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NO. 14.

PORT ARTHUR TRADE.

The lumber business at Port Arthur seems to have grown like a mushroom in a night. Two weeks ago lumber could not be had here for love or money, and now you can get any quantity of it. Since the middle of May there has arrived here, on different vessels, about 2,500,000 feet of lumber, the principal portion of it being for the Northwest. But this is only a beginning of what is to come. The barge Lothair, Capt. Symmes, with her consorts, the Staubenzie and Corrisande, have a contract for landing here, from Parry Sound, for Ogilvie & Co., of Winnipeg, 6,000,000 feet of lumber, to be used in building elevators in the Northwest. After this contract is completed he will probably continue all the season. They carry about 1,000,000 feet each trip, and it is estimated that they will land here during the season about 10,000,000 feet. G. A. Priest, who has opened out in the lumber business here, will also do an extensive business. He will have vessels running here regularly with lumber, which he will ship to the Northwest. It is estimated that he will ship through Port Arthur several millions of feet. Graham, Horn & Co., of this place and Port William, also have their fleet of vessels, which will be constantly employed in bringing lumber here for the Northwest trade. Their shipments will go into the millions. We have heard of day of another large lumber yard that will shortly be opened out here by a Mr. Wells, of Winnipeg. We understand he will go into the business on a large scale, and will ship several million feet to the Northwest during this season. With these large lumber firms operating here, it will be safe to estimate that between 25,000,000 and 50,000,000 feet of lumber will be transhipped at Port Arthur this season. And still business in this line is only beginning. The coming events are casting their shadows before, as it were. Where now are the people who a few weeks ago asked what we were going to do with our docks? The vastness of the trade that will eventually go through Port Arthur can scarcely be estimated at the present time.—*Herald.*

SAW MILLS IN THE DOMINION.

The business of sawing timber gave employment in Canada in 1881, as we learn from the census returns of that year, to 41,500 persons in 5,390 mills, at an average wage of about \$200 a year each. The value of the logs sawed in that year is placed at \$20,798,000, and the wages amounted to \$3,146,000. The value of the product is placed at \$23,569,000.

The census enumerators have located the 5,390 saw mills in operation in 1881 as follows:—Ontario, 1,761; Quebec, 1,729; Nova Scotia, 1,190; New Brunswick, 478; P. E. Island, 165; Manitoba, 37; British Columbia 27, the Territories 3.

The number of hands employed was: In

Ontario, 16,846, of whom 69 were women and eight girls under ten years. In the province of Quebec 12,461 hands, of whom 37 were women and eight girls. In New Brunswick 7,175, of whom 20 were women and eight girls. In Nova Scotia 1,160 hands of whom 34 were women. P. E. Island returns 419, British Columbia 404, and the Territories 44 employees, making a total of 41,569 persons.

The following are the statistics of the annual wages, value of raw material and value of these 5,390 saw mills arranged by provinces

	Yearly Wages.	Raw Material.	Products.
Ontario.....	\$3,681,223	8,985,797	16,629,075
Quebec.....	2,287,191	5,101,884	10,642,649
New Brunswick..	1,243,625	4,351,100	6,632,820
Nova Scotia.....	549,480	1,440,858	2,304,137
Manitoba.....	203,190	513,158	835,173
British Columbia	202,420	223,061	550,321
P. E. Island.....	53,202	127,194	240,153
Territories.....	17,000	43,802	95,318
Grand total	\$8,146,000	20,798,389	33,569,052

Figures of shingle manufacture are not included in this table—the Provinces standing as follows in the product of the shingle mills—Ontario \$454,803, New Brunswick \$128,714, Quebec \$98,130, Nova Scotia \$69,344, P. E. Island \$10,406, British Columbia \$5,597. Commenting on the return the *Montreal Herald* says:—"The art of shingle making was either not understood or remained uncultivated in Manitoba and the North-West up to 1881. Doubtless in the manufacture of lumber of all descriptions great strides have since been taken in that quarter." *Monetary Times*

THE LAKE OF THE WOODS.

We take the following extract from the *Montreal Herald's* report of the interview of a reporter with Major Lewis:—

"Is there a good timber country east of Winnipeg?" was asked by the *Herald* representative.

"Not until you reach," Major Lewis replied, "the Lake of the Woods or rivers and lakes connected with it. Of course, Lake Winnipeg is renowned for being plentifully supplied with spruce, but, in order to get red or white pine, you must go to the Lake of the Woods or east of it, and then it is only found in very small quantities, and in groves or bunches."

"Is the timber of large size such as we usually cut in Ontario?"

"By no means," the Major answered, "but I think it is sounder and better, although smaller, and will average, per centum, more stock lumber."

"Why is it that there are complaints about the want of lumber if the timber is there as you say?"

"In the first place because millions upon millions of the timber have been burnt, I think chiefly on account of the carelessness of traveling Indians lighting fires. Some people think

that the destruction has been caused by lightning. This may have occurred in some localities, but it never could have caused such wholesale destruction as has taken place, as the country shows evidence of. In the second place, on account of the great expense that pertains to the getting out and manufacture of timber, aside from the fact that there is no permanency in the present regulations, that would justify a capitalist in investing his money."

"Are there any facilities at or near the Lake of the Woods for the manufacture of lumber?"

"Yes, we have at Rat Portage on the Canada Pacific Railway, mills, steam and water power, as fine as there are in the world, with all the latest improvements."

"Does Rat Portage possess any natural facilities for manufacturing purposes?"

"It not only possesses an immense water power, which is now being used for a large paper mill, but, I have been informed, will, in a very short time, be utilized by the Hudson Bay Co., for the working of the largest grist mills in Canada. In addition, I may say, that Rat Portage is destined to be the watering place of the whole great Northwest. There will be many who will go to Port Arthur, which in my opinion, will be the Chicago of the Northwest, but for real pleasure, canoeing, boating, tenting and fishing, the Lake of the Woods is par excellence the place there."

HEAVY IN HEMLOCK.

F. Shaw & Bros., with headquarters at Boston, are said to be the greatest manufacturers of hemlock extract and tanners in the world. They own seven tanneries in Maine, an equal number in Canada, besides six large establishments in Maine and New Brunswick, for the manufacture of hemlock extract. Two years ago, they owned or controlled 14 tanneries in Canada, but, as bark grew scarce they gradually closed their works there, until but six are now in operation. The location and capacity of their tanneries, as given by the *Mining and Industrial Journal*, of Bangor, are as follows: Grand Lake Stream, 700 vats; Kingman, 550; Vancoboro, 500; Jackson Brook, 400; Forest City, 300; Lincoln, 200; Princeton, 100; total capacity, 2,700 vats. Their extract works in No. 39, near Burlington, consume 8,000 cords of bark yearly; in Houlton, 3,000 cords; Shorman, 6,000; Woodstock, N. B., 7,000; two sets of works on the St. John river, 6,000 each; total, 38,000 cords.

The same authority says: The tannery at Grand Lake Stream is said to be the largest in the world. The buildings consist, first, of a drying house for the leather, 80 feet square and eight stories high. Connected with and running north from this is the building containing the 700 vats, which is 600 feet long and 80 feet wide. Adjoining this is the bark mill, leach

room, and furnace room, 220 feet long; and running eastward from the dry house is a building 225 feet in length, which contains the dry hide and finishing rooms. There are 13 steam boilers and 12 furnaces for burning the waste bark or tan. The motive power of the establishment is furnished by six water wheels and three steam engines. The works run night and day, the year round (Sundays excepted), and the premises are illuminated during the night by the Edison Electric Light. The firm has its own saw mill, which furnishes all the lumber required in the construction of its factory buildings, and also all the houses in the village occupied by its own and other laborers. It has steamers on the lake for towing its 12 scows, which bring in about 100 cords of bark daily, that which is not required for immediate consumption being stored for winter use. The bark required for tanning the leather must be got out a year ahead, and the firm has at the present time some 11,000 cords of bark—peeled and yarded in the woods last year—which it is now bringing forward in its scows for this summer and next winter use. As an illustration of a single item of expense in running this tannery, it may be stated that this bark is valued at \$7 per cord. The company has a single pile of bark, up the lake, containing 4,000 cords.

This immense establishment turns out 1,000 sides, or about nine tons in weight, of finished leather every working day of 24 hours. To produce this quantity of leather requires the grinding and consumption of 40 cords hemlock bark, in connection with 15 barrels of hemlock extract, equal to 15 cords more—or 55 cords daily. South American hides are mainly used.—*Northwestern Lumberman.*

The lumber trade of St. Paul, Minn., in 1881 was reported as having amounted to \$1,348,000, and in 1882 it rose to \$3,439,622, thus gaining more in one year than all the previous years of St. Paul's existence.

The city council of Pueblo, Colo., has received a remonstrance against cutting down a cottonwood tree which is 26 inches in circumference, and probably 1,000 years old. It is regarded as the largest and finest cottonwood in the state.

A large elm tree growing at Norwich, Conn., is over 70 years old, and the limbs are 30 feet from the ground. It stands alongside a house, the chimney of which has been swept away by the overhanging branches, while the tree has raised and moved the house one foot by the force of its growth. A similar instance has occurred at Nassau, New Providence, one of the Bahama Islands. A cotton silk tree growing there has attained such mammoth proportions that it has actually lifted a large Government building.

FORESTRY IN GERMANY.

A writer in an English paper treats this subject as follows:—"Forests in Germany were originally common property, ownership of forests being unknown. Of the lands suitable for agricultural purposes each one took possession yearly of a fixed portion for cultivation. From the forests, however, each one took as much as he desired, and from wherever he pleased, excepting those groves which were set apart for religious purposes. Traces of the ownership of forests by private persons are found in the sixth century. At this stage of proprietorship, one could only claim particular woods, and prohibit the use of the same by others, unless the felling and using of the timber had actually commenced. Mr. Zimmerman, the United States Consular Agent in Berlin, states that the earliest forest properties were so-called privileged forests. By privileged forests are meant such as were the property of emperors, kings, princes, and other rulers and nobility. The privileges at first extended only to the exclusive right of hunting, fishing, etc., in the forests; but later complete control of them was claimed, and they were appropriated by the nobility, and held as property belonging solely and entirely to themselves. In the earliest times traces of forest protection and preservation are to be found. In the middle of the thirteenth century a penalty of three 'schillings' was attached by law to the cutting of wood in a forest without permission. After the privileged forests came the private proprietorship of forests, then the state forests, and lastly the state forests of to-day. The laws and regulations under which the utilization of forests was most justly and equitably permitted, occur between the years 1500 and 1800. Proper management of forests and discretion in felling the trees first began to be practised in the mining districts. Then it was necessary to have at hand the wood absolutely required there in connection with the working of the mines, and the mine owners were compelled to preserve the existing forests. After the mining districts the forests in the neighborhood of cities and towns began to be cared for. The 'Erfurt' forest economy dates back as far as 1359. In the Nuremberg district in 1368, and in the Frankfurt-on-the-Main district in 1423, the planting of the pine tree was introduced.

"The first forest schools were established in Germany about the year 1717. They were so-called high schools, in which certain district officials (Revierverwalter) were the teachers. These schools were at first self-supporting; later, they received assistance from the state, or were made state forest schools or academies. Thus, forest academies were established at Dreissigacker in 1801; Tharandt in 1816; Nelsungen in 1816; Aschaffenburg in 1820; Hohenheim in 1820, and at Eisenach in 1830. To each of these academies three professors were detailed for duty, one to instruct in forest economy, one in natural history and science, and one in mathematics. In Baden, forest culture was added to the list of subjects studied at the Polytechnic Institute at Karlsruhe in 1832, and in 1833 the same was done at Brunswick. A chair of forestry was established at Giessen in 1825, and later also at Heidelberg, Munich, Tubingen and Leipzig. At the last three, however, because of the forests being too remote for the practical instruction necessary for a student of forest culture to have, and for other reasons, the subject was dropped. In Prussia, the incitement to the study of forestry came from the state. From 1770, on the proposition of Minister Van Hagon, lectures on forest botany were delivered at Berlin, and excursions into the forests were made for the purpose of examining on the spot the subjects treated in the lectures. In 1821 a forest academy was established at Berlin in connection with the university there. This academy was, in 1830, removed to Eberswalde, where it now is. The instructors at this academy consist of the director, three master foresters and five professors, and the subjects taught are as follows: Forest culture in general, method of forest appraisement, the manner of keeping and rendering accounts of incomes received and expenditures made on account of forests, the protection of forests, utilization of the same, and huntsmanship, history of forest culture and statistics relating to same, geodesy

and draughting, mathematics, physics, and mechanics, botany, zoology and entomology, mineralogy, geology and chemistry, and Prussian civil and criminal law. Excursions are made into the forests three times weekly, and lectures and practical demonstrations are then given. In 1868 a second Prussian forest academy was established at Minden on the same principle and with nearly, if not quite, the same course of instruction. In the opinion of Professor Daukelmann, of the forest academy of Eberswalde, a re-organization of this course of study will take place within the next ten years, so that forestry subjects alone, such as preservation and cultivation of forests, botany, zoology, etc., will be taught at the forest academies, and general or relative subjects, such as geodesy, draughting, mathematics and law will be made a separate course for the forestry student at a university. Before admittance to the forest academy can be obtained the applicant must be over twenty years of age. He must also have certificates to the effect that he has passed the requisite final examinations at a Prussian gymnasium or 'realschule' of the highest grade, that he has passed examinations as *clerk* forester, and that he has a good character, and also the means necessary for his subsistence while studying at the academy. A thorough forester, in Prussia, is an adept in natural history relative to forests and their inhabitants, at the same time a geologist, botanist and chemist, and the possessor of a good general knowledge of the laws of his country. He knows every foot of land in his district, at the various stations he notes the rainfall, the force and direction of the prevailing winds, their humidity and dryness, the temperature, etc. For the encouragement and assistance given to these men by the state, the return made by them in the management of its forests interests is of the greatest value. The Prussian forestry corps at present consists of 1 chief general master forester, 3 general master foresters, 30 chief master foresters, 1 forest director in Hanover, 93 master foresters, 685 chief foresters, 3,351 district foresters, 356 forest keepers, and 70 minor officials."

THE U. S. LUMBER TRADE.

Bradstreet's in a recent issue discourses thus on the lumber trade. The lumber interest of the country, second only, it says, in importance to that of iron, represents an annual output exceeding eight billion feet, of which amount Chicago, the leading market for the vast pinerias that crowd the northern slopes of Michigan and Wisconsin, distributes one-fourth. The consumption of lumber tends to increase in the eastern, middle, western and southwestern states, and following on this progressive demand and augmenting cost of securing supplies is a general advance in price. The Chicago dealers testified before the Tariff Commission that the average has risen from \$9.63 per thousand feet for the three years 1877, 1878 and 1879 to \$11.63 in 1880, \$13.92 in 1881, and over \$14 in 1882. It is difficult to imagine a great industry like that of lumber suddenly arrested for want of supplies, but the most reliable authorities place the period of comparative exhaustion at fifteen years. The estimate of ten years formerly entertained was based on the amount of timber which would yield not less than 20 per cent in grades common to fine, when government selections were neglected even at prices of \$1.25 to \$2.50 per acre; and no pine timber was considered worth cutting which measured less than sixteen to eighteen inches diameter at the butt; when the logging district of Michigan and northern Wisconsin was almost unknown, and the merchantable timber of the south, now extensively made available by railway connection, was underrated. The encroachments, however, on the pinerias of the west and south-west, cannot be made good, the land being too serviceable for agriculture, while in the south crops of cotton, sugar, tobacco, corn and oats prove far more profitable than timber growing. Each year timber has to be sought further back. After damming up every available creek by which the logs could reach the rivers, logging railroads have been constructed to the water. The process of denuding lumber lands is hastened by the "butchering" going on to supply the quantity demanded by the voracious

mills. Did lumber command a far higher price much of the timber brought to market would be reserved for further growth. It is a common saying that not one tree in four, owing to inherent defects, is suitable for logs. Anticipatory of future requirements, and with the prospect of heavy advances in price, large sections of land containing choice descriptions of white and yellow pine are, with a limited extent of hardwoods, being bought up to hold by eastern and New York capitalists. Of the profitability of such investments there can, of course, be no question. The forthcoming failure of supplies exercises no immediate effect on the market; the probable and actual supply of each successive lumber season is the main concern of the trade, the future being left to take care of itself. The general policy of the lumber trade is to buy for the present demand, based on a large supply and in this it is pursuing the same course as last year. As to outside resources, Canada offers immense supplies. Nova Scotia and New Brunswick will long continue their exports of spruce; Mexico, with her rich timber lands of qualities of wood suited to this market, including walnut, ebony, mahogany, oak, hard cedar, hickory and sycamore, promises in no long time to be an important source of supply, as railroads, cutting through her forest reserves, are now being rapidly built under the influence of state and government concessions.

Among the influences operating on the course of trade, and slightly affecting prices, are the rates of freight between competitive points. The opening of navigation on the lakes is always the signal for material reduction by the trunk lines between the west and east. Freight on the lakes this season are somewhat lower, while canal transportation has risen, owing to the successful demands of the boatmen for higher wages. Railroads are getting more into the lumber trade than formerly through trunk lines reaching wooded belts previously untouched, the building of new lines depending as a source of revenue on lumber traffic both for neighboring consumption and distant shipment, and the extension of tributary lines to the ever-receding sources of supply.

PRODIGIOUS PINE TRANSACTION.

In this country we are becoming familiar with immense pine land transactions, and sales involving hundreds of thousands of dollars have become common occurrences. A recent sale of pine lands, however, by the Mobile and Ohio railroad is so enormous, involving three quarters of a million acres, that we give a full description of it, with the aim and purposes of the purchasers, as furnished by the *Mobile Register*, whose reporter interviewed Mr. Danner, one of the contracting parties:

"A. C. Danner & Co., have purchased," said Mr. Danner, "all the pine lands of the Mobile and Ohio road. These lands lie in the counties of Washington, Mobile, Choctaw, Clarke and Baldwin, in the state of Alabama, and in the counties of Wayne, Greene and Jackson, in the State of Mississippi. These lands comprise about 750,000 acres, extending about 15 miles on either side of the Mobile and Ohio road. Some of the land is tributary to the Pascagoula mills, and some to the Bigbee river. It is all tributary to the road which runs through them."

"What sort of lands are they?"

"Mostly good timbered land. Along the road a good deal has been boxed for turpentine, and a small portion of the land has been cut over. The depredations have been considerable, but lying back from the road is a quantity of the finest timber in the country. All the land is rated above one dollar and a quarter an acre, and some of it is a good farming land which has been held by the road at five dollars an acre."

"What is the object in buying this vast quantity of land?"

"My main object was to secure plenty of timber for mills. People are around picking up lands here and there, and there was danger that some day I might find myself like the negro with the pocket book with no money to put in it. I wanted enough timber to last me my lifetime, and now I have got it."

"What was the railroad's object?"

"The railroad wanted to get rid of the land and the depredators at the one time, and it sold to my firm. We think we can stop the depredations and make those who have depredated pay for what they have taken. If we can't get the money, we can bring a criminal suit against them and against those who have received the stolen property."

"And how do you propose to utilize this vast territory?"

"We expect to form a land and lumber company to be known as the Danner Land and Lumber Company, and will use up as much of the lumber as we can. We will build several mills along the line of the railroad, with tramways running into the heart of the best timber country. We think we can utilize a great deal of this territory." Here Mr. Danner unrolled a map showing the land divided off into sections and colored to show to what extent the purchase has been encroached upon. This map shows that about one-half of the 750,000 acres is virgin forest. A quarter has been more or less turpented and another quarter has been more or less cut. "This is a pretty big enterprise," suggested the reporter.

"I believe," answered Mr. Danner, "that it is the largest sale of pine lands ever made to one firm. You have perhaps an idea of the size of 750,000 acres. Well, it is a trifle less than the area of the State of Delaware and something more than the area of Rhode Island. The lumber business is becoming better systemized and the time is passing when a man with a thousand dollars and any sort of a saw mill can succeed. The mill men will have to own the timber and we are but taking a step now which in a few years will become a necessity. We shall, of course, put our other land into the company, and may consider ourselves amply provided with material."

"How much land will the company own?"

"About eight hundred thousand acres."

THE WASTE WOOD IN SAW MILLS.

The following letter appears in the *London Timber Trades Journal* and may suggest ideas to our own saw mill owners:—

SIR,—I have machinery fitted up for the chair trade, but have not sufficient work to keep it going. It consists of a portable rack saw bench, a plain circular saw bench, 42 in. band saw machine, and lathe, all driven by steam. This is a beech wood country, but it is dear. We are fairly supplied with ash and oak of good quality, also fir. Elm is rather scarce, but it can be got at. Can you indicate to me any way by which I can manage to work full time by the manufacture of small work to use up the waste wood from the chair works? Such things as spools and reels for cotton have occurred to me. What prospect do you think there is for oak spokes, ash handles, packing cases, or toys? In a country place like this we are not able to find out what uses and purposes wood can be applied to.—Yours, &c., H. T.

[There are no doubt some of our readers who can assist "H. T.," and we shall be glad to forward any letters to him that may come to hand. This question of the utilization of the waste wood is one of great importance to proprietors of saw-mill and other wood-working establishments, and we invite correspondence on the subject.—Ed. T. T. J.]

A WOODEN COSTUME AT A CARNIVAL.

A very unique costume was made for the use of Mr. Charles H. Reed at the Olympian Club carnival, says the *Boston Globe*, the entire outfit of dress, boots, mask, wig and parasol being of wood. Mr. Reed wore a costume representing half man and half woman at the last carnival, but at this one will appear in full lady's attire. The chief garment is a princess dress made of various kinds of Spurr's papered veneers. It has a brocaded front and basque and trimmings of knife-paring, fuchsia and loops of wood ribbon, and it is ornamented with rosettes and leaves in wood of various shades in their natural colors. At the sides there is a substitute for embroidery in inlaid work of fancy designs. The sleeves are of cork paper, trimmed to imitate puffing, and at the bottom is a deep border of black walnut knife-paring. The boots and gloves are of birch bark, and the mask of matched woods with a fringe of plaiting. The wig is

composed of about 100 curls, consisting of white pine shavings artistically grouped. The parabol is of Chinese pattern, covered with varicolored veneers and similarly lined. The effort has been made before to make a cross of wood, but without success. This attempt is thoroughly successful, the effect of the different kinds and colors of wood in the combination being very striking and artistic. The veneers are so thin that the costume is not very heavy, and so flexible that it is not liable to injury.

POSSIBILITIES OF PAPER.

An exchange says:—The daily papers notice, occasionally, some newly discovered uses for paper, paper taking the place of wood in cabinet work, in joiner work, superseding iron in some instances, used for building material to withstand the action of the elements, and even for railway sleepers. Some of its recent applications are of importance enough to be recorded, but in many instances paper receives credit that should be shared by other materials. Paper, itself, is simply a vegetable pulp, made coherent in sheets, or "boards," by the aid of glue, sizing, or similar material, and compression under rolls. It is subject to the action of moisture, and is more or less combustible. Evidently, to resist the elements and heat, it must be subjected to changes from its original character. These changes are induced by a mixture of other materials, to such a large proportion in some instances that the paper pulp is only the matrix, or gauge, holding the other substances in connection and form. Plaster of Paris, whiting, ground asbestos, and even clay, are among the materials that may be incorporated with paper pulp to change its nature, and fit it for peculiar and unusual service. Paper is waterproof by saturation in tar, and thus resists, for a time, the pelting of storms. Some descriptions of wall-paper hanging are surfaced with clay, that not only gives a glossy finish, but also makes the paper partially resistant to the action of flame. It is possible, undoubtedly, to so charge paper pulp with an incombustible material as to allow it to be used as a chimney flue. Even without the addition of foreign material, the paper pulp is formed, by immense pressure, into barrels for merchandises, the body of car wheels, and other articles requiring great stiffness combined with lightness. Paper mache, a union of paper pulp and glue, and subjected to pressure, may be made almost indestructible when the surface is defended from outward attack by a proper enamel. The possibilities of paper pulp treated for particular uses is suggested by occasional additions to its employment seen in the markets. No two uses could be more directly opposed than vessels for holding water and articles for resisting fire; yet paper pails, wash-basins and other similar utensils are common, and excellent tobacco pipe bowls are made of paper. In the first instance, the material is defended by a water-proof paint or varnish, and in the other the pulp is mixed with ground asbestos to resist the heat of the lighted tobacco. These possibilities may be greatly extended, a paper pulp charged with other materials yields steadily to pressure in moulds, as well as to formation in sheets between rolls. There would appear to be no obstacle to its extended employment in interior house finishing as doors, door-frames, mouldings, etc., and the framing for furniture."

AN INNOVATION IN PULP MAKING.

A new machine for preparing wood fibre for pulp, invented by a Gardiner, Me., man, is described as follows:—The purpose of the machine is to shave the wood off so finely that it is ready to go into the paper engines. It takes a piece of log 12 inches in length, which is revolved at a speed of 1,000 revolutions to the minute. A sharp cutter shaves the log, taking off a shaving so thin that it would take 750 of them to make an inch. As it takes about 200 sheets of ordinary paper to make an inch, one can judge somewhat of the thickness of the fibre made by this machine. The knife has a sliding motion, and gradually moves forward as the block decreases in diameter. In the first machine made, the principal trouble was found in keeping the knife sharp. As the knife became dull the fibre turned off became of uneven thickness; but this has been remedied by an ingenious arrange-

ment of whetstones that keep constantly at work on the knife while the machine is at work. The pulp the machine makes has not been tried upon the better class of paper, but it will work on the coarser grades, and the inventor is confident it will also be practicable on better grades. If it proves so, it will result in a great change in the manufacture of pulp. It makes it much faster, besides saving labor, and the saving in cost of transportation, the pulp being dry and therefore with no water to pay freight on, will be a good profit.—*Northwestern Lumberman.*

Mahogany Spurs.

A noticeable peculiarity of the mahogany tree, of which very few have knowledge, is seen in the numerous spurs, which are thrown out from the body of the tree, at regular intervals from the ground up to the height of 12 feet or more, all of which grow downward like roots and finally enter the earth and become real roots. These spurs, often from 12 to 16 inches in diameter, are incomparatively superior to any part of the trunk for beauty of texture and color. These spurs are rarely cut by the loggers, on account of the great labor necessary, to avoid which the axemen build a hasty scaffolding of sufficient height, to enable them to cut off the tree above the spurs. So highly are these secondary roots valued for their beauty of grain and color, that of late years dealers are having them cut for the market, as an extraordinary prize. Some of these mahogany spurs have been sold for \$250 per 1,000 feet, board measure, while the body of the tree brought but \$40, at the port of exportation.

A Full-Fledged Saw Mill.

It is an interesting sight to witness a large full-fledged saw mill in working order. Logs come in at one end and go out of the other sawed into lumber, lath, pickets and shingles, while the refuse not worth sawing goes by means of elevators into the huge burner, where it is consumed. The slabs suitable for wood are hauled away and piled. Thus this process goes on day after day, until the close of the season, when a fresh campaign is inaugurated and crews go into the woods and chop down the monarchs of the forests, preparatory for another season's sawing. How long will this business last? Many years yet, but the day will come when 400,000,000 feet of lumber will cease to be sawed on the Menominee in a single season. Other industries ought to be started up and the resources of the upper wilds be fully utilized.—*Menominee Herald.*

A Boom Promised.

The *Buffalo Lumber World* says:—It is predicted that there is soon to be a boom in the timber lands of the Canadian Northwest. The *Lumber World* some months ago mentioned the probability that American capitalists would invest largely in Canadian timber lands, and it is now reported that American buyers are actually selecting the best and most accessible tracts of timber land in Manitoba. A thorough exploration of the section about upper Lake Winnipeg is to be made, and if its results are satisfactory, heavy purchases will probably be made. It is claimed that the finest spruce limits in the Northwest are to be found about upper Lake Winnipeg, a section where forests have yet been scarcely touched.

Then and Now.

The *Orillia Packet* says that Mr. John Knight, Manager of the Medonte Lumber Company, and Mr. Haddon, of Fox Mead, took a saw mill from Hamilton to Fort Garry, some twelve years ago. Then they would not take the whole country as a gift, because there was no means of ingress or egress. Now the immigrant may travel from Liverpool to Winnipeg in twenty days.

WE have received an admirable little work "The Woods and Timbers of North Carolina," by P. M. Hale, published by him at Raleigh, and by E. J. Hale & Son at New York. It contains a mine of valuable information and is another proof of the growing interest in such subjects. An excellent review of the whole adds to the value of the work. Such descriptions of the forest wealth of the various districts of

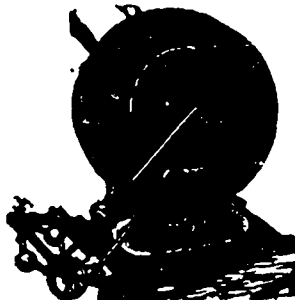


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For running Sewing Machines for families or for manufactories; also, for running Lental Lathes and Engines, Telephone Generators, Coffee Mills and Reosters, House and Church Organs; also for running one Printing Press or six, at the same time. Paper Cutters, Sausage Machines of any make or size; GRAIN, FREIGHT OR PASSENGER ELEVATORS, Straw Cutters, and all kinds of Machinery by Water Power.

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Over Fifty Motors of other makes have been taken out and replaced with the **TUERK MOTOR**; among the list are the Backus, the Robin, the Little Giant, the Hayward, Clark's Piston Engine, and others.

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- A. Solmens, Hat Manufactory, So. Norwalk, Ct.
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- Village of Rutland, Rutland, Vt.
- W. L. Randall, Chicago, Ill.
- A. J. Stoll, Sandusky, Ohio.
- Killits & Wayland, Chillicothe, Ohio.
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Do not fool your time away trying other Motors, but send for the Tuerk Motor, which is warranted to do better work with less water than any other Motor or Water Engine made.

Send for Catalogue, and state what you want to run,—give full particulars and Water Pressure per square inch.

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North America would be of great public service.

M. VIOLLETTE's experiments on the action of steam on wood show that certain temperatures improve the tensile strength of the wood. Thus elm obtains its maximum point of strength at a temperature between 150° and 185° cent.; oak receives an increase of strength of five-ninths, fir two-fifths, ash two-thirds, walnut one-half, the temperature in these cases varying from 225° to 150°. Other processes of artificial drying, based on a heated blast of air, have been used with more or less success.

AN Ottawa despatch of July 9th says:—The lumbering business is progressing well this season. Owing to the water being so high, there was no trouble this season in drawing the timber into the main stream. The cut of square timber last winter was a very large one, and numbers of rafts are now on their way to Quebec. They will reach that market earlier this year than formerly. The demand for square timber is quiet as yet, but the market, it is expected, will revive in the fall. It is thought that not so much square timber will be cut in the limits during the next season as in the past winter.

WHAT THE BOARD OF TRADE RETURNS REVEAL TO US.

The *Timber Trade Journal* of June 16, says: In the returns under consideration there is nothing very reassuring. Nor is there much to lament over. Our imports have slightly increased, on the whole, but the timber trade is innocent of all participation in that excess, which is, however, too small to be of any importance. The total value of our imports for the month was £30,257,443, against £33,933,954 the May previous, the difference being only £312,488, or less than 1 per cent.; while our exports are not materially changed either, though the difference is on the wrong side. Last May, that is in 1882, they were valued at £25,421,000, this May at £24,851,000, the difference being but £570,000 on the month, or about 2 per cent. on the total; which, when we consider that an enormous business is still doing, and that some trades fluctuate materially at different periods of the year, might easily be accounted for without signifying any general downward tendency. But unfortunately it is below the average of the previous months of the year, and must therefore be taken to prove that the favorable turn we are all looking for has not yet demonstrated itself.

The difference may be said to be accounted for entirely by the lessened value of the woollen goods exported, for, though there are considerable fluctuations in other articles, they pretty nearly neutralize each other. For instance, in metals there is a deficiency in the export of iron, tin, and copper of £200,000, but an increase in machinery of £211,000, and arms and ammunition £68,000, &c. We need only touch on the salient items and general tendency of these returns, as the particulars have been discussed by the daily press before our chance to notice them came around. It is remarkable, however, that the trade which employs the largest quantity of shipping tonnage very seldom obtains any special notice in these monthly revelations, so that what has to be said thereon usually appertains alone to this *Journal*.

If there were but a reasonable resuscitation of trade, the timber returns of the Government officials would appear sufficiently encouraging. We may account for a certain degree of business dissatisfaction by the numbers contending in almost every branch of trade, which has the effect of subdividing it into so many minor establishments that, though much is doing, few individual firms, in proportion to their staff and appointments, are doing a great deal. But when we find that the timber import of the country itself is diminishing, that, in fact, though the number of people competing in the trade is increasing, the business they do, as a whole, is smaller than it was a year ago, then it must be admitted that the dulness of trade has a deeper foundation than the number of competitors in it accounts for; and that appears to be the case with the timber interest now.

It happens, however, from the position of the trade itself, that this curtailment is not an evil at the present time. It is a consequence of the action of the import merchants themselves, and though indicating some restriction of trade, has the recommendation that it does not load them, as last year, with superfluous stock while they are still tolerably well supplied for the requirements of the country. It would be more satisfactory on the whole, perhaps, to see the trade expanding instead of pulling itself together, as the phase goes, but to find our wharves groaning under accumulations of wood goods for which the retail dealers seemed to have no room, and trade altogether more quiet than usual, would make but a gloomy prospect for the importer of the property. We might see greater figures on the import side without corresponding benefit to the merchants importing.

In May we called attention to the fact that the importation of foreign building timber up to the end of April was some 127,000 loads behind that of 1882, to the same period of the year; but the falling off in May was still greater, as the importation was short of that of May last year by 140,531 loads, so that up to the 31st the total deficiency of the quantity imported at that date is 238,111 loads.

Now this amount of timber, though very great, is not any considerable portion of the British annual supply; but, at any rate, it is equal to about 5 per cent. of it, and assuming the total to average yearly about 6½ millions of loads, the first five months of 1883 have left a gap to be filled up of more than a quarter of a million loads. Now we are quite aware that this apparent deficiency—for it is so by comparison—may vanish away in a single month, because, on some occasions, such as occurred last year in the month of August, when over 900,000 loads came forward, exceeding the supply in August, 1881, a year of large importation, too, by about 180,000 loads—such a quantity is not a third part of a month's supply. But this is just the reason why it is reasonable to suppose it will remain in arrears. The supply was so full last summer that this season is not likely to surpass it, and a full importation henceforward cannot be expected to do more than keep pace with it; and what state of affairs may rule in the autumn it is too early yet to discuss, but the same reasons that ran up freights last fall are in existence still, and the later months of the year may find the import of timber checked, as it was then, for the American harvest is likely to be a plentiful one, and it is to Europe they look for their principal market, which will tempt ships away from the timber trade.

It will, therefore, during the summer be almost a matter of simple calculation that the state of supply, if it does not further recede, will stand at about a quarter of a million behind last year, a difference that may be safely predicted to hold good to the end of September, and it would not surprise us if the marginal difference were increased in the same direction, though great efforts are being made to induce English importers to extend their purchases abroad.

There is one peculiarity in the Board of Trade returns which we should have noticed in its right place, but we may interlope it here rather than pass it over unnoticed. This country had to pay in 1881 and 1882 for corn food, and potatoes from foreign parts, a little over £23,000,000. For eatables and drinkables altogether about £61,000,000; from January to May inclusive. This year, for cereals and potatoes only, we have already paid £9,000,000 sterling more than over before; and this large sum going out of the country for what appears to be a superfluity of food, instead of being spent at home, may have something to do with the depression among British agriculturists. If the Chancellor of the Exchequer were to put an additional tax upon us that would fetch him in another six millions of money the whole country would be loud in his condemnation. Yet, somehow or other, we have been made to pay that immense sum for more eatables, when we had plenty for our money in the preceding years, and did very well without enlarging our scale of dietary. The effect of this extra draw on the public purse must be injurious to the farming interest at home, and that is reflected back on trade generally. It is believed that it is beneficial to the people at large, but it may be reasonably doubted if it does not make trade harder to live by here than ever it was before. Food is cheap and plentiful among us, yet we covet it so much that to propose to check its importation by a small duty is regarded as worse than high taxation. But in America their only anxiety is how to get rid of it, and by and by, with this immensely increasing influx, we shall have to find some new market and become corn exporters ourselves. Our merchants have been doing something in this way to the extent of about three millions, including drinkable, for the first five months of each year. But, with the increasing imports of this season, our exports of commodities was only slightly augmented. Strange that those who resent the idea of a duty on the import of corn, which might lessen the quantity brought in, have no objection to offer to its being sent away again, if a market can be found for it elsewhere.

That trade is still in a very unsettled condition the returns under consideration do not contradict. But neither is there anything in them that can be regarded by the timber trade in particular as affecting their interests prejudicially. Abbreviation of the importation is

shown to be, so far, continuous, and that under the circumstances will be counted a positive good. Had it taken the course of the corn export from America (which was not any more needed in this country that we can hear of), the mischief it would have done, it will be more easy to imagine than describe. We cannot tell what is before us, but of such a calamity it is not apparent that the trade need be under any apprehension during the rest of the current year.

CARE OF SAWS.

Ewing D. Craddock, in a letter to the *Cincinnati Artisan*, says:—The saw is one of the most essential and sensitive tools used. A saw, to do the work that is required of it, should be kept in a condition to do the work. First, the saw should be well balanced on the mandrel and hang true; second, a straight face on the log side; hang the saw plumb up and down; second, keep your saw well pointed, so that every tooth will do the same amount of work that is required of it; these are the first elements of successful mechanics; these, too, should always be closely observed; third is the shape of the tooth, to which, as a rule, but little attention is paid by the majority of sawyers. Every man has his own ideas about putting his saw in order; therefore all cannot be right. My idea is this: A saw tooth should come in contact with the kerf that is to be removed at an angle of 45 degrees. This will produce a thin cutting edge, and will be found to produce the desired result, cutting with the least power, and to economize power is a matter of interest to all. It makes the lightest running saw. As to swaging the teeth, or spring them, I sometimes run one, then the other, but the spring-tooth is, by far, the lightest running, and cuts smoother lumber. The full swage, with plenty of power, will do as good work as any. The objections I have to the full swaged tooth is that it takes more power to drive it; consequently there is more strain on the plate of your saw; besides, it cuts more kerf than the spring-tooth, making your saw more liable to buckle. All sawyers know the wider the kerf the more power it takes to drive the saw, and the less feed can be carried; but a spring-tooth will cut a quarter less than full swaged, and, as a matter of course, makes the lightest running saw. Still, each tooth cuts the same distance into the timber, and, therefore, I recommend the spring-tooth. I always spring the teeth at the extreme points, to prevent them from losing the set, for the nearer the point a tooth is set the longer it will retain its set; and file the under sides of each tooth a little beveling, say, 12 or 15 degrees, and the back straight, and you will find this kind of dress will give satisfaction in all kinds of timber. In this country, most all the sawyers run the chisel-tooth, or, as some call it the full swage, no set, and meet with good success. The reason of this is that a full swaged tooth is easier filled than a spring-tooth. Yet a spring-tooth does not require half the work to keep it up that a full swaged one does, and will make great saving in files and emery wheels.

CEDAR.

Cedar timber, which a few years ago was entirely ignored in calculations as to the value of land in the northern portion of Michigan, has now obtained a rank among the valuable timbers of the state.

Thousands of acres of land from which the pine has been cut have been allowed to revert to the state in years past because considered of insufficient value to admit of tax-paying, on which hundreds of thousands of cords of cedar was standing, and which at the present time is of incalculable value because of the demand which has sprung up for cedar for railroad ties and fence posts and fencing, telegraph poles and paving. The former owners of these lands now comprehend their shortsightedness, and realize that other men are reaping fortunes from that which was discarded by them as worthless because of the then prevalent but foolish idea that the pine lands of the northwest were valueless, except for the standing pine timber, and that when that was once removed the most sensible thing the owner could do was to let the state possess it. Now, however, a thousand acres of land, well stocked with cedar, is a bonanza, and

the possessor thereof may be looked upon as a "bloated monopolist landholder."—*Lumber Trade Journal*.

HEMLOCK BARK.

The great slaughter of hemlock trees through out the country, says the *St. John, N. B. Globe*, in order to get the bark, has led to an application to the Dominion Government to place a duty on the export, in the hope that this duty will have some effect in stopping the destruction. This application will not be successful, and, if successful, it will hardly have the desired effect. The Provincial Government has just adopted some new regulations, in regard to the hemlock license, which will have some influence in preventing the destruction now so prevalent, while, at the same time, adding to the Provincial revenue. No doubt the Surveyor-General will give official notice of these in the next *Gazette*. We understand that in substance they are as follows:—

Applications to be made in the usual form for licenses.

All licenses for hemlock will expire on the 31st day of March in each year.

Each application for license must not be less than two or more than six square miles, and the upset mileage at the rate of 8 dols. per square mile must accompany the application.

The stumpage charged will be at the rate of 1 dol. per thousand superficial feet of logs cut, and the bark is not to be removed from the landings until the stumpage has been paid.

In setting the stumpage the mileage of 8 dols. per square mile will be credited for all licenses actually operated on.

The licensee is prohibited from unnecessarily destroying other growing trees on his license, and in case of violation of this section the license to be forfeited and the bark subject to seizure.

THE OLM.

The olm is by far the best and cleanest tree for the city.

The best size are those trees of about three inches in diameter four or five feet from the ground. It does not pay to set out those that are smaller than a man's wrist, because up to the size of three inches in diameter the trees can be transplanted with perfect safety, and the additional dollar cost is cheap for the four or five years' additional growth.

In digging up, the roots should be cut at least a foot and a half from the foot of the tree, making the ball three feet in diameter. For trees six inches in diameter a much larger ball should be left—a very good rule being to make the diameter of the ball in feet correspond to the diameter of the tree in inches, taken four or five feet from the ground, thus: Three inches, three feet; six inches, six feet.

It is well, but unnecessary, to keep a large mass of earth around the roots (as some seem to think very important) provided the roots are kept moist by wet straw or moss, etc. If the ground in which the tree grew should have been poor soil, it is better to remove it carefully and sift the good earth about the rootlets. Roots once dried and parched are like faded and dried bouquets—they may be soaked in water, but will never live again.

The stem should not be chopped, but in good bark, and should have a healthful appearance, straight and tall; not having the branches shoot out too low.

Some fools cut off the entire top and set out a row of bean poles. This should not be done. It is merely a trick of the nurseryman, who say "You must cut off the top as much as you do the root." Few, it is a poor rule that won't work both ways. Therefore, cut off the root as much as you do the top, and what have you? The tree men advocate cutting off the top merely to save trouble in hauling the trees. They care nothing for the looks of your trees as soon as you have paid for them. The root of the tree is its mouth and stomach; the leaves its lungs. Cut out the lungs and stomach of a boy you wish to live, will he thrive? If, however, the top be very large, it may be trimmed in a little, that is cut of the tips of the largest branches.

A single-stemmed top is better than a double-stemmed top, and less apt to split apart in after years, when the branches are heavy. Here lies

the success provided the tree has good and moist roots. Dig a hole large enough to receive the ball easily and deep enough to have a half-foot of good earth under it. Have plenty of good earth, best of all a mixture of swamp muck and garden loam. Don't be mean and niggardly to a tree that will live 60 or 100 years. Now, fill the hole half full of good earth and put the tree in place, so that its general appearance is good from the most important standpoint.

"The same side south" is all humbug. Keep the tree plumb!

When all is well arranged, begin to fill in the good earth, using only the best and finest in contact with rootlets; gently sift and shake it between the roots; be careful you do not leave an air-space just under the tree, across which no rootlet can throw itself and in which mould is sure to form. This is often a cause of failure, to avoid which it is well to make the earth in the middle of the hole a little higher than the sides before putting in the trees.

After a few inches of earth have been placed over the roots the earth should be pressed down with the feet, gently at first, so as to break them, firmly afterward.

Keep the tree plumb all the time. The nurseryman's work is now done, yours just begun. Do not let the young trees be shaken by the boys, nor bitten by the horses. Do not forget to give each tree a pail of water during the hot days of the first summer, during which time you must expect the tree to have a little "set back," but all will be well the second summer.—*Brooklyn Eagle.*

STEAM HAULING.

Throughout the yellow pine section in the South, manufacturers generally are adopting the steam tramway system, as a better and a more economical way of reaching their mills or streams that are remote from the forests. Under the old manner of logging with trucks, with its many obstacles and delays, the cost would frequently run as high as \$1 per M., but by the use of steam this sum is cut down to 15 cents per M., on distances covering five to eight miles.

Through this latter system over one fourth more timber can be brought to the mills, and the poorer grades handled, which heretofore have been left standing, as the cost of moving was too great. Another benefit derived through this same source is the ready connection of forests distant from streams, and the improved value of lands, thus connected, making them worth nearly as much as those more favorably situated.

The expense of building these roads has been calculated to be from \$2,500 upward, of course depending on the material used. The advantages in moving timber by the process, and the difference in cost of transportation, is so discernible that the speedy erection of numerous roads is certain, and the profitable returns as assured as in the Northwest.

The introduction of steam tram roads, the improvements in milling machinery, and the erection of dry kilns in the South show that the people of that locality are determined to keep abreast of the times, and are willing to adopt measures that will promote the industry, and cheapen the cost.—*N. Y. Lumber Trade Review.*

Northwest Timber Limits.

There are upwards of eight hundred applications for timber limits in the Northwest now before the Department of the Interior, a great many of which are from persons who desire them purely for speculative purposes. The demand for lumber is growing faster than the supply is coming into market, and the establishment of additional mills will benefit the country. It is hard for the Department to distinguish between the honest and the speculative applicant, as all have to make the same declaration as to their intentions; but the popular policy of protection should lead to a strict enforcement of the conditions on which limits are granted, that those who do erect mills may be enabled to secure enlarged limits, if they require them, without having to pay middle men who prey upon the necessities of their neighbors. Selling limits by auction, as is proposed to be done with coal lands, would lighten the labors of the

department, secure to it the amount paid by the bona fide mill owners to the interloping speculators, and at the same time enable the former to secure his limits at their intrinsic value.—*Saskatchewan Herald.*

Compressed Sawdust.

The *Canadian Manufacturer* in an article on compressed bran, sawdust, &c., says:—"If the problem of compressing bran were satisfactorily solved, a large export trade with England would spring up immediately.

It is now claimed that the problem is at last positively and satisfactorily solved, not only for bran, but also for sawdust, coal dust, and other kinds of waste products too numerous to mention. The *Chicago Industrial World* publishes a cut and description of "The Smith Consolidator," with which it is claimed that sawdust, coal screenings, tan bark, etc., can be compressed into convenient form on the large scale and at small expense. For instance, one of these machines of medium size, will turn out sawdust in blocks, solid and easily handled, at the rate of a ton and a half per hour. We would like to hear more of this machine, which really promises far greater utility than people might at first imagine. In the wooden country, which we call Canada, its capacity for usefulness ought to be almost unlimited.

The English Timber Trade.

The *Timber Trades Journal* says:—"Great depression still prevails in the English timber trade in the North Midland, Lincolnshire, and Yorkshire districts. Nearly all trades are in a sluggish condition, the railway carriage and wagon building trades are also very quiet. There is a slight improvement in the coal trade compared with the corresponding periods of the two previous years. The large falls of timber that have taken place this and three or four seasons back, with increased import from the Continent, America, and other places, coupled with bad trade, is the principal cause of the extremely low prices. There are a few kinds of the best qualities inquired for, but no better prices are to be obtained; the over crowded state of the market for oak is beyond recollection in several instances in this district. Previous years' falls are still lying in the woods, with a larger fall than usual this year, and also an increase in imports of foreign logs and manufactured spokes, &c.

Care of Belts.

A well-known belting manufacturer says: First, See that your belt is put on with the grain or hair side next the pulley, as it adheres closer to the pulley; then the flesh side, which is out, is stronger and not so liable to crack. Second—See that the belt is put on so that the joints run with, and not against, the pulley; you will, by this means, avoid tearing and splitting up. Third—Every person using belts should keep on hand the "Eureka" belt oil, for oiling purposes, applying the same just before stopping in the evening. It should be applied lightly. No. 1 beef tallow is also good, and where a belt has lain idle for a long time, and becomes hard, pure Neat's foot oil can be used, but under no circumstances should any other animal oil be used. Fourth—Give special attention, and impress your employes with the fact, that resin, coal-tar, pitch, and anything of a like nature is worse than useless, and will ruin your belts.—*Workman.*

Falling Lumber Block.

Muskegon, Mich., June 30.—A dock with 800,000 feet of lumber fell into the lake on Thursday afternoon, precipitating twenty men at work on it into the water. Three or four of them are missing, but the men are Hollanders and their names are unknown. A boy named Frank Barnhardt was crushed under forty thousand feet of timber. Two immense piles of lumber adjoining which threaten to fall, prevent search for the bodies.

A VOICE FROM THE UNITED STATES.—I have suffered for the last twenty years with Dyspepsia and General Debility, and tried many remedies, but with little success till I used Peppermint Blood Bitters when relief was quick and permanent. A. LOUZE, Alpena, Michigan, U.S.A.

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Collier Street, Adjoining the Market.
RATES REASONABLE, CENTRAL LOCATION,
FREE BUS TO AND FROM ALL TRAINS.
Every accommodation for Commercial and LUMBERMEN.
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J. T. LAMBERT,
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ORDERS FOR DIMENSIONS AND ALL OTHER KINDS AND GRADES OF

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WHOLESALE AND RETAIL
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Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM VITAE, RED CEDAR, &c. American and French VENEERS.
Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.
Yard: Cor. Wellington & Strachan Aves.
Factory: Corner Soho and Phoebe Streets.
Office: 39 Adelaide Street East, (First Floor, nearly opposite the Post Office).
TORONTO, ONT.

\$72 A week made at home by the industry. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address **TAUS & Co.,** Augusta, Maine.

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POSITIVELY CURED.
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VEGETABLE BALM
ELIXIR
Has stood the test for FIFTY-THREE YEARS, and has proved itself the best remedy known for the cure of **Consumption, Coughs, Colds, Whooping Cough and all Lung Diseases** in young or old. SOL. EVERYWHERE.
Price 25c and \$1.00 per Bottle.
DOWNS' ELIXIR

E. S. VINDIN,
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LUMBER MERCHANT
Office, Tempest's Block, Fort Hope.

DODGE & CO.
Pine & Hardwood Lumber
Office: Cor. East Falls Avenue and Stiles Street,
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Correspondence Invited.

LUMBER
Shingles, Doors, Sash, Flooring, &c.,
WANTED,
STATE QUANTITIES AND PRICE TO
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LUMBER DRYER
J. J. CURRAN, Inventor.
CURRAN & WOLFE, Proprietors for the U.S.
39 & 41, Franklin Street, Chicago.
A. F. BARRON,
Patentee and Builder for the Dominion of Canada,
Office, 9, Corn Exchange,
MONTREAL.

Send for descriptive Pamphlet containing list of parties using this Dry Kiln in the United States. Dryers built and in working order by the following Companies:
James Shearer, Montreal; James Crossen, (car builder), Cobourg, Ont.; Canada Pacific R.R., Perth, Ont.; Kingston Car Works, Kingston, Ont.; Pike & Richardson (Cooperage Co.), Chatham, Ont.; and in course of construction, Grand Trunk R.R., London, Ont.; Steinhoff, Schnoor & Co., Staves and Heading, Wallaceburg, Ont.

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EXTRACT OF WILD
STRAWBERRY
Cures Cholera, Cholera Morbus, Dysentery, Cramps, Colic, Sea Sickness and Summer Complaint; also Cholera Infantum, and all Complaints peculiar to children teething, and will be found equally beneficial for adults or children.
FOR SALE BY ALL DRUGGISTS,
T. MILBURN & CO.,
Proprietors, Toronto.



DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

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Special rates will be made for page, half page and column advertisements.
Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.
All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

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

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

PETERBOROUGH, Ont. JULY 16, 1883.

A NEWSPAPER has been started at Deseronto, with the appropriate title, "Buzz Saw."

LARGE quantities of lumber are arriving at Quebec from the West over the North Shore Railway.

RECENTLY 2,600 logs were sold by the Tittabawassee boom company, as unclaimed logs, and to pay the boom charges against them.

THE farmers living along the River Moira, whose lands have been flooded owing to the damming back of the water by the saw logs, have entered suits against the lumbermen.

A LARGE number of dock sticks, some of them 100 feet long, are being hauled from the mountains on either side of Lake George, N. Y., and shipped by way of Ticonderoga to New York city.

We would call the attention of our readers to the important auction sale of valuable timber limits to be held at Ottawa on August 28th, the particulars of which may be found in our advertising columns.

MICHIGAN parties have recently bought 56,000 acres, and Iowa parties 16,000 acres of timber land situated in Escanaba, Conecub, Butler and Crenshaw counties, Ala. It is proposed to ship lumber north.

AN old record recently unearthed contains the information that in 1823 lumber sold in Maine as follows: Clear pine, \$18; merchantable, \$12; refuse clear, \$9; refuse, \$6; mill refuse, \$2.50; shingles, \$3.

FRED. L. HEWINS, of East Winthrop, Me., and Louiscount Lyon, of Manchester, have purchased a tract of 200 acres, lying five miles from Augusta, on which grows what is known as "Widow Sanford's pines," the price paid being \$6,000. The pine is all medium sized, second growth, and is in demand for box-making, for which purpose it will be shipped to Augusta after being sawed where it grows. A large steam mill will therefore be erected.

A. BANNING, at Ludington, Mich., lately made a contract with Aldrich & Brayman to unload 1,600 cords of hemlock bark from the cars to the railroad dock, at \$1.25 per car. The bark goes to Milwaukee.

THE Rat Portage correspondent of the Winnipeg Commercial says:—On account of the low water not much more than 15,000,000 feet of lumber will be sawed at this point and Keewatin during the present season.

A LOG train on the St. John & Maine railroad makes five trips of 30,000 feet each per day, for James Murchie & Sons, from Magaguadavic lake to Vanceboro, Me., from whence the logs are floated to the Milltown boom.

THE planting of 100,000 eucalyptus trees on the Roman Campagna has counteracted the effect of the malaria to such an extent that the Tre Fontaine, the abbey of the Trappist monks, is rendered habitable through the entire year.

THE Winnipeg Commercial, of July 3rd says: Owing to the dullness in building operations the demand for lumber is not great. There are several large contracts being let in the city which will rid the yards of some of their stock.

A RAILWAY being projected into the interior, British Honduras will be able to export larger quantities than ever of the mahogany, cedar, ebony, indiarubber, and other products with which she abounds, and of which this country can easily absorb large quantities.

A DESPATCH from Ottawa dated July 5, says: In the Department of the Interior, yesterday, tenders were opened for the limits in the Bow river country recently advertised. It is said that the bonuses offered are very satisfactory. The result will likely be made public in a few days.

THE Franco-American Trading Company, recently contracted for 500,000 feet of yellow pine in New York to be used on the Isthmus of Panama, in the building of 150 houses for the De Lesseps Canal Company, the houses to be prepared and shipped in the knock-down from New York.

THE Belleville Intelligencer of July 9th says: Messrs. Gilmour & Co's. North River saw log drive, under the superintendence of Mr. Asahel Airhart, of Marmora, is now in Crow Bay. This drive takes the tail of the Beaver Creek drive to Trenton, and has been a highly successful one from the start.

A. C. DANNEB & Co., of Mobile, Ala., will have a cypress plank on exhibition at the Louisville Exposition that will be 17 feet long, three inches thick, and four feet eight and a half inches wide. It will be free from knots and shake. The log from which the plank was cut was obtained in Baldwin county, across the bay from Mobile.

THE Orillia Packet says that Mr. John Knight, Manager of the Medonte Lumbering Company, was in Orillia on Monday. He says the rails on Medonte tramway will be laid as far as the mills within a month. Owing to the depth of snow last winter, only about three million feet of logs were got out which, will be cut within three weeks.

THE Timber Trades Journal says:—There can be no doubt but that the rage for American walnut, which gave to that trade such a spurt has greatly subsided, and probably diverted the demand once again in the direction of mahogany and hardwoods. Fashion is everything, and the furniture and housebuilding trades form no exception to the general fickleness of taste; but we expect it will be a considerable time before there is such a run on American walnut as there has been. In suites of furniture there was a harshness about it which the other dark kinds of hardwood did not display. The straightness of the grain also, unlike the European descriptions, afforded very little to attract the eye after the novelty had worn off.

A SOUVENIR of this exceptionally stormy season was received by the Kirby-Carpenter Company from Edgar, Neb., recently, in the shape of an order for 600 window-blind slats to replace those broken out at that place by a late hail-storm. The storm was a terrific one and laid most crops dead over a space, a mile in width and two miles in length. Window blinds were no protection to glass, as the slats were broken, and all the glazing shivered, on the south and west sides of houses in the path of the storm.

THE Lumberman's Gazette says:—The F. & P. M. railroad is reaching out with branches after the pine which is accessible only by rail, and by this means has become an important feeder to the Saginaw river mills. About one and one-half miles has been completed from the main line just west of Farwell, upon which the first train of logs came out last week. This branch will be extended at least eight or ten miles this fall, and when completed will bring about 100,000,000 feet of logs within reach of this road, the log traffic of which has assumed enormous proportions.

TRADE WITH AUSTRALIA.

To the Editor of the Canada Lumberman.

SIR,—I happened to see your publication of the 2nd instant to-day for the first time, which I found full of interest.

I notice that you insert extracts from Australian timber circulars. I enclose you one of my firm's, Lord & Hughes, and if you think it worth while to make extracts from ours I will write by next mail requesting them to supply you with a copy every month.

We have been in the lumber business in Melbourne for about 25 years, and we handle nearly all the American and Canadian lumber that comes to those markets.

I am journeying through America and Canada picking up scraps of the lumber trade. I arrived last month at San Francisco, and have done America and part of Canada, and will leave here on Tuesday next for St. John, N. S., thence to Portland, Boston and New York, afterwards to England and Europe (Norway and Sweden).

I shall therefore assume that our monthly circulars will be acceptable, and will instruct my firm accordingly.

Yours truly,

SAMUEL HUGHES,

Of the firm of Lord & Hughes, Melbourne, Quebec, July 7.

[We should be glad, not only to receive the circulars, but to have Mr. Hughes favor us with any remarks that he may think of value, as to his trip to Canada, and hints as to increasing the trade with Australia.—E. C. L.]

THE PRICE OF WHITE PINE.

The owners of white pine stumpage should try the ground a little more carefully before they venture forward loaded heavily with that kind of property. It is not so very clear, after all, that white pine lumber will advance in price in the ratio of its diminishment of supply. There is no good reason to infer that it is so essential in the building and mechanical economies that it cannot be supplied by something else. The history of the industrial world goes to show that commodities and useful material are valued according to their quality and intrinsic merit. Mahogany and black walnut are worth more than white pine for this reason, and not because they are so very scarce or hard to obtain. It is as handy and cheap to lay down mahogany in New York as Missouri walnut at the same place. The last pine tree sawed into boards, might be on the market, and it would not sell as high as some of the finer woods, unless somebody wanted it for a relic. Modern invention and progress do not enhance, but cheapen the necessities of life. It is claimed by good authority that the staple, wool, has not been so cheap in forty years as now. Cotton yarns are cheaper now than since the spring of 1879, and it is thought that cotton generally will rule at a lower average during the ensuing year than at any time since the war. Iron and copper are ruling at the figures which were obtained in 1878. There has been no advance in the average price of food since one's boyhood, taking one year with another, unless

it is in beef and butter, and events will regulate those when the vast Rocky mountain regions of this country and Mexico swarm with cattle and sheep. It may be said that over-production has kept down the prices of all these things mentioned, and that the capacity to produce them is unlimited, while the capacity to produce lumber from white pine is diminishing. But the tendency of modern invention and energy is to provide substitute commodities whenever there is money to be made by it. That which enters into common use, like white pine, must not cost too much. When the time comes that its scarcity necessarily forces up its price, the buyers rebel and reject it for something else. When white pine costs as much as walnut, mahogany, cherry and other finer woods, it will be scorned. When any of the woods cost more than the common people can afford to pay for ordinary uses, they will be rejected for iron, terra cotta, glass, or other substances, which will be cheapened to the grade of common use by invention. While pine will undoubtedly be a product of firm commercial value in the future, under the influence of a diminishing supply it will never reach a price much above what it averages to-day.—Northwestern Lumberman.

WHAT CAUSES THE TIMBER LINE?

A writer in the New York Independent, says:

The cause of what is known as the timber line on high mountains continues to be discussed in scientific periodicals, and the attempt continued to connect the line in some degree with mean annual temperatures. The writer of this paragraph has had the matter in mind when on these high elevations, and the explanation seemed very simple. On all these high peaks there is a continuous, though in some cases slow, descent of the soil from the summit to the base of hill. He has never seen a case where there was soil enough to grow a tree, that trees were not growing. As the wash from the rain or melting snow will be nearly uniform in a given range, there will be of necessity some uniformity in the timber line. On Mount Washington and other high places, little plots of dark vegetable earth can often be found far above the present timber line, the remains of trees which existed before the earth was washed away. What is called the timber line seldom shows graduated sizes as a mere matter of temperature would call for. Generally the line is formed of very small trees, and immediately scrubby plants, from the absence of deep soil, begin.

NORTHWEST TIMBER BERTHS.

For several months past the Department of the Interior has advertised for the lease of five hundred square miles of timber berths of fifty square miles each, in the Northwest Territories, situated on Moose Mountain, in the district of Assiniboia, and on the Bow River, and on its tributaries the Kananaskis and Spray Rivers, in the District of Alberta. It was provided in the conditions that only one berth should be granted to the same individual or firm, but the same applicant was allowed to make a separate tender for each of the berths. According to the regulations governing the granting of yearly licenses to cut timber on Dominion lands under section 52 of the Dominion Lands Act of 1879, provision is made for the licensee paying a ground rent of \$5 per square mile; for requiring that within a month after the date of the Order in Council granting a timber berth, the person in whose favor it is passed must pay the rent for the year in advance, the rent to bear interest at the rate of six per cent. per annum from that date until the same is paid; that when applications for licenses conflict, berths shall be laid off and described as the Minister of the Interior may direct, and tenders shall be invited for the same. Persons tendering are required to state the sum or bonus per square mile which they are willing to pay in addition to the ground rent and a royalty of five per cent. on the amount of the sales of all the products of the berth, and the limit is awarded to the person offering the highest bonus. Licensees are required to have in operation within a year from a date to be fixed in the license, and to keep in operation for at least six months of each year of his holding, a saw mill, capable of cutting daily at least two thousand feet board measure

of lumber. It is further provided that when a license has complied with the conditions above enumerated, and where no portion of the berth is required for settlement, or other public purposes, of which the Minister of the Interior is to be the judge, the license may be renewed for another year, subjected to such revision of the annual rental and royalty to be paid therefor as may be fixed by the Governor-in-Council.

Tenders for the berths above referred were received by the Department on the second of July, and were opened on the third. The highest bonuses offered per square mile were the following, which were accepted:—

Berth A, J. G. Thorp.....	\$104 20
" B, J. G. Ross & Co.....	81 00
" C, O. H. Ingram.....	124 80
" D, A. McLaren.....	44 20
" E, Vincent W. Bayless.....	104 20
" F, A. McFee.....	104 60
" G, John B. Kehl.....	104 40
" H, Franklin Holman.....	64 20
" I, W. A. Rust.....	124 60
" J, Isaac Kerr.....	124 40

Considering the want of facilities for moving the timber, the distance from the market, and the absence of other convenience experienced by purchasers of limits in the Province of Ontario, the above offers are considered good.—*Ottawa Citizen.*

DANGEROUS DOORS.

Adequate authority ought to insist, says the *British Medical Journal*, that all doors in the passages of large buildings, which are likely to become crowded, should swing freely both inwards and outwards. It is dangerously difficult, and it may become impossible at a critical moment, to open a door which can only be opened against the impact of a pressing crowd. The fastenings of such doors should be regarded as perilously faulty unless they are so arranged that they can be quickly and readily loosed without risk of injury. Probably the most dangerous fastening for the doors of public places is one like that which contributed to cause the disaster in Sunderland—namely, a vertical trailing bolt at the bottom of a door, which becomes fast by dropping into an opening in the flooring over which the door moves. If these and some other important points in the number, capacity, and direction of the channels of egress from public buildings, and especially in the construction and working of the doors of such passages, were efficiently remedied we should probably hear of few instances of loss of life from the inevitable rushes and panics of persons confined in crowded spaces.

MONTREAL NOTES.

The *Gazette* of July 6th says:—The local demand has been light for all kinds of lumber, excepting cherry and ash, which are wanted for both the home and American trade. There is a fair business reported in laths at the advance previously noted. Deals continue to be shipped to British ports on nearly every steamer, and lumber is going forward to South America, two vessels having been chartered to the River Platte during the week at \$15@15.50.

Moving Lumber.

The *Lumberman's Gazette* says:—The largest fleet of lumber-laden vessels which ever left the Saginaw river in a single day passed out of the river on Saturday afternoon in less than ten hours, between 12 o'clock noon and 10 o'clock at night. People who imagine that there is nothing doing in lumber in this market may be undecieved by scanning the list of vessels. A reasonable estimate places the amount of lumber on board this fleet at about 23,000,000 feet and this amount of lumber moving out of the river, just at this time furnishes food for reflection by those interested in lumber, indicating as it does the beginning of the lively times during the next 30 days.

Hoops for the Children.

Most of the plain wooden hoops which serve as toys for the children are made at Granville Corners, Mass., and the more expensive ones at Philadelphia, Pa. In making plain hoops, ash or beech is cut into straight, narrow strips and steamed, when the wood is readily bent till both ends meet, which are fastened together

with tack n. An ash or beech stick goes with a hoop, and the ordinary price is 10 cents. Granville Corners turns out from 75,000 to 100,000 annually. The Philadelphia hoops are more stylish. After steaming and nailing the wood, the workmen bevel the edges of the rims, put on a few bright colors, and fasten diminutive bells on the under side at regular intervals.

DESTRUCTIVENESS OF FLOODS.

The recent floods in the Missouri and Mississippi have resulted in destructions to crops, land and property in general, which can only be estimated in millions of dollars. It appears to be almost certain that the increasing number of destructive floods of late years must be largely attributed to the rapid denudation of timber lands which has been going on. Of course floods will occur periodically whether forests are removed or not, but their frequency and destructiveness seems to increase as the extent of well wooded land decreases. The leaves and roots of trees, and the sod protected by them, all act as a sort of sponge, absorbing any heavy rainfall and giving it forth again gradually, thus measurably removing the danger of excessive floods. But when this gigantic natural sponge is destroyed by the removal of the timber, the rain runs off as it falls, violently swelling the small streams, which in turn rush on to the rivers, and a flood is the result. Trees planted certainly looks like a slow way of stopping floods, but that, judiciously prosecuted, it would ultimately be successful, there can be but little doubt.—*Lumber World.*

The Spruce Dying.

A despatch from Bangor says there has been a great destruction of spruce trees in Northern Aroostook. The owners of pine lands have already lost thousands of dollars, and the matter is causing great anxiety. An entomologist is going to Aroostook to look into the cause of the decay and death of these trees. He will probably be accompanied by Franklin B. Hough, of the United States Commission of Forestry, who has recently been in the state making some investigations. Jacob Hardison, of Caribou, says that in five townships the spruce over eleven inches in diameter are dead or dying, and that the young trees are unaffected. His view of the cause is that about eight years ago there were heavy rains, which loosened the earth. The rains were followed by a protracted gale and a hard winter. The root fibres were broken which caused decay; then the worms followed. He says that on the northwest slope, where the wind had the greatest range, the trees suffered the most. The trees present a seared appearance first at the top, and year by year death passes toward the roots.

Texas Timber.

A Texas paper says: "The timber lands of northern Texas will be, in the course of a few years the most valuable of any lands in the state. Lumber can be bought, delivered at our doors for \$1.50 per 100 feet, while in the western counties the same will bring from \$4 to \$6, and the demand on our almost inexhaustible forests is becoming greater every day. Thus far little timber has been culled beside the pine and walnut, while the thousands of acres of white oak, red oak, ash, hickory, bois d'arc, sweet gum, etc., remain in their virginity, not a stump showing that the destroying hand of man has ever been lifted against them. It is believed that these forests will necessarily be drawn upon to supply a demand for building purposes, railroad ties, etc., as fast as the tributary west is building up."

Timber Berths in the Northwest.

OTTAWA, July 10.—Some time ago the Department of the Interior advertised for the lease of 500 square miles of timber berths of 50 square miles each in the North-West Territory, situated on Moose Mountain, in the Assinibois, and on the Bow River at Starbuck, the Kananaskis and Spring River in the district of Alberta. Tenders for these berths have now been opened, and the leases awarded to the following parties for the following bonuses offered per square mile:—Berth, A, J. G. Thorp,

\$104 20; B, J. G. Ross & Co, \$81; C, O. H. Ingram, \$124 80; D, A. McLaren, \$44 20; E, Vincent W. Bayless, \$104 20; F, A. McFee, \$104 60; G, John B. Kehl, \$104 40; H, Franklin Holman, \$64 20; I, W. A. Rust, \$124 60; J, Isaac Kerr, \$124 40.

In cutting wood, when the cutters revolve and the wood is only fed to them fast enough to allow them to operate, a much higher speed is possible than if the tool be stationary and the wood is driven at a rapid rate, as in turning. There are two causes for this. In the first place, each cutting surface in the former case is alternately working and resting, while in the latter instance there is a steady friction on the single surface, which, if the work be pushed too rapidly, will soon develop so much heat as to draw the temper of the tool. In the second place, the rapidly revolving cutters act as a sort of fan, producing a strong current of air which assists in preventing too great heating.

Speaking of the new docks at Tilbury, near London, the *Timber Trades Journal* says:—The timber mostly used in the construction of these docks is pitch pine and Danzig, and already about 10,000 loads of such have been consumed, besides considerable quantities of spruce. There are now two cargoes in the Thames close to the works of something like 1,500 loads of Danzig and pitch pine. We may observe, in reference to the latter, that the dimensions are especially large for sawn timber, the average length being 75 ft., and the square about 14 in. The whole of this cargo, we are told, was cut at Pensacola by Mr. D. F. Sullivan (the largest shipper at that well-known southern port) to the engineer's specification specially for these works. One-third of the cargo was over 70 ft. long, a thing as yet never attempted at the port named.

The London *Timber Trades Journal* says: Thursday June 28th at the "Baltic" showed little or no better result than that of the day before; bidders had it apparently all their own way, and prices as usual took an exceedingly low tone throughout. It was only the few reserved lots that met with a buyer here and there which showed anything like a remunerative price, and it is questionable if the upset price had not been drawn on a very moderate scale, if even these would have been noticed at all. There seems no life in the bidding just now, and if the competition takes an occasional active turn, one or other of the bidders retires from the strife just at the point when prices are beginning to take a move upwards. Only bargains tempted the general body of buyers, and it was to the unreserved lots the dealers alone cared to turn their attention.

ROCK ELM WANTED.

A Few Car Loads of good ROCK ELM, cut into 1 1/2, 2, 2 1/2 and 3 inches thick, 12ft. length preferred.
DUFRESNE & JODOIN,
Lumber Dealers,
6212 498, St. Joseph Street, Montreal.

SAW MILLS AND TIMBER LIMITS WITH Logs, Lumber, Store Goods, &c FOR SALE In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.
Canada Pacific Railway now running through part of the property.
For full particulars address:—
WILLIAMS & MURRAY,
GODERICH, ONT.

WATER POWER TO LEASE.

THE UNDERSIGNED having largely extended their raceway 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
1886 LAKEFIELD, ONT. W18L0

A RARE CHANCE! Valuable Steam Saw-Mill FOR SALE.

The Waba Creek Steam Saw Mills, situated on the Madawaaka River, one mile from Armprior. Capacity of Mill, Fifty Thousand Feet of Lumber per Eleven hours. Capacity of Booming Pond, Thirty Thousand Logs. Has Bins through piling grounds connected with main line of Canada Pacific Railway. The Mill is in good repair, having only run a short time, and is well found in all appliances required to run it to the above capacity. There is also a good water power connected with it from the Waba Creek, and good stabling, Barn, Boarding House, and other buildings. For information, price and terms, apply to John Robertson, 581, St. Jacques Street, Montreal, or to James McCuan, Armprior, who will show intending purchasers the whole property, or to

ALEX. FLECK, Ottawa

AUCTION SALE

OF VALUABLE

Timber Limits

I will offer for sale by Public Auction, on account of whom it may concern, at the Grand Union Hotel, in the CITY OF OTTAWA, on TUESDAY, the 29th day of AUGUST next, at the hour of 2.30 o'clock in the afternoon, Timber Limits as follows:—

PARCEL No. 1.

License—		
No. 339 Kippewa, Season 1882-83,	50 sq. miles.	
390 do do do do do	40 do	
391 do do do do do	20 do	
392 do do do do do	6 do	
399 do do do do do	50 do	
397 Teaticamlingue, do	50 do	
335 do do do do do	6 do	
400, River Ottawa, do	25 do	
386 do do do do do	67 1/2 do	
400, Coulonge & B River do	7 do	

PARCEL No. 2.

401, North of River Coulonge	30 do
402 do do do do do	30 do
403 do do do do do	30 do
404 do do do do do	30 do
405 do do do do do	30 do

PARCEL No. 3.

387, River Ottawa, do	17 do
383 do do do do do	43 do
392, River Coulonge, do	50 do
392 do do do do do	50 do

PARCEL No. 4.

Upper Ottawa, License 1878-4, No 431,	containing	Miles.
do do do do 532	do	68 1/2
do do do do 533	do	49 1/2
do do do do 534	do	52
do do do do 535	do	47 1/2
do do do do 537	do	32 1/2
do do do do 537	do	48 1/2
do do do do 537	do	60 1/2
do do do do 538	do	47 1/2

PARCEL No. 5.

do do do do 567	do	50
do do do do 568	do	47 1/2
do do do do 569	do	40
do do do do 510	do	23
do do do do 511	do	25

Also half interest in Licenses Nos. 343 and 344, season 1882-83, 87 square miles.

Timber cut on Kippewa Limits was sold in 1880, 80c; 1881, 82c, and 1882, 82c. There is also a farm in connection with the limits which will be sold with a quantity of Clear Mess Pork, Flour, Oats, Beans, Hay, Horses and other rigging requisite for shantying.

TERMS—Cash, or one-third cash, one-third in 6 months and one-third in 12 months, with interest at 6 per cent., approved notes. For further particulars apply to the Crown Timber Agent, Ottawa, or to

R. C. W. MacQUAIG,
Auctioneer,

THE FORESTS OF MAINE.

The words "state-of-Mainer" in the woods of Michigan for many years was the synonym for what was understood as being well versed in lumber logic and in all the ramifications of the business from the cutting of the tree to its delivery in the boom in logs. But of late years this term has not been so common, and a "Canuck" has been considered fully equal to the man from Maine. This naturally led to the inference in some circles that the lumber business in the Pine Tree state was about extinct, and the situation of that state has been very often referred to as foreshadowing what Michigan was inevitably coming to by the ultimate extinction of her pine timber. Later reports, however, indicate that the lumber industry is far from being "petered out." One of our Boston exchanges says that now that the returns are all in, it is ascertained that the output of logs in Maine is about 600,000,000 feet, and it is estimated "that there were employed in the neighborhood of 10,000 men and 3,000 horses and oxen. On the Penobscot choppers and sled tenders were paid from \$25 to \$30 per month, and it is guessed that the men on this river were paid \$250,000 during the season. The season for sledding was one of the hardest ever known." The employment of ten thousand men in the lumber woods of Maine indicates anything else than that the lumber industry is a thing of the past in that state. Michigan men may take heart from the above facts.—*Lumberman's Gazette.*

RAILROAD TIES.

During the last five years the price of railway cross-ties has increased 25 per cent., and the quality offered for sale in open market seems to have decreased in about the same ratio. The specifications generally prepared by railway companies do not maintain the former high standard, either in manufacture or quality of timber used. The number of kinds of soft wood that may be used for this purpose has increased nearly two-fold, and a larger number of inferior hard woods, hitherto rejected, are now included in the specifications for cross-ties. Take, for instance, a hemlock tie, of which considerable quantities are brought here by lake vessels. They will last, ordinarily, about one-half as long as a white oak tie, yet they now bring as much in open market as a first-class oak tie sold for ten years ago. The best timber suitable for cross-ties is not entirely exhausted, but where good timber grows there is also good soil, which generally sustains a larger and more compact population than in a comparative treeless region, and there must of necessity be a greater drain upon the timber supply for houses, barns, fences, etc. In sections where the farming population is greater, so are the cities and towns proportionately larger, and they must also be supplied with the commercial woods for manufacturing purposes, as well as a supply of cordwood for fuel, from which the whole population draws largely, unless there is, as in Illinois, a coal mine within a reasonable, or rather economical, transporting distance. Many farmers have reserved a portion of the natural timber upon their farms for prudential reasons. If they have an unfavorable year and poor crops, they eke out their income to meet current expenses, taxes, etc., by selling a part of their reserved timber. They will make a few hundred cross-ties for the nearest railway, also several cords of wood for sale in town, and at the same time add a little more arable land to the farm.

The consolidation of railway lines has had a tendency to equalize the distribution of cross-ties, and in some instances it has saved the "mother" line from an unavoidable stringency in the annual supply absolutely required to run the road-bed. Oftentimes the branch lines absorbed by the larger company have in the region where located greater resources of tie timber to draw from than the entire main line. It used to be considered that 15 cross-ties to a 30 foot rail—or 2,640 per mile—were sufficient for the heaviest traffic. But with heavier cars and engines, and heavier loads, the number per rail has been increased to 17, or 3,000 per mile of track, and while we have been putting more wood on the road-bed, the rails have been increased in weight, with a tendency to a still

heavier rail. The heaviest rail used in this country does not exceed 72 pounds per yard, the average being 60 pounds per yard, or 94 tons per mile, while the best English roads use a double-headed rail weighing 80 pounds per yard. Allowing an average face to face cross-tie of nine inches, and 3,000 ties per mile, we have a wood-bearing surface of 2,250 lineal feet per mile of track. The English roads, with a heavier rail, have a much less number of cross-ties. A rail weighing 80 pounds per yard equals 15.7 tons per mile, and with cross-ties of nine inches face (average), and 10 to each rail length, the English track has a wood-bearing surface of 1,432 lineal feet, about 33 per cent. less than our own roads. This is what we shall eventually come to in America—a heavier rail and less wood on our road beds. We think that it is not safe to use a softwood tie, such as white cedar or hockberry, save upon tangents, and then oak ties should be used at the rail joints, with only the best oak ties upon curves.

The English roads have no oak ties in their road-bed; their principal ties are made from "larch," which comes from the shores of the Baltic sea. The European larch is about the same wood as our tamarac, and said to be a little less resinous. We reject this wood in America for such purposes. In its native regions the farmers use it extensively as fence posts. Whether it has ever been tried for cross-ties we cannot say, but think it would answer the purpose very well if it would not check too badly, a defect quite natural to the wood.

The time is coming when railway companies will have to use a greater number of soft wood ties, or ties of a less compressive strength than oak, and many woods not at present available because of their rapid decay when placed upon the ground, will come into general use by means of the increased durability given to them from some of the preservative processes now of a tentative character. This will necessitate a return to the use of iron chairs to prevent the rails from cutting into the soft wood ties. These chairs the English railways have always used. The cheaper methods now in vogue for manufacturing iron will undoubtedly give us a cheaper chair than we used 15 years ago, and it remains for the practical track man to give us one of better form and strength, and at the same time simple and effective in its use. The chair should be the same pattern both for end and intermediate bearings, and must be fastened to the tie with something that will retain its hold more firmly than the common spike.

The wooden cross-tie will never be discarded from the railway road bed. There is nothing that will take its place so well under all conditions; it is elastic, easy of renewal, little effected by frost, and at its maximum cost is much cheaper than any substance yet devised. We doubt if a metal cross-tie can be safely and cheaply used north of the fortieth parallel; we should think that the extremes of temperature common to higher latitudes would cause them to be an unsuitable support, particularly when exposed to the action of frost or the extreme heat of the summer sun.—*Railway Age.*

SAVE THE TREES.

We find that the views expressed by the *Chronicle*, with reference to the wholesale destruction of young maple trees on St. Jean Baptiste day, have met with the cordial indorsement of almost everybody in the community. Indeed, we cannot see how other views should prevail for a moment. It is quite clear that if we plant trees we do it with a view to preserve the forests, and it is equally clear that if the saplings are to be torn up by the roots and wasted six weeks after the planting the task is rendered useless, and all the work and bother go for nothing. Either Arbor Day must be made to mean something or else we had better abolish it altogether. There were more young trees destroyed in the city of Quebec on Saturday and Sunday last than we planted in the entire Province on the 9th and 18th of May last. This must not continue.

On the part of some sensible members of the St. Jean Baptiste Society, a well conceived resolution was passed early during the past week with regard to maple trees. We believe Judge Chauveau and Mr. Le Sage of the Agri-

cultural Department, moved energetically in the matter and beseeched their fellow-compatriots to spare the young trees, and adopt some other mode of decorating the streets. They were over-ruled, but their words had some effect, and the better class of our people refrained from purchasing the car-loads of handsome young maples which stood before their doors. Now if moral suasion will not deter people from destroying our trees, the law must be invoked to protect them. We call on Mr. Lynch to use his influence, and to bring in a bill at the next session of the legislature, making it a misdemeanor for any one to cut down trees under a certain age, and providing a penalty also for the persons who use the trees as they were used, or rather ill-used, on Sunday last. We ask the Cures of parishes to employ their great influence with their congregations, and to ask the people who listen to their teaching to forbear from denuding the forestlands of their native Province. The labor of three years should not be thrown away on a single day's pleasure. We hope our words to-day will bear good fruit, and sink into the hearts of all true men who wish to see a prosperous future for our common country. To that end all must lend a helping hand. The conservation of our forests should be the national policy of Quebec.—*Quebec Chronicle.*

A FOREST AT THE BOTTOM OF LAKE TAHOE.

For some years past there has been a bank in Lake Tahoe, which in clear weather has generally been taken for moss formation. It lies at the right of the steamer's course between Tahoe city and Tallac house, about two miles beyond Idlewild. It looked as if a lot of trees had sunk to the bottom of the lake and that moss and alimo had collected there until the whole presented a wavy semi-transparent appearance about 50 feet below the surface. During the past few weeks the moss and debris has disappeared, and now when the water is clear a forest of pine trees can be plainly seen with every limb and twig perfect. On Wednesday last some fishermen went out there in a boat, and, lowering some grappling irons, secured some splendid pieces of the petrification. One is a pine branch about three feet long, which, hold a few feet from the eyes, has the exact appearance of a pine branch just taken from a living tree, and apparently fresh and green, the brittleness and weight distinguishing it from the freshly-cut branch. The forest occupies about two acres, and seems like a forest immersed, except that its stony branches are forever still and tall weeds and vines which cluster about the trunks of the giant trees are as motionless as the rocks. No wind ever stirs this strange verdure, and the birds which once sang in the branches centuries ago have given way to fish, which swarm through the forest in thousands.—*Carson Appeal.*

LAKE NIPISSING.

BRAUCAGE BAY, June 26.—A large quantity of square timber belonging to Barnett & Mackie, David Moore and J. R. Booth, is being loaded on cars at North Bay, bound for Quebec. Fraser & Sereney are driving their timber

down French River into the Georgian Bay. A forwarding company of Kingston has the contract of delivering it in Quebec. M. McDougall is also driving this river with several thousand logs.

The total cut of timber about Lake Nipissing this winter is not less than 1,000,000 cubic feet and it is all large and fine timber, both in size and quality. It is said to be much ahead of the average of what is taken out along the Ottawa.

A report is current that the extension of the Northern Railway from Gravenhurst is to be shortly commenced. This road is much needed in this section of the country to connect with Toronto and the west. It is supposed they will tap South East Bay, one of the finest harbors and booming grounds on Lake Nipissing. Here a number of lumber firms are likely to erect mills, and from this point, ship by rail. South East Bay is looked upon as the coming town of Lake Nipissing. North Bay will also be an important point, as the C. P. R. are taking considerable pains to make it a prominent shipping port for the lumber trade. Two or three miles north of this place there is said to be a very fine township of land, and already there are some thirty farms taken up.—*Ottawa Free Press.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowspits, Spars, Staves, &c. measured and culled to June 29—

	1881.	1882.	1883.
Waney White Pine.....	347,609	357,399	739,802
White Pine.....	1,050,206	1,047,377	438,948
Red Pine.....	214,762	174,664	45,393
Oak.....	783,193	455,694	431,138
Elm.....	223,129	155,815	83,918
Ash.....	152,815	91,962	42,980
Basewood.....	8,000	150	1,176
Butternut.....	173	1,245	373
Tamarac.....	3,573	320	691
Birch & Maple.....	107,888	135,750	134,450
Masts.....	— pcs	13 pcs	— pcs
Spars.....	— pcs	— pcs	— pcs
Std. Staves.....	45,542.20	52,511.15	108,92.16
W. I. Staves.....	922.1.0	275.5.1.21	34.8.0.1
Bri. Staves.....	1.7.5.23	21.4.0.4

JAMES PATTON,
Supervisor of Cullers.

Quebec, June 29.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of 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 physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

ONE OF MANY.—Mr. R. W. Carmichael, Chemist and Druggist, of Belleville, writes as follows:—"Your Burdock Blood-Bitters have a steady sale, are patronized by the best families here and surrounding country, and all attest to its virtues with unqualified satisfaction."

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on May 31st, 1882 and 1883, and also the Consumption for the month of May, 1882 and 1883—

	Stock, May 31st, 1883.	Stock, May 31st, 1882.	Consumption for the month of May 1883.	Consumption for the month of May 1882.
Quebec Square Pine.....	112,000 ft.	58,000 ft.	27,000 ft.	62,000 ft.
" Waney Board.....	103,000 "	103,000 "	— "	— "
St. John Pine.....	8,000 "	3,000 "	— "	— "
Other Ports Pine.....	23,000 "	23,000 "	2,000 "	3,000 "
Red Pine.....	12,000 "	14,000 "	8,000 "	8,000 "
Fitch Pine, hewn.....	484,000 "	707,000 "	182,000 "	240,000 "
" Sawn.....	513,000 "	347,000 "	290,000 "	321,000 "
Planks.....	45,000 "	67,000 "	26,000 "	30,000 "
Dantz, &c. Fir.....	75,000 "	102,000 "	5,000 "	61,000 "
Sweden and Norway Fir.....	6,000 "	4,000 "	6,000 "	4,000 "
Oak, Canadian.....	148,000 "	214,000 "	23,000 "	29,000 "
" Planks.....	190,000 "	68,000 "	32,000 "	80,000 "
" Baltic.....	20,000 "	53,000 "	— "	5,000 "
Elm.....	27,000 "	38,000 "	— "	4,000 "
Ash.....	— "	9,000 "	— "	4,000 "
Birch.....	45,000 "	40,000 "	59,000 "	21,000 "
East India Teak.....	85,000 "	63,000 "	34,000 "	20,000 "
Greenheart.....	180,000 "	61,000 "	8,000 "	24,000 "
N. B. & N. S. Spruce Deals.....	9,079 stds.	7,220 stds.	3,821 stds.	4,975 stds.
" Pine.....	790 "	380 "	— "	— "
Quebec Pine & Spruce Deals.....	4,305 "	3,510 "	1,409 "	1,509 "
Baltic Deals.....	3,254 "	2,220 "	406 "	204 "
" Boards.....	231 "	100 "	81 "	— "
" Boards Flooring.....	5,823 "	3,980 "	2,273 "	1,960 "

Chips.

The Indians are threatening mischief in Spokane county, W. T., and the loggers have received arms and ammunition from the governor.

Messrs. Wm. Bently and W. F. Fawcett, having purchased 3,000 acres of wood land in the township of Albemarle, Bruce county, intend going extensively into the lumbering business. Mr. Bently will take charge of the operations, with head quarters at Warton.

S. W. FOSTER, of the Muskegon Booming Company, is having a scow built, 20x45 feet, which is to be used in getting logs into the water that have been thrown on the shore. It will be furnished with a 50-horse power engine, and will use wire cables with which to pull the logs from shore into the water.

FELIX L. OSWALD says:—"The true basis of national wealth is not gold, but wood. Forest destruction is the sin that has cost us our earthly paradise. War, pestilence, storms, fanaticism and intemperance, together with all other mistakes and misfortunes, have not caused half as much permanent damage as that fatal crime against the fertility of our Mother Earth."

Our cast iron pulleys are much lighter than formerly, and latterly, wrought iron pulleys have been introduced, having in addition to the advantages of being already balanced and being stronger than cast pulleys, that of being very much lighter. Wooden pulleys of very neat construction have been placed on the market, and paper has also been pressed into service as pulleys.

THE Rat Portage correspondent of the Winnipeg Commercial says:—"A tow of two thousand logs was brought in on the 22nd June by the steamer Couchiching for the Rainy Lake Lumber Company's mill, which started cutting on the 23rd and is running day and night. The Winnipeg Lumber Company's new steamer the Princess, was launched on the 14th, and the machinery is now being put in."

A SOUTHERN mill man, in a communication to a New Orleans paper, advises his southern neighbors to procure good machinery and improve their methods of manufacture so as to cheapen and perfect manufacture. He suggests they will find it true economy to erect steam dry-kilns, and provide proper planing machinery, thereby enhancing the value of their product and increasing their profits. It does not pay to ship water and shavings, rotten and otherwise valueless lumber.

AN estimate places the amount of standing pine beyond the headwaters of the Pike, a tributary of the Menominee, in Wisconsin, at 1,500,000,000 feet. This pine is at present inaccessible to a driving stream, and must be reached by rail. The Wisconsin and Michigan railroad will probably penetrate this district, and bring out the logs for manufacture. It is quite as likely, however, that railroad mills will be built, and much of the product shipped west and northwest.

THE Emerson International says:—"The piles which have been lately arriving from Dakota for the pile work of the new bridge are of very inferior quality, and only a few of them can be used in the work. We understand the contractors are to send men up the Pembina River, to cut piles for themselves, as they will be able to secure any number there of the very best quality. This will delay the work somewhat. One of the pile drivers is at work on the west side of the river near the West Lynn's coulee."

THE Boston correspondent of the North-western Lumberman says:—"These Boston yards are at present very well stocked, although there have been times within a year when there was a larger amount on hand than now. Coarse lumber has sold right along, better than fine grades, and the hardwood trade has been better than last year. The yellow pine trade dropped off in April and has not yet come up to expectation, although there is now a better feeling, and prices are a little stronger. Spruces and hemlocks are in very good demand, and prices reasonably strong, although the combination prices on spruce are being cut by some producers. There is some demand for shipping pine,

Messrs. NELSON, MATTER & Co., of Grand Rapids, Mich., lately received a consignment of tea and tomano woods from the Sandwich Islands, and have made it up into desks. The former wood resembles walnut and the latter mahogany, both, however, being finer grained and susceptible of a better finish than the more common woods. This is the first time that either tea or tomano have been sent east of San Francisco, and the experiment has proved so successful in every respect that it is likely to be repeated.

THE Muskoka Herald says:—"The proprietors of the shingle mill at Matthiasville have adopted a novel and cheap way of transporting their shingles down the river as far as the Black bridge, thereby avoiding drawing them up and down the hills on the road. A number of saw logs are fastened together with lines and the shingles piled thereon, the loaded raft is then cut loose and allowed to float down stream to the bridge, the shingles are put ashore, the raft broken up and the logs of which it was composed sent on their way, rejoicing, no doubt, at having contributed to cheap transportation of shingles to the front."

THE Timber Trades Journal says:—"The supply of Canadian deals to Clyde has been unusually early this year. These imports have come chiefly per steamers, and before any of the "fleet" of timber traders to Greenock have arrived. But it is not likely that the imports of deals will continue on so large a scale, as the results of public sales are not encouraging, the attendance at those having been smaller generally than was to be looked for at this season, and even when pretty numerous showing little disposition to purchase. Some lots are being sold privately, no doubt, but the public sales give evidence of an extremely quiet trade."

THE London Timber Trades Journal says:—"Everything points to a good fall trade; if sellers do not push stuff where it is not actually needed, the improvement may come earlier than a great many expect. The inclination seems to be to hold best goods and press the common qualities, sellers forgetting, probably, that by so doing they give a downward character to the market generally, which cannot fail to act unfavorably on almost every description of timber. With regard to the dock stock of deals, timber, &c., there is nothing in their present proportions that need cause apprehension of any over supply, and on most of the chief items they are considerably less than they were this time last year."

THE London Timber Trades Journal says:—"It may be a matter for congratulation, or the reverse, that the shipments from the timber ports have hitherto been confined to such limited proportions; but it is undoubtedly favorable for an advance in prices should trade become more active. Whether that would be an unmitigated blessing to the general body of consumers or not it is unquestionably what sellers would like to see speedily established, though probably a large trade at present prices would be more agreeable to the big stock holders on the other side than business on a smaller scale at 6s. advance. Just now, however, it is the smaller scale without the improved price, though the moderate shipments may naturally be expected to lead up to an increase in value."

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to business, thanks to your wonderful medicine.

I am yours truly,

W. H. DICKSON,
218 St. Constant St., Montreal.
To Henry, Johnsons & Lord, Montreal.
Arnica and Oil Liniment is sold by all Drugists.

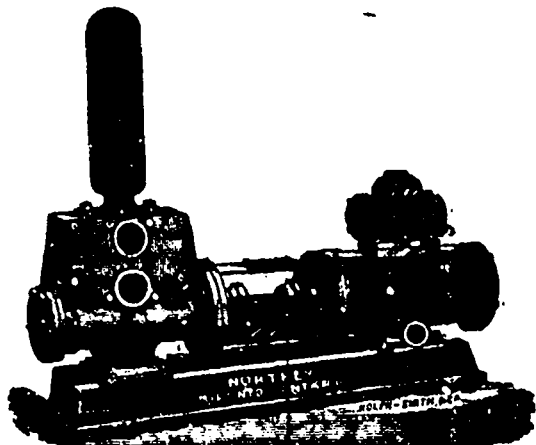
A MINISTER'S EVIDENCE.—The all prevalent malady of civilized life is Dyspepsia. Rev. W. E. Gifford, of Bothwell, was cured of Dyspepsia and liver complaint that rendered his life almost a burden. The cure was completed by three bottles of Burdock Blood Bitters.

WHAT EVERY PERSON SHOULD KNOW.—The grand outlets of disease from the system are the Skin, the Bowels, and the Kidneys. Burdock Blood Bitters is the most safe, pleasant, and effectual purifier and health-restoring tonic in the world. Trial bottles 10 cents.

**NORTHEY & COMPANY,
STEAM PUMPS**

FOR ALL DUTIES.

ILLUSTRATED CATALOGUE AND
PRICE LIST ON APPLICATION.



ALL WORK ABSOLUTELY
GUARANTEED.

Combined Steam Fire Pumps and Boiler Feed Pumps for Saw Mills, Etc., a Specialty.

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SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAITOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills



Established 1874.

Established 1874.

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RELIEVE AND CURE

Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

C. L. TILLEY, WATERVILLE, N.B.
Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1177

Market Reports.

TORONTO.

From Our Own Correspondent.

JULY 9.—Flat is the most expressive word to apply to the present condition of the lumber trade here. Stocks are accumulating on the hands of the wholesale dealers and vessels tied up at the docks, and plenty of lumber on the wharves to give them cargoes. In the face of this state of things dealers do not seem discouraged at all, there is a general hopeful feeling that shipments will move off briskly as the season advances, and as a reason for the faith that is within them, they point to the undoubted fact that there is less dry lumber of last season's cut on hand at the present time, than at any corresponding period for several years past, and, although trade on the American side is not as brisk as could be desired, still there are hopeful signs of an improving market. However, there is no use in denying the fact, that manufacturers cannot dispose of new cut stocks at \$1 per M less than the same grade of lumber sold at this time last season. This, in the face of an increased cost of production, of at least \$1 per M, makes a difference to the producer of \$2 per M below last season's prices, which is a serious matter, especially to such as are working on borrowed capital. If the advice given repeatedly by Mr. Wm. Little, of Montreal, to lessen production, could only be acted upon it would be good policy. But the difficulty is, there are only a few manufacturers who could afford to let the capital invested be idle, so the work of destruction to our noble forests go on from year to year, and sold at a mere tithe of their ultimate value of a few years hence.

At the yards there is a slight tendency to break on prices, more especially in coarse boards and plank. Bill stuff holds its own fairly, and lath and shingles are firm at previous quotations, the market not being at all overstocked with either of the latter, and there is little doubt but that mill men who have a suitable class of timber for bill stuff will do a remunerative trade the season through, and any loss there may be will fall mainly on those who confine themselves to the wants of the American market. Cherry and butternut are in good demand and for which good prices can be obtained, if cut into squares, and 3 in. and 4 in. plank. The trade with western Ontario continues fair and considerable shipments by car are being made on through rates direct from the mills.

Table with 2 columns: Item description and Price. Includes Mill cull boards and scantling, Shipping cull boards, Promiscuous widths, Cantling and joist, up to 16 ft., etc.

Table with 2 columns: Item description and Price. Includes Cutting up planks to dry, Sawn decking stocks, Pinks Am. Inspection, Three uppers, Am. Inspection, etc.

BUFFALO.

Table with 2 columns: Item description and Price. Includes We quote cargo lots, Uppers, Common, Culls, etc.

BOSTON.

Cotton, Wool and Iron of July 7, says:—There is no particular change in the situation. Trade is running along in a quiet and moderate way, and is expected to do so for the remainder of the summer. Prices also keep pretty even. Pine is in fair request at previous quotations. Spruce and hemlock hold pretty steady. Southern pine keeps along about as of late. In

hardwoods the demand is principally for choice grades.

Table with 2 columns: Item description and Price. Includes Selects, Dressed, Shelving, Dressed, 1st, Dressed, 2nd, Dressed Shippers, Dressed Box, Sheathing, 1st-quality, etc.

CHICAGO.

The Northwestern Lumberman of July 7, says: Not as many cargoes arrived at this port during the week ending at date as during the preceding week, the comparison standing 157 to 243. This considerable falling off is attributed to adverse winds by the consignees more than anything else. They generally take but little stock in the reports from the other side of the lake that shipments were to be withheld. A leading commission dealer said that he had received no instructions from his consignors that anything of the kind was afoot, and he thought it would be foolish for the manufacturers to pursue that policy, for the reason that should the market offerings be lean, Huron and Saginaw lumber owners would seize on the opportunity to rush their stock in, where the east shore lumber might have been. By reference to our cargo market reports last year at a corresponding time, we see that there were then adverse winds and a falling off in receipts; but after July 4 a big fleet came in, and the succeeding week the receipts aggregated 65,000,000 feet of lumber and 18,000,000 shingles. It is probable, therefore, that by the time this issue is in the hands of its readers the receipts will again be heavy. The national holiday, and the extremely hot weather, together with the adverse winds, have conspired to keep back arrivals to some extent, without taking into account the reported application of brakes at Manistee and Muskegon.

Though the market has not been over crowded with cargoes on any day of the week—not even on Monday—the enquiry has not been very active. Offerings have been got rid of to be sure, but there has been an inclination to stand around and wait on the part of buyers, and make the rifle at the last moment only. It is presumed that when the market has this sluggish feature about it, prices are not very firm at the quotations. The heaviest drag is noticed on Norway dimension, which the yard men persistently and conscientiously pound in every case. This cannot be wondered at, since the question of weight in freight rates has become such an important one in delivered lots. Norway piece stuff is undoubtedly good to use, but it is bad medicine to ship to Kansas and Nebraska, when A is trying to beat B on prices of delivered stock. The yard men this season delight to hammer prices anyway, and Norway comes in for the beating every time, and it has to go for about \$9 a thousand.

The asking price for a fair run of white pine, short dimension, is \$9.50, and it is doubtful if its selling value is appreciably lower than that. If deals are made at a lower figure, it is "just because it is you, you know," or some peculiarity in the schedule is taken into account. Where there is a large proportion of long lengths in the cargo, the top range of our quotations only are reached, which is not as high as in former seasons.

On the whole, the market is barely holding its own at the recent decline. Buyers are still troubled with indigestion, and do not take hold eagerly. Still the offerings move off in time, and an immense amount of lumber is changing hands. It is reported that one commission house last week sold 23,000,000 feet of lumber, but the story sounds as if it carried in it an ingredient of the Fourth of July.

Table with 2 columns: Item description and Price. Includes Quotation are as follows, Short dimension, green, Long dimension, green, Boards and strips—No. 2, etc.

The official figures giving the arrivals of lumber and shingles for the past week are omitted in this issue, being unobtainable in full, owing to the non-session of the board of trade during a part of the week. No comparison could be made between the figures at hand, and the ones representing the receipts for the week ending

July 5, last year, consequently they would be of little interest. Our next report will include the receipts for the two weeks.

ALBANY.

Quotations at the yards are as follows:—

Table with 2 columns: Item description and Price. Includes Pine, clear, 4 M, Pine, fourths, Pine, select, Pine, good box, Pine, 10-in. plank, each, etc.

OSWEGO, N. Y.

From Our Own Correspondent.

We correct former quotations; since our last the market has been dull, and the decline in prices has not had the expected result of increasing the demand. Stocks are large and still increasing; dealers from the interior are buying very sparingly, doubtless expecting a still further decline as the new cut will soon be dry enough to come forward.

Table with 2 columns: Item description and Price. Includes Three uppers, Pickings, Fine, common, Common, Culls, Mill run lots, Siding, selected, 1 inch, etc.

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Table with 2 columns: Item description and Price. Includes Three uppers, Common, Culls, etc.

LONDON.

The Timber Trades Journal of June 22, says: There is very little to say in regard to the freight market. Rates from the Baltic to London remain very weak; in fact, it is said by those closely connected with the trade for many years, that such a dearth of inquiry for both deals and firewood tonnage for London has never previously been known. As a counterbalance to the miserable state of the market here, a brisker demand for the out-ports and France, with a slightly higher rate, has to be reported. From Canada the market still remains firm, with a slight inclination upward. No arrivals from Quebec are reported, yet probably some steamers from thence will put in an appearance before we again meet our readers.

A tolerably large contingent of wood-laden vessels have entered the port since we last wrote, the total amounting up to 57, of which 29 were steamers, the others being the usual class of sailing ship. Not many of them are, however, with deals from Sweden, only four are from the latter country. The bulk of the arrivals seem to be made up of firewood, with a couple of Pensacola shipments to add to the already sufficient stocks of this description. Amongst the list is the steamer Viking, from Montreal, with some deals, but the quantity is not much to add to the limited stocks of pine. The mahogany cargoes are plentifully distributed throughout the list. As yet the steamers pre-

ponderate over the sailing ships, a state of things that could hardly have been imagined, much less realized, ten years ago.

Last year at this time there were only 24 ships arrived during a similar period, but these were subsequently improved upon, and the arrivals were quite on a par with these we have now to record. Nevertheless the present lot up is a very formidable fleet coming on a flat market, and prices can hardly recover in view of this large increase. The winds have been up to the last day or two very favorable for ships from the northward, and though not so material a point with steamers, nevertheless greatly facilitates their voyage.

LIVERPOOL.

The Timber Trades Journal of June 23, says: The imports have come forward a little more freely, and include some cargoes of pitch pine, which will be placed in the open market on account of the shippers. The general condition of trade, so far from showing any signs of improvement, tends rather the other way, and the complaints of the continuance of a flat state of business in the manufacturing districts are as ripe as ever. The suspension of a small house in the wholesale trade here, with liabilities of about £6,000, has had a disquieting effect upon the market in Liverpool, and it is also rumoured that a dealer in Manchester has been compelled to make an arrangement with his creditors, who are principally Liverpool timber-merchants. Though the amounts involved are not large, yet they influence business very materially, and tend to check what little life there is in the market.

There is but little doubt that this was felt at the auction sale of Messrs. Alfred Dobell & Co., who offered a very fine cargo of Mobile hewn and sawn pitch pine timber and deals, just landing. The local trade was well represented, but there were hardly any country buyers in attendance, and the sale, therefore, was slow and dragging, the prices realized being very low, considering the quality and large size of the timber. As neither the cargo of Darien sawn pitch pine nor the parcel of Savannah hewn pitch pine had arrived, they were not offered.

GLASGOW.

The Timber Trades Journal of June 23, says: The past week's imports here comprise some further supplies of Canadian deals, the arrivals of which since the season began, now sum up to 89,700 pieces, as against 69,000 pieces at corresponding date last year. Of lower port deals (chiefly from St. John, N. B.) there have been imported this year 237,000 pieces, as against 171,500 pieces last year at corresponding date. The only arrivals to note at Greenock for the week is a cargo of pitch pine timber. Imports of this wood to date compared with last year's are, 1852:—30,500 logs, kewn and sawn; 1853, 22,000 logs. The arrivals of teak to Clyde since the beginning of the year have been 9,869 logs, as against 13,717 logs last year at corresponding date.

The stock on hand of the various wood goods in Clyde ports will be taken at the end of this month.

Of Quebec log timber the quantity held is comparatively light. At the end of March last the aggregate was 31,000 loads, as against 42,000 loads at the same time 1852. The consumption of Quebec log timber during the quarter ending 30th June, 1852, was about 18,000 loads, and if the current quarter comes up to this, it is evident a comparatively small total will be shown on hand at the end of this month.

Besides the leading imports that have been noticed, parcels of wood goods arriving weekly, per steam liners from New York, amount to a large total. Of staves, for instance, there have been 410,000 pieces imported this year, also a cargo of 116,000 pieces per sailing vessel. Last year's total at date was 454,000 pieces.

There have been no public sales to note since last writing, but several are announced, and will be duly reported.

SWEDEN.

The Stockholm correspondent of the Timber Trades Journal writing on June 16th says:—Since my last letter the great bulk of the first spring fleet has sailed from the lower ports of the Botnian Gulf, and it is now seen that the

aggregate export has been larger than anticipated. A gratifying feature of the present spring shipment is, however, the proportion to which the outports on the Continent and in Great Britain have contributed, as contrasted with the quantities shipped to what are called the head entropots. If we analyze the clearances, for example, in the Sundswall district, from whence the heaviest export has taken place, from May 2d to June 12th, we find that out of a total of 55 wood cargoes exported within that period, only 19 cargoes have been despatched to the four principal ports of the United Kingdom, viz., 10 cargoes to London, eight cargoes to Hartlepool, and one to Hull. Grimsby is conspicuous by its absence. From the Gelle district, again, the clearances during the time above named were 144 wood cargoes altogether, of which eight were despatched to London, five to Hull, two to Grimsby, and eight to Hartlepool. It must also be borne in mind that a considerable portion of the above eighteen cargoes for London from the Sundswall and Gelle districts consisted of firewood. The above fact would seem to sufficiently dispose of the apprehensions that importers in London and other important centres would be likely to be swamped by consignment shipments.

Notwithstanding that production continues on a smaller scale than last year, and that the statistical position of the trade, as expressed by logs in the water and stock on hand, is decidedly better than it was then, I am sorry to have to report increased weakness for the lower qualities of redwood. It is generally the case that the smaller firms have to bear the brunt of the censure that falls to the lot of those who spoil prices, or rather who are popularly supposed to spoil prices, by their erratic and plunging mode of doing business consequent on loading themselves with too much stock; but now we find that wealthy firms, in an anomalous state of the trade like the present, suddenly turn round from their former high standpoint and reduce their prices considerably without the excuse that their poorer brethren generally have. Such, unless I am wrongly informed, is what has lately occurred south of Sundswall, and if persisted in will be likely to demoralize the trade. An immediate further decrease in the production of both red and whitewood is now imperatively needed, and should be acted on as far as it prudently can.

A reduction, has, it is said, been made at Hudikswall, 80 men having been dismissed from one of the yards at that place a few days ago. As soon as importers in the large English centres are convinced that they have nothing to fear from consignment shipments, and that last winter's "log-get," with the present production, are both moderate, they will soon to cease their persistent waiting policy, and I therefore consider the Society of Saw-mill Owners, &c., at Stockholm would do the trade a service were they to publish at once the actual figures showing the quantity of logs cut during the late winter in Norrland, as compared with 1881-83 cuttings, and which they have presumably now received from the different districts.

As we have been favored with heavy rainfalls during the last fortnight, the streams in Norrland are now in better condition for floating, and complaints of want of water are not so much heard. In the Ljusne and Dal River districts floating has been tolerably successful up to date, while further north the late fall of rain will have helped the small streams considerably.

THE AUSTRALIAN TRADE.

We take the following extracts from the May circular of Messrs. Lord and Hughes, of Melbourne—

The amount of business done in timber and building materials since the date of our last issue on the 10th ult., has been considerably below the usual monthly average, arising from the fact that the trade are in fair stock and importers not pressing sales. The demand from the yards for consumption still continues active, but during the winter months there is likely to be a falling off. Stocks of most lines held by importers are large, and we do not look for higher prices than those now ruling before the spring of the year.

LUMBER.—Imports: Nil. Sales by auction

have been parcels ex "H. G. Johnson" and "Leading Wind." Michigan clear pine realized £17 12s. 6d. per 1,000 feet super; white pine shelving, 12 inches wide, £10 2s. 6d. to £10 3s. 6d.; over 12 inches, £10 15s.; T. and G. Coiling, £8 15s. Particulars fully reported below.

AUCTION SALES.—17th April—Ex "H. G. Johnson," 8,570 feet 2½ in. Michigan clear pine, £17 12s. 6d. per 1,000 feet super; 20,000 feet 3 in. do. at £17 12s. 6d. do.; 25,000 feet 12 in. white pine shelving, at £10 2s. 6d. do.; 59,194 feet do., at £10 3s. 6d. do.; 35,182 feet, wide do., at £10 15s. do.; 26,332 feet 10 in. T. and G. Coiling, at £8 15s. do.; 1st May—Ex "Leading Wind," 2,500 feet 2½ clear pine, at £13 per 1,000 feet super.

Messrs. Gemmill, Tuckett & Co.'s May report just received from Melbourne, says:—Since last issue we have to report a steady demand for all descriptions of building materials, and prices realized during the month fairly sustain our late quotations. The building trade continues active, and the deliveries from the store yards are well up to the average of several months past. American lumber.—A shipment per H. G. Johnson realized at auction for Michigan clear pine, 2½, 3, and 4 in., £17 12s. 6d. to £17 15s.; w. p. shelving, 15 in., £10 2s. 6d. to £10 3s. 6d.; do. wide, £10 15s.; w. p. t. and g. celling, 10 in., £8 15s. Ex Leading Wind, 2½ in. clear (inferior), £13 per m. ft. super. Unless large shipments come forward prices will advance, as the trade stocks are moderate.

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec:

JUNE 23.—Collins Bay Co., oak, &c., sundry coves.

G. Germain, deals, Portneuf.
McArthur Bros., white pine, &c., New London cove.

British Canadian Lumber and Timber Co., white pine, &c., St. Michael's cove.

R. H. Klock, white pine, etc., Cap Rouge.
Flatt & Bradley, oak, elm, Sillery cove (Sharples).

E. P. Moor, white pine, &c., Cap Rouge.
E. L. Sewell, deals, Jacques-Cartier Mills.
Collins Bay Co., staves, Union cove.
Smith, Wade & Co., birch, St. Raymond Station.

John McRae & Co., staves, New London cove.

John McRae & Co., staves, Indian cove west.
JULY 5.—Sundry persons, oak, &c., sundry coves.

John McRae & Co., staves, Montreal.
E. L. Sewell, deals, Les Ecuriules.
Cook & Gibbons, ash, &c., St. Michael's cove.

YOUNG'S POINT, ONT.

From Our Own Correspondent.

SAW LOG DRIVES.—Mr. R. C. Strickland had a drive of saw logs arrive here on Saturday July 7th of 13,000, B. Loraque, forman, en route to the mills at Lakofield. Messrs. Ulyott & Saddler have two large drives at present in Clear Lake. F. Bell, foreman, has 40,000 and John Barr has 35,000, all en route to their saw mills at Harwood. This completes their drives for the season. A. Wynn, forman for Mr. Geo. Chalmers, arrived here on Monday, July 9th, at the snubbing ground with his large drive of saw logs, having made a splendid run from Boschink Narrows. From all appearances it will be a few days before any drives can pass through here, as several booms have broken loose between this place and Lakofield.

HIGH WATER.—The water still keeps very high, and the high winds we are frequently having of late retards the progress of saw log driving very much. This time last year we had scarcely water enough to float a tie from here to Peterborough; the steamers had to quit running, and the saw mills on the Otonabee had to shut down. This year it is quite the reverse.

The *Timber Trades Journal* of June 30, says: The imports are pretty numerous this week; seventy-three vessels, sail and steam, have brought timber of one sort and another to the Thames since the date of our last report. Of these rather more than half are sailing ships. Still the steam-shipment trade is fairly repre-

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sented, and apparently shows no sign of being out of favor with wood freights. Some people there are who attribute the unsettled state of the wood market to the fact of vessels of this class being now so largely employed in it. But this an opinion we do not exactly coincide with. Although steamers have undoubtedly brought about a great change in the shipment of deals, &c., we think they are so well recognized now that the market fluctuations which they caused at their first introduction have subsided, and the general body of importers, we expect, would rather lament their withdrawal, should such an event occur.

It is said that nearly 100,000 acres of Kansas lands have been planted with trees under the act of Congress authorizing additional pre-emption where trees are planted. The Cottonwood tree is mainly planted because it grows rapidly. Besides these trees thus planted in masses, there is more or less tree planting on all farms for shade, ornamentation or fruit. In time these trees must favorably effect the climate, and perhaps break the force of the fierce winds which now sweep with but little check across the state.

The *Timber Trades Journal* of June 23rd says:—There was a good average business done at the London docks this week, though the deliveries were not excessive. About the same as at similar date last year, something less in deals and flooring, but more in square timber. Though trade can hardly be said to be very lively, there is no laxity to be worth taking notice of in the dock business. It is remarkable that the timber deliveries from the Surry Commercial Docks are always smaller in the summer months than in the spring and fall.

The weight and density of different kind of woods are extraordinary. In Brazil there is a variety of tree the specific gravity of whose wood is less than cork, 0.206, while that of the ironbark of Australia is 1.426. The formation of the cells of soft and hardwood differs inasmuch that the fibres of the one are more densely or compactly laid than in the other. It is the straight-grained woods that have the greatest flexibility, though the beautiful effects of color, and woods best adapted to ornamental work are found among the tough, cross-grained and knotty varieties.

This issue of the CANADA LUMBERMAN is printed for the first time by means of power supplied by a water motor from the factory of Messrs. Tuerk Bros. & Johnston, of Chicago. The water is supplied by the Peterborough Water Works Company, which draw their supply from the Otonabee river. This motive power is most satisfactory in every respect, being thoroughly efficient, with steady regular motion, economizing fuel and labor, and adding greatly to our comfort by the lowered temperature. This motor seems especially well adapted for printing offices.

A VOICE FROM THE UNITED STATES.—I have suffered for the last twenty years with Dyspepsia and General Debility, and tried many remedies, but with little success till I used Burdock Blood Bitters when relief was quick and permanent. A. LOUGH, Alpena, Michigan, U.S.

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CORRECT GRADING.

The advantages of uniform grades are many. In the first place, a man now in the yard business can buy of reputable houses with safety. A demand for a certain grade will bring it. There are a few handlers of lumber in this market who pass over to the consumer material that would not pass muster, if inspected by a man of experience, but these handlers have no connection with our best yards by any means. They thrive on the ignorance of their customers, and were it not for this ignorance their business would be very moderate in proportion.

It is not every retail dealer who understands that it is best for him to sell uniform goods from one end of the year to the other. This is specially true if he has dealings with carpenters and contractors who know what lumber is. A dealer may go to a market in which he does not buy regularly, and buy a better grade of any particular description than he has been used to handling, and, strange as it may appear, his doing so may injure him as much as though he were to buy an off grade. The one lot will please his customers, but unless he can duplicate it, the next lot will be a disappointment. His customers will either want him to duplicate the better lot, or ask for a reduction on the other.

A strict uniformity of grades is as necessary for a retail dealer as for a large market. There should be a standard rigidly adhered to, and many a dealer has learned that it is dangerous to step away from the line in either direction.—*Northwestern Lumberman.*

ABOUT SAWS.

In a little work on "Hand Saws," by F. T. Hodgson, we find the following:—

"Heating spoils saws. Some sawyers will run a saw until it is tremendously hot, and, to make it worse, they throw cold water on the side, thus causing sudden contraction on that part of the saw, and after a few such times the saw has to go to the factory to be hammered and put in order, and to come back to meet the same fate as before. If the saw is round, hangs true in mandrel, is in line with the carriage, filed square at top and bottom, the backs of the teeth lower than the points, with the required amount of spread set, and the teeth kept well chamfered with a gummer, so that when the saw runs only the point will come in contact with lumber, then a saw will run free and cool, and there will be no extra strain on the plate, no heating or danger."

Regarding the bursting of saws, the author of the work says: "Circular saws sometimes burst from what may appear as unknown causes. There can be no doubt, however, when a saw does fly in pieces from some apparently unknown cause, but that a thorough investigation would trace the occurrence to one of the following causes:—

- 1—Square corners at bottom of tooth.
- 2—Out of round, with the backs higher than the points, so that instead of cutting, they scrape the dust off with the back.
- 3—Undue strain put upon the saw by the plate rubbing against the timber, causing it to heat, which takes the life out of a circular saw."

CYPRESS.

Although cypress has been in use many years at the South for building purposes, it is only within the last two or three years that its value has commenced to be appreciated at the north; but the demand for it is said to be steadily increasing, and the probability is that ere long it will form a very considerable portion of the supply of lumber sent to this market. There are two varieties of the tree, usually called the yellow and red. The latter, which is the harder of the two, grows upon the highlands, and as it takes a high polish, is extensively used at the South for furniture, shelving, counters and wainscoting. The yellow variety grows in swamps and bottom lands in the State of Alabama and all along the Gulf Coast, and throughout these sections is used as a substitute for white pine, although when thoroughly dried it is rather heavier and does not work quite so easily. It is claimed that it is stronger than white pine, that it can be nailed without splitting, that it does not warp, and does not readily

absorb moisture. It is used exclusively for hogsheds, barrels, tanks, cisterns, etc. It is also used for picket fences, sashes, blinds, door sills, clapboards, shingles, tanks, and vats for breweries and mills, and is said to be growing in favor for dyeing and chemical vats, as the dye does not effect it as much as other woods.

The most important quality of the wood is represented to be its great durability, which has been amply tested with the most satisfactory results. In this respect it valuable for the foundations of buildings upon filled-in land, where the wood is apt to become wet and then dry, as it will not rot easily. Since it has been systematically placed upon this market, it has been growing steadily in favor with builders, and as its merits become better appreciated, the consumption of it will no doubt increase. The lumber generally runs large and clear, and the price at which it can be laid down here makes it a cheap wood for almost any purpose.—*Lumber Trade Review.*

DULUTH AS A LUMBER CENTRE.

The Duluth Times, of a late date, refers to the rapid growth of the lumber manufacturing interest at that point, since Michigan men have taken hold, purchased land and built mills, and predicts that this branch of industry and trade is to be one of the chief elements of Duluth's progress upward toward the "zenith" of its hope long deferred. There is no question but that Duluth is as well situated to become a great lumber manufacturing and market centre, as any point in the Northwest. All it needs is ample railroad facilities, directly west into north Dakota, and northwestward is already secured, and will be added to in the near future by connecting branches and links. The Lake Superior region and northern Wisconsin might all be made tributary to a great distributing market at Duluth, which should become second only to Chicago. The hundreds of miles of shore encircling Lake Superior afford as ample a means of reaching out and gathering pine by the cargo, as does Lake Michigan for this market. Duluth stands to the treeless agricultural regions of Dakota, Nebraska, and the prairie sections of the nearer states of Iowa and Minnesota, as Chicago did to Illinois, Missouri and Iowa, when the lumber trade grew up here. But Duluth lumbermen must realize the necessity of building up a trade in wholesale yard assortments before it can become a great market.—*Northwestern Lumberman.*

QUEBEC.

The Chronicle of June 29th, says:—The timber market continues in a very quiet state, and the rafts now arriving are hardly even examined by shippers, which show that there is no inclination to purchase. Some very choice timber has reached the market, and especially we may mention a raft from Nipissing, about 60 feet average, as well as one from Kippawa—last year's timber—about 51 feet average, and sold at 28 cents. We also hear of a dram of white pine, 42½ feet average, just arrived, at about 26 cents. A small quantity of red pine, about 39 feet average has been sold at 16 cents. Very little inquiry for hard woods, except for ash and walnut, both of these woods are wanted for shipment.

SHIP KNEES.

Most people are probably not aware that for the past eight or ten years a rather extensive business has been carried on in the shipment of haematac knees for ship building from Ontario to the states of Maine and Massachusetts. Maine has been so long looked upon as a land of inexhaustible forests, that it is with surprise we learn that the fine ships of which its people are so proud could not be built but for the assistance of Canada. There are plenty of small knees in Maine, but large knees of eight inches and upwards are very scarce, and those that exist are in places not easily reached. Among the first to operate in the shipment of knees to Maine was Mr. J. S. Edgerley, of Fox Meade, Ont., although a Maine man. There are eight or nine persons now engaged in the business. Most of the knees go to Bath, and the cost of carrying them over the 1,100 miles

of railway between the place where they are cut and Bath is \$85 a car or about \$2 each. The price at Bath varies from \$7 to \$8 and \$9 each, so that ship knees are by no means cheap. During the present summer it is expected that large shipments of knees will be made to Maine from Ontario.—*Montreal Herald.*

A BIG UNDERTAKING.

When the North-West Lumbering Co. first signified their intention of erecting their saw mill, at Selkirk, Man., and of rafting their logs across Lake Winnipeg, many who possessed a knowledge of such work predicted the failure of the enterprise. There was no vessel on the lake they claimed powerful enough to tow a raft. It was also stated that the storms so frequent and sudden on the lake would prove disastrous to the raft, no matter how strongly it was constructed. All these predictions were totally uncalculated for, as a few weeks ago a very large raft was successfully towed across the lake by the steamer Colville. This raft, which was 1,200 feet long, by 80 feet in width, was the first brought across the lake. A two-inch hawsor was stretched through the centre of the raft, and was secured to each joint by side ropes. The actual running trip was fifty hours or two miles an hour. Mr. G. H. Bradbury, formerly of this city; one of the managing partners of the North West Lumbering Co. superintended the work of towing, and he has proven that such a voyage can be made with safety and security.—*Ottawa Free Press.*

LARGE LOSS IN DAMP FUEL.

Burning wet or damp wood or coal, instead of dry is much more wasteful and expensive than most people imagine and the subject is worthy of attention. An extensive series of experiments, recently made at Bochum, Germany, shows that six tons of finely broken dry coal gives as much heat as about seven tons burned as wet as it would be if water were dashed upon it and drained off after a short time. And this is the condition of much coal kept in damp vaults, leaky sheds, or out of doors. The lesson is obvious: keep the coal in a dry place and condition, and 5 to 14 per cent less according to its fineness, will be needed to obtain the same heat. There is a good scientific explanation of this. Water, in changing to steam or cold vapor even—that is, in drying off—conceals or makes latent, about 1,000 degrees of heat. If heated to 212 degrees, the boiling point, the steam really contains about 1,200 degrees of heat, although only 212 degrees are sensible, or are shown by the thermometer.

The waste of heat is still greater in burning green or wet wood. The sap or water uses up—that is, carries off in latent state—a very large portion of the heat produced by its carbon, or its dry material. As much man and team power is required to haul three or four cords of green wood as for six or eight cords of dry wood. The lesson is: cut the fuel and split it as finely as it is to be used, in the grove; haul it home when well dried, and it in a dry place for use. It will be worth far more for heating purposes than if burned green or wet, or damp even. The only exception to this rule is only when, by reason of easier hauling on snow, and on account of the leisure of men and teams in winter, it may be expedient to haul home the green wood then; but in all cases let it be well dried before it is used.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address *Wise & Co., Portland, Maine.*

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Sample Bottles 10c; Regular size \$1.

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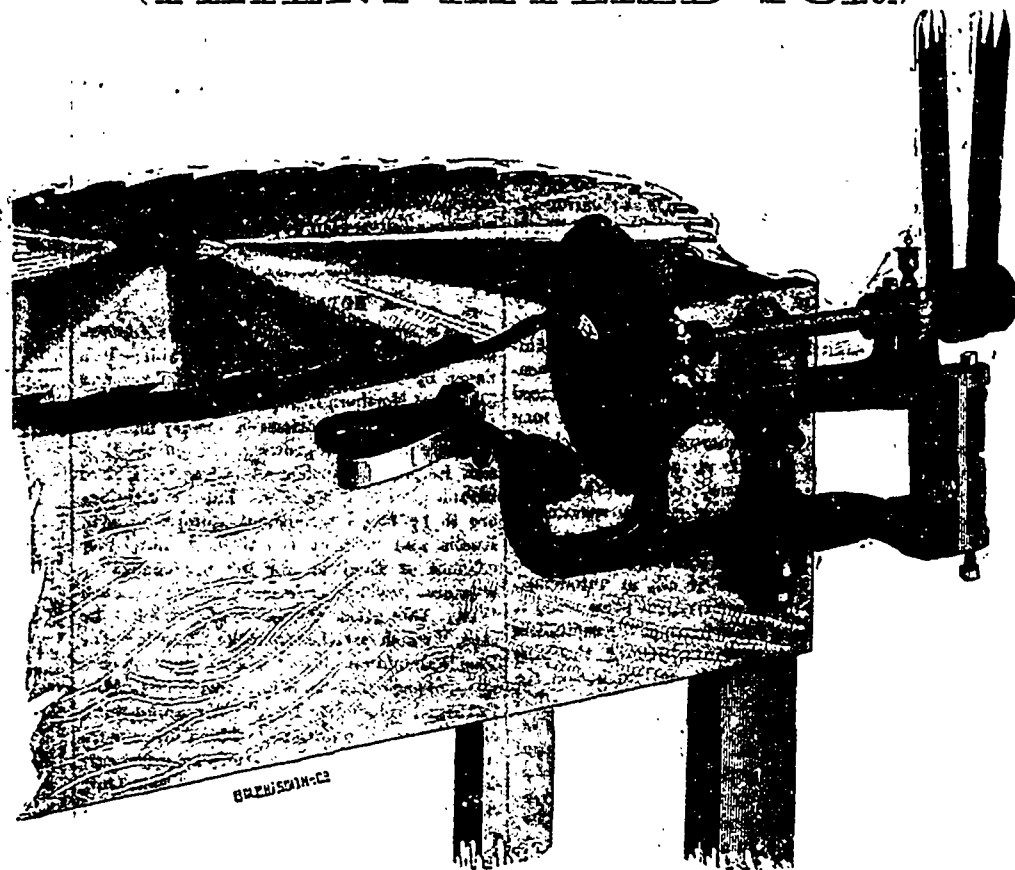
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Price Complete, with Countershaft - - \$40.00.

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Manufacturers of HART'S PATENT EMERY and CORUNDUM WHEELS.

CHARCOAL AND BY-PRODUCTS.

Readers of the *Lumberman* will remember that several times mention has been made in its columns of the Mathieu retort for making charcoal. Mr. J. A. Mathieu called at this office recently on his way to Detroit from the South. He has been putting in four retorts for the Shelby Iron Company, at Shelby, Ala., and will put in 76 more for the same concern. The 80 retorts will turn out 10,000 bushels of charcoal per day. The gentleman has now 56 retorts in Michigan, 24 in New York, and 82 elsewhere. As everybody knows, wood in the South is very cheap, and there are many who may be interested in knowing the financial result of making it into charcoal. Mr. Mathieu gives it as follows, per cord of yellow pine, the prices representing the values of the different products on the ground at Shelby.

68 bushels of charcoal,	7 cts.....	\$4 76
12 gallons of turpentine,	30 cts.....	3 00
2 gallons of wood alcohol,	90 cts.....	1 80
Tar.....		1 50

Total\$11 06

The entire cost of treating a cord of wood, including labor, interest on the investment, wear and tear, etc., does not exceed \$2.50. To place the price of the products considerably lower, the profit would be regarded large considering the outlay. Mr. Mathieu, as will be seen elsewhere, has been giving his attention to a new style of refuse burner. Aside from being safe, it is profitable. A safe and profitable "hell" is certainly a new idea. A safe burner has been desired by many a mill owner after an unsafe one has been the cause of the burning of a stock of lumber. A large mill firm recently wrote to this office regarding refuse burners, saying that sparks from its old one set on fire 6,000,000 feet of lumber which was consumed. Smaller fires from the same cause have been frequent. The burner in question is said to be absolutely safe, and, besides, to pay a profit of about \$5 for every cord of refuse wood thrown into it. The slabs, edgings, etc., are put in at the base of the burner, and the charcoal is taken from the top. The fire can be kept continually burning. The charcoal is suitable for locomotives, blast furnaces, etc., and the cost of the burner is about the same as that of an ordinary burner. From the acetic vapors are made turpentine, alcohol, and other marketable liquids. The *Lumberman* thoroughly believes in Mr. Mathieu's retorts for making charcoal, inasmuch that it turns wood, that would otherwise be of no use, into dollars and cents, and being pretty well acquainted with the ability of the gentleman as a chemist and inventor, it has no reason to doubt that his refuse burners will be as great a success as his retorts are.—*Northwestern Lumberman.*

MINNESOTA PINE.

The alleged pine land frauds in Minnesota have again been brought into prominence by the indictment in the United States Court of four men, charged with fraudulent practices in obtaining lands and timber belonging to the public domain. The individuals indicted are John McGuire, S. R. Wentworth and J. H. Caldwell, of Duluth, and C. B. Sleeper, of Crainard. The latter is county clerk of Crow Wing county, and it is charged that he was in collusion with the other parties mentioned, by which Sleeper gave them bogus certificates, which were issued to fictitious names, and on the strength of those, entries in the land office were duly filed, and the timber on the lands entered afterwards cut off and sold. Almost simultaneously with these arrests and indictments W. W. Spalding was removed from the government land office at Duluth. Since his removal he has spoken out loud, and declares that while the arrests were just enough, they were not brought about by the vigilance and enterprise of the federal officials, but through the connivance of a ring of much larger and more powerful fellows who picked up only a quarter section at a time. The *Lumberman* has before described the alleged method pursued by the great pine land owners, who promote public sales, like the late one at St. Cloud, at which it is said they freeze out outsiders and small would-be buyers by high bidding, and afterwards letting the bids lapse, until the outsiders are discouraged and give up in

disgust; whereupon the alleged ring steps in and gobbles the land at a minimum price.

The capitalist always enjoys the advantage of being able to do that legally, by the overbearing power of money, that the man of but little or no means is forced to do, if he does it at all, by fraud or crooked means. For instance, numerous individuals in the Duluth district, and other parts of Minnesota, have wanted to get possession of the pine on government lands in that state. The land was subject to entry as homesteads, under the pre-emption law, but not otherwise, except when the government should order special auction sales in districts that had been set apart and surveyed for the purpose. It was the most natural thing in the world for operators in logs to use the pre-emption dodge in getting possession of timber, inasmuch as they wanted nothing at all of the land after it was stripped of pine. It is well known that the pre-emption scheme has been worked for years with great success, so far as securing the pine was concerned; but the chickens of illegal procedure are apt to come home to roost sooner or later, and the men recently arrested have an example of the truth couched in this homely saying.

The capitalists who, it is said form a Minneapolis ring, and have promoted the prosecution of the fraudulent pre-emptors, have evinced much righteous indignation against the men who were picking up quarter section lots, but it is presumed that their virtue was pricked as much by their own moneyed interests as by the loss that the government was sustaining. They wanted that pine, and they did not want it slashed into here and there by so-called pre-emptors. They wanted it all, in untouched, virgin blocks, and at government price. So it has been all along the scheme of the capitalists to dog the small operators out of the pine woods by shouting fraud, and setting on the federal officials when that was possible. The bill that was pending in the last congress, introduced by the Hon. R. D. Washburn, and said to be backed by Senator Sawyer, of Wisconsin, and favored by the new Senator Sabin, of Minnesota, to repeal the pre-emption law, has its motive in the desire to wrest the pine lands from the pre-emptors, and give the capitalists at Minneapolis and Stillwater an opportunity to buy it up in blocks.

The difference between the scheme of the large operators and the small operators is this: that of the first is legitimate; that of the other is illegitimate. One is the method of the monopolist; the other that of the swindler and thief. Poplar prejudice puts both on a par, but there is a wide difference in favor of the monopolist. The Minnesota pine capitalist, of course, want all the pine land they can legally get their feet on. There is nothing essentially wrong about that, in a business sense. They want to secure the land as cheaply as possible. There is nothing surprising about that, since they are human. They want it before the small operators have "hogged" over it and spoiled the best tracts. They don't want to see men from down East at the sales, and do not mean to let anybody but Minnesota men buy up blocks of the lands they covet. They have for years had men in the woods, going over the government lands prospecting, and know where the best pine is to be found. They have the inside track and intend to keep it, and make the most that is to be made out of Minnesota pine. It is likely that there is a combination among the wealthy pine owners of Minnesota to secure the results indicated in the foregoing; there may be, or there may not be. There can be no doubt, however, about their intention to own the most of the government pine in northern Minnesota.

But when it is alleged that there is anything particularly reprehensible about the designs of the alleged ring, it seems like straining the question. If there is anything wrong in the Minneapolis scheme, it is in the alleged freezing out of would-be buyers by high bidding, and then refusing to take the lands as bid in. If there is collusion between the bidders and the government officials in this scheme, it amounts to a swindle, and should be ferreted out and punished. But if the government agents, who conduct the sales, know nothing about the motives of the straw bidders, all that can be

said is that the alleged ringsters perpetrate a clever trick on the outsiders. It may not be strictly honorable and business-like, but it could not be called illegal, or even preventible.

So far as the public are concerned, the general good would be better subserved by allowing the pine lands of Minnesota to pass into the hands of the great operators, who have capital enough to cut and manufacture the pine and distribute it for use. The growth of Western Minnesota, Dakota, Wyoming, Montana and Idaho depend on the ability of their expanding community to obtain lumber for building purposes. A dog-in-the-manger policy of restricting the sale of these lands to pre-emptors, and by auction sales at long intervals, will not contribute to the progress of the New Northwest. It is not sufficient to say that a few capitalists should not be allowed to monopolize Minnesota pine. Capital will control it in the end, despite all that can be done to prevent it. It will be manufactured and distributed more economically by a few capitalists than by hundreds of owners of limited means.—*Northwestern Lumberman.*

A BOTANIC GARDEN.

The current number of the *Farmer's Advocate* has the following suggestive paragraph:—In a paper by Mr. Charles Gibb on "Trees and Shrubs of Northern Europe and Asia," in which he records his observations on forestry and horticulture in the fruit-growing areas of the Russian Empire, the author alludes to the lack of botanic gardens in Canada. These institutions are to be found throughout Europe, even in Russia and most of the tropical and other colonies of England, for the interchange of botanical products growing in similar climates. "That this great Dominion of Canada," he says, "which stretches from the Atlantic to the Pacific should be without a botanic garden or a series of such gardens, is a fact without parallel in British colonial history." We cannot think of a city or town in Canada which has a more suitable and beautiful spot for a botanical garden than Salter's Grove, near London, Ont. And in what other city in our Dominion can such assistance for the successful organization and management of such a most elevating school be found as with us? We need only mention the names of Wm. Saunders, Esq., F. R. S. C. &c.; Dr. Burgess, A. R. Murdock, and so many others. By all means have a botanical garden at once, and let London have the honor of having such a worthy addition to our fine schools and colleges.—*London Free Press.*

THE Behn Manufacturing Company, of Winona, Minn., has taken a \$25,000 contract to supply all the woodwork for the new building of the Northern Pacific road at St. Paul. The entire inside finish will be in Wisconsin red oak. The same company has the contract for trimming what is expected will be the finest bank building in Dakota, to be erected at Pierre.

A DISPATCH of July 9 from Portland, Oregon, says:—Tremendous forest fires are raging south of Ralama. Six miles of railroad and two locomotives have been destroyed at Oak Point logging camp. The loss reported up to this morning is \$200,000. The flames extend for miles and are so fierce that it is unsafe to attempt to investigate the losses. It is believed the fire will continue until it rains.

A correspondent of the *Northwestern Lumberman* says:—New England in those good old days was a well-wooded section; as to that matter, it is far from being lumberless to-day. In certain sections there are large tracts of woodland which, if properly protected, will within another decade prove a valuable source of profit to its owners. Investigation goes to prove that New England is well adapted to the growth of timber, especially white pine, and who knows but in a few years those of us who may live may witness the shipping of New England pine, the same as to-day pine is shipped to us. In parts of Maine, at this time, pine is being cut, from which large quantities of good width and strictly clear in grade are sorted out. Large quantities of clear strips are cut, which are used by moulding manufacturers, who in former times used western strips.

THE Grand Haven Courier says:—G. W. A. Smith, this week closed a bargain with Chicago parties for the firm of Smith & Field for 1,100 acres of choice pine lumber on White river, estimated to cut 30,000,000 feet. Average haul, one mile to the river. The most of said pine is within a mile of their old camps. Consideration \$120,000.

THE *Timber Trades Journal* says:—The fact of the present low prices is causing a curtailment of the production at several of the shipping ports; and we hear that some of the largest concerns in Sweden have ceased night sawing, confining all their operations to day work, and as the night cutting has been carried on somewhat extensively hitherto, this action on their part is likely to make a considerable difference in the supplies.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." \$60 a week in your own town. \$5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many amazing fortunes. Ladies make as much as men and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLITT & Co., Portland, Maine.

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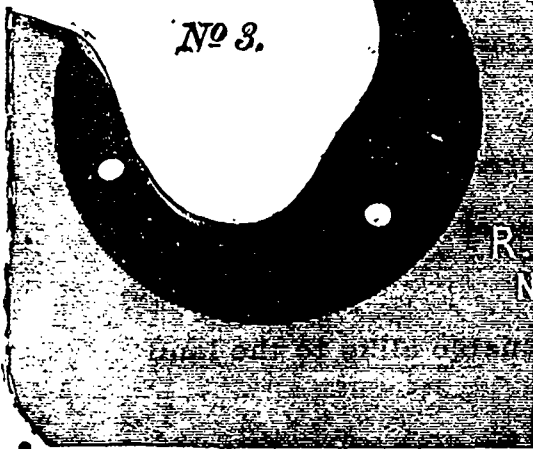
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Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Amprior.

We run 60-inch to 72-inch Solid Saws, as thin at center as 10 gauge at rim—saving, over a 7 gauge saw—1000 feet of lumber in every 25,000 cut.

McLAUGHLIN Bros., Amprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute. Write them.



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One of the best bit saws made, above cut represents usual size tooth, one size larger and smaller made. Send for particulars and prices.

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Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows:—54 inches in diameter, as thin as 12 gauge at rim and 11 at center, 54 to 56, 11 gauge at rim, 10 at center, 60 to 72, 10 at rim, 9 at center. Our unparalleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, Evenness of Temper; 2nd, Perfect Accuracy in Thickness, Saw balances perfectly; 3rd, Properly Hammered, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

NO EXTRA PRICE FOR THIN SAWS.

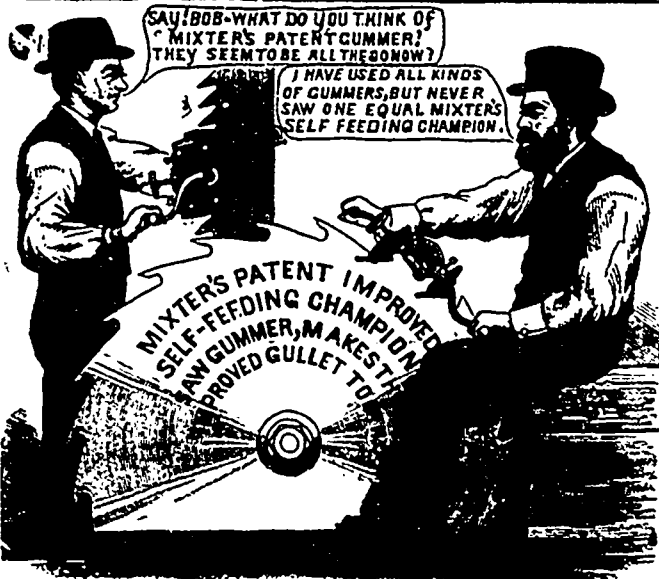
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Can insert one tooth for every inch in diameter of Saw.



Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 gauge at rim.

The CLIPPER FLANGE SAW EXPRESSLY FOR HEAVY FEED.



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