consumption of wood during the past month compares very favorably with the same period during the last two years; prices, however, continue very low, and buyers are supplying themselves from the cargoes shipped on consignment to this market, rather than enter in to contracts for future delivery. The arrivals during the month have consisted chiefly of pitch pine and Norway flooring boards, both of which articles have been sold at extremely low rates, and as the prospects for future arrivals are not encouraging, it is to be hoped that shippers will curtail their supplies to this market.

COLONIAL WOODS.—The stocks of both square and waney pine continue heavy as compared with the same time during the last few years. The consumption, however, shows some improvement, amounting to 89,000 feet (net 63,500 feet last year; the sales have been by retail only. For red pine the demand is very dull, and there are no transactions to report. Of ash the stock is ample, and there is very little enquiry. The stock of elm amounts to only 10,000 feet, and the consumption during the month consisted of 3,000 feet. The consumption of oak has been on a reduced scale, and the stock is ample for all requirements; there are no wholesale transactions to report. Birch has been in fair request during the month the consumption amounting to 30,000 feet; the present stock consists of 50,000 feet. Of N. B. and N. S. spruce deals the consumption shows a considerable falling off, amounting to only 1,820 standards, as compared with 3,044 standards during the same period last year; the arrivals have been small, but the stock is ample, viz., 10,247 standards, against 12,014 standards at the same time in 1883; the sales have consisted chiefly of small parcels and a cargo from Halifax, which was sold at £6 12s. 6d. per standard ex quay. Lower port pine deals continue in dull demand; by auction a Richibucto parcel realized £11 15s. per standard for first quality, £8 per standard for 2nd quality, and £6 to £6 5s. for 3rd quality. Of Quebec pine deals, 503 standards have been imported during the month, via Portland; the consumption amounted to 997 standards, against 892 standards in 1883. The present stock is heavy for the time of the year. For Quebec staves the demand is dull. Of palings there are no sales to report.

The arrivals since our last have been 45 vessels, 25,163 tons, against 42 vessels, 21,183 tons in corresponding period last year, and 20 vessels, 14,781 tons in 1882.

From 26th January to 31st March, 1884:—

Vessels.	Tons.
Quebec.....	9
St. John, N. B. & Co.....	4
United States.....	17
Baltic.....	31
Total.....	60

From 26th January to 31st March, 1883:—

Quebec.....
St. John, N. B. & Co.....	4
United States.....	6
Baltic.....	40
Total.....	50

A QUESTION TO THE POINT.—Reader, have you a languid, weak and tired feeling, with nervous exhaustion, especially in the early spring? Then your liver is inactive and circulation poor. Arouse the torpid liver, cleanse the sluggish blood and regulate the secretions with that purifying tonic Burdock Blood Bitters.

WEATHER PROBABILITIES.—Forecasting the weather is uncertain at the best, but it is certain that if you catch cold in this changeable climate you can best break its ill effects by Hagar's Pectoral Balsam, the most reliable and pleasant remedy for coughs, colds, bronchitis, and lung complaints. It is so agreeable that even a child may take it.

IT SHOULD BE INVESTIGATED.—If any of our readers suffer from chronic diseases of the stomach, liver, kidneys, or the blood, they should investigate the merits of Burdock Blood Bitters. It is making the most remarkable cures on record.

The cotton manufacturers at the South, in a meeting recently held at Augusta, Ga., resolved to curtail production until the plethora in the market shall be somewhat reduced. All manufacturers other than saw mill owners appear to know that when they have over produced their respective lines of commodity, so that a glut in market occurs, they must stop adding to the pile.—*Northwestern Lumberman.*

A BANQUING lumberman has developed himself in Central Wisconsin, who talks in a fashion that proves that he has a happy faculty of getting on the silver side of a cloud in every instance. Hundreds of lumber holders would like to borrow his glasses: "Buyers are thick and plenty, and the stock on hand entirely inadequate for the spring trade. Hardly a firm can fill the most ordinary mixed order entire, and the large number of buyers from Chicago and other lumber points indicates either that their... are broken or that we are selling too low. I predict that upper grades will advance, will be scarce, and the better part of common drawn on largely to take the place of the shortage of select. Lower grades of common should in sympathy, at least remain firm at present prices.—*Northwestern Lumberman.*

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The CANADA LUMBERMAN is sold at the Offices of Messrs. SAMUEL DRACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., MAY 1, 1884.

In Victoria, Australia, a tree has been found that measures 485 feet in length.

INDICATIONS point in the direction that Kansas and Nebraska will be the banner states for the lumber deniers this year.

The forests of the United States are estimated to cover 380,000,000 acres or sixteen per cent of their total area.

It is said that a syndicate of English capitalists have bought up nearly all the black walnut in the western states for shipment to Europe.

EXPERIMENTS are being made with every prospect of success, to manufacture handsome, serviceable and waterproof boots and shoes from wood paper.

ONE cord of wood makes one ton of excelsior. A concern at Milo, Me., uses up 1,800 cords of wood a year. The same house converts 1,600 cords of white birch into spools.

AN estimate, as near as can be made, of the cut of logs on the Androscoggin river, Me., is 30,000,000 feet, a decrease of 10,000,000 from the cut of last year, which was 40,000,000.

DURING the month of March the Eau Claire Pulp & Paper Company made 220,000 pounds of paper, 153,000 pounds of pulp. Of poplar, spruce and basswood 123 cords were used.

At Silver City, Alberta, Canadian North west, building is active. Sixty houses are in course of construction and there would be many more if it were not for the scarcity of lumber.

The Export Lumber Company, New York, reports that the export of pine lumber from the port of New York for the three months of the year ending April 1, was 19,991,000 feet. For the same months of the year named the amounts were as follows:—1883, 14,056,000; 1882, 11,277,000; 1881, 14,511,000; 1880, 13,550,000; 1879, 12,670,000; 1878, 10,411,000; 1877, 12,679,000.

A BRIGANTINE is being built at Dorchester, which, when completed is to be loaded with lumber and general cargo and sent to the Fiji Islands. This is a new venture, says the Moncton Transcript.

A HALIFAX daily states that the saw mill of Messrs. Davidson & Sons, at Bridgewater, the most extensive lumbermen in Nova Scotia, will be extensively employed this season in cutting lumber for foreign markets.

AN effort is being made to start a wood pulp factory at Albert, N. B., having the fine water power of the Hupewell Mill Company. Mr. Andrew Anderson is active in the matter and it is to be hoped his efforts will be successful.

A STRIKE among the shingle mills has taken place at Manistee, Mich., caused by a reduction of two cents per thousand on packing and sawing. A number of French-Canadian families recently went in and commenced work at the reduction.

THE Hamilton Spectator says:—The opposition to the cedar block scheme is being gradually dissipated, as the estimated cost of the pavement becomes known. The introduction of block pavement will be particularly welcome to dry goods merchants, who now lose more in a week from dust than they will be required to pay in a year for the pavement.

THE quantity of redwood timber standing in the State of California is estimated at 23,650,000,000 feet, of which 4,500,000,000 feet are in the county of Humboldt, in which the cut is set down at 600,000 feet per day. The export of redwood from California in the year ending May 21, 1880, was 186,735,000 feet, which since then has been largely increased.

THE Muskegon, Mich., Booming Company decided to begin operations on April 21. The rates of rafting, towing, and delivering logs to the different divisions, for the season, have been fixed as follows: Division No. 1, 44 cents; division No. 2, 50 cents; division No. 3, 56 cents; division No. 4, 63 cents, a reduction of 5 cents on divisions 1 and 2, and 6 cents on divisions 3 and 4, as compared with last season's schedule.

THE four States producing the most lumber according to the census are Michigan, 4,172,572,000 feet; Pennsylvania, 1,733,844,000; Wisconsin, 1,542,921,000; New York, 1,184,220,000. The production of the first two States has materially increased since the census figures were compiled. Wisconsin is now entitled to the second position in the list. No other State outside of the four named produces 1,000,000,000 feet yearly, though Ohio and Indiana hug it closely.

SAWDUST, as an ingredient of mortar for house plastering, is commanding considerable attention in certain directions. It is used in place of sand. It is claimed that such mortar is more porous than the ordinary kind, consequently the face of a wall composed of it is warmer; that it is a non-conductor of sound and dampness, that it overcomes the echo in churches and halls. In the manufacture of the mortar a glutinous substance is used which sticks it firmly to the wall.

A CANAL boatman's association has been formed on the Erie Canal, with clearing houses at Buffalo, Tonawanda and New York. The lumber dealers of Tonawanda and Buffalo have taken up arms against the combination, asserting that they will not be controlled by its fixed charges and other arbitrary restrictions. On the other hand, the engineers of the new arrangement claim that it will benefit the forwarders of lumber and grain by ensuring the greater despatch and less expense to shippers. It will, at the same time, protect boatmen from the alleged imposition of scalpers. The shippers threaten to discriminate in favor of non-association boatmen, and altogether, according to the Tonawanda Herald, the termination of the disagreement is exceedingly doubtful.—Northwestern Lumberman.

LUMBER TRADE OF THE OTTAWA VALLEY.

OTTAWA, April 14.—Seizing a few moments of leisure, your correspondent inspected the extensions which have lately been made on the line of the Canada Atlantic Railway at the Capital. Up to last fall the line had only been completed to the northern terminus of Elgin street, some two miles distant from the extensive lumber yards of the Chaudiere. The work of reaching that point has been one of considerable expense, including rock excavations and heavy fillings or gradings, but in the month of December last this work was successfully completed, and the track laid to within a short distance of the lumber mills, where they have now a number of sidings laid to accommodate the loading of several trains of cars simultaneously. Your correspondent visited the new terminus at Chaudiere, where a scene of great activity presented itself; an endless number of cars being loaded with lumber ready for shipment. At this point the company have secured a large area of ground, which, when the sidings are all down, will give facilities for shipping the lumber with unprecedented rapidity, ordinary cars being loaded in an average of not more than half an hour's time. A walk through the yard of one of the prominent lumbermen of the city suffices to show that all the facilities which had been furnished by the company for shipment of lumber were none too ample, and in conversation with the manager your correspondent was informed that the Canada Atlantic railway was a great boon to the lumber trade, and that never before had they been given such facilities for the shipment of their product; heretofore great difficulty had been experienced in obtaining cars, whereas now a simple call to the head office of the company would secure an immediate supply. Enough was seen by your correspondent to convince him at any rate that a new era in the lumber trade of the Ottawa Valley had dawned, and that with the facilities now offered for its rapid shipment the year round—instead of lumber firms, as formerly, having to avail themselves of the limited period of navigation in order to ship their products, and the lumber being thus taken in advance to the market, as it were, to be stored at the points of distribution, and which had serious effect on the price obtained for it—the fluctuations and depression in the great lumber interest which was felt a few years ago is not likely to occur again, in so great a degree at any rate, so far as the Ottawa Valley is concerned. Upon making inquiry as to the quantity of lumber shipped by the road, the record of the past month was given, which showed that an average of twenty-five carloads of twelve net tons each were shipped each day, or 150 carloads per week, and, in fact, recently 176 carloads were shipped within five days, or an average of 35 per day. As no foreign cars are allowed to leave empty, favorable rates of freight can be afforded.—Ottawa correspondence of the Montreal Gazette.

THE REAFFORESTATION OF IRELAND.

Among the many schemes that have been put forward for the restoration of prosperity to Ireland, not the least worth of notice is that to which Dr. Lyons, junior member for the city of Dublin, has devoted much of his time and thought and even of his means. Ireland, like other countries has suffered to a serious extent from the wholesale destruction of its forests, and Dr. Lyons thinks that, if money and skill were expended on the replanting of its bare hillsides and moors, the result would be to add manifold to its facilities for supporting a prosperous and happy population. So thoroughly convinced was he that reafforestation would be a real gain for his country that at his own expense, he invited Mr. Howitz, the forest conservator of Denmark, to examine its resources and needs in this respect. The result, even when allowance is made for the enthusiasm of Mr. Howitz and his employer, is not disappointing. Ireland, in Mr. Howitz's opinion, presents special conditions for rendering forestry easy and beneficial. Out of its twenty million acres he thinks that five millions, now mostly waste, might be planted with profit. On the continent advantage has been taken of natural conditions far less favorable than those

that are found on the mountains and valleys of Ireland, which are adapted for the growth of the better classes of timber. A list of which he appends to his report comprises thirty-six conifers, thirty-eight deciduous and hardwood trees and eight kinds of bushes that could be advantageously grown. His plan would be to plant one hundred thousand acres annually for the next thirty years, which is the time he assigns for a plantation to come to maturity. The varieties he would select according to the readiest local uses of the wood, or, if a demand arose in England or elsewhere, the choice might be modified so as to meet it.

The benefit arising from such a scheme would not, however, be limited by the market value of the timber, but would be felt in many other ways. It is well known that, where trees are absent, the soil becomes poor and the climate deteriorates. Injurious floods both in Europe and on this continent are frequent consequences of forest destruction; and, on the other hand, the fertilizing effects of timely streams are denied to the thirsty soil. For trees not only absorb superfluous moisture but also keep it in store for seasons of scarcity. In Ireland, as elsewhere, this two-fold boon of preservation and refreshing is lacking where the trees have been sacrificed.

One good feature of Mr. Howitz's scheme is that it robs the people of no land that is fit for habitation or susceptible of agriculture. The five millions which he would improve by forest planting consist for the most part of land that pays up a farthing of rent. The question chiefly to be considered is that of ways and means. Judging from the policy of his own government, he took it for granted that the necessary funds would be forthcoming as a matter of course. But the only source from which, at the present moment, any public aid might be expected—the Tramways fund—has already so many claims on its good offices that there is not likely to be a great deal remaining for a purpose not originally included in its provisions. It will chiefly depend on the patriotic spirit of the landlords, therefore, whether his recommendations will be carried out to any really profitable extent.

Happily, on this point, there is some precedent by which the action of some of them, at least, may be assumed. Lord Powerscourt, in a letter to the Times, early last summer, gave the results of his own experience of tree planting on his estates in the County Wicklow. This nobleman expresses himself as, on the whole, fairly satisfied with the undertaking. The largest of his plantations comprises about 700 acres of upland, which he covers not only with larch, spruce and Scotch fir, but with oak, willow, poplar, ash and alder. Values, he says, may be effected by many causes, but "if anything like the present rate of growth is maintained for the next twenty years, £50 per acre will be a low estimate." As to cost, he says that in Scotland it can be done for 20s. to 30s. an acre, and except for the rank growth of the grass, it would be no greater in Ireland. If other proprietors are only encouraged to follow the example of Lord Powerscourt, and Dr. Lyons succeeds in imparting to land-owners generally some of his own enthusiasm, considerable benefit may follow the publication of Mr. Howitz's report.—Montreal Gazette.

THE GREAT FORESTRY EXHIBITION.

The New Brunswick papers have of late been paying a good deal of attention to the approaching great forestry exhibition at Edinburgh. Mr. Edward Jack has been appointed to represent both the Local Government and the New Brunswick Land and Lumber Company on the occasion. He will be assisted by Mr. Ira Cornwall, jr., for some years resident in St. John, and more recently in Liverpool; who will be remembered by many people in Hamilton and elsewhere in Ontario. The amount voted for Mr. Jack's expenses is more than he will require for himself alone, and an effort is now being made among business men to raise, by private subscription, enough for such expenses as may be incurred by Mr. Cornwall. According to the official programme the articles exhibited are to include, not only timber and lumber in the rough, and tools used in forestry work, but also

all manufactures of wood that may be offered. This allows the showing of a very great variety of articles in general use, and the exhibition bids fair to be one of the largest and most important of the time. The following may be named:—

Implements and tools used in forestry; models huts, sheds, etc. Plans of river embankments, etc. Saw mills and wood-working machinery of every kind. Fencing material. Timber specimens and ornamental woods. Woods used for railway purposes. Wood pavements. Cooperage. Wood carving and turning, with tools used. Basket and wicker work. Fancy wood work. Wood engraving. Bamboos, reeds, etc. Tanning substances. Material for paper manufacture. Drugs, foods, etc. Charcoal, tinder, etc. Rustic work. Specimens of dried foliage. Illustrations in the shape of drawings, paintings and photographs.

The St. John Sun thus lengthens out the list: "Chief among the list that can be manufactured here with profit are packing boxes of all sizes, our woods being really better suited for this work than any to be found on the continent. Salt and fish boxes are also required in endless quantity. Window sashes, casings, doors and door casings of the better class of woods can be sent to England at a good profit, though it is doubtful if it would pay to compete with the United States in slop work of the cheaper woods. Laundry and kitchen tables and patent folding tables are in demand; also cloth boards, pastry boards, rolling pins, potato mashers, wooden bowls of all kinds, clothes horses, wringers, towel-rollers, ice cream freezers knife and fork boards and boxes, wash boards, (a very large item), pails, tubs, churns, and handles for brooms, mops, hoes, rakes, hammers, hatchets and edge tools generally. There is a large demand for common wood bedsteads, much of which is now received from Boston; while chairs and furniture in parts, hat and clothes wall racks, stepladders, folding and patent ladders, bench screws and bobbins and spools are standard articles in unlimited quantities. There is a limited demand for shoe pegs, toy or miniature washtubs, pails, chamber sets, wagons, wheelbarrows, log cabbins, bureaus, sand-mills and fancy boxes.

Special attention must be paid to the manufacture of spools and bobbins. In the first place, the very best seasoned woods must be used, and the articles made to an exact gauge. As silk, etc., is reeled, not measured, the necessity for accuracy in the size of the spool is obvious. There is a tremendous demand in England just now for Venetian blinds, while ships' furniture presents another line in which very much can be done. Coopers' work—keg and barrel staves, headings, bungs and hoops—also open up a good field. The difficulty with the bungs sent abroad in the past was that they were neither of the right size or style to suit that market. Boot and shoe lasts and boot trees can also be exported with profit; likewise boxes for trunks, seamen's chests, etc.

The Telegraph says:—
The exhibition is intended to include everything connected with or illustrative of the forest products of the world, and will be open to exhibitors from all countries. Exhibitors will be provided with water, gas or steam power, on special terms, and under their own entire control. The shafting, pulleys, belting, etc., will be at the expense of exhibitors. This will enable any person having special wood-working machinery to exhibit it in motion. Exhibitors may mark the selling price of the articles shown, which makes the exhibition something like a great sample house.

Mr. Co-nwall, some of whose letters on the subject are published in the St. John papers, suggests that the Edinburgh Exhibition should be further utilized as an opportunity for circulating information about New Brunswick, and promoting the emigration of desirable settlers. The St. John Globe is of opinion that, while it is the duty of the local Governments respectively to get vacant lands settled, the Dominion Government is, after all, the authority upon which the duty primarily rests. To which we may add that the important work of immigration and settlement may well engage the best attention of both authorities.

The Dominion Government has declined to

take any action in the matter of this exhibition. As the provinces have the control of timber and public lands, the present occasion appears to be clearly one of provincial rather than Dominion responsibility. All the more reason, therefore, why the provinces should be wide-awake and take timely action, each one for himself. So far we have heard of nothing done by the Ontario Local Legislature in the matter, which is surely to be regretted. Ontario has a large interest in the produce of the forest and in manufactures of wood, and it can scarcely be that she is not to be represented at Edinburgh at all. The provincial treasury is flourishing enough to spare very easily a few thousands for the important object indicated. We should be glad to hear that Mr. Mowat and his colleagues had decided to take action at once.—Canadian Manufacturer.

HOW TO PREVENT FIRES.

The following simple precautions suggested by the New York Independent, if strictly followed, would prevent a great many destructive fires. The rules might be posted in every store, dwelling, and factory with good results:

The leading causes of fires are kerosene oil, matches, and furnaces.

1. Always buy the best quality of oil.
 2. Never make a sudden motion with a lamp, either in lifting it or setting it down.
 3. Never place a lamp on the edge of a table or mantle.
 4. Never fill a lamp after dark, even if you should have to go without a light.
 5. See that the lamp wicks are always clean and that they work freely in the tube.
 6. Never blow out a lamp from the top.
 7. Never take a light to a closet where there are clothes. If necessary to go to the closet, place the light at a distance.
 8. Use candles just as much as possible in going about the house and in bedrooms. They are cheaper, can't explode, and for very many purposes are just as good as lamps.
 9. Matches should always be kept in earthen jars, or in tin.
 10. They should not be left so rats or mice can get hold of them. There is nothing more to the taste of a rat than phosphorus. They will eat it if they can get at it. A bunch of matches is almost certain to be set fire if a rat gets at it.
 11. Have good safes in every place where matches are used, and never let a match be left on the floor.
 12. Never let a match go out of your hand after lighting it until you are sure the fire is out, and then it is better to put it in a stove or earthen dish.
 13. It is far better to use the safety matches, which can only be lighted upon the box which contains them.
 14. Have your furnaces examined carefully in the fall, and at least once during the winter by a competent person. All of the pipes and flues should be carefully looked to.
 15. If there are any closets in the house near chimneys or flues, which there ought not to be, put nothing of a combustible nature into them.
 16. Never leave any wood near a furnace, range, or stove to dry.
 17. Have your stove looked to frequently, to see that there are no holes for coal to drop out.
 18. Never put any hot ashes or coal in a wooden receptacle.
 19. Be sure that there are no curtains or shades that can be blown into a gaslight.
 20. Never examine a gas meter after dark.
- Fires, of course arise from other causes than those we have stated. Smokers burn up much valuable property which is not in the shape of cigars. Bunches of oiled rags of the most inanimate nature in themselves still perform the most wonderful feats in the destruction of property. Tramps, with their old pipes, will creep into barns and haymows, and servants will be careless in thousands of ways, but if every person who owns property will give the subject attention, and see that those around him are posted, and see that reasonable rules are always obeyed, many thousands of dollars could be saved annually which are now burned out of existence.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of March 1884, and first three months of the year: NORTH DATED 31st MAR., 1884.

Quantity.	Value.
Timber (Hewn).	
Russia.....	2,048 4,691
Sweden and Norway.....	86,819 123,873
Germany.....	14,906 29,178
United States.....	14,991 55,308
British India.....	9,937 144,398
British North America.....	323 1,029
Other Countries.....	35,065 27,724
Total.....	162,374 410,991
Timber (Sawn or Split, Planed or Dressed).	
Russia.....	1,349 1,983
Sweden and Norway.....	72,949 107,796
British North America.....	7,997 17,428
Other Countries.....	24,718 109,830
Total.....	117,013 237,046
Staves (all sizes).....	7,365 33,250
Mahogany (logs).....	6,916 64,878
Total of Hewn and Sawn.....	379,886 708,037

THREE MONTHS ENDED 31st MAR., 1884.

Timber (Hewn).	
Russia.....	6,021 15,690
Sweden and Norway.....	122,871 182,765
Germany.....	22,564 42,101
United States.....	24,767 104,843
British India.....	29,681 302,110
British North America.....	6,413 23,928
Other Countries.....	117,770 136,743
Total.....	321,017 890,924
Timber (Sawn or Split, Planed or Dressed).	
Russia.....	12,906 26,180
Sweden and Norway.....	117,023 270,848
British North America.....	29,541 44,740
Other Countries.....	67,034 218,323
Total.....	226,506 559,891
Staves (all sizes).....	17,645 87,322
Mahogany (logs).....	12,822 109,581
Total of Hewn and Sawn.....	589,323 1,368,625

The National Manufacturing Company.

The National Manufacturing Company of Ottawa, the enterprising makers of all classes of tents, camp furniture, and flags, are now busy filling an order for New South Wales, Australia, one of their foreign markets. They have carried off every gold and silver medal given for these lines of goods at the Dominion and industrial exhibitions wherever exhibited. And to dispell any doubts from the minds of readers as to the company's claim to the many awards of merit they mention, we quote part of a letter from J. H. Hill, Manager and Secretary of the Toronto Industrial Exhibition Association. He says:—"I beg to say that the highest awards made at the Industrial Exhibitions for the years 1881, 1882, and 1883, for tents, marquees and flags, were to the National Manufacturing Company, being a silver medal for each year. Last year, 1883, was the first in which a medal was specially offered for camp furniture and equipages, and it was awarded to the National Manufacturing Company."

The brilliant show of medals and awards held by them attests the reliability of their goods, and besides their large sales from Prince Edward Island to Br Columbia, they ship extensively to the United States, Great Britain and Australia.

THE Ottawa Free Press says that there are at present ten thousand pieces of square timber, belonging to the Messrs. Klock of Aylmer, in Papineau bay. Messrs. Grondin and Racicot, who have the contract of rafting this timber, began work yesterday.

WATER POWER TO LEASE.

THE UNDERSIGNED having largely extended their railway at Lakeside, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND
1400 LAKEFIELD, ONT. W1419

Canada Pine Limits FOR SALE.

A HALF INTEREST in three of the best White Pine Timber Limits on the Province of QUEBEC, near to Market, and estimated to contain 75,000,000 FEET White Pine (incipiently large and of superior quality, is offered to sale to a responsible party, who will be expected to assist in working the property, from which large profits can now be made. Price for the half interest \$35,000, one-third cash and the remainder in one and two years with interest at seven per cent. Principals only will address for particulars, Box 2031, Montreal, Canada.

FOR SALE. SAW MILL, STOCK and Limits, Situated at Tobermory, Co. Bruce

Stock on hand, Three Hundred and Fifty Thousand Feet Dry Lumber, Eight Hundred Thousand Pine and Cedar Shingles, Four Hundred Cord Wood, Ten Thousand Five Hundred Pieces Paving, Two Thousand Two, Four Hundred and Forty-five Thousand Feet Pine in the Log, Cedar Timber for 750,000 Shingles. Saw Mill Capacity 20,000 feet per day. Docks, Buildings, Horses, Wagons, Sleighs, Supplies, &c. Eighteen Hundred Acres Land, timbered with Pine, Oak, Cedar, Black Birch, Basswood and Maple, enough to run the Mill ten years. Everything in first-class order and new. The whole amounts to \$16,500, figured at cost. The Property will be sold at a Bargain. For further particulars apply to

MAITLAND & RIXON, Owen Sound, 616 Or S. O. KANADY & CO., Toronto.

WANTED AGENTS to sell TUNISON'S NEW AND SUPERIOR CANADA MAPS & CHARTS

As paying as any agency in the world. For particulars, full and free, address H. G. TUNISON, 388 Richmond St. LONDON, ONT.



NOTICE.

SEALLED TENDERS addressed to the undersigned, and endorsed "Tender for Indian Supplies," will be received at this office up to noon of THURSDAY, 1st MAY, 1884, for the delivery of the usual Indian Supplies, duty paid, in Manitoba and the North-West Territories, consisting of Flour, Bacon, Groceries, Ammunition, Twine, Oxen, Cows, Hulls, Agricultural Implements, Tools, &c.
Forms of Tender, and full particulars relative to the Supplies can be had by applying to the undersigned, or to the Commissioner of Indian Affairs at Regina, or to the Indian Office Winnipeg.
Parties may tender for each description of goods separately or for all the goods called for in the Schedule.
Each tender must be accompanied by an accepted Cheque of a Canadian Bank, for at least five per cent. of the amount of the tenders for Manitoba, and ten per cent. of the amount of the tenders for the North-West Territories, which will be forfeited if the party tendering declines to enter into a contract when called upon to do so, or if he fails to complete the work contracted for. If the tender be not accepted the cheque will be returned.
Tenders are required to make up and attach to their tender the total money value of the goods they offer to supply, or their tender will not be entertained.
The Tender for Beef must be a separate tender; if it includes any other article it will not be considered. The lowest or any tender not necessarily accepted. (No newspaper to insert without special authority from this Department through the Queen's Printer.)
L. VANCOUGHNET,
Deputy of the Superintendent General of Indian Affairs.
DEPARTMENT OF INDIAN AFFAIRS,
OTTAWA, 11th March, 1884.

AGENTS wanted for The Lives of All the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The best selling book in America, immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. R. ARR Book Co., Portland Maine.

FORESTRY.

At the winter meeting of the Fruit Growers' Association of Ontario, Mr. John Knowlson, of Lindsay, as follows:—

On the lines of horticulture and agriculture in this Canada of ours, I am impressed with the idea that there are three subjects worthy the special attention of philanthropists and all well-wishers of our country's progress, financially and socially: Forestry, Sorghum, and Grape Culture. Numerous have been the pleadings in our agricultural and horticultural journals for forest tree planting; yet how little has hitherto been accomplished. However, let us still hope that farmers and others will be aroused to its necessity. No people have more reason than we Canadians to value and admire the "goodliness of trees;" and yet in no country are they more rudely assailed as the enemies of civilization, and objects of extermination, by the ruthless and consuming fire. Such semi-barbarism is discreditable to our national life, our common sense, and our foresight; the matters of less moment.

Even to confine our view to the environs of our country towns, with very few exceptions, one of the most forbidding and desolate features about them is the mark of this yearly devastation of forest trees, for which there is no necessity. Whereas, if properly ornamented with trees—some standing alone, some in groups—would be exceedingly attractive; and a park with convenient drives and by walks for pedestrians, would be likely to draw summer residents, whose money would contribute to the permanent enrichment of its community.

An essential part of the proper treatment of all wood lots is *thinning*. Farmers who cut all the wood from a lot, regardless of size or quality whether for use or for sale, are managing as ill as can be imagined. They might thin in such a way as to get a large yearly profit, and get more for the remaining wood than for all they now cut off at once.

Although, as I have remarked, so little has been done in the way of planting forest trees, let us hope that, through the continued labors of the Ontario Fruit Growers' Association, and the influence of the public press, that the day is not far distant when forest culture will become popular.

The boundless area of suitable lands in this country, the admirable adaptation of its soil and climate to the growth of magnificent trees, I trust, will lead to the diffusion of capital and labour in this department, and that it may soon become a favorite pursuit. In no other way can farmers so cheaply embellish their farms and add to their attractiveness and value, as by improving their woods groves and forests, and planting all the choice varieties of native trees or any spare ground not needed for cultivation. So numerous are the varieties of our deciduous trees that we can have but little difficulty in making a selection. There is the elm, the red and white oak, the maple, the black walnut, the ash, the hickory, the black and white birch, the linden (basswood), the butternut, chestnut, larch, etc. And to give greater beauty to these plantations, should be interspersed here and there irregular groups of different varieties, including an occasional evergreen, of which we have many indigenous species; the white and red pine, the spruce, white and red cedar, and what is justly termed the king of evergreens the graceful hemlock.

In the planting of groups it is well first to study the outlines of all the best natural groups to be found, taking careful notice of the way in which the varieties are combined how near the trees are to each other; how often nature has planted them close together; how often within a few feet of each other; how often at the distance of twenty or thirty feet. Although a group thus imitated would not show much beauty in its incipency, yet it will become more beautiful and picturesque, more and more like nature every succeeding year, and will give delight to everyone who can appreciate nature herself.

However liberally we may introduce foreign trees let us retain a large number of our own. The many uses to which trees contribute prove their great value; for buildings, for fences, for various agricultural implements, for carriages, for ship and boat building, for furniture, for

staves, for casks, for fuel, and a thousand other uses for which they are invaluable. Besides, without trees, the world would become a desert; with them it might be made a paradise. They temper the heat and cold, prevent the injurious dryness of the atmosphere, and greatly promote the fall of genial showers and seasonable rains in spring, summer and autumn. In almost every county of Ontario it is easy to find lands covered with wood of a second growth, which, within the memory of the present generation, have been cultivated for farm crops, till they were worn out—that is, so drained of those constituents which plants derive from the earth that no other crop could be got from them that would pay the cost of cultivation. These lands, upon being abandoned by man, soon began to grow up in wood; and in ten or twelve years the fields were covered; and in forty a fair yield of wood got from them. The wood again being cut and the land ploughed and cultivated, good crops can again be had from them for some years. Air and water were the principal fertilizers that sustained their growth, but their leaves shed from year to year had fertilized the soil very much. It occurs to me that very few of those who are desirous to plant out forest trees need be put to the necessity of raising them from seed, for in every section of Canada tracts are to be found where young trees of all sizes, suitable for transplanting are to be had for the labor of digging; and it should be borne in mind that in digging up trees some skill is required. Some have long tap roots that penetrate the ground deeply, while others spread widely near the surface. These different characters require different modes of proceeding; the roots should be taken out of the ground without the slightest bruise or mutilation, if possible, thus the necessity of curtailing the tops would be obviated. The less the roots are exposed to the air between the time they are taken out of the ground and the time they are planted the better. This should never be forgotten. If roots are of any value it can only be when they are sound and fresh. In less than fifty years hence the requiem of the stately pine, the oak, and the elm will have been sung; but their stateliness and their value will be recorded as a thing of the past; do we not already regret the wholesale recklessness which has been employed for their destruction by the grasping hands of avarice.

This scarcity in the older settlements is now felt as a severe loss; but the next generation will in all probability have to deplore their absence as a loss of still greater magnitude.

Plantations of a tree called the *Catalpa speciosa* are now being made on an extensive scale in many parts of the United States. It appears to be a native of the Mississippi valley. It appears to be hardy, and is represented as being a rapid grower and remarkably durable. I procured ten of those three years ago, and planted on a dry, gravelly soil, which I am led to believe was not the sort best adapted to their growth, although they are said to succeed in all descriptions of soil. The stems were about three-fourth of an inch in diameter and six or seven feet in length. From the fine growth they made and the healthy appearance they showed after two years planted, I was induced last spring to plant 100 more, which I did upon less than an acre, on soil similar to the first. Every one grow and looked healthy the past fall. I intend planting another hundred or more on the same plot next spring, together with a few of our native forest trees interspersed.

At the winter meeting of the same association, held in the Council Chamber, City Hall, Toronto, on the 31st January, and 1st of February, 1883, the meeting took up three items on the programme, and discussed them together, viz:—"The best method of awakening a general interest in Practical Forestry," "The best varieties of Forest Trees to plant for ornament and for profit," and "How can we induce farmers to Plant Trees along the Roadside?"

Mr. GOTT.—This is a subject that is growing in interest from year to year. I will confine myself to the question, what varieties of forest trees are best for general planting; and the first variety I might mention is maple. I believe that the trees of that variety command

the respect of not only Canadians, but of all people among whom they are known. Our Sugar Maple is one of the most beautiful trees that can be produced in any country. It is a tree that has so many uses and so much ornament about it that wherever we see it we have infused into our minds a genuine love for our country. The soft maple is also a very beautiful tree. It grows very symmetrical, is very ornamental where it is cultivated for ornamental purposes, and in every way fills the expectations of the planter. The American Elm is, I think, one of the most graceful trees that we can have planted on our streets, simply on account of its pendulous habit of branching. The basswood is also a very beautiful tree for ornamental planting; and I often think that if would take our basswood tree and our tulip tree, and bestow upon them the same attention that we sometimes do on exotics, they would repay us better for it. The basswood tree is said to be one of the best honey-producing trees in the country. The tulip tree is also a very handsome tree. It is a tree that will reward any amount of care and attention. It grows very symmetrical; the leaf is very large and showy, and in every way the tree is ornamental and beautiful, but more especially so when it shows its beautiful blossoms. The man who sees it once and learns that it is a native tree will certainly be inspired with a deeper love for the country. The nut trees are very valuable, the chestnut, the white walnut and the black walnut. Amongst our evergreens the Canada balsam is one of the finest and most beautiful. It would be almost impossible to import a tree that would surpass it in beauty. Our pines are also very interesting. We have several of them in our country. If they are taken early and planted in our lanes, they soon assume fine proportions, and become very ornamental trees. The black spruce, taken and cared for, I think fully equal, if not superior to the Norway spruce, of Europe. I saw a specimen of this tree on the ground of Mr. Arnold last winter, which struck me at once in a manner which I shall never forget. These are the principal forest trees that I think are interesting to us.

Mr. REASON.—I have a large number of bass woods in my grounds, and I prize them higher than any deciduous trees I have growing, although I have several varieties. The chestnut and the two kinds of walnut the gentleman recommends, will not grow at all in the locality in which I reside (in the centre of Victoria county), although that is one of the best agricultural districts in the Province. I believe a few black walnuts, in sheltered positions, have been brought to maturity; but no chestnuts will grow. I entirely dissent from what Mr. Gott says with regard to the Canada balsam. I think it is the most worthless of all the evergreens the most unsatisfactory, the shortest lived. That has been my experience of it, and I live in a county in which it flourishes naturally. When we come to plant it as an ornamental tree it takes sick and dies just as it has got to such a height that it is beginning to be interesting.

Mr. GOTT.—There must be something wrong in the environment.

Mr. REASON.—I am sorry Mr. Gott did not make mention of two trees I admire very much, the white pine and especially the Norway pine. I think the Norway pine is one of the most beautiful that can be planted.

Mr. LESLIE.—That Norway pine is what is known as the red pine.

Mr. SIGHT.—The remark that the previous speaker has made about the Canada balsam fully expressed my experience. I have no doubt that in some parts of Canada it succeeds very well, but in the northern country it does not. I have noticed that just as soon as the trees around it have been thinned out by persons desiring to preserve it, and just when it has attained a fine symmetrical growth and a good size, it begins to decay. From what I have gathered as to the easiness of transplanting and the success which attends it in growing, I have come to the conclusion, that the best native evergreen we have is the white spruce. It is a perfectly healthy tree. I have never yet known a white spruce to show any signs of decay from age, where it has had anything like fair play. Its wood is one of our most valuable timbers for

certain classes of work; in boat building especially it is invaluable. From what I know of it I would recommend it as the best tree to plant by roadsides. A timber which I see the architects are seeking after very much is the butternut; and in the northern part of the country the tree succeeds very well.

THE PRESIDENT.—Mr. Gott mentioned the butternut under the name of the white walnut.

Mr. ARNOLD.—I have to endorse the sentiment of this gentleman with regard to our Canadian Balsam. It is a beautiful tree in its native swamp, and if we could transplant it into a native swamp again, or to some place where it would have a spring about it to keep it moist, it would stand; but if we attempt to transplant it to high ground, just as soon as it gets to be about ten or fifteen feet high, just when it begins to become beautiful, it begins to die. I hope we shall not get the black spruce and white spruce mixed. I find that there is a great deal of confusion in regard to those two spruces. I have them both, but really I do not know which is the black and which is the white. The spruce that Mr. Gott alluded to as growing upon my place I believe to be the black spruce, but I am not positive. The black spruce, if that is what I have, spreads out more at the bottom than the white, and I would consider that it has a blue shade to it. It is one of the prettiest trees we have, either native or foreign. I have challenged the whole county, and I might almost go further and challenge the whole province, to produce as fine a tree as my black spruce, that I got out of a swamp. The Magnolia is perfectly hardy, and the old Austrian pine is one of the finest trees in the country. I feel like planting walnuts all over my place, and I think if I had a hundred acre farm I would plant them in every fence corner—not for their beauty, but because they would pay. The basswood succeeds well in our section. The walnut does well throughout the greater part of the country.

Mr. ROY.—I can confirm what Mr. Arnold says about the white spruce, and the Austrian, and the Norway spruce. I have both Norway and black spruce upon my place, and when they have room to grow and begin to grow from the ground, I find that the black spruce is the more ornamental of the two. One fault that the Norway spruce has, is, that it goes away up too high and then gets bare at the top; but the black spruce always remains a beautiful tree, and, as Mr. Arnold says, has a blue tinge. The Austrian pine is one of the most beautiful of trees until it gets old. As to the balsam, I find what Mr. Arnold speaks of; after you have had it removed three or four years you will find a branch here and there through the tree dead; but when it is young it is a very beautiful tree. I think every farmer ought to plant the black walnut and the white walnut. The black walnut is not only a very beautiful tree, but it is going to be a very valuable tree. I do not know but what you will get from \$30.00 to \$100.00 a thousand feet for black walnut now. Our country is being denuded of it. The ash is also a valuable tree; it is now brought greatly into use in making railway cars and various other things.

Mr. ARNOLD.—Americans have come over from Michigan and paid as high as \$6.00 to \$8.00 a stump for old walnut stumps along the Grand River; and they have taken them over to Michigan and made them into furniture, which they have brought back to us and sent to Europe.

Mr. ROY.—I planted about fifteen or eighteen walnut trees some nine or ten years ago—the nuts; and before I came away I went out to get the size of them, and they measured eight or 10 inches in diameter.

A MEMBER.—What is the difference in the growth of black spruce and the Norway spruce, the same time planted?

Mr. ROY.—I suppose they will remain at about the same altitude until they get to be about twelve or fifteen years old, and then the Norway spruce will begin to grow past the other.

Mr. A. M. SMITH.—There is one tree of considerable importance in our section that has not been mentioned yet, that is, the common poplar. Our pulp mills in the vicinity of St

Catherines are paying from \$7.00 to \$8.00 a cord for this wood for the purpose of manufacturing pulp for paper out of it, and it is a tree that I think will grow in any part of the province, and very rapidly too. I think our common white cedar has not been mentioned either. For a shelter belt or ornamental hedge oven, it is not surpassed by any of our native trees. My experience in regard to balsam is very similar to that of the others who have spoken of it. It is a good deal like some of the human species; it is very promising when young, but as it grows up it sometimes goes to the bad for want of water.

Mr. BRUCE.—I think the best way we can interest the farmers in practical forestry is by showing them that there is money in it. There appears to be a general opinion abroad that the black walnut will not grow except in certain favored regions; but anybody who has read Mr. Joly's very able paper on forestry, will see that he is very successful in growing it below Quebec; and if it will grow below Quebec, it will certainly grow in any part of Ontario.

Mr. WRIGHT.—Mr. Joly's residence is between Montreal and Quebec, at Lotbiniere.

Mr. BRUCE.—Well, below Montreal at any rate; and if they grow below Montreal they ought to grow in any place in Ontario. Owing to the scarcity of the black walnut, the butter-nut is now being used for it, stained and varnished, and it looks so much like black walnut when it is made up that you can hardly tell the difference.

Mr. ROR.—Have you seen the black walnut growing in Ottawa?

Mr. BRUCE.—I have specimens growing at my place that are three years old. The tulip is a very handsome tree. The Georgetown mills on the Grand Trunk use half basswood and half rag for pulp for paper. I am told the basswood is running short; it is a very free-growing tree and can be easily cultivated, and where paper works are established I am sure it would pay the farmers to go in and cultivate it, especially on any broken ground they may happen to have; it is worth about \$4.00 or \$5.00 a cord at paper works. The main difficulty in the way of planting trees along the roadside, is the unfortunate fashion they have here of allowing cattle to run at large. I do not see how you can very well protect trees along the roadside as long as cattle run at large. There ought to be some act of the legislature, if there is not one at present, to restrain cattle. (To be Continued.)

GREAT EXHIBITION OF TEXTILE FABRICS AND MACHINERY.

On August 4th of the present year there is to be opened in the Agricultural Hall, London, an exhibition that will include everything connected with the production and manufacture of all kinds of textile fabrics, whether used as clothing or furniture, will comprise every novelty in machinery, tools, and appliances used in the textile trades, and also manufactured goods, both in the piece and made up for use or wear. All the processes incidental to spinning, weaving, etc., will be shown in operation, from the raw material to the finished manufactured article. Emmott & Co., of the Textile Manufacturer, Manchester, England, have been associated officially with the management and the exhibition will be devoted entirely to textile fabrics and the machinery on which they are made, the selection of those gentlemen is certainly a good one. The exhibition will open August 4, and close September 20, 1884.

The Duty on Lumber.

Many Americans want the duty to be thrown off Canadian lumber going there. Ex-Governor English of Connecticut who is reported to be worth \$5,000,000 has been largely interested in the lumber business for many years. He was asked if he favored the placing of lumber on the free list. "Most assuredly I do," was his reply. "Maine is stripped of all but her coarse lumber, and New York state is denuded of its hardwood supply. Michigan is the only state from which we can obtain a supply of building woods. The South has the woods, to be sure. In Arkansas, notably, there is a great supply, but it costs more to get it up here than it would to get it from Canada. Our policy of protecting

In this instance has worked to the destruction of our great forests. The country suffers materially in consequence. Unless lumber is put on the free list what few woods we have left will be sacrificed, and then we shall be at the mercy of the Canadians. It is but the part of wisdom to put lumber on the free list."—Ottawa Free Press.

Dwarf Trees.

The dwarf trees of China are curiosities of forestry. Every child knows how the Chinese cramp their women's feet by bandaging them when they are infants, and thus render it impossible for them to walk. It is, however, wonderful to see miniature oaks, chestnuts, pines and cedars growing in flower pots, 50 years old and yet not a foot high. To do this take a young plant, cut off a tap root, and place it in a basin in which there is good soil kept well watered. If it grows too rapidly, dig down and shorten in several roots. Every year the leaves grow smaller, and the little dwarf trees make interesting pots.

The British Canadian Lumber Company.

The Chancellor gave judgment on Wednesday April 9th upon the petition of Bates to wind up the British Canadian Lumber Company. He held that the company is not insolvent within the meaning of the Winding Up Act, and therefore refused the order. He found it unnecessary to consider the question of the jurisdiction of the Court over a foreign corporation doing business here, coming to the conclusion that he did upon the merits.

AN Ottawa correspondent says that Mr. J. R. Booth, a lumberman of that city, is building a railway between Lake Nipissing and Lake Noyabonsing. The railway will be five miles long, and is to cost about \$100,000. It is to be used to carry timber.

THE Middlesex Mechanics' Association, of Lowell, are considering the feasibility of holding a fair the last two weeks in September, and the board of government have been instructed to estimate the expense, obtain other information, and report the advisability of holding a fair, at a future meeting. The corporations of Lowell have offered to contribute \$2,800 toward the fair.

THE Muskegon News says:—Several of the mill docks have not a single foot of lumber remaining thereon unsold, and the owner thereof have disposed of considerable lumber yet in the log. These are facts which may not be ignored in the consideration of the business outlook, and they serve to inspire lumber manufacturers in this district with confidence as regards the prospective business for the season of 1884. The doubt and uncertainty which clouded the business outlook here during January and February have been succeeded by a more cheerful and buoyant spirit.

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.

A VALUABLE HINT.—Artizans, actors, sportsmen, mechanics and laboring men, in fact all who unduly exert muscular strength, are subject to painful contractions of the cords, stiff joints and lameness; to all such Hagar's Yellow Oil is a prompt relief and perfect cure.

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THE BABY'S PRAYER.

She knelt with her sweet hands folded,
Her fair little head bent low,
While dead vines tapped at the window
And the air was thick with snow.
Without, earth dawns with winter;
Within, hearts dumb with care;
And up through the golden silence
Rose softly the baby's prayer.

"Bless all whom I love, dear Father,
And help me to be good," she said;
Then stirred by a sudden fancy,
She lifted the shining head.
Did she catch on the frozen maple
Some hint of the maple green,
Or the breath of the woodland blossoms,
The drifts of the snow between?

"The beautiful trees," she whispered,
"Where the orioles used to sing,
They are tired of the cold, white winter,
Oh, help them to grow in spring;
And the flowers that I love to gather,
Lord, bring them again to May;
The dear little violets, sleeping
Down deep in the ground to-day."

Ah, earth may be chill with snowflakes
And hearts may be cold with care,
But wastes of a frozen silence
Are crossed by the baby's prayer;
And lips that were dumb with sorrow
In jubilant hope may sing,
For when earth is wrapt in winter
In the heart of the Lord 'tis spring.

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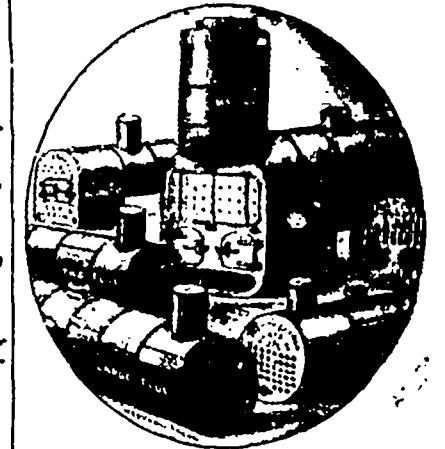
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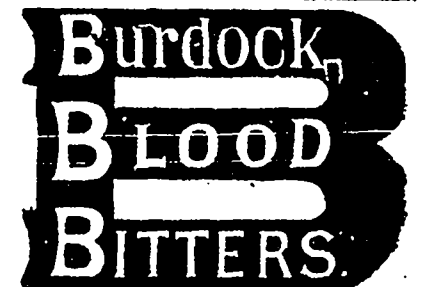
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Market Reports.

TORONTO.

From Our Own Correspondent

APRIL 24.—The retail yards continue to do a good thriving trade, more especially those situated at the west end of the city. Dealers at the east end say that they could do with more business and not feel over-taxed. This is generally the case to a greater or less extent; towns as well as empires progress toward the setting sun, and this city is no exception to that rule. Two new wards have lately been added, one at the east end and one at the west, and the municipality of Parkdale, a large western suburb, will be embraced ere long, and that portion of the city which has been considered as the western end will become the centre.

No shipments have been made over our docks as yet, but the dulness has been in some measure relieved by the loading of timber vessels for Collins Bay. This is a new departure from established methods, all timber for the Quebec market having heretofore been rafted and towed down the lake, but by the present means this timber will arrive in Quebec fully one month earlier, as our lake is never safe for towing timber before the first of June.

The timber now loading is a fine lot of rock elm and ash owned chiefly by Burton Bros., of Barrie, and was brought over the G. T. and C. V. railroads. Donkey engines are used on the decks of the vessels for the purpose of loading, the timber being taken into the hold of the vessel through port holes in the stern, so that the process of loading is rapid.

The quantity of sawn lumber coming in by the N. & N. W. R. R. is about 35 cars per day, which is small considering that navigation may be said to be fairly open, so far as this port and that of Oswego is concerned, but at the opening of next month we may fairly assume that lumber will move more freely.

Retail prices remain as quoted you in my last letter, with an active demand for long bill stuff and 1 1/2 in. plank from good dressing to picks, the latter being exceedingly scarce. Laths are in good demand with only a limited supply. Mill cull boards, unless well inspected, are a drug on the market. A low grade of culls that would have sold readily on this market two years ago cannot be sold at any price now, the same remarks apply to cull 2x4 and plank.

Table listing various lumber items and their prices, including Mill cull boards, Shipping cull boards, Scantling and joist, and various types of flooring and sheathing.

MONTREAL.

From Our Own Correspondent.

APRIL 23.—Business for the spring season can hardly be said to have opened up yet, but there is a marked improvement since the date of our last report, and as soon as the canals are opened for navigation prospects are good for the lumber trade. The new lumber basin in the canal is pushed forward and the contractor is going to work both day and night as the contract calls for completion next fall. In the far west lumber business is looking very fair, and after navigation opens in the Lake Superior region a good demand is expected. In Ottawa dimension timber men are waiting anxiously for the spring drive, as nearly all the timber they got out last season is used up, and it will be about the 15th of June before the new seasons cut arrives. The demand for deals in Quebec is very good

and prices satisfactory, but the square timber trade is likely to be very flat there this year.

We have no change to make on our price list, but considerable changes are looked for as soon as navigation is fairly open.

Table listing various lumber items and their prices, including Pine, 1st quality, Pine, 2nd, Pine, shipping culls, etc.

CORNWOOD.

Dealers who have been in the Cornwall region report a scarcity of dry wood, owing to the small output this season, and as a consequence prices there demanded are high. Stocks here are pretty low and boats are eagerly looked for next week. Prices here are firm at last quoted, viz., ex cartage at the railway station:

Table listing lumber items and prices for Cornwall, including Long Maple, Long Birch, Long Beech, and Tamarack.

WINNIPEG.

From a late issue of the Commercial we take the following report from the lumber trade in one of our northern cities. Sales during the week have been quite heavy, and are expected to continue so from this time forward. There is as yet no reliable scale that can be published, and quotations depend in a great measure upon the extent of the order to be filled, and the terms of payment, cash down being certain of bottom prices. The prices at which the city contracts for lumber will doubtless form a rock bottom basis. There is no word of the mills in the city starting up yet, but with the probability of the river opening in a few days, we should have them at work by the beginning of May.

Table listing various lumber items and their prices, including Pine lumber, Sheathing, Timber, Dimension and joists, Fencing, A. stock boards, B. stock boards, C. stock boards, D. stock boards, Window and door casings, Base boards, 1st pine flooring, 2nd do, 3rd do, 1/2 inch split siding, Spruce lumber, Dimension and joists, Boards, 1st flooring, XX shingles, Star A shingles, X shingles, Lath.

LATER.

Later despatches tell us that some heavy contracts are at present in the market in lumber, and sales during the month are expected to be quite heavy. There has been considerable of a movement during the week, but the real rush of the season has not yet been entered into. There can be no doubt but that business looks much more promising than it did a year ago, but there is no reason to believe that dealers will get anything like the prices with which 1883 opened, and the fact that a large proportion of the season's sales will be large contracts will help to hold prices down. Still, the outlook is much healthier than it was a year ago. Prices cannot yet be quoted, and quotations will probably be of a shifting character during the whole summer. The opening of navigation will doubtless bring matters more to a focus, and reliable quotations will then be obtainable.

OTTAWA.

From Our Own Correspondent.

APRIL 23.—Monday next will see all the saw mills in this district in full operation. The

date of the commencement is about two weeks earlier than for some years past. A lively season is anticipated, and night and day watches are to be put at work immediately. The demand in the American market at present is very good, but no advance in prices has taken place. The yards herabouts have been pretty well run down, owing to the extensive quantity shipped by rail during the winter. Sherman, Hurdman & Lord's mill was the first to run this season. It commenced to run on Wednesday of this week. E. B. Eddy's splendid new mill will begin on Monday. Mr. Eddy, a few weeks ago, purchased at auction Skead's Nepean saw mill, said to be the best equipped mill in Eastern Ontario. There was a very large attendance at the sale, but bidding was very dull, only a few offers being made. The property was sold by the Merchants Bank. The price paid was \$40,000, not half what it was worth. The mill will not be run this season.

Navigation opened a few days ago. A few of the Chaudiere firms are loading their barges. The first tow of the season will leave with three million feet of lumber on Wednesday. This tow belongs to J. R. Booth, who commenced loading the earliest this season. Perley & Patten are also loading a number of their barges. Freight rates will be about ten per cent. less than last year. From here to Albany the rate per thousand feet will open at \$3.25; and to New York \$3.50. Canadian freights will also be slightly lower than last year. Messrs. Murphy & Co. have purchased the fleets of Messrs. Perley & Patten and J. R. Booth. This firm has in all thirty-five barges and five steamers. Boatmen anticipate a brisk season. The Rideau Canal will open on the first of May, and the Grenville Canal will be opened on Monday next, earlier than it has been for the past ten years. The Lachine canal opens on the 4th of May.

The work of preparing the Chaudiere timber slides has about been finished. A raft belonging to McLaughlin Bros., of Arnprior, will be run over in a week or so. This is an unusually early period for timber to be brought over.

The electric light has now been introduced into all the mills here except one—Sherman Hurdman & Lord's. Perley & Patten and J. R. Booth have adopted the Thompson & Houston light, and each firm has 20 lamps. Young & Gordon and Bronson & Weston have adopted the United States Electric Lighting Co.'s light. The first mentioned firm have ten lamps and the latter 20. E. B. Eddy uses the Brush light and has 40 lamps.

PERSONAL.

General Lord, of Sherman, Hurdman & Lord, returned a few days ago from Bermuda, where he had been recuperating during the past winter. He has recovered considerably.

BOSTON.

Cotton, Wool and Iron of April 19, says:—The general market continues pretty quiet, although improving with the milder and more settled weather. An enlarged and active business is to be reasonably expected shortly.

Orders for spruce lumber are coming in liberally, and the mills are having all they can do. It is claimed that there is quite a possibility of prices going up by and by. White pine shows a little more inquiry, with prices steady. Southern pine is moving in small lots at low and unimproved prices. The market for hardwoods is steadily improving, with prices rather strengthening than otherwise on desirable grades. Walnut holds its own, and is in steady demand. The trade for ash improving with prices firmer, and same is true of whitewood. Oak continues to move slowly. Cherry finds a good market for the better grades.

CANADA PINE.

Table listing various lumber items and their prices, including Selects, Dressed, Shavings, Dressed, 1st, Dressed, 2nd, Dressed Shippers, Dressed Box, Shingles, 1st quality, and Shingles, 2nd.

CHICAGO.

The Northwestern Lumberman of April 19th says:—The port list, as published in the daily press, shows that 72 cargoes of lumber and shingles have arrived here during the past week, but the majority of them have gone direct

the yard docks. Most of the lumber now coming is dry stuff from the cross piles at the mill points on the east side of Lake Michigan, and has been bought over there and shipped by the purchasers, or for them. Thus it cuts no figure with the regular cargo market, but transactions in it do have some influence on prevailing values.

The market season has not yet fairly opened, nor is it likely to till about May 1. It may be surprising to some to learn that there is more lumber arriving now than there was last year at this date, but such is the fact. In April, 1883, during the week ended April 15, but four or five cargoes had been sold on the market; this week more than that number have changed hands, either directly at the docks or to arrive, while the port list shows a greater activity than last season of shipment directly to the yard docks. Yet there is a reported apathy, both among shippers and purchasers, and certain it is that few of the yard merchants are seen on the docks.

Receipts of lumber, shingles, etc., for the week ending April 7, as reported by the Lumberman's Exchange:—

Table showing receipts of lumber and shingles for 1884 and 1883, including stock on hand for April 1st, 1884 and 1883.

ALBANY.

Quotations at the yards are as follows:—

Table listing various lumber items and their prices, including Pine, clear, Pine, fourths, Pine, selects, Pine, good box, Pine, 10-in. plank, etc.

OSWEGO, N. Y.

From Our Own Correspondent.

No change in prices; trade has improved since our last report. It is the general feeling among dealers that prices on common grades will decline after navigation is fairly open, as the stocks in all directions sum very large. The assortment here is very much broken, but there is a full stock on hand.

Table listing various lumber items and their prices, including Three uppers, Pickings, Pine, common, Common, Culls, Mill run lots, Slings, selected, 1 inch, Mill run, 1x10, 12 inch, Shippers, Strips, 1 and 1 1/2 inch mill run, 1x8 selected for clapboards, Shingles, XXX, 18 inch, pine, XXX, 18 inch, cedar, XX pine shingles, and Lath.

BUFFALO.

We quote cargo lots:—

Uppers.....	\$45 00@48 00
Common.....	18 00@22 00
Culls.....	13 00@16 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers.....	\$45 00@48 00
Common.....	18 00@24 00
Culls.....	12 00@14 00

GLASGOW.

From the *Timber Trades Journal* of April 12 we take the following:—A comparative statement of stocks as at 31st of March, 1883, 1884, and 1884, is appended. The consumption during the past quarter of the various descriptions of Quebec log timber specified amounts to about 15,500 loads, showing a slight falling off compared with corresponding period last year. Of Pensacola Pitch pine logs (hewn and sawn) the quarter's consumption has been about 8,600 loads, being an increase of 800 loads over last year. The consumption of Quebec deals (pine and spruce) for the quarter has been 3,660 St. Petersburg standards, and of lower port deals about 1,500 standards. Following are the particulars of the stock of deals on hand at 31st of March last:—

	Pieces.
Quebec 1st yellow pine.....	39,822
" 2nd	10,211
" 3rd	133,321
" 4th	47,693
" red pine.....	31,958
" spruce	58,612
Lower port spruce deals.....	117,566
" pine deals.....	78,662

For the past week the imports to note have been two cargoes of pitch pine logs and planks, and parcels of walnut, poplar, &c., per steam liners from New York, also a cargo of Mexican mahogany, consigned to Messrs. Wm. Connell & Co.

The first of the timber fleet sailed from Greenock for the St. Lawrence on Friday last. Some vessels have been taken up so low as 21s Quebec to Clyde.

NOTE OF THE LEADING WOOD GOODS ON HAND AT CLYDE PORTS 31ST MARCH, 1882, 1883, AND 1884.

	Loads (10 c. ft.)		
	1882.	1883.	1884.
Quebec waney boardwood.....	14,634	9,578	11,844
" yellow pine timber.....	24,029	9,830	16,981
" red pine.....	5,833	3,716	5,311
" oak.....	8,792	5,806	4,250
" elm.....	1,219	1,691	3,409
" ash.....	328	241	602
Birch, all sorts	402	17	364
Pensacola pitch pine, hewn.....	6,200	4,639	9,382
" " sawn.....	13,309	8,687	10,157
" " planks	1,177	342	1,659
Demerara greenheart.....	415	207	440
Quebec yellow pine deals.....	3,819	2,616	3,429
" red	551	123	191
" spruce deals.....	788	830	167
Lower port spruce deals.....	1,822	234	477
" pine	1,227	350	475

AUCTION SALE.

On 9th inst., at Glasgow Messrs. Singleton, Dunn, & Co., brokers (unreserved)—

Quebec 3rd spruce deals—	Percub. ft.
13 ft. 9x3	104.
10 1/2 " 8x3	9d.
10 1/2 " 8x3	8 1/2d.
7 1/2 " 7 1/2 x3	8 1/2d.
10 1/2 " 7x3	8 1/2d.
Quebec 4th spruce deals—	
12 & 13 ft. 11x3	9d.
12 " 9x3	8 1/2d. & 8 1/2d.
12 & 13 " 9x3	8 1/2d. & 8 1/2d.
12 1/2 " 7 1/2 x3	8 1/2d.
St. John, N. S., spruce deals—	
11, 12, 14, 15, & 19 ft. 11x3	9d. to 10 1/2d.
11 " 9x3	8 1/2d.
Mitauichi spruce deals—	
10 1/2 ft. 8x3	8 1/2d.
Hemlock deals—	
10, 20 ft. 7 1/2 x3	9d.
Pictou birch timber—	
14 1/2 & 15 in. av. square	1s. 6 1/2d.

TYNE.

The *Timber Trades Journal* of April 12, says: The arrivals of the past seven days consist mainly of pit props and mining timber, relieved only by two cargoes prepared floorings, which have come forward to the order of local merchants. In the latter goods there appear to be no stocks held at the present time, the local mills being apparently sufficient to manufacture all that is required. In trade generally there is no change to notice. Prices do not vary to any

appreciable extent, the demand being moderate. In pitwood the stocks held are very much too large, and prices are miserably low; in the face of all the quantity coming forward no improvement need be looked for. The only chance of a rise would be to allow all the props to remain in Norway and Sweden for another six months.

LONDON.

The *Timber Trades Journal* of April 12, says:—The close approach of the holidays will afford the trade an interval that will not be unwelcome at this crisis, while the inclination of the market is so undecided, while the absence of any sale next week ought to help prices, if they can be moved by anything.

There seems to be a tendency to speak of prices at the present time as exceptionally low, but this is a great mistake, and we have only to go back half a dozen years or so, and we shall find free-on-board values were 10s. to 20s. lower than they are at present, with freights much higher then than now.

The stocks of staves are full ones for the time of year, though not so large as they were last spring at this date. Baltic are heavier, Quebec and New York, on the contrary, are short, but the market for this kind of timber moves very sluggishly. A considerable demand for staves lies outside the regular cooper trade, but with the increasing importation of cabinet and fancy woods, many of these channels of consumption will be closed.

LIVERPOOL.

The *Timber Trades Journal* of April 12, says: The approaching holidays appear to have had some influence in quieting down business during the past week, so far as regards operations in ordinary timber transactions. Freights continue low, and although ship owners are reluctant to accept such offers as are made by charterers, there is apparently a disposition to accept low offers rather than allow available tonnage to lie idle. The deliveries for the past month have been good all round, though there have been exceptions in some articles, notably spruce deals, which have been unusually low.

There must be a restricted import of these goods if current prices are to be advanced, unless freights can be continually be obtained at the rates now quoted. This is a matter which depends upon the course of events, and upon which we cannot comment.

LIST OF PATENTS.

- The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, April 8, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:
- 296,496.—Hoop-pointing and lapping machine—F. L. Wilson, West Bay City, Mich.
 - 296,591.—Pavement wood—J. Kerr, London, England.
 - 296,562.—Planing-machine.—E. B. Hayes, Big Rapids, Mich.
 - 296,463.—Planing polygonal bodies, machine for—J. Plonkharp, Columbus, Ohio.
 - 296,471.—Saw filing machine, gin—F. M. Sisk, Newnan, Ga.
 - 296,418.—Saw frame, buck—T. Larouche, Watertown, New York.
 - 296,618.—Saw mill, gang—D. C. Prescott, Marinette, Wis.
 - 296,442.—Saw mill set works—R. R. Parsons, Jackson, Miss.
 - 296,360.—Saw shifting mechanism for gang-edgers—D. L. Stevens, Lyons, Iowa.
 - 296,334.—Sawing machine, circular—J. H. Jones, Lynchburg, Va.
 - 296,652.—Sawing machine, circular—J. Van Patton, East Tawas, Mich.
 - 296,693.—Sawing-machine, scroll—W. J. Hull and W. E. Varney, Alexandria, Dakota, and Daytonville, Iowa.
 - 10,467.—Sawing machines, feed mechanism for circular—(Reissue) J. H. Hermance, Toledo, Ohio, assignor to R. S. & R. L. Greenlee, Chicago, Ill.
 - 296,525.—Shingle-sawing machine—J. & J. W. Challoner, Omro, Wis.
- PATENTS ISSUED APRIL 15.**
- 296,873.—Auger handle—D. M. Parry, Rushville, Ind.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on April 1st, 1883 and 1884, and also the Consumption for the month of Mar. 1883 and 1884:—

	Stock, April 1st, 1883.	Stock, April 1st, 1884.	Consumption for the month of April, 1883.	Consumption for the month of April, 1884.
Quebec Square Pine.....	161,000 ft.	364,000 ft.	65,000 ft.	90,000 ft.
Waney Board.....	142,000 "	245,000 "	11,000 "	1,000 "
St. John Pine.....	18,000 "	32,000 "	4,000 "	8,000 "
Other Ports Pine.....	42,000 "	48,000 "	14,000 "	2,000 "
Red Pine.....	41,000 "	48,000 "	14,000 "	2,000 "
Pitch Pine, hewn.....	845,000 "	230,000 "	64,000 "	139,000 "
" Sawm.....	450,000 "	630,000 "	62,000 "	184,000 "
Planks.....	60,000 "	68,000 "	11,000 "	30,000 "
Dantzo, &c., Fir.....	25,000 "	86,000 "	9,000 "	31,000 "
Sweden and Norway Fir.....	10,000 "	98,000 "	2,000 "	22,000 "
Oak, Canadian and American.....	201,000 "	27,000 "	29,000 "	20,000 "
" Planks.....	163,000 "	164,000 "	37,000 "	75,000 "
" Baltic.....	21,000 "	15,000 "	4,000 "	0,000 "
Elm.....	29,000 "	10,000 "	6,000 "	2,000 "
Ash.....	2,000 "	28,000 "	2,000 "	9,000 "
Birch.....	69,000 "	60,000 "	21,000 "	30,000 "
East India Teak.....	40,000 "	55,000 "	26,000 "	16,000 "
Greenheart.....	132,000 "	82,000 "	4,000 "	27,000 "
N. B. & N. S. Spruce Deals.....	12,614 stds.	16,217 stds.	3,044 stds.	1,870 stds.
" Pine.....	1,145 "	2,150 "	892 "	997 "
Quebec Pine & Spruce Deals.....	6,387 "	7,620 "	417 "	367 "
Baltic Red Deals, &c.....	3,687 "	4,272 "	21 "	— "
Baltic Boards.....	240 "	60 "	21 "	— "
" prepared Flooring.....	6,642 "	5,223 "	723 "	1,002 "

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the **LARGEST** and **BEST** assorted Stock of **OILS** in the Dominion, I am prepared to fill all orders **Promptly** and at **LOWEST MARKET PRICES.**

- 297,010.—Barrel shaping machine—J. M. Robinson, Brooklyn, N. Y.
- 297,013.—Boring square holes, tool for—M. Rothechild, Shamokin, Pa.
- 296,925.—Cellulose from wood, etc., manufacturing—C. F. Dahl, Dantzie, Prussia, Germany.
- 297,070.—Chuck, lathe—G. W. Davis, assignor of one-half to E. H. Noble, New Bedford, Mass.
- 296,785.—Plane—J. B. Ripson, Oakkosh, Wis.
- 296,933.—Plane, bench—N. E. Curtis, Mauston, Wis.
- 296,999.—Saw mill head block—D. Parkhurst, assignor of one-half to G. H. Knight, St. Louis, Mo.
- 296,982.—Scrow wood—J. B. L. w, assignor of three-fourths to G. H. & N. Seeley and J. H. Taylor, New York, N. Y.
- 296,929.—Stump extractor—A. S. Croxton, deceased, Cedar Springs, Mich., U. A. Croxton administrator.
- 197,026.—Stump extractor—W. Smith, Tomah, Wis.
- 296,918.—Stump puller—C. A. Blume, Union City, Ind.

- 297,366.—Saw, hand—C. A. Fenner, Mystic River, Conn.
- 297,125.—Saw handle—P. Fraizer, Mount Summit, Ind.
- 297,513.—Saw jointer and gauge—H. Flater, Finly, Ohio.
- 297,243.—Saw tab—J. E. Emerson, Beaver Falls, Pa.
- 297,242.—Saw tab plate—J. E. Emerson, Beaver Fall, Pa.
- 297,312.—Shaft bearing—H. Tabor, Watkins, N. Y.
- 297,163.—Shafting, coupling—A. Muir, Manchester, England.
- 297,282.—Vice, carpenter's—J. F. Miller, assignor of one-half to W. E. Hague, Pittsburg, Pa.

CREPIN, MURPHY & Co., of Montague, Mich., have sold the entire cut of their mill for this season to the Chicago Lumber Company. The transaction is reported to have involved about \$500,000.

AN UNPROTECTED FAMILY—Is one that has not that valuable remedy, Haysard's Yellow Oil in the house for accidents and emergencies. It cures colds, croup, sore throat, deafness, rheumatism, neuralgia, chilblains, burns, bruises and all painful injuries.

- PATENTS ISSUED APRIL 22.**
- 297,407.—Gear, driving—F. Jenkin, Edinburgh, Scotland.
 - 297,347.—Lubricator—H. R. A. Boys, Barrie, Ontario, Can.
 - 297,483.—Lumber rack—J. A. Aycock, Whitesburg, Ga.
 - 297,385.—Lumber trimming machine—E. Heyde, East Saginaw, Mich.
 - 297,403.—Moulding machine—J. W. Hudson, Wellington, Ill.
 - 297,231.—Saw drag—F. A. Crawshaw, Willshire, Ohio.

GOLD for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer to all who are not well satisfied we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortune will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address: **BROWN & Co., Augusta, Maine.**

MACHINERY.

STEAM ENGINES, STEAM PUMPS, STEAM BOILERS, SAW MILL MACHINERY, Of Every Description.

RUBBER BELTING,
LEATHER BELTING,
MILL SUPPLIES.

SHAFTING, HANGERS, PULLEYS, &c.

MACHINERY SUPPLY ASSOCIATION

Corner Bleury & Craig Streets, MONTREAL.

ROBIN & SADLER

Have been awarded Three Years in succession at the Provincial and Dominion Exhibitions in Montreal, First Prizes

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LEATHER BELTING

LEATHER BELTING

Fire-Engine
Hose, &c.

Send for Price Lists and Discounts to the Factory

594, 596, 598, St. Joseph Street,

MONTREAL.

HUGH GIBSON,

MANUFACTURER OF

KNIGHT'S PATENT "EXCELSIOR"

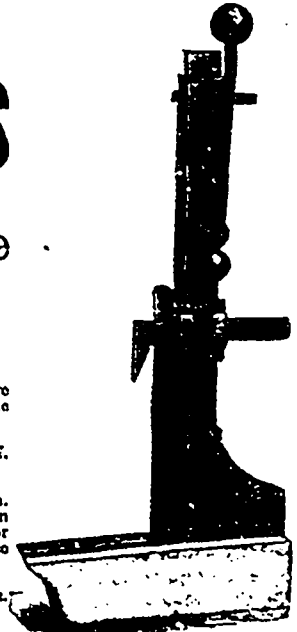
SAW MILL DOGS

The Sawyer's Favorite

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

MISSISSAUGA, June 7th, 1882.
HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.
Yours respectfully,
PETER McLAREN.

BERKELEY, April 29th, 1882.
HUGH GIBSON, SR.,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take \$20 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.
Yours truly,
GEO. S. BROWN, JR.



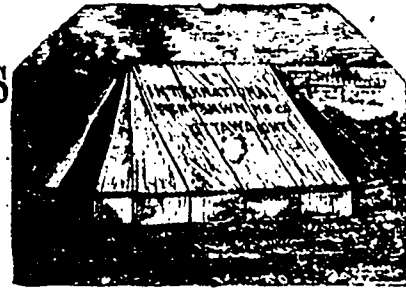
Manufactured by HUGH GIBSON, OHATHAM. EXCELSIOR DOG.

THE INTERNATIONAL TENT & AWNING CO.

184 Sparks Street, Ottawa.

MANUFACTURERS OF

32
First Prizes
AND
6
MEDALS



AT
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TORONTO,
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LUMBERMEN'S TENTS

The Cheapest and Best in the Market!

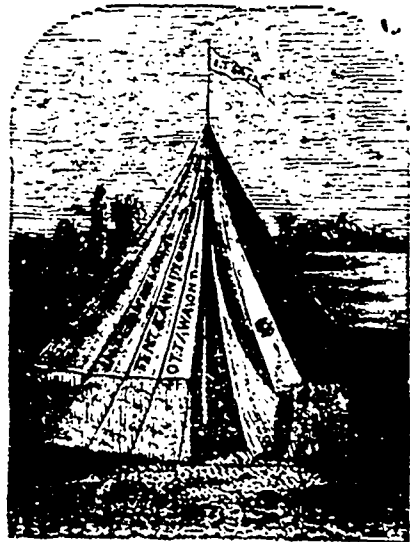
Tents, Flags, Tarpaulins, Waterproof Goods, Camp Furniture, etc., etc.

Estimates for Circus Tents, Range Marquees, Hand-made Sails, etc., furnished on application. Liberal Discount to Large Buyers.

PORTABLE CANVAS BOATS MADE TO ORDER

SEE OUR NOVELTIES

Camp Furniture!



PRICE LIST!

Send for CATALOGUE

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

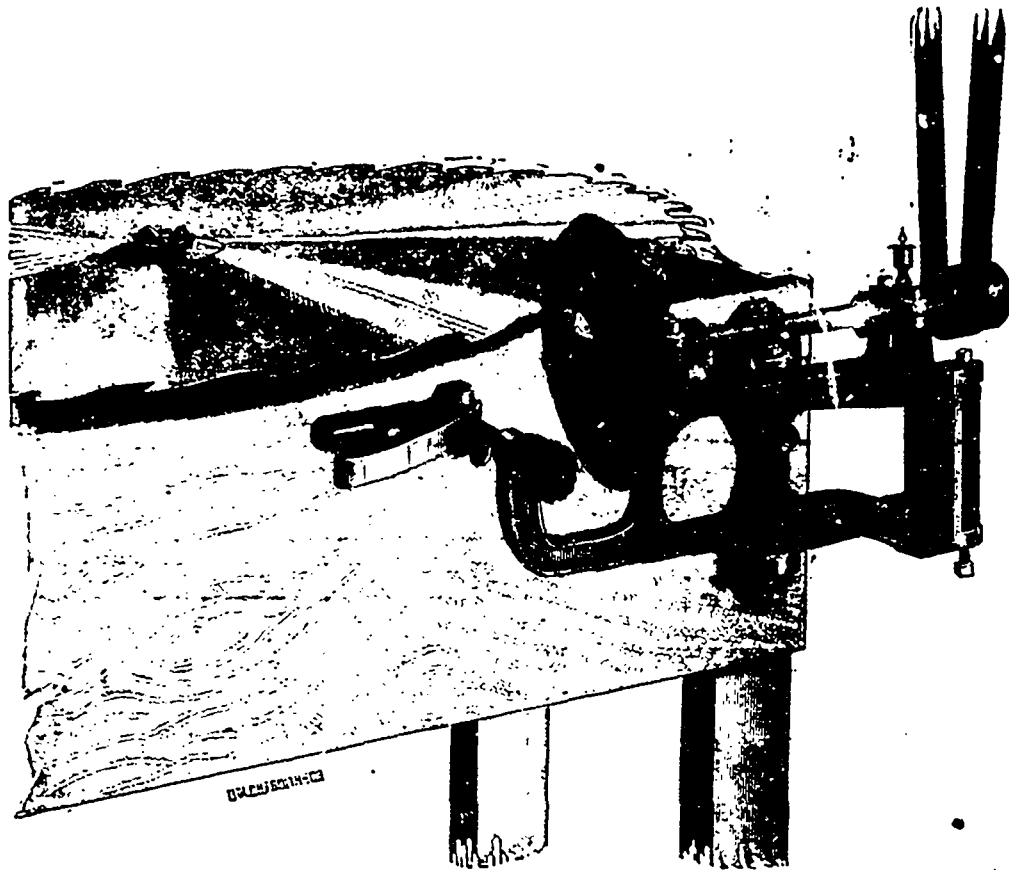
Agency for the WILDERMUTH BED SPRING, the best in the Market.

A. G. FORGIE, MANAGER,
International Tent & Awning Co.,

184 SPARKS STREET, OTTAWA.

ROGERS' PATENT SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.



Don't Heat!

Cheap!

Very Simple!

Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only \$30, including Emery Wheel; Table and Countershaft, \$10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—

"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—

"I have given it a good trial, and am well pleased with it. I find it is one of the indispensables in a saw mill."

ROBT. R. WELB, Orillia, writes:—

"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:—

"The Rogers' Saw Gummer purchased from you gives good satisfaction, it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—

"We are well pleased with the Gummer."

W. W. BELDING, Wyovale, writes:—

"I have the Gummer running and it is giving good satisfaction."

ADDRESS ALL ORDERS TO THE,

Hart Emery Wheel Company, Limited - Hamilton, Ont.

Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

**H. WILLIAMS,
SLATE & GRAVEL ROOFER**

MANUFACTURER OF AND DEALER IN
Tarred Felt, Roofing Pitch, Sheathing and Building Papers, Carpet and
Roined Waterproof Paper, Ready Roofing, &c. All orders promptly
attended to at LOW PRICES.

H. WILLIAMS,
4 Adelaide Street East, Toronto.

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Lumber Drivers' Calks

TEMPERED IN OIL.

25 BALL and 5 HEEL to Set

The Calks are now used by all the principal
Drivers in Maine and New Brunswick.

Kept by Dealers in Lumbermen's Supplies

FOR SALE BY

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Dealers in Lumber and Mill Supplies,

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Samples sent by mail on application.



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GEORGE BRUSH

14 to 34 King and Queen Sts, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,
CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,
Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,
Hand and Power Hoists for Warehouses &c.; &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

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"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

EXTRA HEAVY AMERICAN

Oak Tanned Leather Belting.

RUBBER BELTING, RUBBER PACKING, RUBBER HOSE,
LINEN HOSE and COTTON HOSE.

A Full and Complete Stock always kept on hand. WRITE FOR
PRICES and DISCOUNTS.

We have the Largest and best equipped RUBBER FACTORY in the
world for the manufacture of VULCANIZED INDIA RUBBER GOODS
for Mechanical Purposes.

Our trade here has increased to such an enormous extent that in
order to keep up with the demands, we have purchased from Major
John Gray, M.P.P., Parkdale, the plot of ground situated on West Lodge
Avenue, adjoining the Credit Valley, Toronto, Grey and Bruce, Northern
and Grand Trunk Railways, for the erection thereon of a BRANCH
RUBBER FACTORY, works to be in full operation January 1st, 1884.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO.

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WAREHOUSE:—10 and 12 King Street East,

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The Improved CLIMAX Sash Lock

MANUFACTURED BY MILLER BROS., GUELPH.

Holds the sash in any position so that it cannot be moved either up or
down, can be put on by anyone, only requiring two screws.

AGENTS FOR CANADA:—
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ROBERT MITCHELL & CO.

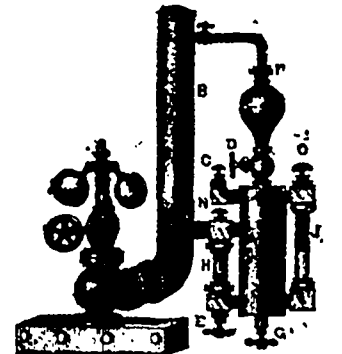
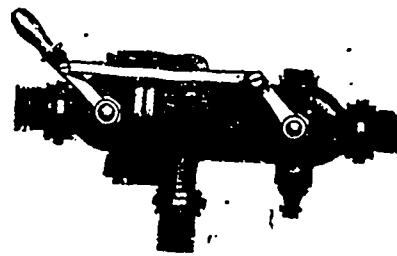
Montreal Brass Works,

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THE KORTING INJECTOR

Acknowledged to be the Best Boiler Feeder in the World.

The Continuous Feed Lubricator
Saves 50 per Cent in Oil.



Will lift 20 feet, and take water at 160 degrees. Only one handle
to start and stop. No valve to regulate. CHEAPER than any
other Injector in the market. Also, PATENT EJECTORS for
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LEATHER BELTING



70 King Street East, Toronto.

SPECIALTY: Belting made from J. B. HOYT & Co's American Oak
Tanned Leather. Send for Price List and Discounts.

STEAM.

THE

Hancock Inspirator

The Best Feeder known for Stationary, Marine
or Locomotive Boilers.

THE INJECTOR PERFECTED!

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

Over 50,000 Now in Use.

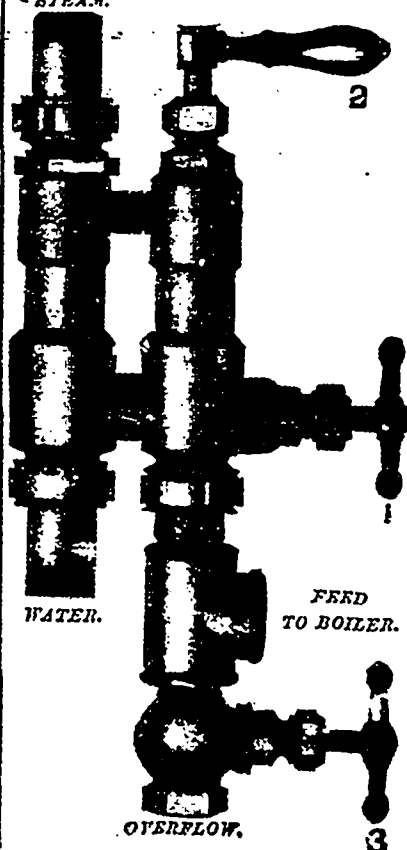
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5 CUSTOM HOUSE SQUARE,
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Manufacturers of Inspirators, Ejectors, and
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TO SUBSCRIBE

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FOR THE FOLLOWING REASONS:

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3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only \$2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

TO ADVERTISERS.

It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

—CHEAPEST, BEST, MOST RELIABLE and ONLY TRUE MEDIUM—

for placing your goods or wares before the saw mill men and lumber and timber dealers of the Dominion.

The William Hamilton Manufacturing Company, Limited

MANUFACTURERS OF

SAW MILL AND GENERAL MACHINERY.

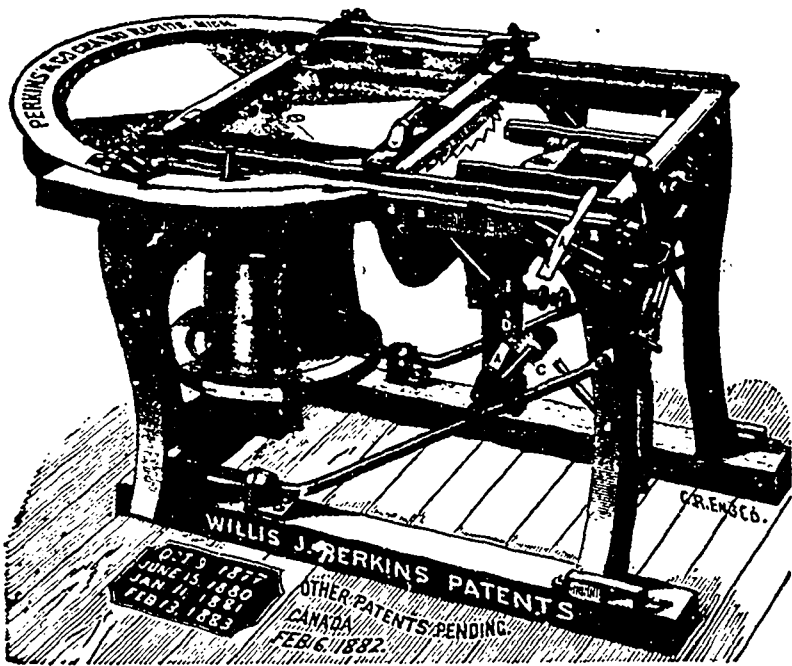
OUR SAW MILL ENGINES are made Strong, Neat and Durable, knowing well the ever varying Strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for Circular Mills and Circular and Gang Mills of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

Besides the variety of Machines we build for the manufacture of lumber we have added to our list the

PERKIN'S PATENT SHINGLE MACHINE.

Having obtained the sole right to manufacture and sell for the Dominion. Also Drag Saws, Bolters, Sappers, Jointers and Packers.



GRAND TRIUMPH.

Willis J. Perkins' Drop Tilt!

The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

SECOND CUT ALWAYS A SHINGLE.

Knots, rots, hearts, bolt squared rift ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut.

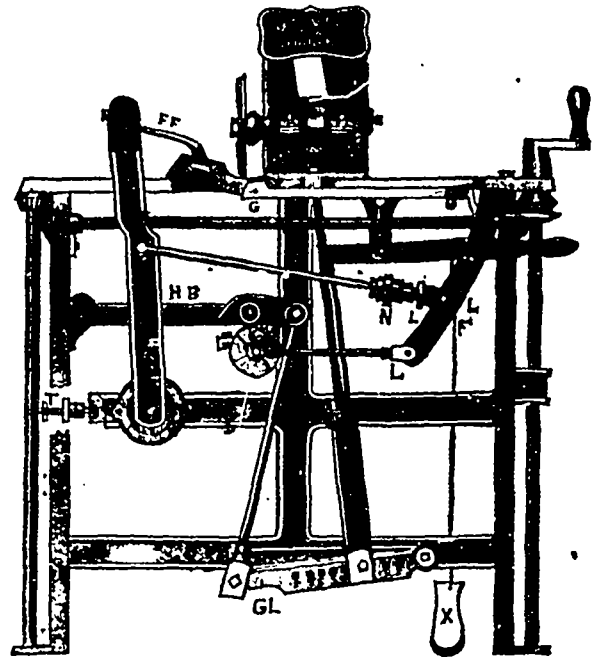
THE WILLIAM HAMILTON MANUFACTURING CO.

PETERBOROUGH, ONTARIO.

SOLE MANUFACTURERS AND AGENTS FOR THE DOMINION.

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THE M. COVEL PATENT SAW SHARPENER.



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

