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NO. 13.

A HEMLOCK-BARK concern at East Templeton, Ottawa river region, has 100 men stripping bark, and intends to get out 1,000 cords.

MR. E. B. EDDY, of Hull, will, it is stated, shortly establish a paper pulp factory in that city on the site recently occupied by Batson & Carrier. He expects to utilize in this way all the sawdust and refuse of his saw mill.

In one day Thomas Hall, with eighty hands, 75 Indians and five whites, put over the Chats slides and rapids a raft containing 170 cribs of white pine and other cribs, amounting in all to 200 cribs, which were rafted and got off the same night. This is probably the biggest day's work of the kind on record.

The *Timber Trades Journal* has the following paragraph on "Yellow Pine:" being our "white pine"—This question of dryness is an important consideration in regard to yellow pine, fully seasoned wood being intrinsically of much more value than stuff freshly manufactured. In Baltic goods, on the contrary, the fresher they are from the mills the more the trade here like them. Of course we do not mean to infer that green wood is as marketable as seasoned, but all deals are supposed to have undergone a process of drying before shipment.

The *American Lumberman* of New Orleans says—"Squatter sovereignty" is a persistent enemy to our magnificent pine forests, and its rule is everywhere found in the shape of thousands of trees girdled and left to decay around thriftless and abandoned homes, hundreds of which are found throughout the pine lands of the South. The vandals generally remain long enough to destroy what they can of what is valuable, and then move to some other section to repeat their work of devastation, an evil as far reaching and as pernicious in its effects as the forest fire. Both are evils which should as far as possible be cured by prompt and proper legislation.

The *London Timber Trades Journal* of June 2nd, says:—It is satisfactory to record, that if the deliveries are on a moderate scale, so are the supplies that have to replace them. Twenty-seven vessels only have to be recorded with timber goods in the port of London for the seven days ending with the 29th, or about 15 short of the number that put in appearance the last week of May, 1882. The next Board of Trade returns will be awaited with some curiosity by the leading importers at the chief centres of trade, and if they show that the same limited scale of supply has prevailed generally in the United Kingdom through the month of May as we had to chronicle in April, a better feeling may be expected to assert itself for the rest of the season among buyers.

PROSPECTS IN ENGLAND

The *Timber Trades Journal* says. It has been shown in our columns, and corroborated by the Board of Trade returns, that there has been a great falling off in the importation of foreign timber into this country up to the beginning of the month of May, nor has there been any excess of importation since, and it is the opinion of many that, however delayed, this backwardation will have to be made up before the season comes to an end. If this theory be admitted—and it is certainly very plausible—nothing is more likely than that the state of markets will ere long begin again to favor the shippers abroad, and that a brisk fall trade at remunerating prices may compensate them for the absence of the usual demand on their stocks in the earlier months of the year.

By the tone of our correspondent in Sweden, we may reasonably assume that there will be some curtailment in the production at the saw-mills over there, though whether this will be on a sufficiently large scale to appreciably affect f. o. b. values during the present season it is impossible to say without more data to go upon. With any improvement in the demand we fear the result to work short time, to which the Swedish shippers have seemingly agreed, would soon disappear, and stuff might be cut to more than meet the revived requirements. But in any case a greater business is likely to be done shortly, if at no better prices, though with the consumption accelerated it is difficult to see how these can be kept from advancing.

We shall not expect to see much improvement, however, till we hear of ships for charter being in more request, because the action of producers in limiting their manufacture will not stimulate the consumption unless a real revival of business takes place over the country in every direction. That the prospects of fall business are more encouraging may be traced to the fact of the present greatly reduced stocks here rather than to what they represent upon the other side. When once buyers begin to find they may be late in getting what they require, a tone will be given to the market which can hardly fail to render values firmer.

In the meantime the cutting trade that is now done keeps quoted prices very low, though for the leading stocks little alteration has been made on last week's prices. If anything, they are already hardening, but taken one with another we consider there is nothing to denote any upward inclination.

Common deals are sufficiently cheap to induce sales, but stocks of this description are plentiful enough to make buyers indifferent as to fresh purchases except at a still further reduction.

As to best goods, these, though wanted, are not in such demand as to make dealers anxious to supply themselves, and they continue to decline transactions except for immediate wants,

at shipper's present holding values. So the market stands, the buyer having rather the best of it; the immense facilities for supplying himself which the public sales here afford, if only on a limited scale, induce him to import only sparingly and to keep on the outskirts of the market until he sees some outward and visible sign that the trade is again moving ahead.

The one favorable fact of a diminished supply is all that we can at present adduce in favor of an approaching upward movement in the trade; but is an important fact, and is more to be relied on than a dozen rumours of short supplies abroad, rivers running dry, or great orders going out from other countries to clear away the stocks that were intended for us.

SUGAR OR ROCK MAPLE.

The following paper on the Acer Saccharinum, is by Jacob W. Manning, Reading, Massachusetts:—

This is in a broad sense an American tree, for it extends from the extreme eastern part of North America to the Eastern Rocky Mountains, and from the highlands of the Gulf States to the watershed between the waters of the St. Lawrence and Hudson Bay. In all this territory it is found at frequent intervals on elevated land and along rivers, and is at home in all rocky formations.

This tree is often from three to five feet in diameter, and seventy to eighty feet high, large and straight enough to make ship-keels, growing naturally without any aid from man.

I measured a tree in Northampton, Mass., that had been planted sixty years that was eleven feet six inches in circumference, three feet from the ground; even this is small compared with some natural trees seen in old pastures.

The wood is close grained and solid, and one of the handsomest of all light colored woods for furniture and house finish. The bird's-eye, curly and branched maple veneers that make such a rich and varied finish are made from it. It is almost the only wood used in the manufacture of boot and shoe lasts, for which a surprisingly large amount is used, and in many other industries where a solid and close-grained, but light wood, is necessary. As fuel it is but little excelled by any other wood.

No other native plant growth produces such delicious syrup as the rock maple. A sugar orchard is a valuable addition to a farm; even our street and lawn trees can be tapped without injury; they appear to grow as finely and live as long as those not robbed of their sap, which one would suppose was their vital fluid.

As a street lawn or park tree it is justly valued as one of the best American trees. It is thrifty, comparatively free from insects, and is sure to grow into a well balanced tree in nearly every locality. The shade is very dense, and yet grass will grow quite freely under single

specimens where the wind blows off the leaves.

In planting, to prevent monotony, it is well to intersperse other trees of different outline. The gorgeous autumn hues of our forests are largely due to this maple. I witnessed at Nowburg, N. Y., on a cloudy fall day in suburban home grounds, laid out by the lamented A. J. Downing, the very best effects in the varied hues taken on by this tree; interspersed among other kinds, each with its own peculiar autumn color, and some still green, but the rock maple overshadowed them all.—*Boston Traveller.*

SHIPPING FOR TIMBER.

The New Orleans *Times-Democrat* complains of the scarcity of tonnage combining large carrying capacity with light draft. It says:—"Our commerce with Mexico, Texas, British Honduras and South America is increasing yearly. More especially is this felt in lumber, but restricted to a class of vessels which are compelled to charge a rate of freight which exceeds in many cases more than one-third the cost of the lumber itself, delivered alongside; the mills can ship nothing but the choicest article, leaving on their hands the cheaper grades and offal. This necessarily entails a higher price being charged for the lumber, and, in consequence, the purchaser is deterred from ordering more than he barely needs. But once let the rate of freight, by employment of the right class of vessels, be reduced; let the mills once be able to lay down the whole cut of the log at the point of delivery, then they in turn can afford to cut cheaper and thus attract orders. The volume of business, it is safe to predict, would be more than double what it is now. Mill owners in the South are, as a rule, hampered for capital, and need all of their means for the development of their business, and cannot afford to embark in a business which is separate and distinct from their own. Yet so severely is the want of this class of tonnage felt that some of our largest mill owners along the Gulf coast are building vessels of their own, with a view of making themselves independent of chance and the exactions of ship brokers. Another feature in connection with this business is the fact, that, could the different ports to the south of us, which have but 7 or 8 feet of water on their bars, rely upon a sufficiency of cheap and light draft tonnage, trade would be stimulated to an extent never known before. In return for our yellow pine and other products, regions of the valuable woods of the tropics, mahogany, cedar, fustic, etc. would be opened up, and vessels which now in a majority of cases return empty, would be guaranteed good freights back. The field is a promising one, and while, for lack of space, we must bring our article to a close, we cannot refrain from inviting our moneyed men to give this subject the earnest attention it deserves, promising ourselves at some future time to treat it more exhaustively and fully."

LUMBER FIELDS.

The aggregate results of the logging operations in the Minnesota and Wisconsin woods reveal the stupendous magnitude of the northwestern lumber interests in a light which will probably astonish persons most familiar with the subject. The total cut of the two states exceeds 4,000,000,000 feet. The mind will be better able to grasp this unwieldy number when it is understood that it represents the trees growing on 1,250 square miles, or about 35 townships of land. In the classification of districts, the great Chippewa valley region of Wisconsin is easily first, with 1,000,000,000 feet on the Chippewa, Eau Claire, and their tributaries. The Mississippi above Minneapolis comes next with 600,000,000 feet. The Wisconsin river returns 441,000,000, the Duluth district 297,000,000, and the Black river 228,000,000. The streams on the west shore of Lake Michigan, grouped together for convenience, show a cut of 785,000,000 feet. On the different railroads in Wisconsin and Minnesota, between 500,000,000 and 600,000,000 feet were cut. The cut is by far the greatest in the history of the northwest.

There is a great truth to which this enormous growth in the logging interest in the northwest points. The swift and surprising development of the country west of the Mississippi river has created a greater revolution in the lumber business than in any other interest that supplies its various demands. Within the last few years the enormous demand from the west has revolutionized the lumber trade in its sources, its methods, its channels and its markets. This year's investigation reveals clearly the fact, more vaguely understood before, that the destination of nearly all the lumber cut in Wisconsin and Minnesota is the treeless prairies and magically-up-springing now cities of Dakota, Montana, Nebraska, Iowa, and even the more southern states. Chicago, once the lumber market of the whole west, gets now only a fraction of the enormous product of Wisconsin and Minnesota, and the magnet of the western demand attracts the lumber from the cheap water routes of the lakes to the westward railroad lines. Nearly all the lumber cut on the shores of Lake Superior goes west by the Northern Pacific. The Wisconsin Central carries a little to Milwaukee, though much of the traffic by that line is diverted by the westward lines it crosses. The great lumber centres of the Chippewa, Black and Wisconsin valleys are drained by the Omaha and Milwaukee and St Paul to the west and southwest. Even the lumber on the west shore of Lake Michigan, within easy reach of cheap water transit to Chicago, chooses instead a circuitous route by the Chicago & Northwestern road across Wisconsin, Minnesota and Iowa to the omnivorous western prairies. The once all-absorbing lumber trade of Chicago is reduced to the handling of so much of the Michigan product as is required for western consumption.

The stimulus of the western demand has changed the methods of lumber production and transit, as well as the direction of the market. The present or prospective exhaustion of the richest and most convenient tracts on the margins of navigable streams, while the demand is annually increasing, compels a resort to new sources and a more careful gleaning of old. During last winter many tracts were cut for the second or third time. Higher prices and an eager market made it profitable to return to second class timber, windfalls and smaller growth, neglected in former years. So far as this tendency leads to a cleaner and more economical reaping of the pine harvest, it is to be commended. It may work harm, however, by causing the destruction of half-grown trees, which contain the promise and potency of the future timber supply. A still more important change in the methods and sources of lumber production is the adoption of means of reaching rich tracts remote from the channels of navigable streams. To an extent not generally understood, the railroads are taking the place of rivers as a means of transit of the product, even from its first source. Hundreds of millions of feet of logs are taken to market every year that never float for a mile on the waters of rivers. Railroads are penetrating the lumber districts in every direction, the North Wisconsin,

the Chippewa Valley, the Wisconsin Central, the Northwestern on the Michigan shore, whose sole or main business is the transportation of lumber cut on their lines, hauled to mills at their stations, sawed into boards and loaded into cars without ever seeing a raft or a boom. In many places narrow gauge roads are built from the main lines into remote tracts, to enlarge the field from which supplies may be drawn. This change of method adds a large percentage to the available supply, and hastens by as much the rate of exhaustion of the forests.

The question of the prospective exhaustion of the pine timber of the northwest will suggest itself to every thoughtful person. There is no question that the time is swiftly approaching when the forests of Minnesota and Wisconsin will no longer answer to the annual demands made upon them, nor that the day is hastened by the extravagant and destructive methods of production, happily less common now than a few years ago. A pine forest is a thing of slow growth, and those of Wisconsin and Minnesota are definitely limited, though still of vast extent. They cannot indefinitely endure the stripping of the available timber from 1,250 square miles per year. The period of exhaustion of the northwestern forests has been the subject of speculation. It is vaguely put at ten years, but there is no data to justify such exact computation. The demand is variable, and there is no means of estimating what the supply may become under changed conditions. Poorer and less accessible timber will be made available by improved methods, and the pine lands remaining will probably be made to go much farther than the same quantity in former years. But the certain fact that the forests are destroyed much more rapidly than they are replaced with new growth, makes their exhaustion only a question of time. There are few virgin tracts left now. The loggers are already invading the Red Lake and Vermillion districts in Minnesota, and the railroads have penetrated to the hitherto intact forests above and between the heads of navigable streams in Wisconsin. Whether ten or twenty years hence, the exhaustion of the northwestern lumber supply is near enough to suggest the most careful husbanding of the resources that remain, and to emphasize the blind and mad folly of a lumber tariff that preserves the forests of our neighbors and puts a premium upon the destruction of our own.—*St. Paul Pioneer Press.*

TREES AGAIN.

One of the yagaries of the free-traders is the publication of a pamphlet intended to show that the only way to check the destruction of forest trees in the United States is to abolish the duty on foreign lumber; and a scientific periodical, which ought to know better, remarks in commending the argument that the timber duty offers "a direct encouragement to a continued course of ruin." The forests are recklessly destroyed because the people have no adequate sense of their value; and the way to check the destruction, say these economists, is to reduce their value by introducing Canadian timber at a low price. To state their position is to show its absurdity.

If we are not to check the destruction of forests until we have persuaded people to cease cutting our trees into planks and shingles, and to buy their building material abroad, we may as well abandon the expectation of a change. The abuses to which we ought to direct our attention are reckless waste in wood-cutting, wanton or careless devastation by fire, and the wholesale destruction of forests not for the use of the timber but merely to get rid of it. All these evils, except possible the second, would be aggravated by the repeal of the lumber duty. It is a common practice all over the country to waste the woods in such a manner as to wreak the greatest possible ruin for the least possible result. The axemen who are cutting fuel leave all the fallen trees and broken boughs, and bring down the fresh ones, of which, moreover, they take only the best parts; or they sweep away the young and old growths together, destroying all chance of a renewal of the forest. Perhaps only a few miles away another gang are stripping hemlock bark for the tanneries, and the naked trunks, instead of being turned to

use, are left to rot on the ground. As the woodman will only chop in the easiest way, without regard to economy, so the householder will burn nothing but the best firewood, without reflecting upon the cost which he will ultimately have to pay for his extravagance.

Forest fires, which are more frequently the result of criminal recklessness than of accident, ought to be the subject of penal legislation. But closely connected with the frequency of these disasters is the widespread sentiment that woods are like weeds, the natural enemies of the settler which must be exterminated to make way for civilization. There are regions of the United States where the owners of timber offer it gratis to anybody who will cut it and haul it away. Under this system the best parts of the best trees are taken for fuel and the rest is burned on the spot, the fires of course often spreading over miles of valuable standing timber. Thus, in order to hasten the clearing of a few acres for the plough, the landholder destroys one of the most important elements in the productiveness not only of his own farm but of the whole country around. His case is like that of the thriftless cultivator who exhausts his fields by excessive and improper cropping, ruining his future for the sake of a few hundreds of bushels in the present. And the man who wantonly lays waste a forest is worse than the man who exhausts a farm, because the injury is not confined to himself and his heirs but is spread far and wide.

The State will sooner or later find itself forced to consider how it can prevent people from cutting down their own trees. But before any such radical reform as this is attempted we must cultivate the "sentiment of trees," in which a large part of our population seem to be strangely deficient. No important public measure can be carried out until public opinion demands it; and although this question of the preservation of forests is attracting more and more attention every year, there is a huge mass of indifference and ignorance which will long resist any change. To this formidable inert opposition, journalists and economists must patiently address themselves.—*N. Y. Tribune.*

LUMBER RAFTS.

The lumber merchants of Hannibal, Mo., employ a novel method of removing lumber from rafts in the Mississippi to their yards. This is usually done by towing the "strings" of which the rafts are composed alongside the shore. The lumber is then washed off by the use of buckets and brooms, and loaded by hand upon wagons which convey it to its proper place for piling in the yards. This method, it will be noticed, necessitates a large amount of manual labor and the occupation of considerable river front in order to handle a large amount of lumber in the season.

The new method calls in the use of the railroad and is operated as follows:—A track is laid along the edge of the water, extending even beyond the low water line. This is heavily ballasted with rock, so that water running over it will have no effect in moving it out of place or floating the ties. At ordinary stages of water, therefore, there is a depth of several feet over the river end of this track. The lumber-raft which it is desired to land is then broken into its "strings," one of which is floated over the line of submerged track and kept in place by a line of guide piles driven for that purpose. This string is again divided into the various cribs composing it, which vary somewhat according to the size of lumber. A train of low, strong flat-cars, built for the purpose, is then run down from the shore, so that one or more of them are under the cribs of the lumber-raft. These cars are of such size that each will take in the length of the crib.

By the proper connections of ropes and staves a crib is moored over a car, and the movement of the train away from the water by an engine floats the crib also ashore. When in such shallow water that it touches the car, the latter receives its weight, and instead of being floated it is carried shoreward and out of the water. The cribs thus loaded, each on its car, are switched to the yards, which are now some distance from the river, as by using this method they can be. At the yards the lumber is quick-

ly washed off with a hose while being unloaded.

The advantages claimed by this manner of handling lumber are many. There is less obstruction of valuable river front by lumber-rafts; cheaper ground can be used for the lumber yards, as they can be away from the river; the saving in manual labor and teaming is very large, and, lastly, the saving in time is an important item. It is claimed in Hannibal that last year was the first that saw the whole supply of lumber out of the water before winter set in, and this was only possible through use of the method we have described.—*Railway Review.*

EXHAUSTED FORESTS.

The following letter has appeared in the *Monteral Gazette*:—

SIR,—I observe, in the *Gazette*, an article referring to the drive of logs on the Connecticut river, containing 90,000,000 feet, as an evidence that the forests of the east are not completely exhausted, and inferring that years after the time at present allotted by statisticians extracts of similar import may be expected from Michigan papers, and that in the estimates of standing pine no calculation is made for the natural growth of trees, etc.

That the forests of the east are completely exhausted has hardly been claimed, but no better evidence of their scant condition as regards pine could be furnished than on this enormous river, draining such a vast extent of country, which not many years ago was covered by magnificent pine forests, hardly a stick of pine is to be found in the whole 90,000,000, and to obtain this amount of spruce, most of which is to supply mills in Massachusetts and Connecticut, the lumbermen were compelled to go to the headwaters of this river in New Hampshire, within gunshot of the Canadian line, even getting some of it from Canada; in fact, four-fifths of it from the region of the Connecticut lake a section of the country that would not have been in the States at all but for the generosity of Lord Ashburton, who, with that liberality proverbial with those dealing with the property of others, presented it to the United States, rather than have any unpleasantness with his friend Webster, for a projection eastward of the northerly line bounding Vermont and Canada would cut off nearly the whole of it.

If this Connecticut river spruce drive of 90,000,000, 40,000,000 of which are old logs, proves anything, it is rather that the eastern states are pretty near the end of their supply, not of pine only, but also of spruce." W. LITTLE.

TIMBER TREATING PROCESSES.

At the National Exposition of Railway Appliances the American Society of Civil Engineers has a large display of specimens of different kinds of wood treated by various processes for diverse purposes, in which are included many curiosities. The collection is the result of the labors of a committee appointed to investigate the subject of timber preservation. The conclusions arrived at, after corresponding with 350 persons, examining 104 patents, and collecting a fund of general information, are that out of innumerable methods of preserving timber but few are practical, and only three can be relied upon to prolong the life of wood exposed to the elements, namely: kyanizing, burnettizing, and creosoting. In Europe these methods have passed beyond the domain of experiment, and there produce great economical results. In this country the cheapness of timber has been the principal obstacle to wood preservation, the cost of injecting making the price of cheap woods too high, and consumers have preferred letting the wood rot and renewing it. The committee believe that this condition of affairs is fast being removed by the enhancement in the price of timber, and the proximate exhaustion of the more available forests, the time having probably arrived when the economy and necessity exists in many parts of the country for treating wood against decay in exposed situations. The selection of the proper method to be used depends upon the proposed subsequent exposure of the timber—dry, wet, marine worms, etc.—and the amount of material which the value of the unprepared timber admits of being expended upon it. For bridge and trestle timber, for fences in

dry soil, and generally for wood exposed to the weather, but not to constant moisture, kyanizing—steeping the timber in a solution of corrosive sublimate—may be relied upon. Hemlock was exhibited that was exposed for 40 years at Fort Ontario, Oswego, N. Y., and various kinds of timber that were exposed for 20 years at Lowell, in a sandy soil; while the samples of spruce, from the gate-boxes of the Lowell water works, exposed in various soils for ten years, exhibit the effect of various degrees of moisture, and show that kyanized timber should be kept dry. Kyanizing costs about \$6 per thousand feet, board measure. Under favorable circumstances it may be relied on to double or quadruple the life of the more perishable woods. Where and when it will pay to use this method will depend upon the price of the timber and its subsequent exposure.

Burnettizing consists in injecting the timber with a solution of chloride of zinc. It cannot be done successfully unless the wood is first seasoned, either naturally or artificially, to deprive it of moisture, and make room for the solution. This is forced in under pressure in closed cylinders, and is liable to wash out subsequently from the outer layers of the timber, unless retained in some way. For cross-ties, and for timber exposed to weather and moisture, but not in very wet situations, Burnettizing is probably, in view of the present price of timber, the most economical method to use. It costs, if well done, about \$5 per thousand feet, board measure, or some 20 to 25 cents a tie. It can be done for even less, but the result is not likely to be satisfactory. The hemlock and maple ties exhibited, which have been in use 15 years on the Lehigh & Susquehanna railroad, and the oak tie, 17 years in use on the Erie railway, show the results which may be accomplished. In Germany Burnettized fir and beech ties average from 15 to 18 years in the track, and this method has there become the favorite for ties, after extensive trial of all the others. This process should by preference be applied to the cheaper and more open-grained woods. It does not answer so well for bridge ties and timber, as Burnettized timber is apt to check and split when dry and exposed to the sun. It will probably not pay to Burnettize ties where white oak, or other equally durable woods, can be obtained at 40 or 45 cents a tie, but a recent investigation upon one of the eastern trunk lines, about 1,000 miles long, has established the probability that, with white oak ties at 62 cents each, an annual economy of \$250,000 may be expected by Burnettizing the hemlock, instead of laying down the oak unprepared.

Croosoting consists in injecting the timber with hot creosote oil under pressure. The mode of application, and necessity for seasoning, are much the same as for Burnettizing. For timber in very wet situations, or exposed to marine worms, the best method to use is that of croosoting. It is the most effective, but also the most costly of the various processes. When well done, it costs from \$12 to \$20 per thousand feet, board measure, or from 50 to 60 cents a tie. It is the favorite method used in England, and is there materially cheaper than here, in consequence of the lesser price of the oil. The English ties exhibited have been from 20 to 22 years in use, and show perfect preservation. Ties and timber croosoted in this country are also shown, but have not had so long an exposure. It is probable they would be thrown out of service, by being cut into by the rail, long before they would decay. Where it will pay to use this process, depends upon a number of local circumstances and prices, which cannot well be enumerated here. It is very good, but costly. There are other substances, such as pyrolignite of iron and sulphate of copper, which have proved fairly effective in preserving timber, but European experience seems to favor most Burnettizing and croosoting. The sections of ties exhibited from the Wabash line, and from that of New York, Pennsylvania & Ohio, were prepared by a modification of the sulphate of copper process. The original patents on all the effective processes have long since expired. There are several patented modifications and modes of application, some valuable, and some otherwise, which are still in force. It cannot be too strongly insisted upon, that to be effective the work must be well done. The sap or mois-

ture must be gotten out of the timber, and a sufficient amount of antiseptic put in. If the solution exceeds a certain strength, the wood is rendered brittle and inelastic, so that both skill and honesty are required to accomplish success. —Northwestern Lumberman.

CUMBERLAND MOUNTAIN TIMBER.

A correspondent of a southern journal has made a tour over the Cumberland mountains, and tells about the timber he saw. In Monroe county cherry is very abundant, ranging from two to six feet in diameter at the butt, and 60 feet to the first limb. It is difficult to get out and will have to be hauled from one to sixteen miles, and then floated down to a mill site. The benches are not smooth but rocky and rugged. The standing cherry in this county is estimated at from 10,000,000 to 10,000,000 feet. It can be bought very cheap, and the correspondent is of the opinion that a man with money and pluck could make a fortune out of it.

In McMinn, Polk, Bradley, Hamilton, Marion, Franklin and Lincoln counties there is a heavy growth of timber, but little cherry and pine, and these counties have some good logging streams. The poplar is very fine, and most of it is accessible at a reasonable cost. The hickory is straight, long-bodied, free from knots and tough. Franklin county is one of the best of this range, both for choice timber and the ease with which it can be marketed. The mountains in this county are less rocky than in the others, and the benches not so steep, with good points for road-beds. There is hickory enough on a tract of 6,000 acres to pay the state debt, if worked up into awl handles and sold at one cent each. On this tract there are estimated to be 15,000,000 feet of poplar, and it can be bought for \$4,000. There is, however, a question as to the title, as there is too much of the land.

One man was cutting butternut and walnut to fence his 10-acre lot, and ash trees, four feet in diameter, were deadened to give his crop sunshine. Small mills, with a capacity of from 2,000 to 4,000 feet per day should be used, as moving often is necessary. The most wonderful mill was found on Robinson creek, in Franklin county. It is very primitive. The mill is made entirely of wood, with the exception of the saws, and was built by George Keller, a 19-year old boy. The mill is driven by three turbine water wheels, all made of wood. The head-blocks are of wood, with wooden ratchets. The sawing is smooth, and the working of the mill would surprise the most credulous.

Mills are being put in operation all along the range of mountains, where a few years ago it was thought out of the question to handle logs. In a short time the sombre stillness of this mighty forest, where now only the plaintive call of the lonely owl is heard, will be broken by the busy hum of many saw-mills. —Northwestern Lumberman.

Manitoba Shipbuilding.

The following from the Manitoba Free Press, of Winnipeg, shows considerable activity in vessel building among the lumbermen of the Canadian Northwest: The Couchiching, a double screw propeller, was launched May 24. She was built by John Short for the Rainy Lake Lumber Company, and is 93 feet in length over all, 18 feet beam, and 7½ feet deep of hold. Mr. Short has two more boats on the stocks, one for Garden & Short, to be 88 feet over all, 16 feet beam, and 6½ feet depth; and the other for W. T. Gibbins, to be 60 feet over all, 12 feet beam, and six feet depth. The Winnipeg Lumber Company has also two boats on the stocks. One is to be 100 feet long, 20 feet beam, and 8 feet depth; the other is for a steam pleasure yacht 50 feet in length.

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.

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."



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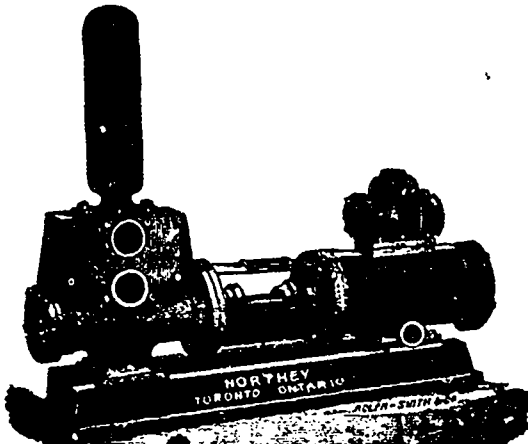
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THE PRESERVATION OF FORESTS AND THEIR ECONOMIC RESULTS.

If any Canadian were asked whether it was a desirable thing to preserve old forests and cultivate new ones, he would without a doubt assent. Strange to say, everybody would agree with him, and yet when we come to apply the proposition with some very practical test, as many votes are found objecting to what ever is advanced to conserve of our forests. Last year an attempt was made in Montreal to awaken public interest by holding a Forestry Congress, which was addressed by many able men, including the ex-Prime Minister of Quebec and the American Commissioner of Agriculture. The instruction which the Congress diffused was valuable and was disseminated over a large area of the country. Whether it will accomplish anything more than the planting of a few thousand trees may be doubted. The subject is becoming serious, and mere individual effort will not be sufficient to meet the requirements of the case. Whatever improvements have been introduced, and however much manufacturers may economize their use of wood, the fact remains that the resources of the country's forests are yearly becoming less. Hitherto the doctrine of private property in land and all that pertains to it has been cherished here and in the United States with a vengeance. It does not seem to have occurred to our legislators that there were other claims upon them than mere socialistic or communistic ones, which merited attention. The theory and practice of all European legislation has long been based on the principle that the State is but the trustee for unborn generations of the human race. There are all sorts of limitations restricting the use of land and its products in France, Germany, Russia and England. Among these are the Agricultural, Mining and Forest laws. The object of these laws is to ensure the largest aggregate production, and to reduce waste to the very smallest limits. The cutting of wood is regulated in such a manner that the area and quantity of wood of forests never becomes less, but rather shows a tendency to increase. The teaching of forestry as a subject of education, is practised just as engineering and chemistry are. Not only so, but France, Germany, Russia and Switzerland have separate schools where forestry is the chief subject of study. In all of these countries, there are, of course, State Forests, without which complete instruction would not be practicable. The schools form a part of a department of forestry presided over by a State Commissioner. The teaching is conducted in intimate connection with the forests. As no statistics are at hand it is impossible to form any correct estimate of the value of the work done by these schools, the number of students turned out, or the precise character of the effect which these schools have had on the conservation of European forests.

We, however, are still young, and our future is all before us; forest land is yet abundant in all the provinces of the Dominion. It is not a very serious matter to urge the appropriation of a sufficient number of acres of forest as a state reserve for the teaching of forestry, and the creation of a fund for its support. Now, there is no need of doing anything in the way of money doles, as a vote of about four townships, or a block of woodland of twelve miles square, would meet all the requirements of the case. An establishment might be begun for twenty students, which would steadily expand to one hundred. Taking the capitalized value of the 92,160 acres at as many dollars, the endowment would be nearly equal to one thousand dollars per head on a hundred students. Worked on the plan of a high timber productive forest, an area equal to 600 acres could be cropped annually. As fast as the wood was harvested the bare places would be reseeded for a new crop. Several systems might be adopted by which the relative merits of each plan could be practically tested. Although the land would not perhaps need to be kept under crop for a longer period than 150 years, many portions could be cultivated so as to yield a crop in periods varying from 35 to 120 years. In the course of a generation every part of the plantation would exhibit new crops under growth, and a convention held in a tent in such a forest would speak with an authority greater than any institutions of a

smaller character thousands of miles away over oceans. Boys at the forest school would see trees in all stages of growth from one to one hundred and fifty years; they would see operations for keeping the land clean, and the up-growing crop of trees vigorous, analogous in every respect to the wooding of farm crops. Not only so, they would learn to bear their part in the work, and when in after life they found themselves engaged as lumber merchants or farmers, they would know how to crop and plant land, so as to avoid waste, and increase the revenue of their country. What farm of 100 acres is there that would not be better for having upon it at least four per cent. of wood land which might become the preparatory training ground of the future forester? The value of such little scraps of wood on a prairie soil is great, apart from any direct commercial result from sales of wood. In the hot summer suns cattle love shade; and their influence in the storm and the wind is none less valuable. In the older Canadian settlements a very large percentage of the agricultural land is wooded, and all that is necessary is to preserve by replanting and judicious cutting what remains.

What is needed most is a forest law for every province, for regulating the cutting of timber. Every lumberman should be required to hold a license to cut under well defined conditions of cropping and replanting. The law need not be vexatious either in letter or spirit, but just and liberal in all its provisions. There are even now ample woodlands in Canada, but at the present rate of slaughter they could not remain to us long. Five years' experience would develop an immense amount of interest in the new system. The forests of Quebec might be made to yield a revenue large enough to emancipate her from the enormous burden of debt she carries. In India the revenue in 1870 from forests was £357,000, giving a net income of £52,000, or 14 1/2 per cent. In 1880 it was £545,000, with a net revenue of £215,000; that is, the revenue had increased 56 per cent., while the charges increased to only eight per cent. India has 9,820,000 acres of state forest reserved, 2,493,000 acres of which are protected from fire, and from cattle and sheep grazing. They are now in a condition to reproduce themselves under the natural system.

Australia is fully alive to the importance of the subject, for ten years ago an act was passed authorizing the payment of £2 per acre to land-owners in certain districts of South Australia to form plantations of trees. In 1875 a Forest Board was constituted, and certain districts of the colony were formerly defined as forest reserves. In 1878 a Forest Act was passed, and a Conservator of Forests was appointed. Last year a quarter of a million trees were planted out, and the forest revenue amounted to £6,517—of which £1,380 was for timber sold—against an expenditure of £6,200. A profit of only £317 is not to be sneered at; it is something that a department of State should pay its way. India did not move in the matter till 1867, and it is only ten years ago that legislation was attempted in South Australia, a colony one-eighth the population of Ontario. Not only do the Forest Department in each case pay their way, but manage to make a revenue. Any one visiting Baden-Baden cannot fail to be struck with the great beauty of the valleys of the Oos and the Murg, and the forests in the immediate neighborhood, which furnish a splendid example of the successful working of forest culture as carried out in Germany. As an example of private forests, which are managed in much the same way, those of Prince Furstenburg, near Rippoldsau, may be mentioned.

Our neighbors the Americans are waking up to the importance of this matter, and in 1881 Dr. Hough visited the forest schools of Europe, with a view to establishing a similar institution on this side of the Atlantic. We are accustomed to flatter ourselves that we are ahead of the Americans in educational matters and also in public spirit. The Americans have never very seriously disputed the claim, but if the forest country of Canada allows them to take the lead in this matter the claim will certainly not be strengthened. Under any judicious system of management the annual yield of Canadian woods can be increased without any actual restriction on the just rights of any. The soil

of a country is not for a generation, nor for a century, but for all that are yet unborn. The theory and practice of all systematic management in Europe is that the annual yield of the forest should represent the earning of the year only, and not any portion of the capital.—*Canadian Manufacturer.*

THE MIDLAND AND LUMBER.

The Orillia Packett says that at a special meeting of the Town Council, held on Friday evening, June 8th, the Mayor read the following letter he had received from Mr. Cox, manager of the Midland Railway:—"We have been in communication with the Messrs. H. & G. Strickland in reference to the removal of the Bradford Mills to some point on the Midland. We have suggested to them Orillia, and they have pointed out to us difficulty in bringing logs from the Black River to Lako Couchiching over the Portage Company's tramway. If this difficulty were removed Mr. Strickland says all their timber on the Black River, about 150 million feet, could be brought to Orillia, which would be the best point to manufacture at. They suggest that the town of Orillia, and ourselves ought to take steps to connect Lako St. John with Lako Couchiching, by a canal, which would at once open a water highway for all the productions of the forest on those waters, which are reported to be very extensive. It seems to me that the idea is a good one, and it is strange that Orillia has not taken action in the matter before, instead of allowing all the forest produced to go past them, by way of the Severn River to Georgian Bay; and Muskoka River to Gravenhurst. Messrs. Strickland think, to accomplish this end the outlay would not exceed \$30,000. My object in writing is that if you think it advisable, I would meet a committee of your Council, and would invite the Messrs. Strickland to attend, who are now the holders of the Dominion Bank limits, Thompson Smith limits and Hilliard limits, which are all tributary to the Black River, and if the mill was moved to Orillia they would pay out annually from fifty to sixty thousand dollars, and give employment to a large number of men."

His Worship said he had been speaking of the matter to Mr. Scadding, had told him the mills would be larger than those of the Longford Lumber Company; Orillia would also be made the distributing points for the shanties. In reply to Councillor Miller, he said the Council could grant no aid beyond the corporation limits; but the Council had power to remit taxes for ten years, and, with the sanction of the freeholders, of granting a bonus. Councillor Jupp said the Railway was interested in the matter. The Reeve did not care who was interested, so long as it was for the benefit of the town. He would not vote bonus for anything; but favoured appointing a committee to confer with the applicants as to what encouragement might be given them. It would not be for Mr. Tait to remit taxes to a new enterprise and continue to tax him. Councillor Thompson said the new mill would not interfere with the home market of Mr. Tait, except for slabs, and the latter could not meet the demand for them. It would be better to receive their proposal, before discussing what could be given. Councillors Miller and Mainer thought it would be preferable to have them meet the whole Council, but the other members thought the smaller the committee the better. On the motion of Councillor Thompson and the Reeve, the Mayor was requested to name a committee and communicate their action to Mr. Cox. His Worship named the Reeve, Councillors Miller, McKay, Thompson, and himself.

BI-PRODUCTS OF LUMBER MILLS.

The *Canadian Manufacturer* says:—"To Messrs. H. B. Rathbun & Sons, of Deseronto, belongs the credit of being the first, in Canada at least, of practically solving the problem of how to utilize the waste from saw mills, and turn the refuse into bi-products that have a marketable value. They have established chemical works adjacent to their mills, and we give a condensed account of the visit of a correspondent of the *Napanee Bearer* to the works:—"It is now admitted these experiments are about to be crowned with success, and that

the solution of the important problem of the utilization of waste material has at length been reached. It has been demonstrated that from the sawdust of the big mill can be extracted acetic acid, wood alcohol and tar; that the charcoal can be disposed of for the manufacture of gunpowder, and that as a bi-product, sufficient illuminating gas of an excellent quality can be produced to light the village and its factories. The chemical works are now being enlarged for this purpose, an excavation is being made for a gas-holder and main, and it is expected that the whole will be in operation early in August. This department is under superintendence, and the whole of the experiments have been conducted by George Walker, formerly of New York." The article on "Bi-products," to be found on front page, treats of many more instances in which so-called refuse matter is capable of utilization, and the subject is on well worthy of consideration."

"Lumber mills have many bi-products which run to waste for want of some cheap and ready mode of converting them into useful and saleable articles. Such are sawdust and shavings. It may be confidently predicted that in the near future uses will be found for all the surplus shavings and sawdust now made. It is only a year or so since car wheels were made of paper mache, and why may not sawdust be so changed by mechanical and chemical manipulation as to become equally useful. A few years ago a great cry was raised at Minneapolis on account of the accumulation of sawdust. Notwithstanding that much has been used for packing, stable bedding and other absorbent purposes, there is a large quantity yet to be utilized. Converted into charcoal by the addition of sulphuric acid, it would be a valuable accessory to the farmer's stable manure heap, as tending to convert the free ammonia of the litter in sulphate, and the charcoal itself has a decided value as a fertilizer."

THE MINNESOTA SITUATION.

St. Paul, Minn., June 4.—The logging situation has not materially changed during the last week for the drivers, and prospects have grown worse rather than better, but the lumbermen do not yet despair of getting some of the logs out that are now reported hung up. The logs are pretty sure to come out of the Rum river, except those on the West Branch and Hillman Branch. The West Branch logs have moved down only about six miles, but heavy rains will bring them all right. The logs are reported hung up on the Willow, at Prairie, Platte and Swan rivers. The local mill owners liable to be most incommoded by the prevailing situation being Morrigan, Barrows & Co., and Camp & Walker. The logs which have got out into the main river are moving slowly. A big jam fully four miles long is reported at Aitkin, and another quite unusual is reported at Grand Rapids. There are probably 80,000,000 to 100,000,000 of the whole cut of 500,000,000 that stand a chance of not getting out. There is no apprehension, however, that the crop will not be ample for every demand of the mills. The cut was an unusually large one, and for the present some of the lumbermen are willing that the logs shall be hung up. The sawing season commenced fully three weeks later than a year ago, and even with the aid of three new mills, two of the three thoroughly equipped and capacious mills, the season's cut of lumber does not promise to be larger than a year ago. Logs in the drives tributary to Duluth are hung up still. Before the water grew so low a few millions got out, as follows: On the Nemadji, 5,000,000 to 10,000,000; on the south shore streams, 5,000,000; on the St. Louis below the rapids, 5,000,000; above the rapids, none. About 15,000,000 have been towed to mills from the north and south shore camps, and more will follow. About 17,500,000 feet are hung up. Advice from the Chippewa River, in Wisconsin, say the general outlook for the drives is about the same as in former years, if anything a trifle better. Most of the drives on the tributaries are hung up, except on the Yellow river, where they are doing fair work—and have the run down to within sixty miles of the mouth. There is a lack of water on the Deer Tail, Brule, and north and south forks of the Flambeau. Several of the log-drivers of the St. Croix and its trib-

taries are undoubtedly hung up for the want of water, and unless there is considerable rain they cannot possibly reach the boom. At present there have been about 125,000,000 feet received in the boom from Pokegama, Groundhouse, Lower Kettle river, Sand Creek, Chicox Brook, Main St. Croix, and the south fork of the Olam. The Namekagon, Moose, Snake and Crotty Brook logs are running in more or less numbers. *Lumberman's Gazette.*

NOTES ON WARPED WOOD.

It is very often found that wood which in the board or plank is perfectly straight, or appears to be so, will twist and wind in every conceivable manner when cut up into long, narrow lengths, or cross-cut into short, broad panels. When wood is "winding," the only remedy, says *Amateur Mechanics*, is to plane off the high corners and make it true by reducing the thickness; but if it be simply cast (one side hollow and the other round), the defect may be easily got over. If the man, by working on some other portion of his job, can let the defective pieces stand for a day or two, then by placing the wood "hollow side" down on a plane surface, or by putting two such boards one on the top of the other, with the hollow sides facing each other, the wood will draw straight without any more trouble. It is always best, when possible, to work wood in its natural state, as even if the tendency to cast be overcome previous to working it, there is always the probability of its returning to its normal condition. Some men when pressed for time, heat the round side on the stove. This does indeed make the wood straight, but there is a great risk of opening and splitting under this steaming treatment, and this liability is very much increased if the wood be at all shabby. If required the wood can at once be straightened without this risk, by damping the hollow side with water, when the expansion of the fibres on that side pulls it straight. It sometimes happens that a piece of wood of some considerable width, such as a carcass end or a wardrobe panel, has to be reduced from 7/8 inch to 1/2 inch thickness. If this superfluous wood be all taken off one side, that side will become hollow, whereas if it be taken off equally on both sides the wood remains as before. In veneering panels, etc., it is always best to veneer on the outside, that is the side opposite the heart side, the reason for this being that veneer is apt to swell with glue being laid on, and must therefore contract after it is fixed. As the heart side has always a decided tendency to curl, the two forces counteract each other, and the wood remains the same. For this reason, it is always best to inlay on the outside.

CULTIVATION OF TIMBER.

We take the following from the *BUILDER*:—"How fatal are the results which attend careless indifference on this point is singularly shown by what has followed in Italy on the disforestation of the once well-wooded peninsula. Not alone have the recent terrible inundations in the north of Italy been directly traced to this cause, but the fatal *aria cattiva*, the poisonous breath of the marsh lands, which has within twenty years or so invaded almost every province of the peninsula, now reigns supreme, driving from the once fertile plains thousands of the unhappy inhabitants. Here we see the direct influence of false economy in this one direction. When we consider, in addition, that Italy could undoubtedly, by proper management, grow a large portion of the timber which at present she has to import, we see another direction in which a false economy has impoverished and impoverished an already poor nation. England, without having reached this sad position, cannot be said to be beyond blame. There exists in our country many a broad stretch of land which, by the action of science, might be rendered productive, and at the same time beautiful. The growth of timber is not of a nature to tempt the speculative demands of modern private initiative; it is for this reason that it behoves the Government, or at least, local authorities, to take up the question. They, at least, standing virtually independent of the consideration of immediate gain, are the only fit instruments by which such work can be done; but the system once set in order, the returns, it is evident, will

be no less regular, even more so than from the ordinary sources of profit. A close study of the matter—an enquiry into the admirable methods adopted on the continent, in France, in Belgium, and in Germany—would form an interesting subject of enquiry either for some Government commission or for some privately appointed body. The question is one of something more than passing interest. Whence are we to obtain our supply of timber? Nature unaided will soon cease to be able to satisfy our demands; but we have here another of the many instances where science intelligently directed can solve the difficulty, and thus once again be of the utmost service to the world, not alone practically, but aesthetically."

REMARKABLE VIADUCTS.

What will be the highest viaduct in the New World is the one now being made (and near completion) for the New York, Lake Erie & Western Railroad over the Kinzua Creek, four miles from Alton, in McKean county, at a height of 2,100 feet above the sea level. This work, designed by Messrs. Barnes & Pugsley, will have a total length of 2,051 feet between the abutments, and a height of 301 feet between the level of the rail and the bed of the river. The line is supported on twenty straight piers of wrought iron work, 61 feet apart. The construction requires nearly 4,000,000 pounds of iron, and 7,000 yards of masonry, and the cost is about \$300,000. This bridge, exceeding by sixty feet in height the Niagara Suspension Bridge, and by forty-five feet the Portage railroad bridge, was recently stated by the *Scientific American* to be "the highest in the world." But this title rightly belongs to the railway viaduct of Garabit, in France, now being erected over a river. The locality is in the department of Cantal. This bridge, planned by MM. Banby & Boyer, and constructed by M. Eiffel, has a total length of 565 metres (say 1,880 feet) and near the middle of the great centre arch (which is the most remarkable feature) the height from the bed of the river to the rail is 124 metres, or 413 feet. A good idea of the height is given in *La Nature*, where it is shown that Notre Dame with the Vendome column placed on the top of its towers would clear the arch. "The viaduct was begun in 1881, and it is to be completed next year. It is estimated to cost about 3,000,000 francs.

Two Cribbs Broken Up.

MONTREAL, June 12.—In the gale yesterday afternoon, two cribs of Messrs. Calvin & Son's rafts were just descending the Lachine Rapids, and it was only with the greatest exertion the rafts were navigated through the dangerous channels of the rapids. On arriving opposite Nun's Island, however, the wind increased in force and most of the cribs comprising the rafts were blown considerably out of their course; several nearly going ashore on St. Helen's Island. Two of the cribs became unmanageable just above the Victoria bridge and swinging with the current were thrown against the piers of the bridge and broken up. The crash each time is said by the raftsmen to have been tremendous, all of the timbers being separated, and the men, of whom there were about a dozen on each crib were thrown into the water and had a hard struggle for their lives before being rescued.

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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. I cure dysentery and diarrhoea, regulate the stomach and bowels, cure 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.

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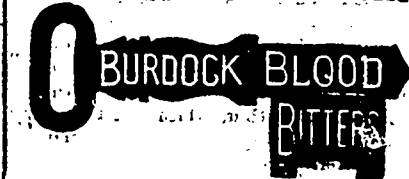
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Manilla Lath Yarn
Equal to the best Philadelphia make.
Samples mailed on application. For
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ORDERS FOR DIMENSIONS AND ALL OTHER
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DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

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

All communications, orders and remittances should be addressed and made payable to 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 Offices of Messrs. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont. JULY 2, 1883.

RECENTLY 8,000 cedar logs were seized by the United States officials, at Newport, Arkansas, on the charge of having been cut from government land.

THE Erie Car Works, at Erie, Pa., have one of the largest stocks of seasoned lumber on hand ever collected in this country, and are now very busy turning out cars on orders.

THE automatic fire sprinkler is becoming very popular among furniture manufacturers and other wood-workers in the United States. The Grand Rapids, Mich., furniture factories are reported to be equipping themselves with the device.

THE Brandon correspondent of the Winnipeg Commercial of June 19th says:—Owing to the difficulty in driving logs down the river from the limits, Leacock's saw mill is still idle. For the same reason Mr. Grigg is not pushing his mill forward as rapidly as he would have done.

THE scarcity of timber at Darien is becoming a very serious matter with those manufacturers who have contracts and are obliged to meet the extreme prices demanded for that which offers. There have been sales at prices equivalent to \$20 for 1,200 feet average, a figure not before touched in years.

THE accumulation of sawdust in St. John river, New Brunswick, has become so serious a matter that it threatens to obstruct navigation for large vessels passing up to Fredericton, and a local paper calls upon the authorities to enforce the law against allowing dust from the mills to fall into the stream.

THE Wood-Worker says:—The band saw mill is evidently the mill of the future where valuable hardwoods are to be cut. Even now the novelty of this style of mill has almost worn off, and they are being set up in nearly every part of the country. That this mill is looked upon as the coming mill is evidenced by the fact that there are not less than half a dozen prominent machinery builders who have recently brought them out, or are preparing to.

A WRITER in an exchange is correct when he says that: "In buying wood-working machinery, the very best rule for guidance is that old one 'the best is the cheapest.' It don't pay to buy cheap materials or cheap workmanship, and cheap machines generally mean both of these. Cheapness is apt to prove an expensive investment in the long run."

THE Bobcaygeon Independent of June 22nd, says:—The first drive of the season has passed through, under the command of Mr. Frank Bell. The drive contains 23,000 logs, which were cut in the township of Anson and the neighborhood of Minden. Mr. Bell is noted for his quick runs, and is this year two weeks earlier than usual.

THE N. Y. Timber Trades Review says:—At Chapman's shovel handle factory, Oxford, Me., they turn out about 150 dozen handles per day when in full blast; use all the ash they can get—from 150,000 to 300,000 feet a year. All their handles have gone to the same man for fifteen years, Jones, of Gananoque, Ontario. They saw out about 400,000 shingles this season.

DURING the last few years a number Mobile, Ala., saw mills have gone into the box making business, or rather, have made it a branch of their business. This branch has increased to enormous proportions; so that now it gives work to several hundred men. The boxes are chiefly for the shipment of early vegetables and fruits.

FURSTENFELD, Germany, boasts of the oldest tree in that country. It is a huge Linden, believed to be 1,000 years old, growing at the back of the village church, in the midst of the trunks of two centuries. Its trunk is fully fifteen feet in diameter, and its twisted branches stretch out far and wide, seemingly covering the entire inclosure. It is still growing, and is one of the sights of that section of Germany.

SOME of the loggers in white cedar timber on South Slough, Coos county, Oregon, have adopted a new mode of getting the timber to market. The logs are hewn into square pieces from six to twenty feet in length and not less than six by six inches, in the woods, and hauled to the landing where they ship them up the bay on lighters and thence to San Francisco. They receive \$20 per thousand feet for these pieces on the wharf at Empire.

A STURKON Bay, Wis., paper says that Chicago commission men, who buy railroad ties in Door county, are getting very particular as to how ties are made. They will not receive any, even on contract, that are not eight feet long, six inches face and sawed at both ends; otherwise they are culled. One shipper who had 4,000 ties to deliver on contract was obliged to set men to sawing off the ends at a cost of two cents each stick—something that he did not expect when the contract was made.

THE Winnipeg Commercial of June 19, says: The saw mills have not much more than fairly got to work, and as the demand is lighter than was anticipated they are not running so strong as they otherwise would. An immense amount of lumber is reported as on the way to this market, via Port Arthur, which will tend to make business in the lumber line quieter. The furniture factories are kept going pretty well. There cannot be said to be any particular rush, but still a healthy trade is being done.

THE cases in which plug tobacco is packed are made almost entirely of sycamore. This wood is valuable for this purpose, as it will not impart any smell or taste to the tobacco and as it will not absorb moisture readily. This appears to be about the only use which can be made of sycamore lumber, which has the very serious defect of warping badly. Were it not for this, it would be a valuable wood for many purposes, as the lumber is large and clear of knots, and there are very large amounts of it in Ohio, Indiana and Kentucky. Perhaps, in the future, some sure method of so treating lumber that it will not warp will be devised, but until then then sycamore will be useless for building purposes.

THE Northwestern Lumberman says:—The most cheerful notes come from Ohio, Indiana and the new Northwest. In the two older states there is an era of improvement in town and country, and new buildings are requiring a large amount of lumber. There are exceptions to this general rule, to be sure, but generally Ohio and Indiana are very prosperous. The progress of new settlements in western Minnesota, Dakota, western Iowa and Nebraska is calling for a heavy volume of lumber, and the Wisconsin and Minnesota lumbermen are reaping the advantage of it, to a greater extent than the trade here. The railroad mills in Wisconsin are particularly busy supplying the western demand.

THE Halifax New Era says:—The market during the week has been quiet and slack in all kinds of lumber. There have been very few arrivals and no exports except a few thousand feet to the West Indies as deck loads. No new orders have been received and there is apparently no demand in any market. Prices are weak at our quotations and unless some change in the demand speedily transpires prices must decline—especially for the lower grades for which this market has become a general rendezvous, owing to the fact that we have no official inspector or surveyor of lumber. In consequence we are the recipients of such lumber and shingles as other markets would reject. We are convinced that it would be to the advantage of the public if some rule were established by which our lumber interests—no unimportant item in our revenue—should be placed under proper management.

IN reference to the statement, in our Toronto correspondence in last issue, that lumber for Parkdale, carried by the Midland Railway, was charged \$5.00 per car load, extra, by the G. T. R. R. and C. V. R. R., and that serious delays occurred between Toronto and Parkdale, it is gratifying to learn that as soon as Mr. White, traffic manager of the Midland Railway became aware of the state of affairs he proceeded to Toronto, and made arrangements which will enable dealers in Parkdale to receive lumber, etc., over any portion of the Midland system at the same price per car load as dealers do in Toronto. As far as the excess referred to of loading over the standard weight per car load is concerned, shippers should abide by the acknowledged and contract standard. The management of the Midland Railway has never been considered shabby in this matter, where only a few hundred feet extra were concerned, but when the excess swells over a thousand feet, it becomes too much of a burden to be carried without challenge. Shippers must admit that there should be a limit somewhere. As to the question of the rate from Midland to Toronto those interested should interview the Midland Railway authorities and state their case.

SIMCOE, ONT.

To the Editor of the Canada Lumberman.

SIR,—The lumber trade in this county is booming, and we are sawing five millions, besides supplying 50,000 white oak railway ties to the Great Western division of the Grand Trunk. London, St. Thomas, Woodstock and Toronto take most of our lumber. Toronto takes hardwood, and we send long pine and oak bill stuff to Buffalo. There are still twenty to twenty-five millions per year made in this county, but a few years will exhaust it. The small second growth, eight to fifteen inches on the stump is being cut now.

Yours, &c.,

A. McCALL.

Simcoe, Ont., June 22, 1883.

MILL REFUSE.

It will be remembered that some months ago the village of Plattsburg, N. Y., brought a suit in the New York state supreme court to enjoin Chauncy and Benton Turner, owners of a large mill at that place, from allowing sawdust to fall into the Saranac river. It was charged in the complaint that the mouth of the river, which was once a clear stream, was choked with sawdust, which generated a foul gas, arrested the outflow of sewage, and befouled the river within the corporate limits, thus endangering health. The referee has decided that the plaintiff is entitled to a decree, perpetually restraining and

enjoining the defendants, their agents, etc., from suffering or permitting to fall into said river at their mill any sawdust or refuse matter, and judgment was accordingly directed in favor of the plaintiff with costs. The Turners will, therefore, hereafter have to provide themselves with a refuse burner, or what would be better, with a chemical works attachment, like Rathbun & Sons, of Deseronto, Ont., by which the refuse could be converted into articles of commerce at a profit.—Northwestern Lumberman.

WERE THE PLAINS ONCE TIMBERED?

This has been a question of no little speculation and comment, and we now come forward with additional "points" on the subject. Last week we were out with a survey party in town 27—2 east. The land was undulating, composed of gravelly loam with a noticeable admixture of clay. The numerous brooks had clay banks with stony and gravelly bottoms. Timber beech, sugar, maple, and large hemlocks, with an occasional birch, white ash, ironwood, etc. Forty-four years ago the United States survey found the same land "third rate, timbered with poplar, birch, hemlock, etc." Three-fourth of the monuments erected by the United States survey were upon poplars from 6 to 10 inches in diameter. In a straight run of five miles we found but one poplar, and that was a gigantic dry stub nearly thirty inches in diameter. We imply from this that the character of the timber has changed with the past forty years, and now we will prove it. (1) The beeches and maples are young,—averaging not more than 8 or 10 inches in diameter in this particular locality. (2) The hemlocks are of monstrous size,—36 inches and over. (3) All the large hemlocks are either hollow or very shaky, while very many are dead. (4) Brooks 4 links wide and larger were found where none existed 44 years ago. (5) Further to the north and upon the same soil with a decided admixture of clay, we found a plain covered with a dense growth of poplar and birch with some Norway pine and spruce pine, all of not more than five years growth, with some soft maple, cherry and iron wood sprouts. A few young spruce pines yet seemed to hold nominal possession, while the blackened stubs of the once gigantic white and yellow pine give the remainder of the history written by fire. (6) The spruce pine will withstand a considerable amount of fire without injury, as attested everywhere by their blackened and charred trunks and green tops. Fire seems absolutely necessary for the germination of its seeds, which by the hundreds of bushels lie in the soil of the plains until a fire sweeps over it at the proper season of the year, when the trees spring up in abundance. We have seen places so thickly covered with spruce pines not more than three feet high that at a short distance it resembles a field of wheat.

What, then, is the history of the plain which we saw covered with poplar and birch? Many years ago it was a forest. Within the last 15 years the land has been denuded of timber by frequent fires.

What will be its future? Should fire not interfere, the poplar and birches will grow in 75 years to forest trees, the maple, ash and ironwood sprouts will grow likewise and become more numerous.

Poplar almost invariably dies at the end of this time, and birch is always crowded out and killed by other timber except in spots peculiarly adapted to its growth. In 50 years more the maple, beech, linden, etc., will have gained the ascendancy, and for the next two hundred years we will see a magnificent forest, where was once a parched and barren plain. It has taken hundreds of years to make this change, but it has nevertheless taken place.

Suppose that at irregular intervals of from two to ten years fire continues to sweep over this place. It licks from the hills the scanty deposit of mould from the falling leaves, and digs deep into the peaty soil of the swamps.

Death and desolation seem to reign supreme, but the spruce raises its head defiantly and thrives amid such scenes. The stumps of the charred oaks send up shrubby sprouts that struggle on until the next fire lays them low. The resin dropped from the trunk and limbs of the pine, and the dried grass feed a future con-

flotation. The potash and other soluble elements left in the form of ashes are washed away by the passing shower, and under the reign of fire the vegetable elements of plant nutrition disappear, and a waste is left covered sparingly with spruce pine, while stunted moss ineffectually endeavors to hide the barren soil, and prepare the way for higher forms of vegetation. Although a greater portion of the so called plains of northern Michigan is covered by a thick sward of hardy grass and herbs, we have seen knolls of hard clay as well as light sand covered with scarcely anything but this moss, showing that the character of the earthy or mineral portion of the soil has nothing to do with this condition. The reclaiming and successful cultivation of a large share of the plains is no longer an experiment but an established fact, but from what we have noted above it follows that every square foot even of the poorest of this once supposed desert will become of service to the agriculturist, and that at no distant day.—*Oscoda County Mail.*

CINCHONA CULTURE IN GUATEMALA.

President Barrios of Guatemala has made arrangements to try the experiment of cultivating the cinchona tree, and Mr. W. J. Forsyth, a planter of Ceylon, who has ridden a thousand miles through Central America, exploring the country to discover the best site for the plantation, is now in this city on his return to East India, to select the seed for 5,000,000 trees. Speaking on the subject, Mr. Forsyth said: "The rapid increase in the number of uses to which the bark of the cinchona tree is put, not only for the manufacture of quinine and an ingredient in the substitute for hops, but for various commercial purposes, induced President Barrios to try this experiment. Although the cinchona tree is not a native of India, but was introduced there in 1879 by the celebrated botanist Clement Markham, at the instance of the British Government, the culture was so profitable that not only has the original investment of £150,000 been repaid, but the trees have been valued at £1,000,000. There are many varieties of the cinchona. One is the *Legeriana calisaya*, which is rich in alkaloid. Another variety is the *officinalis*, the bark of which is known as crown bark. Other varieties are *condamancia* and the *succirubra*. The last named is rather larger than the others and more robust and of quicker growth, but not so rich in alkaloid, though it yields plenty of bark. These barks are generally known to commerce as Peruvian bark, though not cultivated in Peru nor grown there to any great extent. The trees are planted from three to four feet apart, the mature in about six years.

There are three methods of treatment in cultivation. One is by thinning out, or selecting the largest trees to be retained. Another is by coppicing, which is simply cutting the tree down to a stump and permitting the shoots to grow. At the harvest the shoots are cut off. The third method is called the *Milver* system, and consists in taking the bark from a part of the matured tree and mossing over the stripped place until the bark is renewed. If the mossing is carefully done the bark will renew itself continually. The bark is sold at 2s to 13s a pound, and is sold readily, for the supply has never yet been too great.

"The cinchona tree requires a tropical climate and a plentiful rainfall. It would not grow in the United States, but can be cultivated in Mexico. The trees require careful cultivation. President Barrios gave me every facility to explore the country, and he has great hopes of the success of the experiment in utilizing the vast amount of soil in Central America not now under cultivation. They raise coffee there for export, but their methods of cultivation are crude. Fortunately the diseases of the coffee plant which make the culture so precarious in India do not appear in Central America."

NEW USES FOR WOOD.

It does not seem safe nor wise, now, to declare any kind of tree worthless. Even the despised basswood and cottonwood trees have become valuable. It may be, the so called good-for-nothing sage bush, which covers the bad lands of the western states and territories will be found to possess some valuable properties,

and then it will be elevated to a place among the now valuable trees. "Late inventions and discoveries have revealed the fact that the finest polish and strongest household furniture can be made out of paper. It can be pressed so hard that no instrument short of a diamond can scratch it—and it can be given the finest shades in imitation of wood, and produced cheaper than walnut, mahogany or ebony. And late discoveries in paper-making established the fact that cottonwood makes the whitest and strongest fibre pulp yet manufactured out of wood. There are vast quantities of pulp imported, and some newspaper men are clamoring for it being done free of duty. Paper mills in Delaware, Pennsylvania, and other northern states are shipping thousands of cords of poplar wood from Chowan river in North Carolina, one mill in Delaware contracting for 30,000 cords. This is costly, and shows conclusively that our rich lands, where cottonwood grows so luxuriantly and of which in many cases the black walnut has been denuded to make furniture in England, may yet become profitable fields to raise and manufacture paper furniture, car wheels, and houses. Something has to take the place of pine, walnut and cherry in house-building and ornamental wood-work, and the probability now is that the cottonwood is the coming tree. It is easier propagated, a more rapid grower, is exempt from enemies and parasites, and is a native almost everywhere. Forestry men have troubled themselves about the future timber to supply the industrial pursuits. The best of car-wheels are made of paper, which stand the weather and wear longer than iron, and are less liable to accidents from breaking. If they will stand in this most difficult trial, paper can certainly be used in almost any place. And if it can be made of cottonwood pulp, who doubts that this abused and derided tree is bound to come to the front and yet become one of the most popular timbers for tree cultivation."—*Iowa State Register.*

WOODS LIFE IN MAINE.

Says the *Bangor Whip*:—"An interesting souvenir comes from the lumber woods of the north, in the form of a communication written very lengthily on a fine sheet of birch bark, and incased in an envelope composed of the same material. The letter is dated Mattamiscontis, No. 2, range 7, about 15 miles from any settlement, in a lumber camp where Mr. John McGregor has a crew of men engaged in cutting spool wood for his factory. The writer gives some idea of how men live in a lumber camp: "Our camp is built of rough logs of poplar, laid up on the sides about four feet, and running up to a pitch in the centre of about 10 feet. The roof is covered with cedar splints four feet long and laid the same as shingles, making a very good covering, though not very tight. The floor is made of poles laid on the ground. We have two stoves, one a large heater, three feet long, and the other a cooking stove. For sleeping apartments we have a berth made the length of the camp, which is 19½ feet, and accommodates 14 men. In front of this and on a range with the stove is the 'deacon seat,' of the same length as the camp. Our living consists of pork and beans, bread and cookies, ginger bread and old-fashioned doughnuts, dried apples, beef, codfish, mackerel, tea, and molasses. For breakfast we have pork and beans hot from the oven, with ginger-bread, cookies, and tea. For dinner, which is eaten in the woods, we have beans, doughnuts and bread, with tea, and occasionally beef. For supper we have codfish or mackerel and potatoes, with fried pork. We get any amount of fresh perch and pickrel close by the camp, in Mattamiscontis lake. Fish forms a prominent item in our diet."

THE PAPER CRANK.

The *Northwestern Lumberman* says:—"The paper crank seems more energetic with the approach of warm weather. In the direction of paper there is nothing that he is not anxious to do except to tell the truth. He carries his theories to a ridiculous extreme, often failing to temper them with practicability. The paper tie man, who claims so much for his own hobby, is quoted as remarking:—

"Almost anything can now be made of paper. A paper ball can now be made so solid that

nothing can indent it but a diamond tool. Car wheels are now made of paper. Its strength is astonishing. You can suspend 339 pounds from a Bank of England note and it will not part. Bath-tubs, pots, plates, knives, forks, cooking stoves, printing-presses, steam engines and chimneys are made of paper nowadays, and there is absolutely no limit to the uses to which it may be put."

A part of this statement any observant reader would be ready to admit, but the rest of it is sheer nonsense. Car wheels are not made of paper, but paper is an element of their construction. It is sandwiched between iron plates, and enclosed with a tire, being also securely bolted in position. It is not a wheel—it is the filling. The mythology about paper stoves, printing-presses, steam engines, *ad libitum*, may be thrilling literature, but the paper crank cannot produce the originals. The *Lumberman* never expects to be printed on a paste-board press, nor to eat bread baked in a paper mache oven. To construct a non-explosive steam boiler out of paper plate is also a refreshing suggestion. Probably the chemical combination of paper with other materials will result in producing a large number of articles that will have a practical utility, but the range of that utility must be limited to something. It is not at all likely that paper can be made an entire substitute for wood, iron, stone, coal, and other minerals, but this is a claim by no means too aspiring for the paper crank to make.

MONTREAL NOTES.

The *Gazette* of June 22nd says:—"As regards the local trade, we have not much to report during the week, the only change of importance being the advance of 50c. per M in laths, sales having been made at \$2 on account of the improved demand and scarcity of stocks. A moderate trade only is reported in hard and soft wood. Very little dry wood is now to be had, and the new supplies being green there is scarcely any call for it. As regards the export trade, the shipments of deals from this port have already been about double those of the corresponding period of last year. There is very little doing in lumber on River Plate account. In freights a small vessel has been chartered at 67s. 6d. for East of England coast."

The Great Northwest.

The great increase in travel to the Northwest, has forced the "Famous Albert Lea Route" to put upon its line magnificent dining cars, in which passengers will be served meals second in quality to no first-class hotel, for the small sum of seventy-five cents each.

The Chicago, Rock Island & Pacific Railway, which controls this route, has always maintained a reputation for giving travellers first-class meals on its dining cars, and in putting on this line the same class of cars, it fills a want that the travelling public will appreciate.

"The Albert Lea Route," is carrying a very large share of the Northwestern travel, and, although early in the season, has commenced to sell tourists' tickets to the various pleasure resorts in a volume sufficiently large to guarantee an immense summer traffic.

DODGE & CO.
Pine & Hardwood Lumber
 Office:—Cor. East Falls Avenue and Stiles Street,
BALTIMORE, MD., U.S.A.
 Correspondence Invited. 1y12

WATER POWER
TO LEASE.
 THE UNDERSIGNED having largely extended their raceway at Lakesfield, 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
 1888 LAKESFIELD, ONT. w15:9

ROCK ELM WANTED.

A Few Car Loads of good ROCK ELM, cut into 1½, 2, & 3 inches thick, 12ft. length preferred.
DUFRESNE & JODOIN,
 Lumber Dealers,
 6112 493, St. Joseph Street, Montreal.

A RARE CHANCE!

Valuable Steam Saw-Mill
FOR SALE.

The Waba Creek Steam Saw Mills, situated on the Madawaska River, one mile from Arnprior. Capacity of Mill, Fifty Thousand Feet of Lumber per Eleven hours. Capacity of Booming Pond, Thirty Thousand Logs. Has Sidings 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, Beignour Street, Montreal, or to James McCuan, Arnprior, who will show intending purchasers the whole property, or to

ALEX. FLECK,
 Ottawa.

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.

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LUMBER DRYER
J. J. CURRAN, Inventor.
CURRAN & WOLFF, 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.; Stearns, Hoff, Schnoor & Co., Staves and Heading, Wallaceburg, Ont. 12:14

NORWEGIAN BUILDING.

Our contemporary, the *Builder*, recently gave an interesting article on the Norwegian style of building, from which we quote the following extracts:—"Having seen other countries of a more advanced culture than their own," says the writer, Mr. P. Lowzow, "the taste for the beautiful was comparatively early awakened, resulting in a desire to give shape and form to their thoughts and ideas, which was most successfully carried out in the well-known and characteristic art of Norwegian wood-carving. Owing to the imperfect implements and tools of that age, the granite was too hard and difficult a material for building and ornamental purposes, and the large forests had to render the necessary material instead. In the time of the Vikings Norway could scarcely boast of any architecture. Their dwelling were plain, generally consisting of but one large room with an earthen floor, in the middle of which they built a rude fireplace, and made a hole in the roof to allow the smoke to escape. It was their ships that they first attempted to beautify with ornaments, and here their fancy had free scope.

"After the introduction of Christianity, about the year 1,000, a more developed state of society was established. The first church was built in A. D. 996 of timber, on the same spot where now stands the celebrated Trondhjens Cathedral. During the long struggle between Christianity and heathenism, no progress was made in the building of churches, and the second church was not finished until 1,050. This church was, however, built of stone. About this time Norwegian wood-carving made considerable progress, and many of the timber churches were decorated with ornaments of this kind. In these early wooden churches the walls were constructed by the timber being raised on its ends; the outside was covered with deals to protect the inmates against the great cold. The nave was supported by wooden pillars, and rose considerably above the side aisles.

"Of these ancient and interesting structures there are still a few preserved, of which the churches in Borgund and Hittordal are well known to tourists in Norway. At the same time, considerable progress was made in the architecture of dwelling houses, &c. Each building had its separate use. The number of rooms increased, and they were now provided with wooden floors. It is only within the last century or two that two storied houses have come into use, and are now rapidly supplanting the old ones. During the last centuries little or no attention has been paid to the ancient Norwegian architecture in the construction of new houses; but it is a pleasure to report that during the last thirty or forty years a great revival has taken place. Many Norwegian architects have done great service in re-introducing the old Norwegian style, in which many new buildings have now been built and decorated, and Norway will again respect and appreciate its old timber architecture.

"In considering the later and more modern architecture, we must strictly distinguish between the town and the country. In the town the houses are built on the system of flats, and are usually either three or four stories high. Brick is now by law the material for building in town, and nearly all the houses are plastered with cement as a protection against cold and rain. The last fifty years have also developed a stucco architecture, which gives the broad streets and the houses a bright and clean appearance. But in the country timber architecture is still used for churches and dwelling houses. The plan of the residence is, as a rule, simple. In the middle of the house a lobby or small hall is arranged, which forms the means of communication between the rooms arranged around this. As the price of timber is cheap, and rates of wages low, we find, as a rule, that the houses are built larger than required for actual use. Easy access is obtained between the different rooms through doors leading direct from one room to another to avoid the cold air in the lobby. Thus a suite of rooms is obtained, which is found to be very convenient and comfortable. Carpets are seldom used, but the floors are painted and varnished, wainscoting is arranged in the best rooms, and the walls are

covered with deals, which is painted or covered with painted canvas. The ornamentation and decoration of the houses outside are obtained through the projecting head-pieces of beams, the projecting roofs, and the elegant open verandahs.

"The present design of a Norwegian modern timber-house presents a large and more than usually comfortably arranged residence in the country. One now is in course of erection at Osterdalen will form the main building in a large group of houses. The floor will be fitted with English tiles to harmonize with the high wainscoting and the painted ceiling. In one of the broken corners of the large parlour is an open fireplace for use in the mild weather in the spring, and in the other a stove for the severe cold in the winter. Wainscoting of wood is arranged here as in the other rooms, and the ceilings are of ornamental woodwork. In the dining-room the side-board is constructed in the wall, which has a small opening through which the dishes are passed direct from the kitchen.

"The house is entirely built of 7 in. timber, outside and inside, covered by deals to resist the cold, which a well-built timber house really does. The floor beams of the first floor project, after old Norwegian custom, 12 in. out over the ground floor, and support the upper walls. Through this, variation and ornamentation are produced in the elevation, giving the exterior a striking appearance. The high pointed arches of the verandahs under the projecting roofs assist also in this, and thus depth and a fine variety of light and shade are obtained. As a rule, the Norwegian timber houses are light and elegant, and produce by their warm and bright color an attractive appearance. At the same time, they are strong and cheap. The price of the timber is low, and the rates of wages are low, so it is possible even for people not so well off to inhabit a good and handsome house. For this reason," says Mr. Lowzow, "I recommend these timber houses for use in England, to have the houses built in Norway and sent here by steamer, where they can be easily re-erected. The total cost of a timber-house will favorably compare with the cost of a brick house, besides being a much more healthy and comfortable abode."

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing on June 2nd, says:—"The weather still continues favourable for the loading of the spring fleet, and the first batch of ships, with a few steamers, have already sailed, and as winds have been favorable for good passages, vessels will be commencing to drop in rapidly on your side by the time this reaches your readers. An average tonnage of ships seemed to have arrived at Skutskar, Sundswall and the Angerman River, but the arrivals to date at Gefle, Soderhamn and Hudikswall districts are considerably under the tonnage of last season. The diminution in large steamer cargoes to London, Hull, &c., accounts for the reduction in tonnage.

I mentioned a month ago that a reduction of 20 per cent. in the number of logs cut last winter in the Sundswall and Hernosand districts, as compared with the output of the two previous seasons, was the generally received opinion of the producers, and from further inquiries made have no reason to alter the figure given, which, in my opinion, is within the mark. I have also had reports from the Gefle district, to the effect that the diminution in the get of logs last winter, as compared to winter 1881-82, is equal to a total of 13,000 standards of sawn wood in the case of the large companies alone, while a reduction of 30 per cent. in the case of the smaller concerns is well under the reality. I hope to give you the result of observations in the Ljusne and Soderhamn districts in a subsequent letter.

Floating operations have been prosecuted with a fair amount of success during the last three weeks, but complaints are now rife of want of water in the smaller streams, and without being a pessimist, it is quite clear that the present season will be a much worse one than the last in a "floating" sense. It is asserted that the reserve of snow on the mountains is much less in proportion than what fell on the

coast last winter, and consequently that the so-called "fell flood" will be less in volume and of shorter duration than usual. Be this as it may, there is little doubt but that the certainty of a smaller supply of logs than last year, in conjunction with the late spring, has already exercised a curbing influence on the production, which will, in all probability, be some 70,000 standards under 1882 for the district north of Dal River.

At the late meeting of the Hudikswalls Travaru Aktiebolag, a dividend of 10 per cent. was declared for 1882, and a considerable amount carried to reserve. The position of the concern in question has much improved of late years and it now takes a high rank amongst similar establishments. The profits of most of the other large saw-mill companies in Sweden were last year very satisfactory, and altogether it was one of the best seasons the trade have had. This year the result will be much less favorable, not only for producers, but for the middlemen, both on your side and this. At least one English firm of the latter description speculated very heavily last autumn.

A SAWYER ON SAWS.

Having served in the capacity of sawyer for a number of years, says J. G. Kinder, in the *Asiatic*, of Cincinnati, I have naturally arrived at certain conclusions, some of them at variance with those generally accepted. First, I have no use for end-play in a saw-mandrel - would like for some one to give a good reason why he considers end-play of any use. I have no use for a slotted saw. No one contends that a slotted saw will make better lumber than a solid saw, if the latter is cool. I have no use for a hot saw. When it gets hot, be set put the slot in the filer—that is where the trouble lies. I have no use for inserted toothed saws. Have seen a good many fancy kinds of saws, and from the immense quantity of profanity they have caused to be thrown on an unprotected atmosphere, I get my solution of the cause of the great cyclones in the west in recent years; and I am pretty certain that it is some now wrinkle that I have not heard of that is causing, in pretty much the same way, high waters, Wiggins' storms, etc.

I have no theories to advance against their use. I only feel that a solid toothed saw is good enough for me; and there is no tool made on earth, to my eye, that is as pleasant to look at as a circular saw with that keen, whistling cut, wading through big knotty logs, and standing up to the work like a giant. Every sawyer, I presume, has certain little peculiar ways of managing saws. I have only one crotchet of my own that I will make particular mention of, and I will give your readers the benefit of it, provided, by trying it, they will find it a benefit.

It is pretty clear to me that, no matter how true a saw will run when sharp, you can not always keep them just that sharp, and they are inclined to waver to one side or the other, and this tendency must be overcome with the guides. Now, I file my saw with a very slight inclination to the board; in running, the saw bears slightly but invariably to the inside guide pin. As the saw gets duller, it may incline to cut the board slightly scant. By screwing up the inside guide this tendency will be overcome; and if the saw becomes very dull it may heat at rim, which is a very good sign to file. Now if the saw, instead of having tendency to the board, was inclined to the log, as it became duller, the outside guide pin must be screwed up to overcome this tendency as in the other case, but with the most serious consequences; because you are only forcing the edge of saw temporarily, out of its true line, and not the collar or middle of the saw, as there is only about one-sixteenth of an inch clearance for log past centre of saw. And if, in order to make the saw stand up to the work, you have guided the edge one-eighth of an inch out of its true place, it brings the log right against the saw. About this time you will see some blue smoke coming out of the cut, be sending a man to the pond after water to cool the saw, and in a short time will find that some artist has painted in fast colors several little patches of sky-blue scenery all around the collar of saw; after which comes the time for the scientific filer to step in, for I

claim it takes very little science to run a true saw. But when you have a kinked saw, from heating at the collar or otherwise, then it does take a scienced hand to control it, there is no rule I know of to control an untrue saw, only the general one for a filer to put a kink in his filling to suit the kink in his saw. The better plan would be to have both saw and sawyer hammered.

SAWDUST.

Mention was made in these columns recently of cork brick, which are light, strong and sound-proof. The *American Architect* suggests that a similar concrete might be made of sawdust, and if the sawdust could be furnished cheaply (in Boston) it is of opinion that such a concrete would probably find an extensive application, deafening floors and partitions, casing water pipes and furring brick walls. If sawdust costs too much for concrete in Boston, it certainly does not at northwestern lumber producing points; and the cost of transportation of sawdust brick would not be heavy. It is somewhat remarkable that sawdust has not been put to some general use. Some attempts have been made, but one by one the experiments have dropped out of sight. A year and a half ago, or thereabouts, a gentleman began the construction of a machine in this city for the compression of sawdust into fuel, railway ties, &c. The machine worked satisfactorily, but all at once nothing was heard of the invention or the inventor. Whether they have flown is unknown. Other attempts to make sawdust into fuel have been made, but after a flourish of patent rights on the processes, and a good deal of loud talking the schemes have amounted to nothing, so far as supplying fuel is concerned. It is a pity that so much of the timber that the millions of saws chew up should lie and rot. The mill men are crying that it be removed from their sight. It is generally the biggest white elephant they have on their hands. Senator Ingalls, who professes to believe that there is not enough timber in the country to furnish fuel for its inhabitants to exceed fifteen years, ought to go right to work and invent a way to burn sawdust. If he is particularly interested in the protection of our forests such an achievement would amount to a great deal more than swashy talk. If he would do this he would at least get a reputation of being practical, something that his talk about the exhaustion of our forests would never lead one to suspect. The timber yearly converted into sawdust in the United States would make not less than 2,000,000,000 feet of lumber. To make this amount of lumber would require 15,384,615 logs six feet long and 16 inches in diameter. If these logs were placed end to end, they would reach from Boston to San Francisco 13½ times. In other words, the sawdust made in the United States every year, if in logs, would build a solid log fence across America from east to west 18 feet high. That certainly would be a good deal of a wood pile. Now let the men who are feverish because in a few years they expect we will have no timber from which to cut lumber, to say nothing about fuel, in 10 or 15 years, go to work and utilize this sawdust, if they want their names handed down to future generations as public benefactors.—*Northwestern Lumberman*.

THE AUSTRALIAN TRADE.

Messrs. Gemmill, Tuckett, & Co.'s report, dated Melbourne, April 11th, says:—"Since last issue the Easter holidays have intervened, causing a check to business, but notwithstanding this deliveries from the storeyards continue unabated for actual consumption. Dealers report an excellent demand for all descriptions of building materials, and certainly the result of late harvest and splendid prospects of the pastoral and other staple interests of the colony fully warrant the belief that the demand will continue during the balance of the current year at least.

American lumber: At the sales ex Grandee, S. F. Hersey, &c., prices realized are in advance of late rates. Stocks held by the trade are light, and we look for an advance at future sales. We quote for Michigan clear pine, £20 15s. to £16 2s. 6d.; Canada do., 1½ to 4 inch, £12 7s. 6d. to £17 10s.; w. p. shelving, £9 to £13 15s.; w. p. ceiling £7 6s. to £9 12s. 6d.;

per m. feet super according to quality. Norwegian and Scotch flooring: At the sales of cargoes ex Zenobia, Marco Polo, &c., rates realized are somewhat in advance of those obtained last month, and we look for further improvement shortly. We quote for 6x1 1/2 red t. and g., 10s. 9d. to 11s.; 6x1 1/2 white, 10s. 6d. to 10s. 9d.; 6x 1/2 red, 9s.; 6x 1/2 white, 8s. 9d. to 9s.; 6x 1/2 red, 7s. 6d.; 6x 1/2 white, 7s. 6d.; 6x 1/2 red beaded, 7s. 6d. to 7s. 3d.; 6x 1/2 white do., 6s. 9d. to 6s. 6d.; 6x 1/2 red do., 5s. 9d.; 6x 1/2 white do., 5s. 9d.; 4-out red and white weather boards, 5s. 9d. to 6s. per 100 feet lineal.

Messrs C. S. Ross & Co. say:—A fair amount of business has been done since last report in nearly every line of building materials, and prices generally have slightly advanced. The deliveries from the yards for consumption have fallen off, and the trade report a smaller business than that done for the previous twelve months. Money for building operations can be obtained at reasonable rates, but the demand for tenements is not so active, and speculative building has declined. The store in store yards is very heavy, and a large portion will be in hand to meet the shipments from the Baltic of the coming season. The recent arrivals have been the Andora, Breunhilda, Loch Ness, Eivion, Essex, Sikh, Marsala, Siren, and Hornby Castle, from the United Kingdom, with flooring laths, &c., Canada, from Frederickstad, and Callao, from Soderhamn, with red deals, flooring, doors, laths, &c., and others.

OTTAWA VALLEY NOTES.

Mr. Thomas Mackie's square timber made on the South River and Sturgeon last winter, was safely towed over Lake Nipissing to the C. P. R. siding for loading. In all there will be about 5,000 pieces, nearly two thousand of which is board timber. It was expected that the first train load of this timber would leave the siding on Wednesday last for Papineville where it will be unloaded and rafted up, Mr. Mackie having now a gang of men at that point. It is expected that should cars be supplied, two hundred pieces could be loaded per day. The general average of the whole cut will be about sixty feet.

It is said that the Scotch Syndicate intend driving the timber loose to the Des Jacobins, where it will be rafted up. Messrs. W. R. Thistle and O. Sills have a large number of logs on Centre and Carty Creek, Pettawawa, which cannot be got out this season owing to low water.

The saw logs are beginning to come down at a more lively rate.

Yesterday the steamer C. O. Kelly passed down with a large tow.

So far this season no less than five men have been drowned in the Black river alone. Of these, one was in the employ of Messrs. Fraser & McCoshen, one in the employ of J. R. Booth, one in the employ of Mr. Murray, and one in the employ of Hamilton Bros.

Mr. James O. Armstrong, manager for Barnett & Mackay, has arrived at Eganville. He reports that Messrs. Barnett & Mackay's drive will be there in about ten days if the weather is favorable.

Captain Young's drive commenced running out into the Ottawa at the mouth of the Pettawawa several days ago.

Perley & Patten's drive on Chalk river has arrived at Burned Bridge.

Mr. John Rowan is getting out all his drive. He had over 20,000 turned into the main Schyan last week. —Pembroke Observer, June 5th.

MONTREAL NOTES.

The Gazette of June 15th, says:—The local demand has been fair although not equal to that of a year ago, when it was exceptionally brisk. There is not much lumber arriving, which is rather a favorable feature than otherwise, as stocks in the city are already large. The only American inquiry reported is for ash. Laths are steady at last week's rates, and it is thought they have reached bottom, although they are still 10 to 12c. per M. above prices ruling a year ago. There has been an advance in the price of pine lath in Boston, where they have sold up to \$2.50@2.75 per M. The export trade is commencing to show more activity, and we hear of charters being made to load lumber

for the River Platte, of the barque Wolfo, 940 tons, at \$14.50, and the Peter Crerar, 628 tons, at \$15.50. There is a brisk export movement in deals. Two ships have just been chartered for London at 67s. 6d. The Deodarus is loaded with deals for Swansea and the Polatjeran with deals for Hull. The vessels Winmora, Cupid, August, Lefler, Latona, Carla and Lorna Doone are now loading. The following vessels have been chartered to load at Montreal: Soy, Guelph, Murlot, Tiviot and the Bolivia to load at Three Rivers. Contracts have been given out for the construction of the new basins to be built above the present one, for the accommodation of the lumber, cordwood and coal interests. The work will be pushed forward with despatch, as improved facilities for meeting the increasing business of the port in the lines referred to are greatly needed.

STANDING PINE.

When the amount of standing white pine timber in the country is considered in connection with the annual production of lumber, it becomes apparent that without an unforeseen, unexpected and disastrous business panic amounting to a veritable cyclone in its baneful influence, unsettling all values, there can be but very little prospect of any further decline in the price of white pine lumber, either in the near future or thereafter. The supply of standing timber is gradually and swiftly being reduced, and the demand is rapidly and constantly on the increase, while the capacity and number of mills keeps full pace with the demand. The effect of this increased demand and constantly decreasing supply is perceptible in the enhanced value of pine stumpage within the past few years. Standing timber which could have been purchased in Michigan less than a decade ago for \$2 per thousand would to-day command from \$5 to \$7; and when we consider that a very material portion of it has changed hands at the latter price, within the time specified, it becomes apparent that any material reduction in the price of lumber must involve serious loss to the holders thereof, to which they would not be very liable to submit, as withholding the same from the market for a time, involves no expense further than the taxes on the lands, and such action must inevitably, by the action of the inexorable law of supply and demand, re-establish prices. Only one conclusion can therefore be arrived at in a consideration of this question, and that is, that the price of white pine lumber must be maintained. —Lumberman's Gazette.

NORTHWEST TIMBER LANDS.

Information is to hand going to show that the Canadian Northwest is going to experience a boom soon in the sale of timber land. A large number of American buyers have recently invaded that section with capital, and are making selections of the best tracts that are more easy of access.

The timber of that country, or at least the portion of it fit for lumber manufacture, has as yet been very little drawn upon. Hitherto lumbering has been little more than a system of culling from the best districts within easy reach of Winnipeg. The lower portions of Lake Winnipeg were, until very lately, the only locality where operations were carried on to any extent, and these have only recently been supplemented by cutting in the Lake of Woods country. As yet the vast timber fields on the upper Lake Winnipeg, where the finest spruce limits in the Northwest are known to exist, are almost untouched, although the establishing of a more extensive system of navigation on that lake is all that is necessary to bring these timber lands within easy reach of the Manitoba lumber market. It can scarcely be expected, with the present system of rapid development and ever-increasing demand for lumber which is now going on in the Northwest, these timber resources will long remain untouched, and it is just possible that American capital and American enterprise will soon assist much in their development. A number of lumbermen from this side of the line have been visiting the section around Lake Winnipeg, and it is expected that regularly organized parties will soon explore the country in that neighborhood and report on the prospects. —N. Y. Lumber Trade Review.

Ships.

NINETY-THREE thousand acres of land were planted with timber in Kansas last year.

The low water this season in the streams around Rainy Lake and the Lake of the woods in the Debateable Territory, has very materially interfered with lumbering operations, and it is said will diminish this year's cut 30,000,000 feet.

The Kingston Whig of June 11th, says:—Yesterday the biggest cut of timber for the season was accomplished at Gilmour's mill, Trenton. In ten hours 347,000 feet of lumber were cut. This is at the rate of 33,000 per hour.

An Ottawa despatch says that a considerable quantity of square timber is passing through the Chats and Chaudiere slides. It is somewhat above the average, and timber-men are under the impression that prices will be good this season.

A HANDSOME maple planted by the Prince of Wales in 1860, a Canadian oak planted by Prince Arthur in 1863, and a Scotch fir planted by Princess Louise in 1882, are among the attractions of the Horticultural Gardens at Toronto.

Few people are aware, or even stop to think, how much lumber is consumed in car-building. It is estimated that there are 400,000 cars in the United States, and, as three thousand feet in round numbers are used in the construction of a car, it follows that the cars that are rolling around the country represent 1,200,000,000 feet of lumber.

CULTIVATION should at all times be given to young trees to keep them in healthy growth and free from weeds. Where they have been set in rows it is a good plan to plow a light furrow towards them at the end of the season, this is called laying them by, or putting them to bed; it protects them from heaving and provides for the outflow of surfs.

The Montreal Times says that a company of Montreal gentlemen consisting of Messrs. R. Hersoy, M. Babcock, J. E. Rasin, W. F. Hutchins, E. R. Whitney and G. F. Cleveland, is being organized to engage in the manufacture of barrels, kegs, &c., under the corporate name of the Tomlinson Patent Barrel Company. The capital is to be \$100,000 in shares of \$100 each.

The Glasgow correspondent of the Timber Trades Journal of June 2nd, says that in the list of arrivals here for the week will be noted the first of this season's imports of Canadian deals, several shipments having arrived per steamers—altogether 45,250 pieces. There has been no auction sale yet of any of these fresh arrivals. The yarding of them is going on busily meantime. The arrivals of spruce deals during May have been very heavy, amounting to 118,039 pieces, and the total since the beginning of the year is 192,555 pieces. Last year, at corresponding date, the total was 140,000 pieces.

SPEAKING of pitch pine, a correspondent of the Timber Trades Journal says:—"All along the west coast of France this class of wood goods is coming more and more into use. Not only for parqueting, but even for joinery and carpentry, it is rapidly finding favor. The pitch pine flooring has one great advantage over that from the north of Europe, viz, greater durability, and being free from knots, it has a finer aspect. The price is about the same as that from the northern countries, and an improved consumption of this wood may be anticipated. In Spain there is also a fair consumption of this class of wood goods."


THE Bristol correspondent of the Timber Trades Journal says that an auction sale of spruce deals (comprising about three cargoes) was held at Bristol on Wednesday, May 30th, by Messrs. Booth & Co., of Gloucester, Mr. Abraham Booth acting as auctioneer. The sale took place in the saleroom of Messrs. King Bros., at Canon's Marsh. There was a large attendance of buyers, and every lot was sold. The competition was fairly spirited, and the prices realized ranged from £6 17s. 6d. to £7 15s per standard, averaging all around a trifle over £7 2s. 6d. For lower port deals these prices must be considered satisfactory.

The Selkirk Herald says.—Mr. G. H. Bradbury, general manager of the Northwestern Lumber Company, returned from Bui Head Bay, Lake Winnipeg, on Wednesday last. While in Selkirk he called at the Herald office, and in reply to enquiries stated that a raft of logs, containing about 400,000 feet of lumber, was ready for towing across the lake, and that he expected the Colville would start out for that purpose in a day or two. Mr. Bradbury had a very rough experience on his way in. He came in a canoe, and had to lay up the day after starting on account of the ice. When the lake was clear he resumed his journey and crossed the water in the storm of Tuesday, having a very exciting and dangerous voyage. Mr. Bradbury is looking well, and camp life apparently agrees with him.

THE Kooowatin correspondent of the Winnipeg Commercial says. The water is very low in the lakes, and all mill owners complain of the scarcity of power. Mr. Hall, of the Northwestern Telegraph Company, has been in town for the past week, looking for cedar telegraph poles. The steamer N. Mosher, Captain McMurdio has brought in three tows of logs and one tow of telegraph poles during the past week for the Kooowatin Lumber Company, Messrs. Dick & Banning's drives, on Grassy and Pine rivers are lying up for the want of water, and will not come out this season, unless heavy rains come on during the summer. The steamer Lillio Macaulay, with a tow from Hungry Hall for Dick & Banning, was caught in a storm in the Grand Traverse and had to abandon the raft. The logs were all swept into Buffalo Bay, and are a dead loss, as it would cost more than they are worth to collect them again.

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Market Reports.

MONTREAL.

From Our Own Correspondent

JUNE 25.—There is a good demand for laths which are scarce both in Ottawa and in this market, and the price has advanced about 50 cents per M, the quotation now being \$1.75@ \$2.00 with every probability of another rise shortly.

Table listing lumber prices for various types like Pine, Spruce, Fir, etc., with prices per M.

FREIGHTS AND SHIPMENTS.

Shipping for South America has begun, although there have been no clearances as yet. The last vessel taken up for the River Plate was at \$15.50.

LIVERPOOL MARKET.

Advices by last mail state that the market is sadly wanting in animation and for some articles prices are easier. Spruce deals have been sold at £7 2s. 6d. per std. ex quay, both by private bargain and by auction.

CORDWOOD.

There has been no improvement in the demand, but as the imports are still very limited, they are sufficient in the present state of business to keep prices about steady.

Table listing prices for Long Maple, Short, Long Birch, etc.

TORONTO.

From Our Own Correspondent.

JUNE 23.—The lumber trade from the yards and over the docks is extremely quiet at present, consequently there is little worthy of record to give you.

stocks to send forward; secondly, owing to the late starting of the mills this season none of the new cut is yet in a fit condition to ship.

The Midland and Grand Trunk Railway Co. has so arranged matters between themselves so as to admit the shunting of cars to Parkdale without charge, as formerly, which will prove beneficial to all concerned.

Although trade from the retail yards is dull there does not seem any tendency to cut on figures hitherto demanded. Shingles and lath are quite firm at former quotations.

Table listing prices for Mill cull boards, Shipping cull boards, etc., with prices per M.

Table listing prices for 1 1/2 inch flooring, 1 1/4 inch, etc., with prices per M.

WINNIPEG.

From Our Own Correspondent.

JUNE 19.—Before quoting prices in the principal northwestern lumber market, a brief description of the building methods and the different kinds and grades of lumber would be in place.

The scantling frame is the usual style of construction for wooden buildings. This is set on a timber foundation, resting on oak posts sunk in the ground, stone being very costly.

and mansards. There is an American pressed iron slate or shingle which is used on the faces of mansard roofs, which appears to be neatly adapted to its purpose.

In those mushroom towns that elevate their heads on the prairie in a season, if not in a night, there is a poor chance for the plasterer and painter. The inside walls, ceilings and partitions are of dressed lumber.

The lumber sawed here is of the exact size, that is, a 10 in. board is just 10 in. wide and barely 1 in. thick. With regularly manufactured lumber in Ontario it would be 1 1/4 in. wide and 1 1/2 in. thick.

The extra dimensions of Ontario siding and the odd foot of 13 feet lumber is about as good as wasted in this market.

Table listing prices for Common boards, Sheeting, Culls, etc., with prices per M.

BOSTON.

Cotton, Wool and Iron of June 23, says:—Trade is of fair proportions and the range of general values keeps along pretty steadily.

Table listing prices for Selects, Dressed, Sheeting, etc., with prices per M.

CHICAGO.

The Northwestern Lumberman of June 23rd, says:—The arrivals of cargoes at this port for the week ending on Wednesday were a little in excess of those of the week previous.

since Monday has been to give a slight advantage to the buyer.

Table listing prices for Short dimension, Long dimension, Boards and strips, etc., with prices per M.

Receipts of lumber, shingles, etc., for the week ending June 21, as reported by the Lumberman's Exchange:—

Table showing receipts of lumber and shingles for 1883 and 1882, with cumulative totals.

ALBANY.

Quotations at the yards are as follows:—

Table listing prices for Pine, clear, Pine, fourth, Pine, select, etc., with prices per M.

BUFFALO.

We quote cargo lots:—

Table listing prices for Uppers, Common, Culls, etc., with prices per M.

OSWEGO, N. Y.

Table listing prices for Three uppers, Pickings, Fine, common, etc., with prices per M.

TONAWANDA.

Table listing prices for Three uppers, Common, Culls, etc., with prices per M.

NEW YORK.

The New York Lumber Trade Review says:—We would be most happy to report a favorable change in the condition of the general market had we the facts to back such a statement.

usual summer trade. Prices are favorable to buyers, but this fact does not serve to stimulate interest, as purchases are only made in accordance with actual wants, and this line of policy laid down will not seemingly be overstepped. Spruce has been received in more liberal quantities, and with some little duty to work off the increased stock, consignees have been obliged to modify slightly their previous prices. Sales of ordinary random cargoes have been made at \$13, but at the close this quotation was considered rather low, as the market having been cleared, the inside price named for anything about to arrive was \$13.50, while up to \$15.50 was asked for strictly desirable lots.

BORDEAUX.

The *Timber Trades Journal* says:—Some of your readers may be interested in knowing the present state of this market, but though I cannot write much of an encouraging nature, there is a better prospect from the fact of the splendid weather we are enjoying, which imparts new hopes for the near future, and promises a good harvest, which is much needed. The last few months have really been a period of entire stagnation, though the season did not open so very badly. Fair prices were paid by the leading firms, but, instead of being contented with the results thus obtained, the sellers continued to press their stocks, thus giving the smaller houses opportunity to buy at even cheaper prices, and causing the larger ones to lose confidence.

What has surprised the timber trade here has been the firmness on the part of the spruce shippers, or rather their unwillingness to accept the prices offered by the importers; but the former have gradually given way, and now offer to close business at something like 7s. less than their opening quotations, but which sum the buyers here are not even prepared to pay.

CARDIFF.

The *Timber Trades Journal* of June 9 says: The timber market here remains far from satisfactory. As far as we can learn, very little has been done with the Baltic during the past week. One lot of from 400 to 500 standards of deals has changed hands, but the exact price, although not yet disclosed, is not believed to point to any improvement. Steamer charterers are holding out strongly at 33s. 6d. from the lower Baltic ports. From Quebec there is almost nothing being done. In the pitwood market overstocking seems to be still the order of the day. French and Scotch fir are selling freely at 17s. 6d. to 18s., which means a severe loss to the importers, when we say that prices at Bordeaux are maintained at about 14s., free on board.

LONDON.

We take the following from Messrs. Churchill and Sim's London circular of June 10th:—The stock of wood in the docks on the 31st May was—foreign deals and battens, 3,545,000 pieces, against 4,150,000 in 1882 and 3,767,000 in 1881; pine and spruce battens, 935,000 pieces, against 1,309,000 in 1882 and 1,681,000 in 1881; on the quays, 267,000 pieces, against 368,000 in 1882 and 259,000 in 1881; boards, 5,565,000 pieces, against 7,328,000 in 1882 and 4,483,000 in 1881; total, 10,312,000 pieces, against 13,155,000 pieces in 1882 and 10,190,000 pieces in 1881. The delivery from the docks from the 1st of January has been to June 2, 1883—foreign deals and battens, 4,573,000 pieces; pine and spruce battens, 1,163,000 pieces; boards, 4,571,000 pieces; to June 3, 1882—foreign deals and battens, 4,594,000 pieces; pine and spruce battens, 1,401,000 pieces; boards, 4,790,000 pieces; to June 4, 1881—foreign deals and battens, 4,852,000 pieces; pine and spruce battens, 1,363,000 pieces; boards, 4,435,000 pieces. Or in cubical contents to June 2, 1883—sawn wood, 81,696 P. S. H.; prepared boards, 15,265 P. S. H.; timber, 44,467 loads to June 3, 1882—sawn wood, 88,773 P. S. H.; prepared board, 16,876 P. S. H.; timber, 40,211 loads; to June 4, 1881—sawn wood, 97,355 P. S. H.; prepared boards, 15,010 P. S. H. timber, 41,356 loads. The market in the past month has been lifeless, there having been but little demand either for the landed stock or for cargoes to arrive.

The *Timber Trades Journal* of June 9, says: Messrs. Churchill & Sim's forthcoming sale will

be interesting from the fact of the catalogue including several parcels of Gelfe deals of this season's shipment from one of the leading mills over there, some of which are for absolute disposal, besides other clearing lots from this port of favorite brands. There are also several lots of deals, &c., from Dickson's ports for those who hold to the reputation this shipment has so long enjoyed. In respect to other descriptions, the Quebec pine, ex Red Jacket, without reserve, is likely to prove attractive, and in anticipation of the forthcoming shipments, which cannot be here for several weeks yet, ought to meet with plenty of bidding. The recent heavy sales of Fredrikstad flooring have apparently not diminished the confidence of sellers in the ability of the market to go on consuming, and several such cargoes are distributed over the pages of the catalogue in the usual marketable sizes. Oak wainscot and sawn white oak planks as well figure amongst the unreserved lots, and a good assortment of pitch pine timber makes the sale altogether a specially attractive one, presenting an opportunity to the trade to suit themselves with almost every description they require.

LIVERPOOL.

The *Timber Trades Journal* of June 9th says:—Trade remains in a quiet condition all round, and the quays and wharves wear an aspect the reverse of animated. This, however, is not unusual at this time of year, seeing that the import season will soon be upon us, and many buyers refrain from putting their orders in the market until it has fairly commenced, and others are deterred from operating so late in the half-year.

The import for the past month, as we have reported from week to week, has been light. In pitch pine, both hewn and sawn, it is less than half the quantity imported in the corresponding month of last year, and the supplies of spruce also show a large decrease when compared with the same period. The demand for these articles, however, appears to have diminished in like proportion, leaving the stocks of timber but little below those of last year, whilst the stocks of deals of all kinds, flooring, &c., are in excess.

Prices continue low, and so long as the present condition of trade continues they are likely to do so. On all sides we hear complaints of the unsatisfactory state of the building trade, and until it assumes a more healthy tone it is useless to look for any marked improvement.

GLASGOW.

The *Timber Trades Journal* of June 9, says: The wood market here does not give the indications of briskness that might be expected, looking at the activity that prevails in the shipbuilding trade and the improved condition of housebuilding shown by the advance of a half-penny per hour given last month to the house joiners. On the contrary, it is rather dull for most descriptions of goods. There is an opening for birch and walnut logs, of which the market is comparatively bare. The large cargo of lower port birch that was recently brought to auction, as noted in the *Journal* of the 26th ult., is now all cleared out of first hands.

The public sale held at Greenock on the 31st was well attended. Of the goods offered, a large portion belong to a wrecked cargo (sold without reserve), and some portions were more or less damaged or chafed, so that the prices realized must not be taken for the market rate.

WASTE IN SAW DUST.

The *Winnipeg Commercial* says:—In the vast country extending from Lake Superior to the Rocky Mountains, in parts of which timber is plentiful, and in other sections of which fuel is scarce, the question of utilizing the enormous quantities of sawdust produced in the lumber districts as a source of fuel supply is one deserving of attention. The immense lumber cut of our mills every season will produce a quantity of sawdust, which if it could be made subservient as fuel would go a considerable way towards solving the problem of how our western country is to be supplied. Upon this subject the *Lumberman's Gazette* of Bay City, Mich., says:—"The timber converted into sawdust by the circulars on the Saginaw river is a very im-

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.
Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

portant consideration, and amounts annually to millions of feet, and any invention which would be successful in saving any considerable portion of it and still compete in the amount of lumber produced would be a rich bonanza to the inventor, equal to an interest in the best flowing oil well or the richest silver mine in the country. Necessity is said to be the mother of invention, and as the forests disappear and timber becomes scarce, the necessity for economy becomes more and more apparent, and it is not beyond the range of possibility that great accomplishments in this direction are in store for the future."

SEARCHING FOR TIMBER.

A new industry has recently been developed in Ireland—a sort of timber prospecting never dreamed of by our American pine hunters. It is a well known geological fact, says the *North-western Lumberman*, that immense tracts what are now bog lands in Ireland were once covered with forests of oak and pine, and that in cutting peat, immense trees of these varieties are found embedded in the earth at depths of ten, twenty and thirty feet, in many cases whole groves being found standing just as they grew. To find out the location of these miniature subterranean forests is now the speculative work in which some industrious Irishmen are engaged. The timber, when brought to the surface, is found to be perfectly sound, and the oak, which is as black as ebony, is used extensively for ornaments of jewellery and fancy cabinet work, and sells at a high price. A recent visitor to the wild moor and mountain region of Donegal thus describes the way in which the seekers after buried forests operate. Two men, armed with steel rods about thirty feet long, traverse the bog, and by running their rods into the ground are able to ascertain where the trees are to be found. They work by what may be termed natural mathematics, and quickly determine the length of their prize, its approximate diameter, whether it is pine or oak, and is or is not a clumper—one of a company or clump. They fix on twenty or thirty feet square, and cross it with their searchers, say north and south, and then east and west, search it across each way, a stab to each foot or so, and in the course of a few minutes they know whether that area contains what they are looking for. The square lying next and next, and all near each other, are so searched, and the discoveries, if any, marked for future action. The unproductive are also marked, to avoid future loss of labor.—*Scientific American.*

WOOD WORKING MACHINERY.

The question is often asked, will the machinery, especially wood-working machinery, of one hundred years hence embody any special advantage not possessed by the most improved tools of to-day? In some particular tools there is undoubtedly room for improvement, while in others perfection seems to have been attained. Many so called improvements are only such in name, and there are those who claim that the planing machine for instance, is no better to-day than

ten years ago, and hence is not liable to be improved upon to any great extent. In saw mill machinery there is room for improvement, noticeably in the direction of closer economy in the production of lumber. As our timber becomes scarcer these improvements will gradually assume shape.—*Wood Worker.*

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 Drug Gists.

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.

Health is Wealth.



DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery, decay and death, Premature Old Age, and Spermatorrhea, caused by over-exertion of the brain, self-abuse or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by us for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Proprietors, Toronto

THE ONLY
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CURE

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DYSPEPSIA,
Loss of Appetite,
Indigestion, Sour Stomach,
Habitual Costiveness,
Sick Headache and Biliousness.

Price, \$5. per bottle. Sold by all Druggists.

MINNESOTA LUMBERING.

Respecting the drives in Minnesota, the *Mississippi Valley Lumberman* gives the following information:

"The Prairie River logs have been abandoned probably for the year. There have been no logs got out of the Big Swan River drive so far, and the water is low and falling. Unless heavy rains occur in a very few days it will also be deserted. The main upper Mississippi drive has commenced to run at Aitken; the jam at Pokagama Falls having been broken, this drive will come in O. K. The lower Willow, including Quadno and Moose, are running into the Mississippi, and no fears are entertained but they will come. The upper Willow is coming hard and in sad need of rain to make the work easy. No logs out of Split Hand, but the boys are working like beavers to bring them. One drive on Sandy Lake can be had if it seems to be needed, but lower Prairie, Tamarac and Sandy rivers are all very low, many logs will be hung up. It is reported that some 18,000,000 or 20,000,000 feet of logs off the waters of Platte River are in Rice Lake, but upper Platte and Hillman drives are stuck. The main East branch of Rum River is safe on present water. The roar of main East branch drive is below Princeton and most of the logs are in Anoka boom. There is no news from the West branch drive, beyond the fact that a half crew are on the river working, but cannot get out unless there is heavy rains. The probabilities are that this drive will be hung up."

QUEBEC.

A correspondent on June 14, says:—This season of navigation has brought a considerable increase both in numbers and tonnage of shipping to our port as compared with last year, and business generally is good. One great drawback is the scarcity of skilled men to load the vessels, many of them having left the city. This large fleet is fast using up the stocks of square timber which our merchants wintered over at the several coves, and the new timber now on its way to this market will no doubt meet with ready sale at remunerative prices. Deals have been slow of sale so far this season, although within the last few days two mill cuts of spruce have been disposed of. Joly's, of Lotbiniere, sold at \$41.75, \$26.75, \$24.75 and \$19.75, for firsts, seconds, thirds and fourths, respectively, f. o. b.

The *Chronicle* of June 15th, says:—Notwithstanding that we have a large number of ships loading, our merchants are, generally speaking, well supplied, and do not show any inclination to purchase. One new Ottawa raft, belonging to Messrs. A. & P. White, has arrived, and two or three others are reported to be near at hand. We understand there has been more enquiry for deals, owing to the large shipments which are being made, and the general opinion seems to be, that prices will be well maintained for the present.

HALIBURTON, ONT.

From Our Own Correspondent.

SHINGLE AND LUMBER MILLS.—The new shingle mill of A. Sperry, of Peterborough, is now ready to run, and he has a lot of logs to start with. They were brought up the stream as there is no current. They are very fine logs for shingles. The mill is fitted up in first class style; the mill proper is 30x60 feet, two and a half storeys, an engine room 20x30 of one storey. A lean to the main building about 12x30 for the drag saw, which is on the ground floor, where the logs are cut in blocks and split and taken up stairs by an endless chain. The lower floor of the mill consists of sawdust carriers, and all the shating except one line of shaft is over head on the lean to that drives the two Perkin's patent shingle machines and the Corval saw sharpener, made by Wm. Hamilton, of Peterborough, which are on the second floor, also a circular saw for ties and lumber, a saw to trim the shingle block and four saws for jointing shingles. The two shingle machines are of first class make, and are under the management of John Belleghem, of Peterborough, who has been with Mr. Sperry for a number of years. The jointing and packing machines are under the control of Messrs. H. and A. Dunn, of Peterborough. The circular saw has not started

to run as yet, as men of the right stamp are rather scarce, in fact what men are at work in the mill come from Peterborough. Haliburton may be proud of having such a mill in the village, as it has increased the population by about forty people, young and old, and there must be still more, as it will take about 25 or 30 hands to run all the machinery in the mill. Haliburton is located on a very pretty lake called Head Lake on the north branch of the Burnt River. At the north end of the village, Mr. Irwin has a water saw mill, one circular saw, double edger and trimmers, which turns out over 30 M of lumber per day; and alongside we have a grist mill which does all the gristing for the surrounding country.

YOUNG'S POINT, ONT.

From Our Own Correspondent.

THE DRIVES.—Mr. Geo. Chalmers' drive arrived here on Thursday last, consisting of 36,000 pieces. After sorting out here, the pine logs are to be driven down to Hilliard's mill to be cut into market lumber. The cedar logs and ties will be cut at the saw mill here. Mr. P. Cassidy is foreman, and he has a good gang of men. The cook and cookery are second to none on the river for cleanliness and good food.

THE DRIVES IN EELS CREEK.—The two remaining drives in Eels Creek are getting on splendidly. Messrs. Ulyott & Saddler have a large number of saw logs and about 45 men. Mr. Barr foreman. Mr. Geo. Chalmers has a large quantity of saw logs and square timber; he has 20 men, A. Wynn, foreman. They have done well and expect to be at the mouth of the Creek, in Stony Lake, if all goes well, in about two weeks' time, when the two firms will assort out their respective logs. From what I can learn these two drives have made the best run that has been made on Eels Creek.

LARGE SAW LOG DRIVES.—Messrs. Rathbun & Son have three large drives lying here ready to run. This firm has a great quantity of stuff to pass through here this summer. They employ a great many men. Mr. Erwin, of Nassau Mills, has a large drive of saw logs, 18,000, and 4,000 pieces of square timber, ready to run over the dam here. Mr. Douglass is foreman.

THE WATER.—The water is very high for this season of the year and is still rising.

THE SAWLOG DRIVES.—Messrs. Ulyott & Saddler's and Mr. Geo. Chalmers' respective drives of sawlogs and square timber arrived at the mouth of Eel's Creek, on Friday, June 15th. A. Wynn, foreman for Mr. Chalmers, has brought his sawlogs and square timber, a distance by water of 75 miles, and he has accomplished this inside of three weeks. Mr. Barr, foreman for Messrs. Ulyott & Saddler, is also to be congratulated for his success. No doubt his employers will say he is a good man for this work, as he has driven nearly the same distance as Mr. Wynn. The two firms are now busy assorting their respective logs at the mouth of the creek in Stony Lake, where they will make a start for their saw-mills. Mr. Burke, foreman for Messrs. Ulyott & Saddler, is now ready to run over here with 30,000 fine sawlogs for the Harwood steam saw mills. He has been detained here for a few days with head winds and by Messrs. Rathbun's drive which was ahead of him.

SQUARE TIMBER.—Mr. Irwin, of the Nassau Mills, is going to have all his square timber that has been cut back of Haliburton, brought down those waters and shipped at Lakeside. In previous years he had it shipped at Lindsay.

WASTE IN SAWDUST.

The *Winnipeg Commercial* says:—In the vast country extending from Lake Superior to the Rocky Mountains, in parts of which timber is plentiful, and in other sections of which fuel is scarce, the question of utilizing the enormous quantities of sawdust produced in the lumber districts as a source of fuel supply is one deserving of attention. The immense lumber cut of our mills every season will produce a quantity of sawdust, which if it could be made subservient as fuel would go a considerable way towards solving the problem of how our western country is to be supplied. Upon this subject the *Lumberman's Gazette* of Bay City, Mich., says: "The timber converted into sawdust by the circulars on the Saginaw river is a very

important consideration, and amounts annually to millions of feet, and any invention which would be successful in saving any considerable portion of it and still compete in the amount of lumber produced would be a rich bonanza to the inventor, equal to an interest in the best flowing oil well or the richest silver mine in the country. Necessity is said to be the mother of invention, and as the forests disappear and timber becomes scarce, the necessity for economy becomes more and more apparent, and it is not beyond the range of possibility that great accomplishments in this direction are in store for the future.

LOST IN THE WOODS.

A very sad accident took place at St. Rose a few days ago. One Joseph Desjardins, a laborer of the place, left the village about a week ago for the woods, some five miles off, for the purpose of felling trees. He had been for some time absent, when the villagers, at the request of the family, instituted a search for him. After much trouble, the unfortunate man was found lying at the foot of a tree, with two large wounds on his head, and in an insensible condition. He seemed to be dead, but upon closer examination was found to have life in him. He was conveyed home with the greatest care, and is now in a very weak condition, and little hopes are entertained of complete recovery. When he regained consciousness, Desjardins told those around him that he had been felled to the ground by the falling of a tree upon him. On trying to reach home, he was exhausted by loss of blood and fell down at the foot of the tree where he was found. He remained there two days and two nights, exposed to a pouring rain during several hours, without food, and bleeding. He had heard the villagers calling him on the first day of the search, but was too weak to answer. Desjardins, as has already been said, is very poor, and has a family of five children.

A YEAR WITHOUT A SUMMER.

During a cold spring like that which is just now drawing to an end, people generally console themselves with the reflection that the sun will eventually get the victory, and that summer will certainly come at last, though its coming may be delayed. Uncertain as the weather is, the general features of the seasons recur with a regularity which warrants the confidence thus reposed in the annual return of seed-time and harvest; but there are instances on record in which even the seasons seem to have lost their characteristic features, as if the ordinary laws of meteorology had been temporarily suspended. A remarkable case of this kind, and one which the long continued cold weather of this spring makes particularly interesting just now, is that of the year 1816, which has been called "the year without a summer." A communication printed in the *Congregationalist* gives the following summary of the weather of this remarkable year.

January and February were mild; March was cold; April began warm, but ended in snow and ice. Ice formed an inch thick in May, and fields were planted over and over again till it was too late to replant. June was the coldest ever known in this latitude; frost and ice were common. Almost every green thing was killed; fruit nearly all destroyed. Snow fell to the depth of ten inches in Vermont, seven in Maine, three in the interior of New York, and also in Massachusetts. There was a few warm days. It was called a dry season. But little rain fell. The wind blew steadily from the north, cold and fierce. Mothers knit extra socks and mittens for their children in the spring, and woodpiles that usually disappeared during the warm spell in front of the houses were splendidly built up again. Planting and sowing were done together, and the farmers who worked out their taxes on the country roads wore overcoats and mittens. In a town in Vermont a flock of sheep had been sent out as usual to their pasture. On the 17th of June a heavy snow fell in New England. The cold was intense.

A farmer who had a large field of corn in Tewksbury built fires round it at night to ward off the frost; many an evening he and his neighbors took turns watching them. He was rewarded with the only crop of corn in the neighborhood. Considerable damage was done

in New Orleans in consequence of the rapid rise of the Mississippi River. Fears were entertained that the sun was cooling off, and throughout New England picnics were strictly prohibited.

July was accompanied with frost and ice. Indian corn was nearly all destroyed, some favourably situated fields escaped. August was more cheerless, if possible, than the summer months which preceded it. Ice was formed half an inch in thickness. Indian corn was so frozen that the greater part was cut down and dried for fodder. Almost every green thing was destroyed in this country and in Europe. On the 30th snow fell at Barnot, forty miles from London. Very little corn ripened in New England and the Middle States. Farmers supplied themselves from corn produced in 1815 for seed in the spring of 1817. It sold at from \$4 to \$5 per bushel.

September furnished about two weeks of the pleasantest weather of the season, but in the latter part of the month ice formed an inch thick. October had more than its share of cold weather. November was cold and snowy. December was comfortable, and the winter following was mild. Very little vegetation was matured in the Eastern and Middle States. The sun's rays seemed to be destitute of heat during the summer, and nature was clad in a sable hue, and men exhibited no little anxiety concerning the future of this life.

The average price of flour during the year in the New York market was \$13 a barrel. The average price of wheat in England was 97 shillings per quarter. Bread riots occurred throughout Great Britain in 1817, in consequence of the high price of the staff of life.

Big Trees.

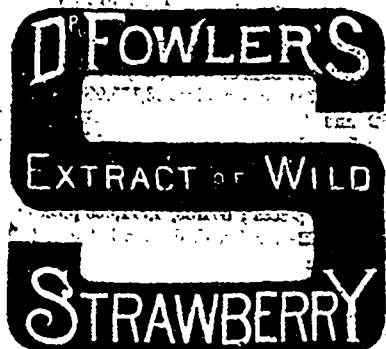
To give some idea of the magnitude to which some of the cypress trees attain, which are cut on the river above and brought to this market, I will state that two weeks since I surveyed a raft that came from Calhoun County (Louis Refoe), four logs of which were sawn from one tree and scaled as follows:

36 in. diameter, 16 feet long,	1,024
38 " " " " "	1,156
40 " " " " "	1,296
42 " " " " "	1,444

Making a grand total of 4,920 feet.—Doyes Rule. The top log was perfectly sound, and all of the best quality of white cypress. There was not a knot visible on the surface of any of them. The lowland forests contiguous to the river and tributaries abound in similar monsters, and it only requires capital and enterprise to unlock these treasures of wealth.—*Apalachicola Tribune*.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dyo'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.



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.

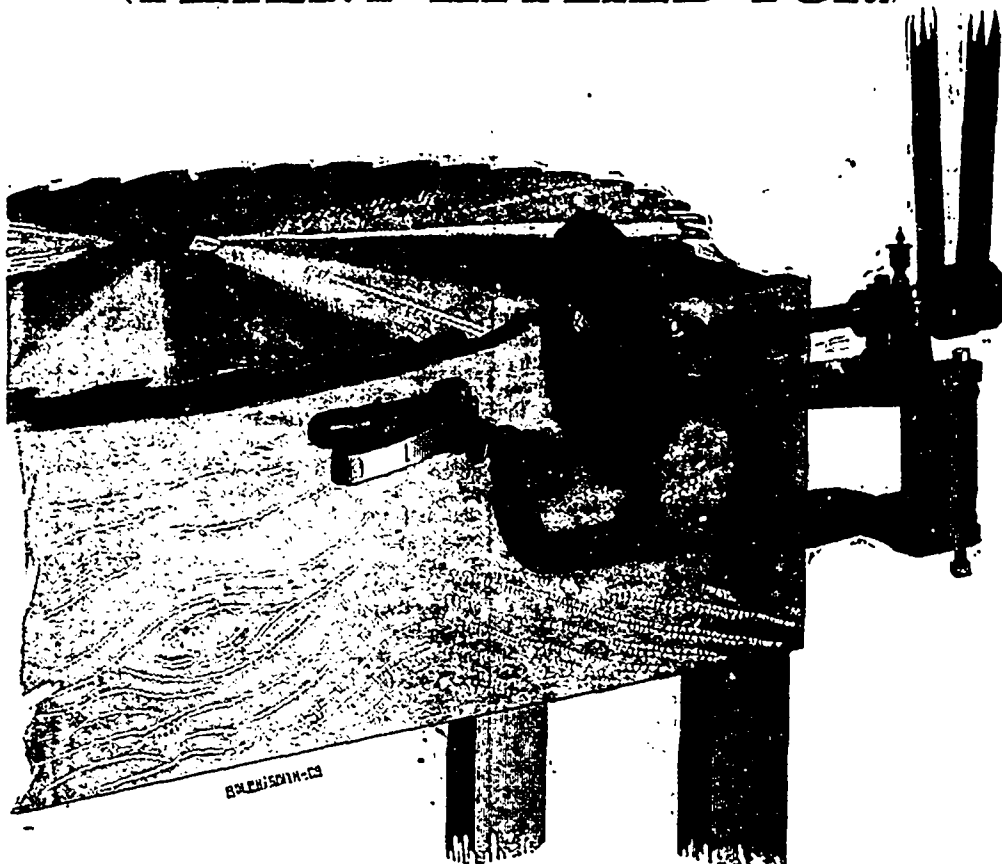
ROGERS' SAW GUMMER

(PATENT APPLIED FOR.)

No Heating!

Quick!

Simple!



Exact Work!

Cheap!

Complete!

POSITIVE STOPS! ADJUSTABLE GUIDE! Every Tooth made exactly alike!
JUST WHAT IS WANTED in every Saw-mill in Canada!

A REVOLUTION IN GUMMING SAWS WILL BE EFFECTED WHEREVER

ROGERS' SAW GUMMER

Is Introduced to replace Burr Gummers, or Grindstones, or where Emery Wheels have been run in the usual way. Every Machine Guaranteed to work as represented or No Sale. It works EASILY; is so SIMPLE and COMPLETE that Sawyers can keep their Saws CONSTANTLY in FIRST-CLASS ORDER and thus LARGELY INCREASE the DAILY OUT-PUT.

Price Complete, with Countershaft - - \$40.00.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

Manufacturers of HART'S PATENT EMERY and CORUNDUM WHEELS.

NEW YORK LUMBER FREIGHTS.

The Ottawa Citizen of June 20, says:—It will be remembered that the American captains struck this spring for \$4 per thousand on lumber to New York and \$3.75 to Albany, to which the mill men had to accede, but very reluctantly, being 50c. per thousand more than they had calculated on. In order to conciliate the feeling and work harmoniously, it was unanimously resolved at a meeting of the boatmen held in the company's offices, 23 South street, New York, on Saturday, the 7th instant, to establish the following rates:—

Ottawa to Burlington and Whitehall.....	\$2 25
" Troy and Albany.....	3 60
" New York.....	3 75

Twenty-five cents extra on strips to Albany and New York. This is acceptable to the Ottawa mill men, and shows that the boatmen are desirous of doing what is right and do not wish to take advantage of their customers. The boatmen are thoroughly organized under a charter in New York State, and are styled the "Northern Boatmen's Transportation Company." The company comprises a carrying capacity of about five hundred (500) boats of about one hundred and fifty tons each. Their affairs are managed in New York by Mr. Geo. F. Hastings, 23 South street, their agent in this city being Messrs. D. Murphy & Co.

It is most satisfactory that an amicable arrangement is arrived at between boatmen and lumbermen, and the association will now have the hearty good will of American men generally.

HANDLING LUMBER.

Here is some good advice for saw mill men. It is furnished by a correspondent of the *Southwestern Lumberman*: When the lumber is taken from the saw by the off-bearer, never allow it to be thrown down, but lay it down carefully, and keep up this rule every time it is handled until placed in the car for shipment. When lumber is bulked down, always put each length down in separate piles, for instance, 10 feet lengths in one pile, 12 feet in another, and so on; this prevents splitting from exposure. When different lengths are piled together in a bulk as it comes from the mill, the result is that the ends of the longer boards crack, and thus the value of the lumber is reduced. Have your lumber properly trimmed before it leaves the mill, bad ends cut off square; rip out all hearts, even if by so doing you get a three-inch clear strip from each side. These strips are more valuable if clear and straight than the whole board with a bad heart in it, besides, you save the expense of handling so much surplus wood. Having your lumber properly trimmed and assorted as to lengths at the mills, keep it that way all the time while hauling, piling on sticks, hauling to cars and shipping, and never allow your men to handle fine lumber roughly, but in piling, loading on cars or waggons, hand the boards carefully from one to the other, and lay them down easily. You will make money by this, even if it requires one-third more men to do the work; the increased price that your lumber brings will pay all this extra expense and leave you a handsome margin besides.

BRAZING BAND SAWS.

The Hoyt & Bro. Manufacturing Co., of Aurora, Ill., gives the following directions for performing this operation.

File the ends of the band on opposite sides, to form two wedged shaped ends, having a lap of say 3-inch long, which, when laid with their bevelled and filed sides together, shall form a good joint of the same thickness as blade. Now clamp the ends on a piece of board, with the back of the blade toward you, with the lap brought fair together. Cut a piece of "silver solder," large enough to cover the lap, lay it between the lapped portion with a little pulverized "borax." Now, having a piece cut out of your board, say three inches wide, directly under your lap, heat your soldering tongs to a bright "cherry-red," and hold them pinched firmly on the lap until the solder flows freely from under the joint, then cool off the tongs and soldered portion of saw by pouring water upon the same, without relieving the pressure until nearly cold. Try a file on both sides the blade, and should it be harder than the other part of the blade, re-heat your tongs a little, and draw the temper

by pressing the tongs upon the hard portion of the blade till partially heated, but not upon the lap, as it will weaken your joint. File off the solder and joint to the same thickness as other parts and the soldering of your band is completed.

COOPERAGE STUFF.

Handlers of cooperage stuff in this city comment seriously upon the character and quality of much of the staves, heading, etc., that is offered or shipped to this market. In many cases the manufacturers of the stuff do not understand their business sufficiently to turn out a product that is desirable or even available. Some owners of mills seem to imagine that if a lot of staves and heading is chopped out in a cheap way it is sufficient, and often they are not particular about the quality of the timber used. This is not generally the fact, but it is true to too great an extent. Instead of an indifference among users of packages as to the quality of the stuff to go into them, there is, on the contrary, a most rigid system of inspection applied. A Chicago commission man would not dare to send a car-load of stuff to a Minnesota consumer that did not come within the proper range as to quality, knowing too well that it would be useless, for the stock would be mercilessly culled. Before buying stocks of a producer to furnish to the trade catered to by Chicago operators, assurance is always wanted that the manufacturer knows what to send, and will turn that knowledge to proper account. Numerous inquiries regarding the placing of stocks are received in Chicago, to which little attention is paid, because the commission men are afraid to touch the product of a mill which they know nothing about. Improperly made stuff is disposed of by hook or crook, generally being supplied to local consumption, for there are apt to be coopers who are no more particular than the unskilled manufacturers of raw material. But at such a point as Minneapolis, to which a large amount of stock is annually shipped from Chicago, there is little demand for poor stuff. All this points to the necessity for the utmost care in studying the wants of consumers of cooperage material, and an earnest endeavor to meet those wants. When the market is dull inferior stuff has but little show, for if stock is wanted it is easy enough to get what is good.—*Northwestern Lumberman.*

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec:—
 JUNE 14.—Henry Connolly, deals, Mill cove.
 Thos. Duck, white pine, &c., sundry coves.
 A. Fraser & Co., timber, Clint's wharf.
 E. L. Kelsey, staves, Point-au-Pizeau.
 Jas. Gibson, jr., birch, South Quebec.
 John S. Murphy, elm, &c., Indian cove east.
 Wm. Simpson, birch, &c., Hadlow cove.
 A. & J. White, white pine, &c., St. Lawrence Docks.
 Jos. Bolduc, deals, Mill cove.
 JUNE 21.—Joseph Bolduc, deals, Mill cove.
 Malcolm McDougall, white pine, &c., St. Michael's cove.
 Peter McLaren, white pine, St. Lawrence Docks.
 J. J. Calvin & Co., elm, &c., Point-au-Pizeau.
 J. J. Calvin & Co., oak, &c., sundry coves.
 John McRae & Co., timber, Indian cove west.
 D. C. Thompson, staves, Bridgewater cove.
 Platt & Bradley and D. C. Thompson, staves, Bridgewater cove.
 Wm. Simpson, birch, Hadlow cove.
 A. Fraser & Co., white pine, &c., Clint's wharf.
 Hilliard & Dickson, pine, &c., St. Lawrence Docks.

LOGS AND LUMBER.

Last week the *Lumberman* contained an extract from the Tonawanda, N. Y., *Herald*, that uttered a bitter complaint of the decline and threatening collapse of the saw-mill industry at that point, on account of the high cost of logs. The complaint alleged that the operators who raft logs from Lake Huron to Tonawanda have squeezed the millmen to the point of bankruptcy by charging exorbitant prices for logs delivered, several of the manufacturers having failed,



and the remaining ones barely holding out, while they are making nothing. In the *Herald* of the succeeding issue a "timber" dealer, as they there call the men who trade in logs, takes issue with the complaint, and denies that the high price of the raw material at Tonawanda is the result of excessive value placed on it by the dealers. He says that the reason why logs cost more in Tonawanda than formerly is because they cost more at the stump. He cites the alleged fact that those mill owners who have undertaken to get their own logs from the woods and raft them to Tonawanda have made a failure of it, while those who have devoted their care and capital exclusively to their mills have succeeded. "The truth is," the timber dealer proceeds to say, "the enormously increased price of stumps, amounting to over 400 per cent. in the last few years, together with the excessive price of labor and supplies to carry on the business, is what has embarrassed the timber trade, and not the excessive profits imposed by the timber dealers." And he adds, "the writer has well nigh quit the business for this reason." So it seems that the trouble is thrown back on the stump and the cost of labor and supplies. It is the same that the Michigan manufacturers complain of; the high price of stumps and labor, that oblige them to ask so much for the product of their mills that there is no margin left for the trade. It seems as if either stumps were too high or else assorted lumber were too low. A just relative level will have to be reached sometime in the very nature of things.—*Northwestern Lumberman.*

VENEERS.

This may properly be called the age of veneers. At any rate the art of veneer making has been brought down to a fine point. As adept as the grainer is, his business has fallen into disrepute, and there are prospects that in the future there will be no great demand for him. Not many years ago pine was the leading finishing wood, but now, in the finer class of houses, it is crowded out. Hardwood for inside finishing is the thing, and ingenious man has studied the problem, how to make the finishing present the appearance of being solid hardwood without being so. This effort is not one of the most laudable, for at the present time the cost of hardwood lumber is so low that if a man builds for durability, he certainly ought to feel able, if able to build at all, to use solid lumber. But so long as he will not always, the veneer makers step in and supply him with a substitute. The perfection of veneers that are turned out is remarkable. It was not long ago that the kinds of veneers were few, but one by one the different woods have been added, until now they are numerous. The veneers are cut remarkably smooth, requiring but little finish before being oiled or varnished, and made as thin as a hundred and seventy-five to the inch.—*Northwestern Lumberman.*

Across Lake Winnipeg.

The *Winnipeg Times* of June 19th says:—George Bradbury, the general manager of the Northwest Lumbering Co. has just returned from a trip across Lake Winnipeg from Bull's Head. At this point a raft of 300,000 feet of square timber was taken in tow by the steamer Colville, and was carried safely across and was safely landed at Selkirk. The trip was made in four days, the greater part of the time being spent at the mouth of the Red River, the water being too low to get across the bar without great difficulty. This is the first raft ever tow-

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ed across the lake, and the timber is for the saw mill of the company at Selkirk.

The *Timber Trades Journal* of June 9, says: It would have been astonishing if the fine clear weather and strong northeast winds which have prevailed for the last ten days or so had not brought into London a numerous fleet from the Baltic, for, in fact, the early spring shipments may now be considered due, and these are some of them. Fifty-four timber vessels would sound large enough for any week of the year, but no week would be likely to bring in a greater number than this, because everything favored the arrival in good time of every Swedish sailing vessel that had got her loading by May 20th and some from Norway much later. The import season may be considered fully on now, and we must expect a longer list of arrivals than we have lately been accustomed to record.

The *Toronto Globe* says:—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 in 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.

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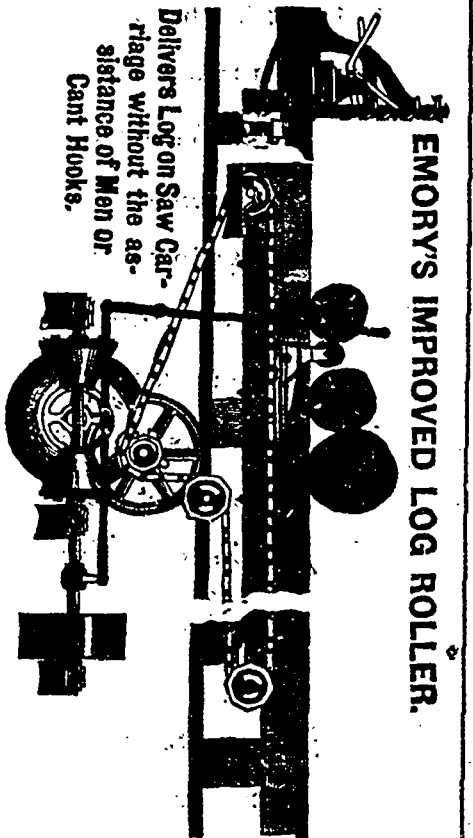
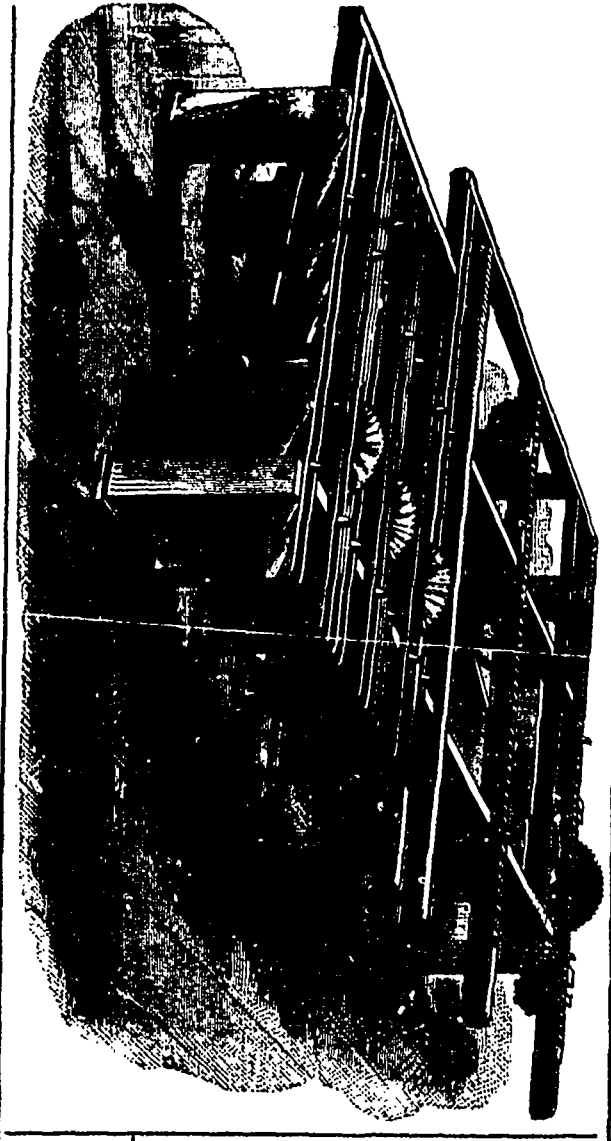
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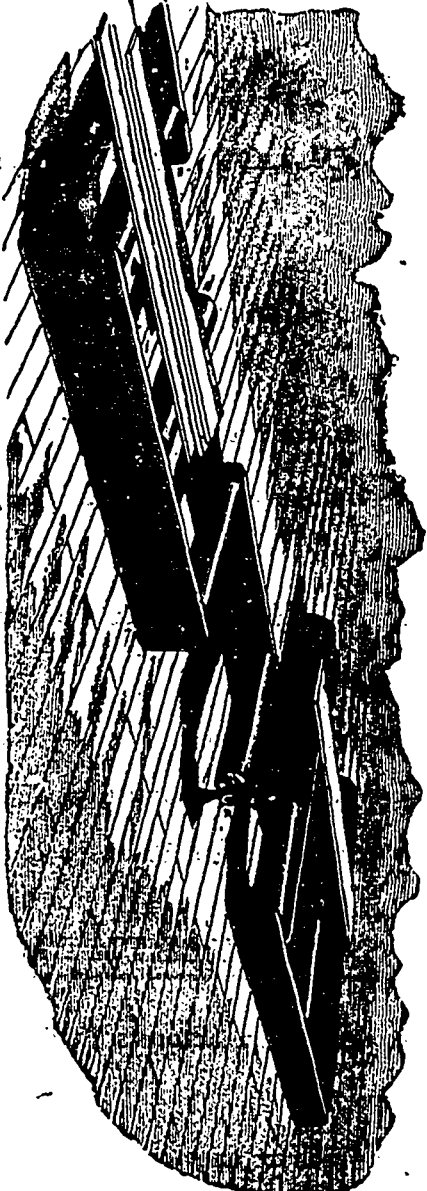
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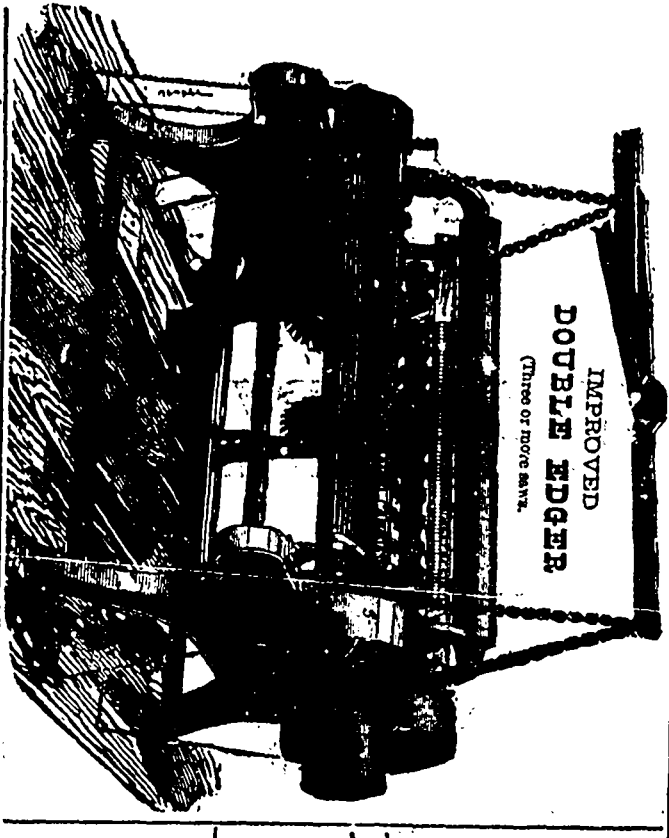
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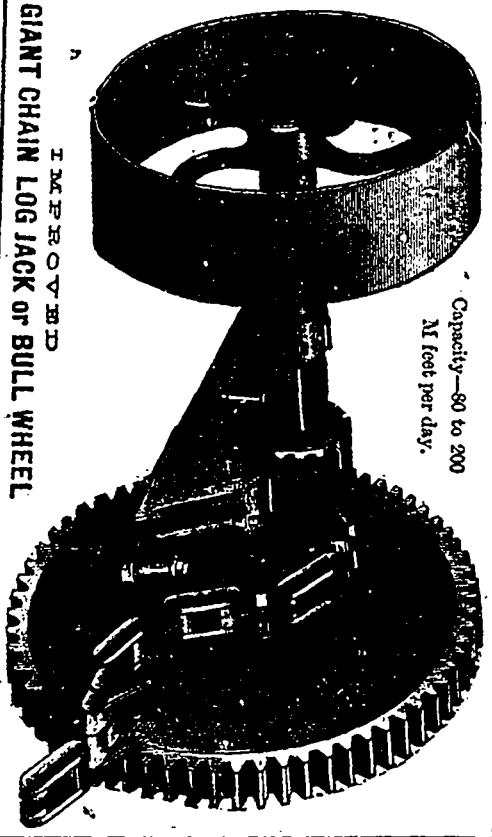


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