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NO. 6.

A QUEBEC despatch says that Mr. P. Ouellet, of Lewis, has purchased from the Bank of Montreal more than a million feet of timber belonging to the estate of the late Leandre Mohot, of Cap St. Ignace.

MR. VACHON has purchased all the lumber on the seignory owned by the Seminary of Quebec. Over one hundred men are engaged in cutting timber and building a dam on the Montmorenci river about half a mile above the natural steps.

INDIAN Superintendent Dingman has been making inquiries into the sale of timber on Walpole Island. One chief declares that he received \$250 in cash and a promise of ten trees to support Mr. Tennant's contract, and a further sum of \$100 to make an affidavit that the tenders were voted on honestly.

TIMBER, such as hickory, dogwood and persimmon, which a short time ago was almost worthless in North Carolina, is now in demand at \$6 per cord, for sawing into blocks for the purpose of manufacturing them into power-loom shuttles. A factory for doing this has been started in Statesville, N. C., another at Elmwood, on the Western North Carolina Railroad, and still another at the Iredell Mills.

COTTONWOOD, like hemlock, a few years ago was regarded as almost worthless. It was principally used by raftsmen for buoying up cyprus logs, and found little or no market. Now it has come into extensive use in New Orleans and other southern cities, for the manufacture of packing boxes and is claimed to be the best wood in the world for that purpose. The milling price for seasoned lumber is \$13 per thousand with prospect of an advance as the supply readily obtainable decreases. The *American Lumberman* thinks it highly probable that this wood will ultimately come into favor for ceiling and other inside work, as experiments in that line have proved very satisfactory.

A BILL has been introduced into Congress directing the withdrawal from the market of the fine government timber lands yet undisposed of, which are principally valuable for their timber, and the appointment of a sufficient number of examiners skilled in woodcraft to make an examination of the pine lands already surveyed, and report a full description of them, giving the quality of the soil, the springs and streams of water, the quality and quantity of pine and other matters tending to fix the value of the land. After the filing of the reports with the Secretary of the Interior, he is authorized to offer the lands for sale in the manner now prescribed by law, but the notice of sale shall contain a description by legal subdivisions, and the quality and merchantable value of the lands.

TO GROW FOREST TREES FROM SEED.

The following paper was read at the meeting of the American Forestry Congress at Montreal, by D. W. Beadle, of St. Catharines, Ont.:

It has occurred to me that there may be farmers who want to plant young trees, either for useful purposes or for ornamentation, and if they want to plant largely may find it impossible to get them in sufficient quantity from nurserymen, who generally confine their cultivation to fruit trees, and have not grown to any great extent forest trees for timber. But these parties can form a nursery of these trees themselves by procuring a small piece of ground and have it especially prepared and well manured, so that there will be strength in the soil for a few years, and then they can raise whatever kind of tree they want. Seeds of the elm, maple, ash and of the walnut and butternut can be found in almost any part of the Province. The important point in planting seeds is that they should be planted as soon as perfectly ripe. Some of our trees ripen their seeds quite early. The soft maples, the dasycarpum and rubrum and the elms, ripen their seeds in June. (Mr. Beadle here exhibited two seedlings of soft maple grown from this year's seeds.) These maples ripen their seed in June, and it should be gathered and sown at once so that you can get a tree of considerable growth before the winter season. The seed of the elms should also be sown at once; it should be sown in drills not deeply, but covered very lightly. These small seeds require to be covered with only sufficient earth to keep them moist, and they will produce plants in a very short time, and gain sufficient strength to tide over the cold season. But it is not true of all the maples that they ripen their seed so early in the season. The sugar maple ripens its seeds late in the autumn, as well as the ash-leaved maple, and unless you wish to sow them in the autumn, you have to preserve them and sow them in the spring. If you are not in a position to sow the seed at once, and wish to keep them till the next spring, they should be mixed with sandy soil and kept damp, yet not so damp as to cause them to germinate, and not be allowed to get dry. In this way you may preserve them with safety. If kept dry in papers some of them will have vitality the following spring, but many of them will not germinate next season, and the proper way to preserve them is to mix them with moist earth. Now come the butternuts, chestnuts, and walnuts; these all ripen in the late autumn, and in suitable soils may be planted as soon as gathered, and allowed to freeze and thaw with impunity, as they will not suffer therefrom, but will germinate freely in the spring. But in soils which heave out the nuts under the effect of alternate freezing and thawing, it will be better to mix the seeds with soil in sufficient quantity

to keep them moist, and prevent them from moulding, and keep them until spring before planting, or they may be spread out very thin upon the ground, and covered with a sod, in which manner they will keep fresh. It is not necessary that the nuts be subjected to frost, that is a matter of perfect indifference; the important thing is not to permit them to become dry. These trees can be grown in nursery fashion, until they attain sufficient size to be planted where they are to remain, especially the elms, maples and ashes. The nut-bearing trees will make better growth if they be planted in the nut where they are to remain.

FAR WESTERN PROGRESS.

One of the most noteworthy examples of current progress is the opening up of Idaho, Montana, Oregon, and Washington by railway construction. The remote regions of the Rocky mountains in Idaho and Montana, as well as eastern Oregon and Washington, hitherto inaccessible save by means of the slow-plodding mule and the long-suffering horse, will soon reverberate with the shrill locomotive whistle and the thundering train. The vast regions thus opening to traffic are mostly without adequate timber resources, and as their mining and stock-grazing interests are developed, and towns and cities spring up, a field of lumber distribution as large as that now tributary to Chicago will be added to that which is calling on the supply.

All are familiar with the building of the Northern Pacific, which now lacks only 200 miles of completion, and will sweep across the northern part of the mountain region. The Union Pacific company is pulling out to reach Oregon and Washington abreast of its great northern rival. It is constructing the Oregon Short Line, which leaves the main line at Granger, Wyoming, and strikes off through Idaho in a generally northwest direction toward Oregon, and is intended to connect with the Oregon system at, or fifty miles east of, Baker City. The road will be opened to Shoshone, Idaho, on March 1, a distance of 321 miles from Granger. Shoshone is at the junction of the Wood river branch, which extends northward. The Short Line not only will connect with the Oregon system, but is striving after Puget Sound business and this interest is spurring the Northern Pacific company to put in the projected road across the Cascade range from its trunk line to a Puget Sound outlet. Not only are these two great rival trans-continental companies thus reaching and straining after north Pacific traffic, but it is said that the Chicago & Northwestern company is stretching for the Pacific through a region midway between the lines of the Union Pacific and Northern Pacific, and will soon have a road completed to Deadwood, in the Black Hills. Further progress westward across the Rockies is only a question of time. These

three great trunk lines will quite thoroughly open up the regions of Idaho and Montana, and each is sure to throw out branches as the two that have already penetrated the country have begun to do. It is safe to say that, within three to five years, Idaho, Montana, eastern Oregon and Washington will be as well supplied with railroads as Iowa and Minnesota now are. This, of course, means settlement, hundreds of new towns and cities, and the use of any amount of lumber.

The territory in question will derive a large part of its lumber supplies from the growths in the mountains of Montana around Lake Pond D'Oroille, the western slope of the Rockies, and on Puget Sound; but these sources of supply will not be nearly adequate to supply the demand. The white pine of the regions of the great lakes will furnish a kind of lumber that will be wanted in the mountain states and territories, and the supply will be drawn upon as long as it shall last. - *Northwestern Lumberman.*

THE NORTHWESTERN TRADE.

We learn from the *Northwestern Lumberman's* report of the proceedings at the monthly meeting of the Chicago Lumbermen's Exchange, at the president called upon Major Camp, of Camp & Walker, Minneapolis, Minn., to address the meeting. After a few complimentary remarks, by way of sugar coating a bitter pill he was rolling up for them, he launched the opinion that the prospects were that trade in the northwest would not be as good as it was last year. They should cut the same amount of logs that was cut last year, but they went in for more. Providence had kindly stepped in and saved them from the foolishness they had intended (meaning the intervention of deep snow and extremely cold weather). The demand in Dakota and Manitoba will not be as great as it was a year ago, and the prospect was a little discouraging. Yet they were working along and maintaining prices. He could say for the firm of Camp & Walker that it had not sold a foot of lumber yet below list prices. When they should find that their prices were above the market, they would reduce their figures and issue a new list. The trade of Chicago and the Minneapolis district the coming year would have to meet a heavy competition. There would be a heavy increase of production in northern Wisconsin, fully 200,000,000 feet, on account of numerous new mills having been put in. Chicago will not get a chance to ship to Manitoba, as it did last year, because he (Camp) would prevent it if possible. The dealers of his section would also crawl down into Iowa and Nebraska, and in those fields try to work off some of their surplus. This talk might not be palatable and encouraging to some of the dealers present, but it was nevertheless true. When Mr. Camp had done speaking, the president adjourned the meeting.

QUEBEC FORESTS.

The Montreal *Gazette* says:—There are some interesting features in the last report of the Commissioner of Crown Lands of this Province with which some of our readers will be glad to be made acquainted. The result of the financial transactions of the Department for the year 1881-1882 is highly satisfactory. The amount realized from the sale of Crown Lands, Clergy Reserves, Gold Mines, Woods and Forests, and other resources, together with certain fees and deposits, attain a total of \$318,283.11, an increase of \$148,094.85 over the receipts of the preceding year. On operations so favorable it fell to the lot of no previous Commissioner since Confederation to report. They took place during the tenore of office of the Honorable Mr. Lynch's predecessor, and it is to be hoped that the satisfactory state of things which he has had the pleasure of announcing will go on improving (as they have begun) under his own administration. This large income was mainly derived from the sale of Crown Lands and, more especially, from the collections on account of woods and forests. The increase of ordinary revenue from timber dues and ground rents was \$230,930.63. Of this sum the greater part arose from the additional dues imposed by the order in Council of November 12, 1880. The beneficial effect of this order began to be apparent during the last fiscal year and to what extent it is likely to affect the future receipts of the Department may be gathered from the statement that from the branch of woods and forests the figures for the last six months were \$600,000. A sale of timber limits of comparatively small extent in October, 1880, produced \$26,921, and though, greatly exceeded by a previous sale in the fall of 1880, which brought the handsome amount of \$132,774, its success, with other indications, gives reasons to hope for good returns hereafter from this source of revenue. The limits thus leased by auction covering an area of 715 miles, situated for the most part in the eastern portion of the province (in the counties of Montmagny, Rimouski, Bonaventure and Chicoutimi), brought to the treasury an average bonus of \$36.58 per square mile. This is more than double what has been hitherto obtained for limits of similar situation.

The Commissioner recognizes the obligation that presses on the Government, in view of the rapid denudation of timber areas in Canada, as well as elsewhere on this continent, of taking measures for the preservation, by judicious working, and, where possible, for the renewal of our forests. Mention is made of the evidence that the persons most concerned by business and associations in that branch of economy have taken the matter into earnest consideration, and have seen at last the expediency of atoning, as far as practicable for the waste and neglect of the past. In this connection the Forestry Congress, which met in this city in August last, was an event of no slight importance, as significant of a determined purpose to utilize experience and combine effort in that direction. Of the good influence of the Congress, the recommendation of the Commissioner to adopt its resolutions, as far as circumstances permit, is itself a proof. The Hon. Mr. Lynch gives a pithy interpretation of one of the most important of the resolutions, whose force he acknowledges as a neutralizing of so-called colonizing movements, whose real object is the pillaging of our forests. To effect that object, to distinguish between land that is fit only for forest-bearing and land that may be advantageously cultivated, he points out that it is necessary to have minute and detailed inspections of our vacant lands, and he promises that those already commenced (to ascertain the manner and extent in which surveying operations should be carried on) shall be prosecuted with renewed vigor. He is already able, he adds, through the sustained conscientious inspection of Mr. Joseph Bureau, Forest-ranger, to exercise control over all the region between the Du Lièvre in the west, and the line dividing Ottawa and Argenteuil counties in the east, and from the 46th parallel towards the south to the limit of Ottawa County in the north-west. As to forest fires (the prevention of which formed the subject of the other recommendation of the Congress) Mr. Lynch is of opinion that, in ad-

dition to existing legislation, measures more energetic than any hitherto adopted must be undertaken, if the law is to be, as in the past, more than a dead letter. It is satisfactory to know that Mr. Lynch has held conferences with some of the chief lumber merchants, who are owners of limits and equally interested with the Government in the preservation of the forests from destruction, for the purpose of arriving at some plan of common action. It is to be hoped that the result will be such a system of supervision as will prove efficacious. Of course, if the organization approved of should turn out to be futile as an agency of fire-protection, there would be no use in wasting money on it. But, on the other hand, if it is possible to apply protective measures on a plan and scale which would prove largely preventive of such holocausts as have ravaged our forests in past years, the expense would be a trifle, compared with the good accomplished. At any rate, it is well to know that the Commissioner is directing his known capacity and energy to the object in question and, with all who are interested in the safe-keeping of our forests, we trust that his efforts will be successful.

ELM BARREL HOOPS.

The *Lumberman's Gazette* of Bay City, Michigan, says:—The manufacture of barrel hoops from elm timber dates back some 20 years. The pioneer in this new industry received the usual encouragement that was meted to inventors, who were in advance of the masses. The now hoop (made by a machine) was regarded with distrust, and those few who engaged in its manufacture were considered foolhardy and and only a few removes from a lunatic asylum.

The drummer of those days who attempted to place the hoops was no sinecure. He was the inventor and manufacturer as well, and his reception on the market may be imagined, when few hoop dealers would take them as a gift. However, continued perseverance and enterprise, guided by a seeming prophetic vision of the necessary wants of the near future has won, and we see in the elm hoop of to-day, one of the most important staples of the country.

The first conception of the manufacturer of elm hoops was to saw the logs into planks of the required thickness to make the hoop the required width, then by cutting from the edge of the plank into strips, the necessary thickness required for hoops.

This seemed to be the only way that could be devised, and all the now and improved hoop machinery that were subsequently invented arrived at the original result. The log had to be cut into plank, increasing labor and cost, and decreasing value and quality by making two-thirds of the hoops bastard. With all these attending difficulties and imperfections the hoop has steadily grown in favor and the consumption is rapidly increasing.

Two years ago F. L. Wilson realizing the importance of the cut hoop and noting the growing local demand in the Saginaw Valley, conceived the idea of cutting hoops direct from the log, adapting the machine to the natural growth of the timber, and not the timber to the machine, uniformly converting the log into perfect legitimate (not bastard) hoops without the aid of saws, and so well has he succeeded that to-day may be seen at the Wilson Hoop Company's works, West Bay City, the most perfect automatic hoop cutting machine in the World.

The mechanical construction of this machine has no complicated parts to get out of order, and considering the unerring work it performs makes it one of the wonders of ingenuity, simplicity and durability.

The motor is a 10x18 engine—directly attached—no belts used.

The feed is automatic and consists of two distinct motions, viz: A rotatory, revolving the log on its axis which produces the thickness of the hoop; a horizontal, moving the log on horizontal ways by means of racks and pinions on a plan with its axis which produces the width of the hoop.

The feed of mechanism is so perfect in construction and accurate in action, the thickness of the hoop can be varied at will the one-hundredth part of an inch.

The logs are cut the required length and

placed in large vats, where they are steamed from 36 to 48 hours. The bark is then easily removed before being placed in the machine. Then, after being firmly clogged, the log commences to revolve, and the hoops are removed one by one, at the rate of 90 per minute. When the log has been reduced to a given diameter it ceases to cut, and the spalt, or heart, is replaced by another. This change of logs only requires 30 seconds time. Although elm hoops have been used for a number of years, their strength and durability has never been demonstrated to such an extent as to give them a place and preference over the split or racked hoops until this system of cutting direct from the log was perfected, giving to each and every hoop uniformity of width, thickness and grain. The use of these hoops is no longer an experiment but has been fully tested, not only scientifically and theoretically, but practically by scores of our best coopers and business men throughout the valley.

This newly developed industry gives employment to upward of thirty hands, eight girls are included in this number, who find the work agreeable and give reasonable satisfaction.

Business has been prosecuted by the company with unusual vigor and energy during the winter months, and they have now on hand a large stock from which to draw during the coming salt-packing season.

They have also secured in their boom and on the bay shore sufficient timber to enable them to supply customers throughout the year to come.

This industry has opened up to the farmers of this valley a new source of revenue—the timber that for years has been consigned to ashes in the log heap. As civilization and improvements have advanced, it has suddenly been discovered to have a value, and a ready market, giving to them a chance to contribute something more towards the wealth and prosperity of themselves and their surroundings.

This invention is a credit to the city as well as a permanent and lasting reality, the product filling a long felt need. The enterprise should be encouraged, and to that end we urge our patrons who use barrel hoop to examine for themselves.

FOREST CULTURE.

In view of the immense consumption of lumber in the United States and the rapid annihilation of the great forests, the importance of growing timber wherever it may be done advantageously cannot be too strongly emphasized. To many the first attempts at growing trees is often discouraging, and they give it up as an unprofitable business. This is especially true on the prairies, where the young trees are exposed to the full weight of the winds which sweep over them, bending, breaking and dwarfing them. Another difficulty in the west is that fencing is expensive, and too often the land set apart for growing trees is not as well protected as it ought to be from the destructive feet of cattle, which do more damage by breaking down the trees and cropping the foliage than is done by the winds. One hungry steer in a very young forest will do more injury than a full-grown hurricane. Many are too economical of their seed, fearing that they will get the trees too thick. There is not much to be feared on that score. The closer the trees are the better; the strong will make room for themselves by killing and feeding upon the weaker whenever the later are no longer of any service as shields to the bodies of the strong against heat and cold, men, beasts, insects and other foes. All the forces of nature will contribute to the "survival of the fittest."

One great mistake, especially in the prairie states, is that of appropriating the bits of timber land, after the timber on them is cut off, for agricultural purposes. If these "clearings" are left alone after the old timber is cut and removed, a new growth will spring up which will develop much more rapidly than any hand planted forest, and the second growth will be better than the first. We have seen in Kansas dense growths of young hickories, which in six to ten years after the original timber was cut, would be from thirty to forty feet high, the bodies long and straight and from six to eight, often ten, inches in diameter one foot from the ground.

These young forests would produce per acre many cords of stove wood, for which they would almost invariably be cut—the owners considering the present needs of more importance to them than any investments for their children, if perchance they had any of their own to provide for.

Perhaps it is not worth while to urge upon the railroad companies the advantages that might accrue to them from scattering walnuts, acorns and seeds of other forest trees on their land bordering their tracks. The stockholders rely more largely upon the net earnings of the roads to boost the quotations of their stock on Wall Street than upon the present or prospective intrinsic value of their plant. Nevertheless there is a speculation in this suggestion of more value than may at first sight appear. The time is coming and is not far distant when wooden ties will be comparatively scarce and expensive, and iron will be worth much more per ton when the supply of wood is exhausted. The seed may now be readily secured; when the trees are consumed the supply of seed is destroyed. While it is still possible to get the seed it ought to be used. In fifteen or twenty years almost every railroad in America might have all the timber it would need to replace decayed and decaying ties. The benefits of such bolts of timber would be manifold, and no more useful than ornamental. The interlacing roots would prevent the washing of the soil into cuts; the branches would afford windbreaks and shade; they would increase the moisture and check the sparks from locomotives which in dry seasons consume the fences and pastures of the farmers. Of course there would be some dangers to guard against, such as result from the accumulations of dry leaves and falling trees, but such contingencies are slight compared with the advantages to be secured.—*The Industrial Monitor.*

HOW TO TAKE OUT SCREWS FROM WOODWORK.

The following practical hints on this subject are from a long article in the London *Builder* on "The Use and Abuse of Screws in Woodwork," and may save our readers much vexatious effort, not to say profanity, in the extraction of old and obstinate screws:—

A difficulty is often experienced by persons who wish to withdraw a screw, by finding that though it will turn round under the application of the screw-driver, yet it will not unscrew out. In this case a well-grounded suspicion may be entertained that the screw in question was driven, or nearly driven, home originally by the hammer, instead of gradually by the screw-driver, and that no regular thread corresponding with the screw exists in the wood. Under such circumstances it becomes necessary to wrench off the hinge or hinges by force, at the risk of their breaking, and this often happens. When hinges have lain undisturbed for long years on old doors or other framings, perhaps for a quarter of a century or double that time, it becomes difficult to extract the screws, although they may have been originally properly driven. This arises from the screws rusting in the wood, and sometimes from other causes. Workmen themselves often fail to withdraw a screw, and are forced to break the hinge to enable them to get under the head of the screw, and wrench it out. They often split, and break too, fancy and delicate wood-work articles, in their efforts to take off hinges, locks, mountings, and other finishings, despite that simple methods exist for extracting screws that have rusted in the wood. One of the most simple and readiest methods for loosening a rusted screw is to apply heat to the head of the screw. A small bar or rod of iron, flat at the end, if rounded in the fire and applied for a couple or three minutes to the head of the rusted screw, will, as soon as it heats the screw, render its withdrawal as easy by the screw-driver as if it was only a recently inserted screw. As there is a kitchen poker in every house, that instrument, if heated at its extremity, and applied for a few minutes to the head of the screw or screws, will do the required work of loosening, and an ordinary screw-driver will do the rest, without causing the least damage, trouble, or vexation of spirit. In all work above the common kind, where it is necessary to use screws, and particularly in hinge work and mountings, fancy fastenings and

appliances affixed to joinery or furniture work, we would advise the oiling of screws or the dipping their points in grease before driving them. This will render them more easy to drive and also to withdraw, and it will undoubtedly retard for a longer time the action of rusting.

THE NEW FOREST OF ENGLAND.

The London correspondent of the *Detroit Free Press* says:—The American reader will be somewhat surprised to learn that within a comparatively easy distance of London there is a forest extending over twenty-three miles of country in one direction and eighteen miles in another and that 92,000 acres of it are the property of the British Crown.

Arrived at Ringwood the traveller will see much inferior soil, but the wild character of the country does not seem to reach its climax until after he enters the forest boundary, two miles beyond the above-named place, and then the wilderness begins to spread and expand on every side.

Sometimes no houses are seen for miles, save here and there a mud-wall cottage, and in the distance the cottor's pony and the cottor's cows wandering among the herbage and wearing each a color with a bell. Here it may be incidentally stated that the ancient forest rights which permits cattle and horses to run upon the common have made no provision for sheep, perhaps because it was a run for deer.

As the train whirls the traveller on he sees a troop of shaggy ponies wandering about in the vain hope, as it seems, of finding something to eat. Hundreds of ponies may there be found who have reached old age and never did any work except the dreadful drudgery of being compelled to move constantly about in the often vain hope of finding something which they could eat. In some parts there is nothing to prevent them from strolling many miles—and they do so wander frequently—their owners seldom looking after them in the summer months. In situations where the horses are so very poor there are no neat cattle. They cannot live upon such scanty fare.

The commons generally cannot be said to be wanting in fertility, but in the swamps rushes does not even grow to more than half the average height, while gorse and the native heather are short in stature and grass in many parts positively a scarce commodity. Some of the most elevated parts are wilderness of sand and gravel, discolored by scrubby herbage for which the average dairy farmer would be unable to find a name. But within this wide, outlying range of desert there are some lovely spots, and heightened by contrast, the really beautiful appears more beautiful still.

It is upon these oases the forest villages are built, and are generally neat and pretty, with good soil, good water, and good roads, and almost hidden with foliage and flowers. The 'Squires' country seats are found there, it being a favorite sporting district and celebrated for fox-hunting. Not many years since 10,000 head of deer, the property of the Crown, ran wild over the desert, and every person ate venison; but the deer are all destroyed now, principally to put an end to poaching and its attendant evils.

The forest at one period was much neglected; squatters settled on its borders and acquired possessions which they held almost as freeholds; and when timber was required timber was had. No care was taken, and much fine timber was lost to the nation. Now all is changed; hundreds of acres at a time are fenced in and planted, and much of the best land is bearing thriving plantations of oak and fir. In many parts the fir trees are exceedingly fine; seldom are they found elsewhere so tall, so straight, and so clean in the bark. Very valuable to the British nation will the timber-bearing portion of the forest ultimately be. Not many, if any, decaying trees are now there, and in the parts not recently planted are many fine ones which will grow and thrive for many years to come. A visit to such historic ground as the New Forest would well repay the traveller in quest of health and picturesque scenery.

The *Trent Valley Advocate* says that Messrs. Gilmour & Co., intend establishing a large lumber yard at Napaeae.

FOREST PROTECTION IN QUEBEC.

Hon. Mr. Lynch in the Quebec Legislative Assembly on March 8, moved that it shall be lawful for the Commissioner of Crown Lands to employ, between the 1st of April and the 1st of November in any year, for the more effectual prevention of forest fires, such a number of men as he may deem necessary for that end, and he may, for any portion of the Province of Quebec, appoint an officer for that purpose, who shall be known and designated as the "fire superintendent." In support he made a very powerful speech, referring to the recommendation of the Forestry Congress, to the message of President Arthur of the United States, to the opinions of Mr. Russel and of Professor Sargeant, and to many other corroborative evidences of the necessity of protecting our forests against their great scourge, fire. He referred to the diminution in the supply of white pine, and felt sure that the limit-holders, who were equally interested with the Government in the protection of our forests, would willingly consent to a small imposition for the purpose of securing this desirable supervision. He alluded to the law now in force in Ontario concerning forest protection, and spoke of the desirable manner in which it had worked. He did not know whether, if the system had been in vogue in this province, it would have succeeded in preventing the large conflagrations which we have experienced, but he looked forward in the future to the establishment of a body of well trained men, who would, at all events, be instrumental in preventing fires heretofore caused by carelessness or negligence. He would be glad of any suggestion from members of the House which would make his measure more practical, and desired particularly that the Legislature should assert the principle of adopting an effectual means, by means of no large outlay, of forest protection against fire. [Applause.]

Mr. Joly warmly supported the resolution, adding the hope that the Government would appoint as superintendents honest and useful men, and not parties recommended to their favour for political reasons, and offering a large number of practical suggestions, especially with regard to railways running through forest lands.

Mr. CARBAY said the Government could not take too much interest in the protection of the forests. Within the last twenty-five years it was probable that more timber had been destroyed by fire in the province than had been cut for the market. He had heard, only to-day, a lumberman complaining of the laxity of the rules of the Crown Lands Department with reference to the cutting of trees measuring less than twelve inches at the stump. After the Dominion subsidy, our forests now supplied almost our only source of revenue, and he could not recommend too strongly to the hon. Commissioner of Crown Lands the great importance of taking means for their preservation, and to render effectual the present regulations of the Department affecting them. He was sure no member of the House would begrudge a reasonable amount to be set apart for this purpose from the revenue derived from our Crown lands. [Applause.]

Mr. Flynn followed, expressing the pleasure with which he had heard the remarks which had fallen on this subject, both from the hon. Commissioner of Crown Lands and also from the hon. ex-lord of the Opposition. He spoke at some length in favor of the resolution.

Mr. Beaubien also supported the resolution, suggesting, amongst other things, that the guardians who should be appointed might be employed in seeding down such portions of the bush as had been swept by fire, and were unfit for cultivation, and instancing trees now thirty feet in height, the seed of which he himself had planted. He also spoke of the waste occasioned by the manufacture of square timber, speaking at considerable length.

Mr. Marchand made some lengthy remarks in favour of the resolution.

THE U. S. FAR NORTHWEST.

Practically, the whole country between the Minnesota prairies and the Rocky mountains is bare of timber. There are little strips of forest trees along the water-courses in Dakota, but they consist mainly of cottonwood, soft maple and alder, and furnish only a scanty

supply of fuel to the settlers, and are of no value as a source of building material. West of the Missouri there is nothing worth sawing up into lumber until the advanced spurs of the Rockies are reached—the Big Horn, the Belt, the Judith, the Big Snowy and the Yellowstone mountains. In the gorges running up their sides there is sufficient "bull pine" and spruce for the settlers' purposes and for railway ties and bridge timbers, but there are no large, well timbered areas. On both sides of the main divide of the Rockies about the same condition is found. The pines are somewhat larger, and some cedar is met. For want of something better, the timber is of great value for local consumption, for fuel and building purposes in the neighboring valleys, but this is all that can be said of it. Not until I reached Clark's Fork of the Columbia, or the Pend d'Oreille, as it is known to the settlers, did I see any extensive body of good timber. On both sides of that stream, between the Cœur d'Alene and Cabinet mountains, lies a heavily-timbered belt of about one hundred miles in length by thirty in width, reaching down to and around Pond O'Reille Lake. The trees are "bull pine," cedar, hemlock and spruce, with a little white pine. The western slopes of the Cœur d'Alene mountains and the Bitter Root mountains, which are a continuation of the same range, are moderately well timbered and furnish material for fuel, fences and buildings for a wide stretch of rich, bare country farther west. From these mountains, westward to the narrow valleys running up into the Cascade range, the country is nearly destitute of forest growth. A few stunted pines grow on the sides of the deep, narrow valleys through which the streams run. Along the lower course of the Columbia and around Puget Sound there are immense forests of fir, furnishing a practically inexhaustible lumber supply. Eastern Washington, fast becoming a great wheat-field, feels most the lack of forests. Western Oregon, including the fertile, well-settled Willamette valley, is well supplied from both the coast and Cascade mountains, while western Washington is all a vast forest, where the clearings are mere specks upon the immense expanse of woodland. This magnificent forest is destined to be a source of great wealth for centuries to come. The lumbering operations up to this time, although very extensive, have only notched it here and there at long intervals close to the water-side. —E. V. Smalley, in the *Century* for February.

REPLACING WHITE PINE.

The *Chicago Times* says:—One noteworthy fact in the lumber business of Chicago is the annual increase in the supply of the Gulf states. By many it is claimed that this lumber will be the immediate successor of white pine in western markets, should the latter cease as soon as expected. At this time, however, the cost of transportation does not allow large shipments of southern lumber, and long timber and dressed flooring are the only grades of yellow pine sold in Chicago. The latter, being dressed before shipping, is greatly reduced in weight, and the current prices afford a satisfactory profit. Enough lumber has already been received from the south to remove any fear of a lumber famine in this city for many years, as, if it can pay present rate of freight, it will come naturally to a large market, when the south has more railway competition, which increasing wealth and enterprise are sure to supply.

Letter from Member of Congress.
HOUSE OF REPRESENTATIVES,
Washington, D.C., Feb. 19, '82.

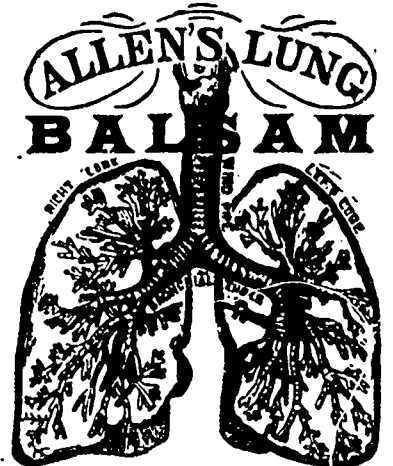
GENTLEMEN,—Inclosed find \$1, and will you send me some of N. H. Down's Vegetable Balsamic Elixir by express. I have a bad cold, as has almost every one else here, but cannot find the Elixir, which I used frequently at home and consider a most valuable medicine; in fact, the very best remedy for a cold that I ever used. Very truly yours, WILLIAM W. GROUT.

GOOD ADVICE.—If our readers will accept proffered advice, they will always keep a bottle of Hagar's Yellow Oil at hand for use in emergencies, such as Burns, Scalds, Wounds, Lameness, Croup, Chillsains, Rheumatism and all varieties of aches, pains and inflammations. It will ever be found reliable.

Health is Wealth.



DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Glaziness, 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 Spermatorrhoea, 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



(This Engraving represents the Lungs in a healthy state.)

THE WAY IT WILL AFFECT YOU.

It excites expectoration and causes the lungs to throw off the phlegm or mucus; changes the secretions and purifies the blood; heals the irritated parts; gives strength to the digestive organs; brings the liver to its proper action, and imparts strength to the whole system. SUCH IS THE IMMEDIATE AND SATISFACTORY EFFECT that it so warrant to break up the most distressing cough in a few hours time, if not of too long standing. It is warranted to GIVE ENTIRE SATISFACTION, EVEN IN THE MOST CONFIRMED cases of Consumption. It is warranted not to produce costiveness (which is the case with most remedies), or affect the head, as it contains no opium in any form. It is warranted to be perfectly harmless to the most delicate child, although it is an active and powerful remedy for restoring the system. There is so real a necessity for so many deaths by Consumption, when ALLEN'S LUNG BALSAM will prevent it if only taken in time. Physicians having consumptive patients, and who, having failed to cure them with their own medicine, would recommend to give ALLEN'S LUNG BALSAM a trial. Sold by all Druggists.

PERRY DAVIS' VEGETABLE PAIN KILLER.

This celebrated Medicine is recommended by Physicians, Ministers, Missionaries, Managers of Factories, Workshops, Plantations, Nurses in Hospitals,—in short, everybody, everywhere who has ever given it a trial.

TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhoea, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost bitten Feet, &c.

The PAIN-KILLER is sold by medicine dealers throughout the world, Price 20c., 25c., and 50c. per bottle.

HEAD BLOCKS, ETC.

The head blocks must be accurate and durable, and move easily and rapidly. They should be small in construction, and of strong material well put together. For general purposes, setting to 1-16 of an inch is close enough, but in some cases they are needed to set 1-32 of an inch, as in making 1 1-16 inch boards with 1/4-inch saw kerf, as in this case if the blocks set to 1 1-16 only, the sawyer would have to leave the lever at the 1 1-16 inch pin every other throw. In some cases there is an independent knee to thrown ahead of the other when a tapering log is to be cut; but a joint between the knee and the backbone is undesirable, and another way of doing the same thing is to have a strong slide which can be extended 6 inches; which will answer very well where short logs are to be cut with but little taper to them, as in the northwest. But where hard wood is to be sawed there will be need of more taper, sometimes over a foot in short logs, and in these cases the independent knee will be necessary.

It is well that the blocks be faced with steel, the facings being renewable when necessary, (say in two or three years.) To allow free passage for bark and dust, the ends of the blocks may be left open. The set shaft should be good and strong so as not to spring. In some cases the blocks are brought back by coil springs, which have the advantage that they take up lost motion.

If there be two many notches, there will be less liability of the pawl catching the right one, one or more notches being lost with a heavy log, and one or two too many being got when the log gets sawed down. Thus the first boards will be likely to be too thin and the last ones too thick; and there will perhaps be remnants on the blocks that will be of no use.

The set-work racks, where racks are used, should be of cast steel, so that no motion will be lost. If there be self receding blocks, there should be buffers to catch them. There should be a scale to show the distance from the knee to the saw, and it is very convenient to have one covering the back ends of the blocks, which will be more convenient for the setter. Blocks should be broad, heavy and strong. Pawls are best of cast steel, and should be broad.

There is advantage and economy in good sawing for every one concerned. If the trees are sold by the thousand, the seller gets more for his trees. If the mill is stocked by the job, the stocker gets more for his labor. If the sawyer saws by the thousand feet, he gets more money for sawing the same, and the mill owner gets more, too. The raftsmen like well sawed lumber, because it packs closely, there is less danger that boards outside of the grubs will wash out, and thick boards do not have to be put out to prevent this; water and mud are excluded, and the raft runs lighter and draws less water. Builders prefer well sawed lumber.

There is one thing that can be said in favor of very strong mills; that very long logs, especially if they be hewed, can be sprung considerably and thus made straighter before sawing. For this purpose there may be upon each knee a windlass with a lever and latch. Ten feet apart is a good distance for the blocks.

There are cases where once in a great while very long lumber comes in. To provide against this, the carriage may be of the ordinary length, but in two sections, dovetailed together so that they will match exactly, and held together by stout couplings. Then when the extra long logs come in the carriage may be opened out lengthwise and the long logs taken in.

For making stock boards it is well that the blocks have wings which will prevent the springing of the lumber as it sets thin, and will thus keep the last boards of right thickness and surface.

Modern mills have live rolls to catch the lumber as it comes from the saw, and take it to where it is needed. These rolls may be of iron, say 24 inches long and 9 to 12 inches in diameter, being hollow, and running in babbitted bearings kept well oiled. They may be driven by a counter shaft having friction bevel wheels, or a vertical shaft through the floor having either bevel gearing or a belt.

The dogs should be so proportioned that they will hold large, small, or medium logs. It is

well that their points be steel bits which may be taken out and sharpened, or replaced. It is better that they hold the log or cant by its edges instead of spoiling its face.—*Lumber World.*

TREE PLANTING.

The subject of tree planting is becoming more fully impressed on the minds of western settlers as its importance becomes more fully recognized. Farmers are planting trees for windbreaks for the protection of their crops on the prairie land, and while they are serving this purpose they are constantly improving in value for the timber they produce, for which ample returns will be received in the future. The railroad companies also have awakened to the importance of this subject, and are substituting belts of timber for the fences, with which they have hitherto attempted to prevent snow blockades along the line of their tracks. These live fences have been substituted for pine fences by the St. Paul, Minneapolis & Manitoba road, with excellent results, and the Northern Pacific is also following the example, and will thus attempt to prevent the snow blockade of their tracks which have hitherto caused them such serious annoyance. It is considered that from its durability and other advantages the live fence will be much cheaper and more economical, as a pine fence to be anything like serviceable, must be at least eight feet high, and this costs in the neighborhood of \$300 per mile. The necessity of tree planting on the western prairies is also recognized, not alone for the timber production, in order for its utilization for lumber purposes when it shall have attained sufficient growth, but also for the climatic effects and the increased rainfall, which many scientists maintain is derived therefrom. Whether this theory be correct or not, it is sustained by many of the foremost men, who have given their best thought and consideration to the investigation of the subject. Certain it is, also, that it has been practically demonstrated in many prairie countries, where tree-planting has been extensively engaged in, the rainfall has been materially increased, and the surrounding country has been vastly more productive, and corn and other crops have prospered where they had previously failed. In many sections of Dakota where in former years nothing but a species of corn known as "squaw" corn would mature, since timber belts have been cultivated and matured, other grains have superseded the corn alluded to, and the territory has become prolific with crops which previous to the timber growth alluded to, were known to be if not impossible, at least very improbable of successful results. In some parts of Dakota and Nebraska in which fifteen years ago the rainfall for an entire season amounted to only six or eight inches, since its occupation by settlers who have tilled the soil and planted large tracts of young timber, it has increased very materially, running as high as 100 per cent. While some writers maintain that the increased rainfall springs from the cultivation of the soil, the more general accepted theory is that it has been produced by the tree growth and its action on the atmosphere. This view is also further partially sustained by the moisture produced in many sterile and arid sections further east, after the land alluded to had been adapted to the growth of timber as an experiment because of its complete usefulness for agricultural purposes. However it may be, certain it is that tree planting is being more extensively engaged in and receiving far greater consideration on the western prairies than formerly, and this result is doubtless superinduced by practical demonstration of the beneficial effects, not only as regards climatic influences, but also for the profits derived in the increased value of the lands and the constantly increasing value of the timber for utilization for fencing, building and other purposes.—*Lumberman's Gazette.*

DUTIES ON LUMBER.

Mr. Royal moved in the House of Commons on Thursday, March 1st, for copies of all correspondence relating to the abolition of duties on lumber imported into Manitoba and the North-West Territories. In doing so, he called attention to the very high duties which prevailed on this necessary article and the necessity of having

them removed, or materially reduced on lumber imported into the North-West. It was a well-known fact that the country depended almost entirely for its lumber supply upon that brought in from the United States, and the cost on account of duty increased about \$3 per thousand feet. Though the country possessed valuable pineries, they were not as yet developed, and a remission of the duty for a few years at least, till the home supply could be utilized, was very desirable.

Mr. Bowell said that the papers asked for would of course be brought down. Until they were produced and all the facts were before the House, it would not be possible to discuss the question intelligently. He might say though that the logs cut of which lumber was made and lumber in certain States were admitted free. He might also remark that a large number of logs had been purchased during the past year in the Western States, and floated down the Red River to be imported free of duty and manufactured in Winnipeg. It would be for the hon. gentleman to consider, when the papers came down, how far that interfered with the investments which had been made. He was not prepared to say that the price of lumber imported into the North-West was such as to justify the statement that the duty imposed amounted to \$8 per thousand. To say that would be equal to saying that lumber purchased in Minnesota cost \$4 per thousand. He was quite satisfied it would be found that large quantities of lumber were imported from Thunder Bay into Manitoba, and that east along the north shore of Lake Superior would furnish the North-West with a very large proportion of its wood.

Mr. Blake said that if the consumer was to derive any advantage by getting his lumber from within Canada, it was clear that he must now be paying duty.

Mr. Charlton suggested to the Government the propriety of making the duty on lumber specific, instead of *ad valorem*. The duty was now twenty per cent, and the American Government imposed a specific duty of \$2 a thousand, but our duty, if the price of lumber was \$40 per thousand, reached \$8 per thousand.

Mr. Watson (Marquette) said the price of lumber in the North-West was excessive, and in his part of the country the freight and duty together came to more than the original cost of the lumber at Minneapolis. The timber limits of the North-West were certainly being developed, but they did not half supply the demand. In view of that and the fact that freight rates were high, lumber should be admitted free. As far as Manitoba was concerned she did not require protection. Under the present policy, she had to buy her machinery and agricultural implements from Ontario, and to pay a price for them higher than she would have to pay if she could bring them from the other side. The Minister of Customs had said that logs came in free, but the hon. gentleman ought to know that the admission of logs free of duty did not lessen the price at all.

Mr. White (Roufrew) was sure the hon. member for East Simcoe (Mr. Cook) would not adopt the view of the hon. member for North Norfolk. The objects of the last speaker, regarding the lines upon which manufactured American articles should be admitted into Canada, Georgian Bay, and Lake Superior districts, were to supply Manitoba with its lumber, and the hon. member for East Simcoe (Mr. Cook) was making preparations to secure that trade for his firm. That hon. gentleman would therefore not favour the reduction or the removal of duties.

The motion was carried.

THE BRISTOL TRADE.

Messrs. King Brothers have issued their annual timber circular, being a report of the timber trade during the year 1882, which contains much interesting matter concerning the course of business at this port during the last twelve months.

In reviewing the timber trade here for the past year, they say it must be stated that the tonnage employed in the importation has been 80,248 tons register, against 68,328 tons register for the previous year. The importation in cubic feet has been 22 per cent. heavier than in 1881; 15 per cent. less than 1880, and about 5 1/2 per

cent. above the average of the last five years. The consumption, fortunately, has been slightly in excess of the importation, and 6 1/2 per cent in excess of that in 1881, thus showing that a fair amount of trade has been done, though generally at low values. Business throughout the past year was done at very close prices, and competition was not only confined to importers here, but also extended to those of the neighboring Channel ports, who sold largely in this market. We trust soon to have a fresh outlet for goods from this port by means of a new railway now prospecting, which will not only be in the heart of our city, but in all probability around its quays.

CANADIAN WOOD.—Quebec white pine.—The importation has been much below the average, consisting of but 7,320 loads, the whole of which excepting 338 loads, were for railway purposes. The enhanced prices for these goods so limit the consumption that, notwithstanding the smallness of the import, the stock carried forward for general trade is 180 loads, being only twenty loads less than this time last year. Red pine.—No import. The consumption has been 47 loads, and the stock on hand 20 loads. Oak.—The figures show a decrease in the importation of about 65 per cent. compared with last year. There has been a fair consumption, and the stock carried forward consists of 44 loads. Elm.—There has been only a sluggish demand; the importation was small, and the stock on hand is only 8 loads. Ash has been in good request; the consumption has exceeded the import, and the stock held is less than half of last year. Walnut.—No import. Stocks are quite cleared. Birch.—No import. There has been a good demand, and parcels that have been brought in coastwise have found ready buyers. The stock now held is nominal. Deals.—The importation is nearly equal to that of last year, about 30 per cent. of which came forward by the Montreal Line steamers, and included several parcels for inland dealers. Prices ruled high; there has, however, been a fair inquiry, and the stock carried forward is 37 1/2 per cent. less than last year, consisting of 1,103 standards. Stave.—Only a small trade is now done in these goods, the consumption being so limited. Stocks are quite cleared.

NEW BRUNSWICK AND NOVA SCOTIA GOODS.

—Spruce deals.—The importation has been larger than usual, and shows an increase of nearly 20 per cent. over 1881, whilst the consumption has been slightly in excess, thus leaving the stock on hand 2,312 standards or about 16 per cent. less than last year. Good values were obtained for these goods in the early spring, towards summer the chartering of several large steamers at low freight brought down prices, but with the withdrawal of the steamers from the deal ports freights rose, and deals increased in value until the end of September, since which there has been a gradual decline in price. Pine deals are not in favor, and have been only lightly imported. Birch, owing to the scarcity of Quebec, has been in good request, and with the exception of a small cargo now landing stocks are quite cleared.

TREES IN STREETS FROM A SANITARY POINT OF VIEW.

An interesting controversy on the utility of trees in streets and open spaces in cities has been lately going on in the Geneva journals. It arose out of a discussion in the International Hygienic Congress, which was held in Geneva in August, and Dr. Pischaud, a member of the Congress, has since contended, in the *Journal de Geneve*, that trees in streets do more harm than good; that they impede the circulation of air; and that as for the shade they afford, people who do not like sunshine have only to keep on the shady side of the street. Instead of planting more trees in towns, as some propose, he would rather, in the interests of hygiene, remove all existing trees. In reply to Professor Goret, of the University, points out that the functions of trees in streets are not limited to acting as screens for sun-burning wayfarers; they temper the heat, and serve as a protection against dust. The evaporation from their leaves tends to keep the surrounding air cool and moist. One of the best means of refreshing the air of a sick chamber is to place in it plants and branches, and sprinkle them with water. A

like effect is produced by trees. Sunlight is necessary to health; but trees, if not thickly planted, do not intercept sunlight; the perpetual vibration of their leaves and swaying of their branches admit the light every instant, and in sufficient measure, and serve, moreover, to protect the eyes from the noon-day glare. So far from trees impeding the circulation of air, they help to purify the air; the evaporation from their leaves determines a current from above, and the fresh air thus brought down helps to drive away the heated and dust-impregnated gases of the streets. Another useful property of foliage is that, while in hot, dry weather it moistens the surrounding atmosphere, thereby rendering it fitter to breathe, this effect, which is due to evaporation, ceases in wet weather. Trees, moreover, act as purifying agents by absorbing carbonic acid and giving out oxygen. But the action of trees on the air is far less important than their action on the soil. Their roots draw up stagnant waters, and absorb the organic matters contained in the filth from which the streets of a town are never free, and which, after infiltrating the ground, are a frequent cause of fevers and infection. Trees, in fact, have the same on the sub-soil of towns as fields have on the contents of their sewers,—they act as disinfectants. Taking these facts into consideration, Professor Goventures to differ from the conclusions of the Hygienic Congress, strongly recommends the planting of trees in streets and squares. But they must be planted with judgment. They should be placed at proper distances apart, and the branches should not be allowed to come in contact with the buildings near which they grow. The sorts best adapted for street planting are those which grow to a considerable height and spread out their branches. The fashion that prevails in some continental cities of cutting trees down to a uniform size is highly objectionable. The branches of trees so treated become so compacted together as to be impervious to light, and the shade they give, although deep, is too circumscribed to be of much use.—*Boston Journal of Chemistry.*

INDIA RUBBER DISCOVERED.

Two species of India rubber yielding trees have recently been discovered in British Guiana of a character which insures their future profit to the colony. One is a near ally of the para rubber tree, and is known to the aborigines of the country by the name of Hatie, its botanical name being *Hevea spruceana*. It is about sixty feet high, with a trunk diameter of twenty inches, and is found on the alluvial oft-flooded land of the creeks and banks of the lower parts of the rivers, where in places it is abundant. The second is not scientifically known yet, as flowering specimens of it have not been obtained. It is one of the largest trees of a forest flora peculiarly rich in large types. The trunk is four or five feet in diameter, and runs up straight sixty or seventy feet unbranched, above which the head extends many feet more. On its discovery recently a few branchlets could only be obtained by shooting them off with large shot. The bark is thick and wonderfully rich in milk of excellent quality, and the elasticity and tenacity of the rubber seem to be unsurpassed. It is scattered in individual trees over a wide area of colony. The produce of these trees has not been put in the market yet, collectors apparently being unacquainted with them. Samples, however, have been sent to England to be valued. The discovery of these was made by Mr. G. S. Jenman, Government botanist, during an exploration which he lately made in British Guiana.—*London Daily News.*

A CURIOUS FIR-TREE.

Switzerland has its old chestnut-trees on the banks of Lake Lemán, and the ancient linden of Fribourg, the history of which is said to go back to the time of the royal conflicts with Charles the Bold. M. Louis Pire, President of the Royal Botanical Society of Alliaz, Canton of Vaud, which he believes to be older than the linden of Fribourg, and considers entitled to be regarded as the oldest and most remarkable tree in the canton, if not in the whole confederation. It is growing near the baths of Alliaz, at a height of about thirteen hundred feet above the

hotel, and forty-five hundred feet above the sea, surrounded by a forest of firs, which it overtops by more than thirty feet. The trunk of this tree is ten metres, or a little more than thirty feet in circumference at the base. At about a yard from the ground it puts out, on the south side, seven offshoots, which have grown into trunks as strong and vigorous as those of the other trees in the forest. Bent and guarded at the bottom, these side trunks soon straighten themselves up and rise perpendicularly and parallel to the main stem. This feature is not, perhaps, wholly unparalleled, but another most curious fact is that the two largest of the side-trunks are connected with the principal stem by sub-quadrangular braces resembling girders. These beams have probably been formed by an atomosing of branches, which, common enough among angiosperms, is extremely rare among conifers; but it has been impossible to ascertain the manner in which the ingrowing of one branch into the other has been effected. The adaption by which a limb, originally destined to grow free and bear foliage, has been converted into a living stick of timber, is a strange one, and affords a new illustration of the power of nature to fit itself to circumstances. The space between the rough flooring formed by the growing together of the offshoots, at their point of departure, and the girder-limbs, is large enough to admit of building a comfortable hermit's hut within it.—*Popular Science.*

A TIE TEST.

M. Chevalier Drolet, of Canada, last season made a visit to Paris, for the purpose of impressing on the French government the superiority of Canadian timber for railway sleepers, so that they should be employed in the immense railway schemes the government has in contemplation. The forests that have heretofore been drawn upon for sleepers lie on the shores of the Baltic, in the Danubian principalities, and in Italy. The French government expected to be able to supply 6,000,000 ties a year, and M. Drolet thought it would be an excellent scheme to supply this timber from Canadian forests. He took some samples with him, and showed them to the minister of public works, a series of tests being afterwards applied to the samples. The tests consisted of severe traction and crushing, and were pronounced satisfactory. M. Drolet was about to sign a contract to deliver 7,000,000 ties, when the government was frightened out of the railroad scheme by an article written by Leon Say, and the contract fell through. The question now is, whether the government will continue the railways eventually, or hand them over to the great companies. In either event M. Drolet thinks that Canadian ties are sure of a market in France. He bases this conclusion on the fact that he was compelled, on account of the lateness of the season, to decline a contract to deliver 370,000 ties at Bayonne to be used in the construction of a railroad in the north of Spain.

Tannin in Bark.

The *Lumberman* is in receipt of Forestry Bulletin No. 24, showing the amount of tannin in the bark of some of the trees in the United States. The highest percentage, 31.04, is found in mangrove, that grows on the gulf coast. Oak ranges from 5.99 to 16.46 per cent, the latter being for the bark of the chestnut oak of the Pacific coast. Hemlock varies from 13.11 to 15.87 per cent. The lowest in the list is the bark of the yellow oak that grows on the Atlantic coast. As the bulletin asserts that the figures given "do not indicate the real value of the bark of the species for tanning which can only be obtained by actual experiments made on a large scale, other properties of the bark, besides the percentage, affecting the value of the leather prepared with it," it is somewhat difficult to determine of what practical use they are.—*Northwestern Lumberman.*

REST

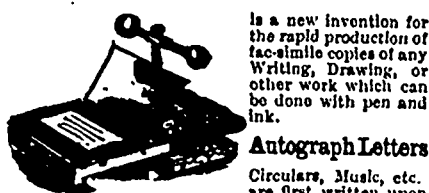
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PETERBOROUGH, Ont. MA^Y 15, 1883

REPORTS from Muskegon are to the effect that the crop of logs will fall very far short of the anticipated cut at the commencement of winter operations.

A chestnut tree in North Carolina was recently felled that was nine feet in diameter. It is estimated that it was a sapling when Columbus reached America.

THE Bolleville *Intelligencer* says that a number of shanty men have returned home from the woods. They assert that the cut is very large and that the drive will be an early one.

IN North Carolina are 40,000 square miles of almost unbroken forests. In ten years from this time, it is estimated, these will be worth more than the present total valuation of that State.

The German Federal Council have assented to the increase of timber duties, proposed by Prussia, the new tariff being 30 pfennings and 70 pfennings on every 100 kilos of raw and sawn wood respectively.

ARKANSAS, it would appear, is not entirely devoid of large timber. A tree was recently cut in Hempstead county, in that state, which measured twenty-six feet in circumference. This would do as a companion to some of the large California trees.

AN Ottawa correspondent says:—Lumbermen are in capital spirits at the quantity of snow which is on the ground and the length of its duration. So favourable has the winter been for their operations that one team has been able to do as much as two last winter.

ABOUT 18 miles from the City of Mexico, on the road to Toluca, is situated a large area of pine forest, in which the growths are said to be as fine specimens as can be found on the American continent. No streams to float logs abound in the region, and it is thought that portable mills will have to be relied on to cut the trees into lumber before it is removed. The American plan of constructing logging railroads would settle the question of transportation.

PETER LOUSCHER recently cut near St. Joseph, Wis., what is regarded the largest spruce tree ever felled in that region. It was designed for a vessel spar, and is 100 feet long and three feet through at the butt.

MR. JAMES BETHUNE, Q.C., of Toronto, who went to England a few weeks ago, has obtained permission to bring the case of McLaron vs. Caldwell before the Judicial Committee of the Privy Council. Mr. Caldwell appeals from the decision of the Supreme Court of Canada.

COMPETENT judges place the cut of Duluth, Minn., mills next season at 141,000,000 feet, and a correspondingly larger increase in the manufacture of lath and shingles. Comparing the log cut and the capacity of the mills it looks as though more mills were needed immediately.

THE lumber dealers of Chicago and Michigan City are protesting against alleged discriminations in freight charges by the railroads in favor of eastern and upper Michigan. They claim to be losing heavily in trade in consequence of the present tariff. The railroads are considering the complaint.

A KINGSTON despatch says that Messrs. Boyd, Caldwell and Co. are erecting a mill on the line of the Kingston & Pembroke Railroad, at Caldwell Lake and near Wilbur station. It will have a cutting capacity of 30,000 to 40,000 feet of lumber per day. The product of the mill will add materially to the freight of the of the railway.

The *Campbellford Herald* says:—A messenger from the woods informs a person who reports the matter to us, that at the shanties in the northern sections, the snow is six feet deep on the level. Shantymen need to study the trees they cut down to avoid accident or death, and it is sometimes "nip and tuck" work clearing themselves from the falling pines.

THE *Emerson International* says:—Wardrop & Co., one of our heavy lumber-dealing firms, have opened a branch lumber yard at Stephen. They will stock it with \$5,000 worth of building material, and have commenced the shipment of stock, both by rail and by team. John Howitt, who has been in the yard of the firm here, will have charge of the yard at Stephen.

THE *Lumberman's Gazette* says:—Washington Territory is destined ultimately to become a thriving hive of industry. A territory with 100,000,000 feet of standing timber within its limits, or sufficient to supply the present cutting capacity of all the mills in Michigan over forty years, with the continuously growing demand for lumber in this country cannot fail to become a prosperous and wealthy state, in the not very distant future.

A FINE stain can be imparted to furniture made of beech or pine in a very simple manner. Dissolve three ounces of permanganate of potash and three ounces of sulphate of magnesia in two quarts of hot water. Apply this to the surface of the wood with a brush, and repeat if necessary. The manganese salt is decomposed in contact with the fibre of the wood, and a fine, permanent stain produced. If the objects are small, a more dilute bath can be prepared, and the wood immersed in it for one or five minutes until it is thoroughly stained.

THE NEW YORK STATE PARK QUESTION.

THE *Northwestern Lumberman* says:—The reservation of 600,000 acres of forest land in the Adirondack mountains, New York, by act of the legislature, to be perpetually devoted to sporting and sanitary purposes, does not entirely meet the views of lumbermen interested in that region. Pelow appears a communication from Mr. George W. Sisson, a mill-owner at Sissonville, near Potsdam, N. Y., and a prominent lumberman in that part of the state, to a representative of his district in the legislature, which sets forth the views of lumbermen on the reservation question. The bill which Mr. Sisson opposed has passed, and hence, as an argument against it, his communication has lost its value

but as setting forth the condition of the Adirondack wilderness, and the effect on its forests of lumbering operations, it is interesting and valuable. The last paragraph of the letter is very suggestive, and exactly "what's the matter" with other questions, pertaining to forestry and the lumber business, than the one considered by Mr. Sisson.

It is not a fact that the lumbermen by their operating do to any appreciable extent denude the forest of its timber so that the effect is seen in the flow of the streams or storage of moisture.

The timber cut for market is spruce and pine, and the hemlock, where the hemlock bark is accessible to a tannery, leaving untouched all the hardwoods—together with the tamarac, balsam, cedar, etc., which constitute by far the greater and prevailing portion of the forest trees. Ordinarily the lumbermen cut not more than 15 standard logs to the acre as an average, and often less. Mile-square lots, that average to cut that, are called good lots, and were it not for the occasional stumps and log roads, the timber removed would not be missed. It is folly to talk about of the lumbermen denuding the forest of timber. Where lumbering has been done eight or ten years the growth of timber has much more than replaced that which was cut. The only danger to be apprehended of forest fires, is from carelessness of sporting parties who have no interest at stake or property to suffer from their want of proper care in leaving camp fires.

There are in this, St. Lawrence county, several townships that have been entirely lumbered over for spruce and pine, and some of them the second or third time, and to-day they are well timbered with all the other native woods, in fact are well wooded lands, and furnish as great an amount of moisture, without doubt, as before an axe was struck on them.

Settlement has not followed to any extent in the wake of lumbering in the Adirondacks, neither is it likely to. If these lands had value for settlers' lands do you think the owners would have allowed so large an amount of them to revert to the state for the small amount of taxes? One hundred years of lumbering has not worked up to the foot hills of the Adirondacks. The virgin forests still exists and is still the home of wild game in abundance—it is still as great a reservoir of moisture as ever.

It is known to lumbermen that spruce timber is dying to a large extent all through the forest, and many owners are cutting their spruce timber to save its value. Is it not for the interest of the state to have its citizens convert this spruce timber into its money value and give employment to workingmen, rather than have it become a total loss? Besides these dead, dry trees endanger the remaining timber by increasing fire hazard.

I think the promoters of Senator Lansing's bill or other state park bills should take measure to prevent the construction of the Adirondack railroad through the wilderness, for the result of that would be to develop lumbering along its line, and a railroad through the woods would be quite likely to originate some forest fires and be of far greater damage than the present lumber interest.

The report shows the state to hold 600,000 acres of wild lands in ten counties. These isolated parcels of land, situated in 10 or more counties, will hardly form the nucleus of a state park, and cannot accomplish the object sought in the bill. It would require the purchase by the state from private owners of several million acres to join and connect together the parcels now held by the state. This I understand to be the plan, and I think there will be many land-owners who will be glad to pool their lands with the state for a bidder.

The demand for the passage of this or similar bills does not come from practical business men, but solely from theorists and gentlemen of leisure, members of sporting clubs and parties not in any manner competent to judge of the requirements of or advisability of what they ask for.

THE FORESTS.

THE *Lumberman's Gazette* says:—The desirability of forestry commissioners in each state is fast forcing itself upon the attention of the

people of this country. The rapid denudation of the timber in the country, and the entire lack of anything approaching systematic effort for timber cultivation, and the evil effects of forest removal, both in a climatic sense and in its influence on floods and drouths, has become apparent to escape the observation of those who have given any serious consideration to this subject; and hence forestry conventions have resulted and other movements have been set on foot, if possible to measurably relieve the evil effects of past injudicious legislative and other action. A national agricultural convention has also awakened to the necessity of action in this direction, and passed the following resolutions in behalf of forestry:

"Whereas, We begin to realize the lamentable wasting of the forest lands in the United States, and sad effects of their destruction upon the climate and water supply of the country, and we are forced to confess our need of the knowledge of the better management of the woodland than is now possessed by the people; therefore,

Resolved, That we urge upon the State Legislature the propriety of selecting judicious persons to act as state forestry commissioners, whose duty it shall be to instruct the people in regard to forest trees and their production and management; said officers to report annually upon the condition of the woodland in their respective commonwealths.

Resolved, That we beg of the agricultural colleges established under the land grant of congress, that they shall lose no time in planting state arboreta and establishing forest experimental stations, where all species adapted to the soil and climate shall be tested, and whence surplus seeds and plants may be distributed. Annual reports of these establishments to be made to the governors of the boards of agriculture.

Resolved, That congress be asked to establish one or more experimental forest stations upon the public domain, where the propagation and testing of useful trees shall be the leading object, with the collection of seeds and plants to be distributed by or under the direction of the United States agricultural department, to which bureau these stations should make annual reports."

The above recommendations deserve the thoughtful considerations of state governments and all of those interested in the future welfare of the country.

VERMONT TIMBER.

A correspondent of the *Northwestern Lumberman* writing from Montgomery Centre, Vt., says:—Spruce lumber stands without a rival in this section of the country for its adaptability for building purposes. It is used for square timber, studding, joist, rafters, outside boarding, inside sheathing, outside and inside casing, clapboards and shingles. The poorer, or third quality, is used extensively for packing boxes, for transporting dry goods, groceries, hardware, medicines, boots, shoes, etc. And here in the East there is no wood that is in so general use for butter packages; both in tubs and boxes. It has been in use in this country and vicinity, almost exclusively, for the past 50 years, and I think that the uniformly high quotations in Boston and other markets for many years past, of Franklin county, Vermont, butter (with St. Albans as the shipping point), is pretty good evidence of the excellence of packages when well manufactured for that purpose, for certainly no such prices could have been so uniformly obtained if the packages had not been of good material for preserving the butter. Many of these butter packages, amounting to millions in number, are annually shipped from the East to the South and West, while large quantities of sawed lumber are shipped to Massachusetts and Connecticut, and other places South.

For all the purposes that I have named, the durability of spruce lumber is all that could be desired, except for shingles, but for that purpose and others, where it is exposed constantly, or frequently, to moisture, as for fence posts, water conductors, etc., it is inferior to cedar, pine, tamarac, and some other kinds of timber. Perhaps it would not be out of the place here to say, that the spruce in this part of the country is rapidly disappearing. Everywhere

the lumber business is much more extensively engaged in than at any previous time, and I have no doubt that the prices now obtained are insignificant, in comparison to what they must be in the near future, as the business continues, even to the extent it is now being prosecuted.

Hemlock lumber is also being shipped quite extensively, as the bark is in good demand at remunerative prices for tanning, and the lumber, if not too far from the railroad, can be handled at a profit. Hemlock will, no doubt, come into more general use, as spruce advances in price, it being well adapted to many uses that the second and third qualities of spruce are used for. Basswood is also quite extensively used here for inside finish in buildings and for house-furnishing goods, and the bodies of sleighs, waggon, and in many other directions, it being a light wood, and not easily split or broken.

RESOURCES OF OREGON.

The resources of a country like this will be difficult to measure; for since it is new, its mineral resources are for the most part undiscovered. Enough is known, however, to say that Oregon is rich in iron, coal and timber. These three factors are certainly sufficient to make a state of immense wealth and population. Let the timber be removed from the country bordering on the Pacific ocean, as it will be to supply the greatly increasing demand of lumber for Australia, China, South America and Mexico, and there will be uncovered low hills and valleys all covered with excellent soil. To the capitalists and manufacturer of the east here is a good field. First, in the manufacture of lumber at the mouths of the logging streams; next, in bringing by a railroad running along the seashore from Coos bay on the south to Astoria on the north, carrying lumber from the shallow or to the deeper outlets for export. One million feet of lumber per day is said to be the average now shipped from Puget Sound. Along the seashore of Oregon, and extending for twenty miles inland, there is an abundance of large hemlock, the bark of which is said to be much stronger in tannin than the Maine bark.

In short, here in Oregon, along the seacoast, there is a country rich in resources awaiting the development of the lumbermen, railroads, tanners, dairymen and small farmers, not yet taken up. Going east across the coast range of mountains there are a chain of valleys, the paradise of farmers, but now tolerably well settled. Going still farther east there is the Columbia river basin, the Ochoco and Kalamath counties, which are dry (but not too dry), unsettled as yet, inviting thousands of farmers and grazers to come and make for themselves homes. *Portland (Oregon) Letter to Washington Star.*

THE CHESTNUT IN ITALY.

Sig. Schira, Inspector General of Forests, in an interesting report, says among other things that the famous chestnut tree on Mount Etna, which still lives, measures 64 metres in circumference at its base. Its age is estimated differently—some attribute to it 4,000 some 2,000 years, and recent studies give it 600 years. There are some other famous chestnut trees in Italy, notably one in Montamiata, in Tuscany. The deplorable custom of late years to destroy the forests has deprived Italy of many noble chestnuts, but it is to be hoped they will be protected by the new scheme of the Minister of Agriculture for re-wooding the denuded mountains. In the north of Italy the chestnut grows at an altitude of from 400 to 900 metres above the level of the sea; in sunny situations even at 1,200. In the south the zone of growth is between 500 and 1,200 metres above the level of the sea. Almost all the Italian provinces cultivate the chestnut, these trees occupying the total superficies in Italy of about 496,114 acres. The most are found in the provinces of Lucca, Sondrio, and Genoa. In Lucca, for example, 181.52 per thousand acres of the territory are occupied by the chestnut. The total annual produce of chestnuts (fruit) is about 5,768,436 quintals. Those of Cuneo are best both for quality and quantity. The exportation is about 70,000 quintals, at a profit of about 2,000,000 francs. There are several methods of preserving the fruit—from sugaring the chestnuts to slightly boiling and then drying them, or laying them, when newly gathered in November, among por-

fectly dry sand in vases, and burying the vases in dry earth, when they will remain fresh and good till next June.

FLOODS IN THE STATES.

The Buffalo Lumber World says that a person of an imaginative turn of mind might be easily convinced that the elements were league'd together this season to harass, impede and embarrass as much as possible all who are engaged in the production and sale of lumber, or that the water sprites had determined to avenge the unceasing injuries done to their protectors from time immemorial, the forests. Within the last month a great deal of damage has been done in various sections of the country by floods, more particularly along the Ohio valley and in the states of Ohio and Pennsylvania. The lumber business has probably suffered as much as, if not more than, any other. Cleveland lumber yards lost 23,000,000 feet of lumber and 15,000,000 shingles, the pecuniary loss to lumber dealers in this city alone being estimated at nearly a quarter of a million dollars. In other localities, saw mills have been swept away, lumber scattered broadcast over miles of flooded territory and general property destroyed wholesale. Several towns have been almost utterly ruined by the floods, though happily the loss of life has been comparatively small. In the lumbering districts of the northwest, on the other hand, the snow has been so deep in many localities as to impede logging operations to quite an extent. In now appears probable that the cut will fall a little short of what was anticipated at the beginning of the season, but doubtless logs enough will be banked to keep the mills busy during the season, together with those that have been held over.

SPRUCE IN ENGLAND

The Timber Trades Journal of February 24th says:—That in the first week of the present month spruce deals touched their lowest cargo limit in the market is now pretty evident. Why they should have, since November last, so suddenly fallen in value is inexplicable, unless the theory be admitted that a scare is, in itself, a sufficient cause for some large holders of stock to press their goods to a sale at the risk of serious loss. Doubtless towards the close of last year orders were getting scarce; and the reduction made in price possibly had the immediate effect of passing some amount of wood into consumption which might otherwise have laid for a time at the ports. Unfortunately, the disturbing effects which result from excessive fluctuations of prices are not always confined to the area immediately affected by them. Without doubt, the sudden and extensive fall in the value of spruce, approximating to some 12 per cent., had a most disturbing effect upon Baltic goods. We can now see that there did not exist any sufficient reason for the scare—for such we are disposed to designate it—and the probability rather is that the spruce market will quickly resume or at any rate very nearly resume—the position it held at the commencement of the last quarter of 1882.

Pruning Trees.

In a recent French work on the philosophy of pruning the following rule is given: "The system is based on the fact that, as wood is formed by descending sap alone, a wound made on a tree can only become covered with healthy new wood when its entire surface is brought into connection with the leaves by means of the layer of young and growing cells formed between the wood and the bark. To make this connection it is necessary to prune in such a manner that no portion of the amputated or dead branch shall be left on the trunk. The cut should always be made close to and perfectly even with the outline of the trunk, without regard to the size of the wound thus made. This is the essential rule in all pruning, and on its observance the success of the operation depends."

Maple Sugar.

The sugar bushes of Vermont and western Massachusetts have changed considerably in aspect within fifty years. Formerly the iron kettle was the apparatus used for reducing the sap. The big fire of logs and limbs under the kettle would particularly on a windy day, fill the

boiling sap with ashes and cinders, which, coupled with the rust on the iron, produced a rich, dark color in the syrup. To get the "settlin's" out, or make the "skimmin's" rise in order to scoop it off, milk, and sometimes eggs well beaten together, were poured in, only to burn black and make more "settlin's." The straining of the sap, the improved evaporators, and the arch of the present day were unknown. But it was not the custom then to melt up old sugar, flavor it with fresh boiled sap, and sell it for first-class new sugar, as is done by the whoresale at the present day. The sugar making season of 1883 is expected to be very profitable.

THE TIMBER OF IDAHO.

The Wood River Miner, of Hailey, Idaho, thus describes the timber of that region: Pine timber is abundant on all the high mountains of the Wood and Salmon river region. Just about Hailey, at the base of the mountains, there is but little; but beautiful tongues of evergreen forest run down the mountain side three miles further up, and from Warm Spring creek, 14 miles above Hailey, through to the British possessions, is almost one unbroken forest. The best timber for mining purposes is the red fir, which is very strong and tough, and grows mostly in the lower hills. Up higher in the mountains predominates the black pine, better adapted for charcoal, cordwood, etc. Some spruce and white or balsam fir, with the red fir and black pine, comprise about all the species of the conifers growing in this section. The cottonwood, alder and quaking asp grow along the streams. That paper further says there are no Indians in the entire Wood river country, and the prospector or settler is as safe from their depredations there as he would be any where along the Ohio. Extensive planing mills are wanted at Hailey. There is a vast and rapidly increasing consumption of lumber, and no planing-mill within 140 miles.

WORTH KNOWING.—A Fact Worth Knowing. The best household remedy known for Coughs, Colds, Bronchitis, Asthma, Whooping Cough and all throat and chest troubles tending toward Pulmonary Consumption is HAYWARD'S PECTORAL BALSAM, to be procured of any druggist.

WALTER LINTON, of Waterloo, writes that HAYWARD'S Yellow Oil has done great good in his family, his wife being cured of Callouse lumps that other medicines failed to remove, he also states that a neighbor was promptly relieved of Rheumatism by the same remedy.

MR. THOMAS W. RACE, Editor and Proprietor of the Mitchell Recorder, writes that he had a prejudice against Patent Medicines, but being induced to try Burdock Blood Bitters, for Biliousness that occasioned such violent headache and distress as to often disable him from work. The medicine gave him relief, and he now speaks of it in the most favorable terms.

MINNESOTA PINE LANDS FOR SALE.

THE SUBSCRIBER OFFERS A TRACT OF 8,000 ACRES OF PINE LANDS, in St. Louis County, Minnesota, carefully selected and estimated to cut FORTY MILLION FEET, well located on good driving stream, tributary to Duluth
A. MCCALL,
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320 ACRES FREE

IN THE Devil's Lake, Turtle Mountain And Mouse River Country, NORTH DAKOTA, Tributary to the United States Land Office at GRAND FORKS, DAKOTA. SECTIONAL MAP and FULL particulars mailed FREE to any address by H. F. McNALLY, General Travelling Agent, St. Paul, Minneapolis and Manitoba Railway, 25 E. Front Street, Toronto.

Wanted to Purchase.

LARGE QUANTITIES OF CLEAN SPRUCE & PINE

One foot Long and upwards, three inches thick, three to seven inches wide.

S. J. MORELAND, LUMBER IMPORTER,

Manufacturer of all kinds of Safety Matches and Swedish Matches. GLOUCESTER, ENG. February 20th, 1883

PUBLIC NOTICE

TRADE MARKS TESTED. Granted according to Act of Parliament and Registered in England, Germany, Canada and the United States.

And Beam Engine Marks.

It having come to the knowledge of Messrs. Thomas Jowitt & Sons, of Scotia Works, Sheffield, in the County of York, Merchants and Manufacturers, that several manufacturers and merchants in Sheffield and in various parts of the Dominion of Canada, are pirating the above mentioned marks of "J" and "Beam Engine," which are the exclusive property of the said Thomas Jowitt & Sons, and which trade marks have been duly registered in the Trade Marks Registry of London, and the latter of which has been duly granted to Albert Alsop Jowitt, of the said firm of Thomas Jowitt and Sons, by the Cutlers Company of Sheffield, aforesaid, NOW NOTICE IS HEREBY GIVEN, that legal proceedings will be immediately instituted against anyone trading in Goods of Steel or of Steel and Iron combined, whether with or without a cutting edge, which Goods bear either of the above marks, unless such Goods are of the manufacture of THOMAS JOWITT & SONS. Dated this 21st day of October, 1882.

YOUNG WILSON & Co., EAST PARADE, SOLICITORS TO THE SAID SHEFFIELD, ENGLAND. THOMAS JOWITT & SONS

VALUABLE TIMBER LIMITS FOR SALE,

Situated in the Nipissing District.

The following very desirable limits will be offered for sale at Public Auction (if not previously disposed of) at the

Grand Union Hotel, Ottawa, Ont.

TUESDAY, 24th Day of April, 1883, At 2.30 O'CLOCK IN THE AFTERNOON.

Berth No. 23, Nipissing, 30 square miles
do 43, Georgian Bay, do
do 51, do do

BERTH 23 is heavily timbered and is very favorably situated for lumbering. The Canadian Pacific Railway crosses the south-west corner of the limit, and parties desirous of manufacturing lumber for shipment to Manitoba and the North West would find the an excellent opportunity for establishing such a business. There is said to be a good mill site on the berth, with good facilities for piling and for shipping either west or east.

BERTHS 43 and 51 are adjacent limits, conveniently located for getting logs into Georgian Bay.

The terms and conditions of sale will be made known at the time of sale.

Further particulars may be had on application to Mr. W. H. Rowley, Manager of the Merchants' Bank of Canada, at Ottawa, Mr. Wm. Cooke, Manager at Toronto, or to R. C. W. MacQuaig, Auctioneer, Ottawa. February, 23th, 1883.

FORESTRY IN MICHIGAN.

The following paper by V. M. Spalding, Ann Arbor, Mich., was read at the meeting of the American Forestry Congress, at Montreal:

It is not necessary to go into an argument to show that Michigan ought to be interested in forestry. Everyone knows what an element the forests have been in our prosperity. According to a late report of the Commissioner of Immigration "the aggregate value of the forest products of this State already mentioned is largely in excess of \$8,000,000," and the timber product of a single year, 1870, amounted to \$60,000,000, or about thirty-five per cent of the total value of the natural productions of the State for that year. Michigan produces more salt than any other State in the Union, and the brine is evaporated by means of the refuse from the great saw mills in the vicinity of Saginaw and other lumbering towns. Ours is the second State in the production of iron, and the blast furnaces of Ironton, Elk Rapids, and a number of other places are drawing the supply of charcoal for its reduction from the great hardwood forests in their vicinity. The products of these forests are sent to the ends of the earth. Much of the first lumber of the Atlantic cities and of the Old World comes from Michigan pineries. Threshing-implements, furniture and a long list of articles requiring wood in their manufacture are made in the State and exported from it, their manufacture being a source of support to fifty thousand of our people and their sale a steady source of wealth to the State.

Nor is it necessary to repeat the well-known fact that our forests are rapidly disappearing. The bulletins of the last census, accessible to everyone, show that the estimated amount of merchantable pine timber standing in Michigan May 31st, 1881, was thirty-five billions of feet. At our present rate of consumption, five billions of feet annually, it will take seven years to use up our pine forests. Suppose, however, that the estimates of the amount remaining, although made with great care, are too low; suppose for safety the pine will last twice as long as has been estimated, the fact still thrusts itself upon us that in a few years this great source of our wealth will be gone.

What are we doing in view of these facts? We are going on with astonishing energy and improved machinery to hasten the end. Every man who can do so is trying to get a piece of pine land, or a quantity of logs before they are gone, and our own people, in company with eastern capitalists, are planning the speedy destruction of the hardwood forests as soon as the pine lands have been stripped. The newspaper articles that charge this thing upon us are not sensational. They do not tell all the truth.

We have squandered with reckless haste the abundant forest wealth with which the State was endowed, and, besides all this, time and again, forest fires, that might have been prevented, have swept over fair portions of the commonwealth, carrying swift destruction with them and completing the work that the axe had begun.

In the study of this subject then we may as well turn our attention at once to the forests of the future, for it is evident that those of the present will be gone in a few years. Our own legitimate wants and the great profits of lumber trade have already settled the question for Michigan. If we want forests we must make them.

Without repeating the arguments that have been given so fully by others, I shall assume, what is admitted by everyone who has bestowed serious thought upon the subject, that the highest welfare of the State requires the establishment and continued maintenance of a suitable proportion of wood-land. It may be assumed, too, that, in due time, both Government and people, moved by necessity, if by no higher influence, will unite in a settled purpose to secure this. As soon as this attitude is taken by the people of the State, and we are ready to enter upon the work of reforesting, we shall find ourselves face to face with various difficult problems. Some of us, perhaps, may render a service by studying these problems now, viz.:-

(1) What parts of the State and what proportion of its area should be covered with forests?

Economists estimate about twenty-five per

cent, as a suitable proportion, but this varies with the position, physical character, and commercial interests of the State or country under consideration. The State of Michigan contains large areas that are worthless for any other purpose than raising timber, and still more extended regions that, if not absolutely valueless for agricultural purposes, can be used to far better advantage in growing trees than in raising any other crop whatever. Undoubtedly, the great question with us is, how, in the most direct practical way, can we rehabilitate the extensive regions in the central and northern parts of the lower peninsula that have been stripped of their pine forests, and the remaining portions of this region that will so soon be bare? Anyone that has been through this part of the State will remember its desolate and ruined aspect. "The valuable trees were all felled years ago, and the lumberman moved on to fresh spoils, leaving behind an inextricably confused mass of tree tops, broken logs, and uprooted trunks. Black-berry canes spring up everywhere, forming a tangled thicket, and a few scattering poplar, birch, and cherry trees serve for arboreal life, above which tower the dead pines, bleached in the weather and blackened by fire, destitute of limbs, and looking at a distance not unlike the masts of some great harbor. Thousands of such acres, repellent alike to botanists and settler, can be seen in any of our northern countries." [Erwin F. Smith, "Flora of Michigan."] While there is good soil to be found in this region, much of it is light and sandy, altogether unfit for farming purposes, but it has raised one of the finest forests that ever clothed the surface of the earth, and if it can again be covered with such a forest it will become in the future, as it has been already, a source of almost unlimited wealth.

Another portion of the State will soon force itself upon our attention, unless it is cared for. All along the eastern coast of Lake Michigan sand-dunes extend, precisely similar in their nature, though of less extent than those of the Old World. While these dunes are covered with vegetation they keep, for the most part, within their limits, but indications of what they may do, when free from such control, may be seen at Grand Haven, Michigan City, and other places along the shore, where piles of fine drifting sand are covering railroad tracks, and fences, and some trees, and, in some localities are encroaching upon cultivated fields, to the dismay of their proprietors. The experience of Western Europe is conclusive upon this point, and it is the manifest duty of the State, and of the people, to absolutely prohibit and prevent the clearing away of trees, or even excessive pasturage of such lands, and to encourage by every suitable means, their reforesting.

The farming lands in the southern portion of the lower peninsula all need a fair proportion of woodland for fuel and shelter, and the great majority of these farms would be rendered much more valuable in a few years by judicious plantations of trees; so, also, the northern peninsula, though still heavily wooded over large areas, already has extensive regions that have been stripped of their forests, and that can be turned to better account for this than for any other purpose. We may safely conclude, therefore, that the State of Michigan requires fully as great, and probably a greater proportion of its area to be kept in wood-land than has been estimated as necessary for other countries; in other words, more than twenty-five per cent. in this State, rather than less, may properly be covered with timber.

(2) What kinds of trees shall we plant?

To answer this question we must know something about the different species of trees, the soil and climate to which they are adapted or to which they can be induced to adapt the selves, what kinds will endure unfavorable conditions best, what trees will grow rapidly, and what sorts are most valuable for timber or other products.

Without attempting to decide all of these questions in detail—many of them requiring not only careful study but long experiment, for which the State makes no adequate provision, as yet—there is one very important question suggested at the outset, and that must be met, whether it can be settled at once or not. The question is, how much significance must be

attached to the principle of rotation? It has been commonly noticed that forests of oak succeed those of pine, and vice versa. Oak and hemlock forest have been succeeded by those of elm, beech and maple. When the pine woods in the northern part of Michigan and Wisconsin are cut off, poplars, birches, and the red-cherry spring up, and so, as in many cases, this succession seems to be pretty uniform and constant. There has grown up a half popular, half scientific notion that it must be so, and that, if we are to succeed in reforesting our denuded pine lands, we must follow the order of nature. We have no right, however, to follow nature blindly, and sometimes we can take a short cut while nature is going around a corner. No one has ever formulated an order that governs the succession of forest trees, nor has it ever been shown that there is any such unvarying order of succession. On the contrary, it is one of the most variable things with which we are acquainted, and there is every reason for believing that it depends more upon what the ground is seeded with than anything else. The reason why birches, poplars, and red cherry spring up on our wasted pine lands is that the seeds of these species are carried there by the wind and by the birds, and there is no doubt whatever that other and better trees may, with suitable pains, be made to take their place. When we plant trees about our houses, or along the highway even, if it happen to be now land, we do not stop to make a critical inquiry into the laws governing the succession of forest trees; we find out what trees are hardy, and having settled this point, set out whatever kinds we fancy with the expectation of having them do well if they are cared for.

(3) Shall we plant the white pine in Michigan?

The answer may be given without hesitation. Yes; plant it first, and last, and all the time. Give it a fair chance and it will cover the State again. It may be wisdom to substitute some other species on those tract that have just been covered with a heavy growth of pine, but it is, to say the least, doubtful whether any such distinction need be made. If the white pine were planted in Michigan universally and everywhere where the land could be spared, it would find congenial soil enough even in those counties that have been most heavily covered with it.

Without discussing the value of other well-known species a few may be mentioned as specially worthy of planting in Michigan. The European larch, famous for the durability of its timber, and perfectly adapted to our northern climate; the *Atlantus*, the only tree that has successfully controlled the drifting sand plains of southern Russia, and will perhaps be more valuable than any other on our own sand dunes; the *Catalpa speciosa*, of which specimens a foot and a half in diameter may be seen in Ann Arbor, and which, probably, may be depended upon for hardiness throughout the southern portion of the lower peninsula; the white ash and a long list of indigenous trees, any of which may be planted with every reason to expect a good return. The consideration of the large number of species, both indigenous and introduced, that may be successfully cultivated in Michigan is of great importance, but requires too much space for this article, and will have to be taken up in a separate paper, together with the consideration of the species best adapted to our sand-dunes, and the methods to be employed in planting them.

(4) Admitting that it is desirable that the planting of trees in Michigan should be undertaken at once and in earnest, what are the means of securing this and of ensuring the best results?

(1) The Legislature of the State may promote the work by offering encouragement to tree planting in the way of exemption of property from taxation. As to the form of legislation and its practical details, a careful study of the action of other States will furnish valuable suggestions. Of all State laws on the subject of tree planting that have come to my notice, that of Iowa has seemed prominently adapted to the purpose. The law provides that "for every acre of forest trees planted and cultivated for timber within the State, the trees thereon not being more than twelve feet apart, and kept in a healthy condition, the sum of one hundred

dollars shall be exempted from taxation * * * for ten years after each acre is so planted, provided, etc." Possibly other forms of legislative action on this subject may be found better, but that of Iowa has this very excellent feature, that it has very largely accomplished the object aimed at. We can profitably follow the example of Iowa, too, in securing the preparation and distribution of something corresponding to their "Forestry Manual," an unpretentious pamphlet of about thirty pages, filled with valuable information and practical hints on the subject of tree planting, and distributed gratuitously among the farmers of the State.

(2) The State ought also to be establishing facts upon which to base the future management of the great work of reforesting its waste lands. Two or three experimental stations, located in as many parts of the State, where trees of all sorts, both native and foreign, can be cultivated and the results recorded, would enable us in a few years to demonstrate the usefulness of some kinds and the unsuitability of others for general cultivation. Meteorological observations carried on at these stations would give data for the solution of the difficult but important question relating to the climatic effects of forests.

(3) Very much depends upon the railroad companies, owning as they do, in the State of Michigan, lines aggregating over four thousand miles in length, with large grants of valuable land, they control, in a very great measure, the agricultural and commercial interests of large areas of the State. The Detroit, Mackinac & Marquette Railroad alone owns over 1,300,000 acres of land, and the Flint & Pere Marquette, the Grand Rapids & Indiana, and other lines are possessed of large tracts of both farming and timber lands. An abundant supply of wood for ties and manufacturing purposes is a prime necessity of all these lines, and may be secured by the prompt adoption of a liberal and enlightened policy in maintaining or restoring a suitable amount of forests on their lands. A number of western railroads, though obliged to contend with great natural disadvantages, have taken hold of this work with great enthusiasm, and several of them are now employing paid foresters to direct the work of raising and caring for forests along their lines.

(4) The farmers of the State have very much to do with the future of our forests, and, unfortunately, they have not yet, as a rule, taken a practical interest in maintaining or restoring them. There is, however, no class more ready to enter into undertakings that promise to be productive of good, and none more accustomed to meet and overcome difficulties. When the farmers of Michigan are once possessed with the conviction, that trees are often far more valuable than any other crop, and that they render the farm more productive and worth more per acre, trees will be planted.

(5) A few at least of the educational institutions of the state can do an important work by giving forestry an honorable place among the subjects of their respective course of study. Whether there is as yet a science of forestry in the United States or not, there will be before long, and intelligent and interested action on the part of such institutions will aid greatly in establishing the science, and in gaining for it the confidence and encouragement of both government and people. A beginning of this kind has been made at the University of Michigan, in connection with the School of Political Science recently established there, and the lectures on forestry are attended by a class of about fifty.

(6) The general Government still owns something over a million acres of land in Michigan, and the State Government has yet large tracts of land under its control. If, instead of throwing this away, or selling it at the rate of \$18 per 160 acres, any considerable portion might by any means still be kept in permanent forests under Government control, and this control be exercised wisely and for the public good, as is done in the State forests of the Old World, forestry in Michigan would become an established fact. In some or all of these ways it is to be hoped that the great work of restoring the forests of the State may be accomplished.

Chips.

THERE is an elm tree growing at Canton, N. Y., between seven and eight feet in diameter. At Palouse Junction, on the Northern Pacific railroad, W. T., there are piled 600,000 ties and 36 miles of rails.

SOME of the lumber camps in the vicinity of Port Severn are breaking up on account of the great depth of snow. It is about 3½ feet on the level.

THERE are produced annually in North America 100,000 barrels of homlock bark extract, of which a single Boston firm produces 72,000 barrels.

A WEST Virginia farmer recently sold a single black walnut tree for \$600, which was but little less than the sum he paid for the tract on which it grew.

A PETITION has been presented to the Manitoba parliament from vessel owners and lumbermen, praying that the mouth of the Red River of the North be dredged and lighthouses erected for the benefit of navigation.

THERE is a pine tree in Montgomery county, Mich., the owners of which are offering \$140 to any party or parties who will deliver the butt log in Alpena. The tree is over nine feet in diameter, and it is thought to be largest tree in the state.

THE Montreal *Gazette* says:—Not only is there an enquiry from American markets, but we hear of orders being received from Winnipeg at good prices. The local market rules quiet, a fair business having been done in both hard and soft wood.

THE *Northwestern Lumberman* says that the Puget Sound Iron Company has 70 men engaged in cutting wood on the Sound, to be made into charcoal, and the force is to be increased to two hundred. Two-thirds of the men are Chinamen.

We learn from the *Northwestern Lumberman* that a patent has been granted to Mr. Westman for a new method of erecting portable houses, designed for Manitoba. The inventor covers a round, wooden frame with rope made of prairie grass, and chemically made incombustible.

LOCUST is a valuable wood for many purposes, and is employed in heavy work on account of its strength and durability. It is used in ship-building and mill cogs largely. Locust fence posts are said to have been known to remain in the ground 60 years, continuing perfectly sound.

VERY few ties or other forest produce are being got out in Haliburton. The snow is too deep and the price too low. Cordwood is paying better. Sound two foot wood delivered in the village realizes \$1.25 per cord. This is an artificial price, and is owing to the deep snow. There must be nearly four feet of snow in the woods.

GEORGIA exports over 300,000,000 feet of yellow pine annually. The principal exporting points are Brunswick, Darien, Savannah, St. Marys and Satalla. Brunswick comes first with about 135,000,000 feet, principally resawn lumber. Darien's speciality is timber, of which about 100,000,000 feet was exported last year from this port. The balance was divided mainly between the other three ports.

A correspondent of the Montreal *Gazette* says lumbering seems to be the principal business of the people at Eaton Corner, clapboards, spruce logs, basswood and birch being \$6 per 1,000 feet, board measure, at the Cookshire Mill Company's mill, and the company cannot saw the lumber nearly so fast as it comes in to their mill. The company have also contracted with a party up the river in Newport for 300,000 feet of spruce lumber, and with what they buy of individuals they will be able to run their mill to its full capacity.

NEARLY all the fine cabinet woods in general use are imported via New York and New Orleans, but there are many varieties of Australasian woods that do not reach New York, but are occasionally brought into San Francisco. Of these are the "prima vera" or white mahogany, the toa wood, resembling rosewood, and the manoa wood, all of which are very beautiful cabinet woods, but very expensive. They are somewhat used in California, but rarely find their way eastward.—*American Furniture Gazette*.

THE New York correspondent of the *Northwestern Lumberman* says in regard to eastern spruce that there is really no change to note. Some scattering cargoes are arriving. St. John, N. B., is likely to forward some supplies before long. But there is no demand just now to call for the moving of any large stocks.

M. FAVOL, a French investigator, has found that the croosote treatment for the preservation of wood sometimes doubles the durability of oak timbers used in colleries, but has little influence on pine. He further says that oak prepared with ferrous sulphate last 10 times longer than in its natural state. It should be immersed 24 hours in a solution of 200 grammes of ferrous sulphate.

THE prospective value of southern pine land says the *Tradesman*, is well illustrated by two transactions recently made by Mr. Van Kirk, of Pensacola, Fla. At about the same time he sold 35,000 acres of Florida pine lands for \$1.25 per acre, while for 110,000 acres of Wisconsin white pine lands, estimated to cut the same amount to the acre, he received \$21 to the acre. Yet the Florida lands are as near transportation and as accessible as the \$21 Wisconsin lands.

THE *Northwestern Lumberman* says that last season D. W. Goodenough handled nearly 5,000 cords of homlock bark, at Ludington, Mich., and thereabout, and this year he expects the amount hauled by him will reach 6,000 cords. The larger portion will be gotten out along the Manistee branch of the Flint & Pere Marquette road, mostly in the township of Freesoil. Farmers clearing their land make a good thing on the bark, the stripped logs being clear gain.

MESSRS. JAS. AND WM. DEMESTER, of Gananogue, are actively engaged in their lumbering operation in the Township of Canoto. They have a large gang of men and teams at work; and have now 15,000 standard pine logs ready to run out as soon as navigation opens. The timber is first growth and of best quality; the logs will be taken to Gananogue by way of Kingston. In addition to the saw-logs Messrs. Dempster Bros. are cutting a lot of other timber for rafting and railway purposes.

THE Singer Manufacturing company of South Bend, Ind., is making an immense amount of veneered work. At least two-thirds of the tables and cases turned out are veneered, the veneer being walnut, principally, and the basis pine. It is much the cheaper way, considering the high price of good walnut. Two thicknesses of pine are used, cross-grained in order to prevent splitting. Butternut and cherry are also used to some extent. The factory gives employment to 1,500 men.

A CORRESPONDENT of the *Northwestern Lumberman* writing from New Lexington, Ohio, says:—We had formerly good oak, poplar, walnut, ash, hickory, butternut, sycamore, chestnut, black oak, beech, birch, hard and soft maple, but now there is no lumber made to be shipped from here. D. C. Fowler has the only stationary mill in this vicinity, and it does not run more than a third of the time. There were formerly mills on all the creeks and runs with sufficient water, but they have all departed this life. Since the advent of circulars and portable engines, nearly every section of land has had one or more "sets." Timber has been recklessly destroyed, until Perry county is not a timber county, but large amounts of lumber are shipped in for building and fencing purposes.

TRADE IN THE STATES.

The Chicago *Northwestern Lumberman* says: The most marked feature of the lumber trade for the week past is an increased activity in the middle sections of the country, north of the Ohio and east of the Mississippi, with encouraging reports from the East and the heralding of good prospects at the West. The actual revival of demand in Ohio, Indiana and Illinois, where in the long, hard winter has, to a considerable degree, let go its grip, is like a rebound from the extreme stagnation that prevailed after January came in. It is cheering, as showing that the actual demand for lumber is now, and gives prospects of being, large, and that the current requirement during the winter was simply arrested by the severity of the season. It is proof that much of the clatter about the shrink-

Lumber Drivers' Calks

For Use in Stream Driving to insure a safe footing in Slippery Places.

25 in ball and 5 in heel are the numbers usually required.

PRICES for the six different sizes and for Calk Sets and Punches for adjusting Calks, on application to

T. McAVITY & SONS,

Dealers in Lumber and Mill Supplies,
ST. JOHN'S, N. B.

Labels on image: SMALL BALL, MED BALL, LARGE BALL, SMALL-HEEL, LARGE-HEEL, SCREW HEEL. Text on image: CALK SET, PUNCH, COMBINED, FULLER.

SAW MILLS!

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

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

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

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

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

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

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

ago of demand on account of alleged hard times and forebodings of the future has had more sound than real significance, that the industries of the country are still expanding, that the mass of the people are yet prosperous, that real estate is being improved, railroads and manufacturing built—in fine, that the progress of this great country at large has not been arrested, and that the consumption of lumber is going right on despite the lugubrious croaking of reactionists. While the foregoing is a fact, it may be, doubtless is, true that, in consequence of the prodigious output of lumber last year, there may be placed on the market this spring an aggregate stock somewhat in excess of the immediate requirement, which may tend to cause prices at the season's opening to rule a little lower than they did last year. In fact, the decline in as sorted yard stocks has already been felt, especially at the West. To what degree the value of bulk stocks will be affected by this weakness in the trade remains to be seen later on.

FELLING A REDWOOD.

In felling a redwood tree it is necessary to be careful to have the way cleared for it to drop, as the wood is so brittle that much of a shock is apt to break the trunk square off. The woodman will hold his axe like a plummet, and squint upward to ascertain how nearly perpendicular the huge tree may be, due allowance being made in cutting for any divergence therefrom. Logs are often dragged along to fill gullies, knolls must be levelled and stumps removed. Mortise holes are first cut in the trunk about four feet from the ground, into which iron-shod spring-boards, about four feet long and six feet wide, are fixed for the men to stand on while chopping at a height too great to reach from the ground. In this way the undercut is made, the strokes being made with great

force and precision from the rather dizzy perch. In the neighborhood of an hour the choppers will reach the heart of a big tree, from which point new and more scientific tactics are adopted. The trunk must be laid exactly on a line with the course that has been cleared for it, to prevent injury to it. By very careful sighting and calculating, and masterly execution of plans laid out, the men are able to drop a tree right where they want it, to a dot, and seldom miss their mark, so great is the dexterity acquired. Measurement is made from the end of a lath pointed directly along the line where the trunk is to be laid, to each corner at each side of the undercut, and a little chopping is done to make the angles jibe. The mathematics of the case, though not especially complicated, are about sufficient to place a professor in his element. After the undercut is properly arranged, new mortises are made behind the tree for the spring-boards, and the overcut is made by a two-handed saw. The last few strokes are a delicate piece of business, the ax finishing the job, and the tree falls true and straight.

Salt and Woodwork.

It is a curious fact, says the *Carpenter*, that in the salt mines of Poland and Hungary the galleries are supported by wooden pillars, which are sound to last unimpaired for ages, in consequence of being impregnated with the salt, while pillars of brick and stone, used for the same purpose, crumble away in a short time by the decay of their mortar. It is also found that wooden piles driven into the mud of salt flats and marshes last for an unlimited time, and are used for the foundation of brick and stone edifices; and the practice of docking timber after it has been seasoned, by immersing it for some time in sea water, is generally admitted to be promotive of its durability.

Market Reports.

MONTREAL.

From Our Own Correspondent.

March 10th.—Owing to the state of the roads preventing much haulage, the spring trade is rather longer in opening up than what is usual and we have no change to make on our price list. We hear, however, that dealers in Ottawa are asking higher prices for their lumber, but we have not heard of this being exceeded to, as stocks there are likely to be full and lumbermen are getting out logs beyond their expectations. The Americans are beginning to arrive and pick up suitable lots. We may state that although we do not change quotations, prices are very firm as under, ex-yard:—

Table listing lumber prices in Montreal, including Pine, Spruce, Hemlock, and various grades of lumber with their respective prices per 1000 feet.

CORWOOD.

Trade has been pretty active during the past two weeks and stocks are ample for all requirements as both the Q. M. O. and the G. T. Railways are bringing in large quantities of fine long wood. Prices have a downward tendency and some of the dealers are accepting a shade under our quotations—the market being decidedly weaker. We quote at railway stations:

Table listing prices for Cordwood at railway stations, including Long Maple, Short, Long Birch, and other types.

OTTAWA.

From Our Own Correspondent.

MARCH 9.—There is one class of the community who takes little stock in Wiggin's storm, and that is—the lumberman. While the prophet has issued his fiat advising those interested in shipping and other business pursuits to keep "close to the shore" from the 5th to the 11th instants, he has not said anything of the lumberman. Perhaps there was no necessity, as the hardy hewer of our forests is quite safe from the disastrous elements.

There is little of importance to announce concerning the trade this month. Everything is progressing smoothly in the limits, and a good season's cut will be the result. There is every prospect of the output this year being fully as large, if not larger, than last season.

As yet this session there has been little legislation in the Commons concerning the lumbering industry.

Messrs. Hugo B. Rathbun, Edward Wilkes Rathbun, and Fred. S. Rathbun petition Parliament to be incorporated as a company to be known as "H. B. Rathbun & Sons." The powers asked for are to carry on in Canada, Great Britain, the United States and elsewhere, the business of general merchants, including the sale of lumber and timber, general manufacturers, ship and vessel owners, etc. The principal place of business of the company will be Deseronto.

G. H. Nichols and Charles Kyte, of New York, A. F. Riddell, of Montreal, W. A. Allen and J. H. Haycock, of Ottawa, ask for incorporation as the "Dominion Phosphate & Mining Co." Capital stock will be \$150,000. Head office will be in this city.

NOTES.

Mr. Oliver Latour, a well-known lumberman of this city, has gone to Winnipeg on a business trip. He is interested in certain limits in Lake of the Woods district.

The improvements going on at the mills here this season are more extensive than in previous years.

The last heavy fall of snow on the Upper Ottawa has interfered considerably with work in the shanties.

TORONTO.

From Our Own Correspondent.

MARCH 10.—Business at the various yards is in a fairly prosperous condition and most of the dealers seem to be in the best of humor, and are looking confidently to the opening of the spring trade, which will undoubtedly be good, should no unforeseen circumstances arise in the meantime to mar the present prospects. Last spring the prospects were just as promising up to the time of the carpenters strike, and should the bricklayers take the same course this season, which has been threatened during the last week, the same lamentable results will certainly be the outcome of such a suicidal act.

The continual blocking of the different railways leading into the city is keeping lumber back, so that the wholesale trade by car-loads is nearly at a stand still, and our harbor is tightly blocked up with ice, the prospects for the early opening of navigation being extremely doubtful which will certainly tend to strengthen prices, on early shipments, at least. By my quotations this week you will notice that prices on some grades have stiffened, and remain firm on all grades of lumber.

QUOTATIONS, FROM YARDS.

Table listing various lumber quotations from yards in Toronto, including Mill cull boards, Shipping cull boards, and various grades of lumber.

ALBANY.

Quotations at the yards are as follows:—

Table listing lumber quotations at Albany, including Pine, Spruce, Hemlock, and various grades of lumber.

BUFFALO.

Table listing lumber quotations at Buffalo, including Uppers, Common, and Culls.

BOSTON.

Cotton, Wool and Iron of March 10, says:—Considering the exceedingly unfavorable weather, trade is moving along quite encouragingly and is gradually improving. There are further indications that spring business will be of very good proportions, including new building operations in the city, suburbs, and in fact

all around. The northern mills that supply house frames are quite busy on orders. Advices from down east are that the winter has been very favorable for logging operations. Shingles begin to be called for. Western lumber is in considerably broken stock in first hands, and trade is looking up. Black walnut of the best grades is in good enquiry, and the best oak, ash and cherry are particularly in request for furniture work and inside finishing. Yellow pine continues very quiet. Flooring of the best quality is well sustained, but seconds are rather slow. Timber is dull.

CANADA PINE.

Table listing prices for Canada Pine, including Selects, Dressed, Shelving, Dressed, 1sts, 2nds, Dressed Shippers, Dressed Box, and Sheathing, 1st quality, 2nd.

OSWEGO, N. Y.

From Our Own Correspondent.

MARCH 10.—Trade has been unusually dull; stock of lumber is large but very much broken up which will be remedied on opening of navigation.

Table listing lumber prices at Oswego, N.Y., including Three uppers, Pickings, Fine, common, Common, Culls, Mill run lots, Siding, selected, 1 inch, 1 1/2 inch, Mill run, 1x10, 12 inch, selected, Shippers, Strips, 1 and 1 1/2 inch mill run, 1x6 selected for clapboards, Shingles, XXX, 18 inch, pine, XXX, 18 inch, cedar, and Lath.

CHICAGO.

The Northwestern Lumberman of March 8, says:—The demand for lumber has generally improved since the beginning of March, under the stimulus of requirement for early building purposes. The severity of the winter past checked building all over that portion of the country subject to snow and frost, so that as soon as the weather moderated building was resumed with considerable activity, in order to make up for lost time. The disposition to purchase is encouraged by the inclination of holders to work off as much stock as they can in the shortest possible space of time. This motive to crowd sales arises from the winter having been unfavorable to building and trade, so that stocks have not disappeared from the yards to that extent which was reasonably expected. The dealers find themselves in possession of more lumber than they desire at this season, and the natural consequence is an urgency to sell. This disposition is indicated in reports from Buffalo, Toledo, points in Michigan and Wisconsin, and is very marked in this city. There is a widespread and general feeling that there is a greater surplus in supply than is good for the health of prices. At the same time there is no doubt that the volume of demand will be heavy for the season to come.

Receipts, and stock on hand of lumber, shingles, etc., for the week ending March 8, as reported by the Lumberman's Exchange:

Table showing receipts and stock on hand of lumber and shingles for the week ending March 8, 1883.

STOCK ON HAND FEB. 1.

Table showing stock on hand for February 1, 1883, for Lumber and Shingles.

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Table listing cargo lots at Tonawanda, including Three uppers, Common, and Culls.

LONDON.

The Timber Trades Journal of Feb. 24, says: This market is exceptionally dull, and there seems to be little or no animation anywhere

Nobody seems to want anything, and though sales for early shipment have been made here and there, they are, we understand, on a very limited scale in comparison with the transactions of former years. The auction sales just at this period are relied upon by dealers here to keep them supplied, so that we are hardly surprised to see some dullness pervading the metropolitan import trade, but the measure of flatness that has been reached at the present time has hitherto a parallel.

That a revival of business throughout the country will sooner or later take place we have very little difficulty in believing, and the wood trade will be certain to share in the general reaction. The present position of importers is not unfavourable to such a view, and though unquestionably the inclination is to hold off rather than to buy at the present quotations, there is not the slightest doubt that the spring consumption will reduce the stocks here to such an extent that the trade will be forced to come into the market to secure what they want. The exports cannot long sustain an attitude of indifference, and though the London buyers can resort to the public sales, there is not the same source of supply open to the provincial merchant. Liverpool and Bristol hold auction sales of considerable importance, but that they have anything like the influence on the local markets that the Baltic sales here have, we cannot for a moment suppose. The London dealers, whose operations are chiefly confined to the public sales form such an important branch of the trade that they could almost keep the metropolis supplied, depending on the auctions exclusively for their requirements. This could not be done at any other port but London, the frequency and magnitude of the public sales being quite peculiar to itself.

LIVERPOOL.

The Timber Trades Journal of Feb. 24, says: The arrivals continue very light, and consist chiefly of oddments from the United States, such as parcels of oak wagon scantling, which by the way, are the most important of all, and sundry consignments of walnutwood staves, and other similar goods. The steady demand which was noted as being a characteristic of the present condition of trade still continues, and there seem to be a fair amount of timber and deals of nearly all descriptions going into consumption. When the statistics of the present month are issued, it is very probable that a fair, if not a good, consumption will be found to have marked the present month.

With the good dividends recently paid by the leading lines of railway we may, perhaps, hope to see some increased liveliness in the wagon building trade, if the directors desire to improve the condition of their rolling stock, and if they should decide to do so, then they could not seize a better opportunity than the present, when American oak wagon scantling is at such a low price as it figures to-day, when compared with the cost of producing the same dimensions either from Baltic or Canadian oak in the log.

GLASGOW.

The Timber Trades Journal of Feb. 24, says: Business has been quiet during the past week, and only one cargo imported, consisting of pitch pine from Pongacola. Deliveries have been going on to a fair extent. Of deals (chiefly Canadian) there have been delivered from Yorkhill Yard here, since the beginning of the year, 112,000 pieces, being about the same quantity as for the corresponding period last year.

Messrs. Allison, Couland & Hamilton held a public sale at Greenock on the 15th inst. Transactions were limited, a good deal being withdrawn by the brokers, as the prices offered did not meet their views.

Table listing sales at Glasgow, including Quebec waxy boardwood, Hewn pitch pine, Prime sawn pitch pine, and Bangor, N. S. spruce deals.

WINNIPEG CONTRACTS.

A Winnipeg correspondent says that last year the city of Winnipeg purchased about 3,500,000

foot of lumber. It cost \$30 per 1,000 feet, for lumber up to 16-foot pieces; and \$1 per 1,000 for every foot beyond that size. The supplies were obtained from city lumbermen. The council decided that this year all supplies should be purchased by tender and contract. Tenders for lumber were called for. About a dozen were put in. They were opened and considered by the board of works recently. Several of the tenders were from United States firms. The prices ran from \$24.48 to \$31.50 per 1,000 feet. The contract was awarded to Wood & Co. at \$25.88. An accepted cheque for \$2,000 accompanied the tender. The next highest tender was put in by J. G. Macdonald for \$25.95. Supposing that the city will use about the same quantity of lumber this year as was used last year, it will save \$17,500 by the tender and contract system. It is understood that the successful tenderer is or was a member of the firm of McBain, Wood & Company, and that the lumber to be supplied will be brought in from Quebec via the Thunder Bay route. The contract is an important one, inasmuch as it shows that lumber is going to be \$5 per 1,000 cheaper this year than it was last. If it can be brought from Quebec and sold to the city at \$24.88, it can also be sold to the general public at as cheap if not a cheaper rate.

EFFECTS OF STORMS.

We learn from Aberlour, Banffshire, that great destruction of timber was caused by the gale of Tuesday week. On Drum of Carron, from eight to ten acres of pine trees were levelled with the ground. On the Knock of Allachie, belonging to Mr. Duff, of Aberlour, several hundreds of fir trees were uprooted. Very many of these trees are broken, some through the middle, others at the bottom, and they lie sometimes in heaps of half-a-dozen, tumbled and twisted above each other. They are mostly the best and largest trees that have fallen. At Ballindallock the gale was of unusual severity, commencing on Tuesday night and continuing unabated till noon on Wednesday. It was considered by many to be worse than the storm on the night the Tay Bridge fell. The woods have suffered most damage. Many fine trees have been uprooted or broken across in the most exposed parts of the woods at Phonas, and Drum of Carron. In the Drum Wood, which belongs to Mr. H. A. Grant, of Elchies, many acres of timber are uprooted. The farmstead of Greenmoss, occupied by Mr. Ellis, which was thatched with straw and heather, was on one side clean stripped to the rafters. The stackyards came in for considerable loss. Many stacks have been turned over and scattered in every direction. Wooden erections suffered a great deal of damage.—*Timber Trades Journal.*

A Good Old Miller.

A New Jersey Miller, who had become old and rheumatic, one day called his sons about him, and said: "Boys, I am growing stiff in the knees and faint at heart. My liver is out of order, and I can no longer distinguish between a peck and a half bushel when taking toll. This mill is worth ten thousand dollars. In order to form a stock company, and render my own burdens the lighter, I shall give Reuben two-tenths, Samuel the same, and Henry, who is my first born, three-tenths. Bless you, my children, bless you. You may go fishing for half a day." The three sons took the papers which the old man had made out, and instead of going fishing they went down to a lawyer's office, called a meeting of stock-holders, and proceeded to business. The first-born was elected president, Reuben treasurer, and Samuel secretary, and the following resolution was passed: "Resolved,—That we bounce the old man, and run the mill after our own ideas!"

The above from the *Millers' Review* (Philadelphia), illustrates substantially the experience of a good many indulgent, confiding fathers. Some that read this will be reminded of like cases that have come under their own notice.—*Scientific American.*

The Dismal Swamp.

The Dismal Swamp in Virginia is much reduced in extent compared to what it was twenty

years ago. It now contains, says a recent visitor there, some of the best farming land in the State. A railroad runs across it, and it is on its way to final extinction. The drainage of Lake Drummond, a central body of water lying higher than the average level of the swamp, would make the whole area fertile. This is a project of Gov. Benjamin F. Butler, who once had surveys made, but at length abandoned it. The one great industry of the swamp is lumbering. It is penetrated by small ditches in connection with larger canals, and by rude tramroads, over which the logs are hauled to be sawed up into shingles, railroad ties and fencing. The lake, however, with its fringe of cypress and its projecting roots and stumps, is just as dismal as ever.—*Scientific American.*

THE PROSPECTS.

The *Chicago Lumber Trades Journal* says:—A representative of this journal, in rambling through the country during February, picked up considerable information relating to the condition, actual and prospective, of trade. The opinion among the dealers in whatever town his curiosity led him was emphatic in the belief that a large and profitable trade would open up in the spring, extensive building would begin at the earliest favorable period to pursue work, and the improvements, especially among the farmers, would assume large proportions. The northern part of this state will unquestionably witness, in every line, a marked progress. Along both the Chicago, Burlington & Quincy and Northwestern railroads the dealers are sanguine of a very satisfactory trade. Stocks are not what might be called good upon these lines of travel, for in view of a severe winter the dealers hesitated exceedingly, and did not put in big stocks in the fall, because of the uncertainty of how long they would have to carry them. The weather throughout the country has been very severe and trade amounted to but little in consequence. In Iowa and Nebraska it is stated that the building operations will exceed anything heretofore.

CLOTHES PINS.

The *Newmarket Era* says:—Nearly all the machinery taken to the temporary saw-mill on the 5th of East Gwillimbury last summer by the Messrs. Cano, has been brought back to the mills here this week. It is intended to commence next week at replacing it ready for spring work. There are now over 27,000 logs in and about 200 are yet to come in, but the teams are busy just now in hauling clothes-pin and pail timber. The new dry kilns are now complete and working like a charm. The pail-timber is sawn the proper length and shape and is piled in cars capable of holding 370 cubic feet. There are twelve of these cars, and as soon as one is filled it is shoved into the kiln and another, now dry, taken out of the other end worked up, thus having ten cars of stuff drying all the time. A large wooden chimney, about 40 feet high, has been erected at the back of the building which causes a constant circulation of hot air through the entire kiln, the heating of which we have alluded to. One of these carloads is manufactured into pails and tubs, and another car filled with green material, every day. This kiln is built especially for this branch of the trade and is independent of the other dry kilns. The manufacture of clothes pins is attaining considerable proportions. They are now making, ready for shipment, about 30,000 per day, out of beech, birch, and maple wood. Each pin passes through seven machines before being dried and packed. The firm have already gained the reputation of making the smoothest and neatest pin in the Dominion.

SHADE TREES ALONG THE CANAL.

The *St. Catharines Journal* says:—Mr. Ellis, superintendent of the Welland canal, proposes, during the coming spring, to plant a number of shade trees along the banks of the canal. The idea seems to be an excellent one. While a general tree planting will add considerably to the scenic effect, a much more important and practical feature will be the advantage to the canal banks. In many places the banks being more or less exposed, the planting of trees will be of advantage by holding the soil by reason of the roots permeating in every direction.

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.

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During the past summer a few willow trees were planted in the neighborhood of some of the locks; but the number was very small. We are glad to see that Mr. Ellis has contrived to have a good deal of very necessary work accomplished along the canal that was much needed. A great many exposed places at the approaches to locks and bridges have been securely fenced, so that there can be little danger of accidents occurring at these points. Had this work not been done there can be little doubt but sooner or later some serious accidents would have taken place.

PLANTING THE PRAIRIES.

The *Lumberman's Gazette* says:—The question of whether forest trees will or will not grow on the prairies of the American Northwest is being warmly debated in connection with the bill introduced into congress setting apart a quarter of a million acres in Dakota for the cultivation of trees. The assertion having been made that owing to the long-continued droughts trees could not be successfully grown in Dakota west of the James river, Mr. Leonard B. Hodges, of St. Paul, replied as follows in an address delivered before the Minnesota State Horticultural Society: "The fact that within the last ten years hundreds of groves, containing millions of healthy, vigorous young forest trees, are now growing far out in the treeless region, where science had preordained and doomed the work an impossibility, must be acknowledged. The fact that young groves of forest trees are now being successfully grown on the line of the Northern Pacific Railroad, away-out and beyond the 100th meridian, has also to be admitted, science and its votaries to the contrary notwithstanding."

Saginaw District.

EAST SAGINAW, MICH., March 6.—There is plenty of snow in the woods. The days are mild and the nights cool. Roads are in good condition, and logging is progressing as favorable as could be expected. There is some crust to the snow, and the conditions for cutting and skidding rapidly are no better than before the thaw settled the snow. It is estimated that in neighborhood of 90,000,000 feet have already reached the banks of the Rifle river. Reports from other streams do not differ materially from those I sent you last week. The Flint & Pere Marquette railroad is hauling large quantities of logs, the quantity for January exceeding 16,000,000 feet. S. R. Hall has gone to his camps on the pine river for the purpose of discontinuing operations. He has secured 9,000,000 feet this winter.—*Northwestern Lumberman.*

The Cow Tree.

Sir Joseph Hooker, in his report on Kew Gardens, gives a sketch of a most interesting botanical curiosity, the *Palo de vaca*, or cow tree.

This tree grows in forests at the foot of certain mountain ranges in Venezuela, and attains a height of 100 feet, and frequently the trunk reaches to 70 feet without a branch. The remarkable characteristic of the tree is the milk which exudes from the trunk when an incision is made. The flavor is of sweet cream with a slight balsamic taste, but it is very wholesome and nourishing, the composition being said to approach very near the milk of a cow. From the fact that the milk is somewhat glutinous it would seem that the tree is of the caoutchouc order. Seeds which have been sent to Bombay and the colonies are said to be thriving well. It is noteworthy, as an example of the law of compensation traceable in nature generally, that this cow tree seems originally to have been a native of a country where milk giving animals were formerly totally unknown.

AN Ottawa despatch says.—Shanty toms are returning to the city in droves. The weather has been unusually advantageous for a good cut. The entire cut in the Kippewa district has been got out to the streams ready for the drive.

SHERRY, JERRY & Co. are constructing a logging railroad from Vesper, Wood county, Wis., four miles northwest to the extremity of their pine tract. They have received the steel rails and a locomotive, and will push the work to completion. A contemplated road from Centralia to Vesper would connect with the road being constructed.

HUNDREDS of thousands of cedar hop-poles are being shipped from Canada into New York, mostly by way of Ogdensburg, whence they are shipped into the central part of the state by way of the Rome, Watertown & Ogdensburg road. The high price of hops this has stimulated this industry, and every man who owns a second-growth cedar grove has a bonanza.

THE *Chicago Northwestern Lumberman* says: The new treaty with Mexico, whereby numerous manufactured articles are to be admitted into that country from this free of duty, in reciprocity for a like privilege on the part of the United States, will permit the admission of ready-made houses of wood or iron free. This gives another opportunity for the "knock-down" house business.

THE Fall Mountain Paper Company is erecting at Bellows Falls, Vt., a large furnace to burn waste wet chips and bark from the wood-pulp mill, which are first compressed in a hay-press. By the application of hot air above the fire an intense heat is secured, and the claim is made that the plan of boiler adopted will produce double the quantity of steam than can be made where coal is used for fuel. The company has 29 furnaces in its different mills.

MICHIGAN LUMBER.

MARQUETTE, MICH., February 27.—Since my last report we had several falls of snow. On Sunday and Monday over one foot of snow fell, and the drifts were so bad trains were not run on the Detroit, Mackinaw & Marquette railroad. Skidding is almost out of the question. It costs about all logs are worth to get them on the skids. It is impossible now to get the quantity anticipated last fall. I think the shortage will be fully 20 per cent., and probably 5 per cent. of this deficiency will be put in by summer logging. The Vulcan furnace is finished at Nowberry. It is a very large establishment, and said to have cost \$250,000. The charcoal will be made by a new process in retorts, instead of the old-fashioned way. This company has built a saw-mill in connection with the furnace, and intends manufacturing all the best maple and birch into lumber, putting the refuse and poor logs into charcoal. Two miles further west, at Dollarville, the American Lumber Company has built a first-class mill for pine, which will be ready for sawing in a month. Quite a large business village has been built up since last fall. Business is being pushed lively, and this point promises to be of some importance at an early day. The mill will cut about 14,000,000 feet, and a full stock is being got out. Soney is another lumber village of importance. The Chicago Lumber Company, Ayer, Smith & Co., Perry & Pearson, and Hewet all have offices and warehouses here. This will be the centre of an output of about 40,000,000 feet of lumber this year. The outlet is by Fox and Monistique rivers to Lake Michigan. Perry & Pearson have four camps 30 miles up the line, the product of which is railroaded and dumped here into the Fox river. In the vicinity of Marquette the mills of Fraser, Gillet and the Eagle Mills are all running this winter, principally on bills for the mines. Men's wages still keep high—about \$30 a month.—*Northwestern Lumberman.*

THE SWEDISH TRADE.

The Stockholm correspondent of the *Timber Trades Journal* says:—The languor which has been observable in the f.o.b. trade from the north of Sweden has only very partially disappeared, and unusually few sales have been made up to date. Fair-sized lines of best redwood goods have been disposed of to Hull and Grimsby, as well as to north French ports, while considerable quantities of goods have been sold to Channel ports, notably Poole. Notwithstanding all this, however, importers are acting with an amount of caution, and showing a disinclination to purchase, that was scarcely expected two or three months ago. Unless stocks abroad are much greater and the prospects of trade considerably worse than anticipated, this state of matters cannot be expected to continue much longer. The weather has lately been favourable for getting logs out of the woods, and, in spite of the quantity of snow that has fallen, appearances would seem to indicate that an average "get" will be obtained, although at a somewhat enhanced cost. Sawing has commenced for the season at many of the principal mills, with an ample log supply for the early part of the year.

NORTH CAROLINA FORESTS.

An enthusiastic writer says:—"The white pine is confined to the mountain and Piedmont, or western part of the state, in great abundance in some counties, and of enormous size—more than three feet in diameter, and 100 to 150 feet high. The oaks excel in variety and species, in extent of distribution, and predominate in two-thirds of the state, middle and western. The white oak, a species called post oak, is much valued on account of its strength and durability. Large exports are made to England in the form of staves and ship timber. Red, black and willow oak are very abundant in the middle and western districts, and grow to an immense size, while live oak is confined to the eastern section. Seven species of hickory abound, and are distributed over nearly every section of the state, and are of great size. Being one of the most dense, rigid, heavy and durable of timber, it is said to have become recently in great demand, and shipped for manufacturing purposes to

Europe, California, Australia and other mining sections. Black walnut is abundant in the middle and western sections. The chestnut is one of the largest and oldest trees, sometimes 10 feet in diameter and 80 feet high, found mostly and abundant in the Piedmont and mountain sections. Poplar is one of the largest and handsomest of trees, attaining the greatest size in the mountain counties. It is largely used for building and other domestic purposes as a substitute for pine. Cypress abounds in the lowlands of the east, and it grows to a great size. The ship-yards of New York and Philadelphia attest the use of 20 kinds of timber, all of which, and more, grow in North Carolina, for the most part easy of access, and facilities of transportation becoming more convenient, in proportion as these vast, valuable resources are largely developed."

MIRAMICHI PINE DEALS.

A correspondent of the *London Timber Trades Journal* says:

Sir,—I was very much surprised to see in your last paper a serious charge brought against the port of Miramichi for shipping bad deals—bad in their nature; for what can be worse than a predisposition to rot, of which the production of fungi is a certain indication?

I have always esteemed Miramichi pine as second only, if second, to Quebec, and by some it is even preferred. Nor did I ever before hear of this tendency to sudden decay, which your correspondent "Lignum" ascribes to it, till I saw his letter in your *Journal*. Perhaps he will be good enough to let us know where this phenomenon, peculiar only to Miramichi pine deals, can be seen, in contrast with some other deals equally ill-piled—that is, with insufficiency of air, and standing equally long in the same state.

It is not a light matter to affix a stigma of this kind in your widely circulated paper upon a shipping port that has heretofore, as far as my experience goes, maintained an exceptionally good repute. "Lignum" boldly affirms that Miramichi deals do decay more rapidly than those from Quebec. In the name of the shippers of Miramichi, I challenge him to the proof. He speaks with authority, and we call on him to show whence it is derived. Trusting that you will give this letter also a place in your columns,—I am, Sir, your obedient servant,

AN OLD IMPORTER.

London, 15th February 1883.

HEMLOCK OPERATIONS.

A correspondent of the *Northwestern Lumberman* says:—In reading the *Lumberman*, I frequently see accounts of lumber operations east and west of us. It may be of some little interest to know that this section of country adds somewhat to the annual lumber production. The Sargeant Lumber Company, with mills at Sargeant Station, on the Pennsylvania & Erie railroad, saved the past year 6,000,000 feet of hemlock and about 350,000 feet of cherry; the sale for this production being found in eastern Pennsylvania, New Jersey, Maryland and Delaware. The cherry timber is being rapidly cut from our forests, and few, if any, choice orchards of it can now be found in this section. This company carries about an average stock of 1,000,000 feet of hemlock, and, owing to the heavy demand, has been saving all winter. The company has banked at the mill about 1,000,000 feet of hemlock logs and 250,000 feet of cherry logs.

Soon the woods will again resound with the woodman's axe and bark-peeling will begin. The large amount of hemlock bark peeled last year weakened the price of bark considerably, many, and, in fact, nearly all the tanners, putting in heavy stocks of bark. We do not think there will be as heavy a slaughter of bark this season. We have had an excellent winter for logging, with snow about three feet deep. The recent rains seemed to have no perceptible effect on the snow, but to-day's sunshine, with a warm wind, is making it disappear rapidly.

We are located near the summit of the Allegheny mountains, and are surrounded with heavy forests of hemlock, which is growing into a heavier demand on its merits for buildings, etc. It is noticeable that quite a quantity

of it finds a market at the summer resorts along the sea shore—Cape May, Long Branch, Atlantic City, etc.

SPRUCE IN ENGLAND.

The *Timber Trades Journal* says:—An improved feeling is said to have ruled during the past week in the spruce markets, and the downward tendency of prices, we are told, has been slightly checked. The fall in the value of spruce was so sudden that an early recovery was, under ordinary conditions to be expected, and although for several reasons it is hardly likely that figures which ruled last autumn will be fully recovered during the spring months, yet a slight advance above present quotations may be perhaps experienced. Selling brokers are said to have had, during the last fortnight, plenty of inquiries from the west coast, and transactions in connection with spruce have, of late, been of a more lively character than with any other classes of wood goods. We believe, however, that in consequence of the heavy deliveries of spruce deals, which occurred on the arrival of the fall fleet, the inland stocks have been fully replenished, and that quite an average weight is held by consumers, and stored at the various wharves and railway depots inland.

It would seem that the spruce markets every year more and more effect the value of other kinds of whitewood, and indeed they effect in some parts of the country to a limited extent the commoner qualities of redwood also. Any improvement, therefore, which may occur during the next few weeks in connection with the value of spruce will be closely observed, and the holders of large stocks will, doubtless, read with ready satisfaction any notes indicating an existent or coming improvement.

WOODS AND FORESTS.

The following is the official statement of revenue collected during the year ending 31st December, 1882, as taken from the annual report of the Ontario Crown Lands Commissioner: *Ottawa Timber District.*

Collected at Ottawa.....	179,612.03	
Collected at Quebec.....	62,563.28	242,175.21
<i>Belleville Timber District.</i>		
Collected at Belleville & Department.....	112,773.74	
Collected at Quebec.....	2,590.99	115,364.73
<i>Western Timber District.</i>		
Collected at Department....	111,030.68	
Collected at Quebec.....	13,568.62	125,599.60
<i>Collected on sale of Limits, of</i>		
6th December, 1881.....	411,311.65	482,740.54
Total.....	894,062.19	

Albany Stocks.

Bradstreet's is authority for the statement that the total stocks of white pine lumber on hand at Albany, Jan. 1, 1882, amounted to 96,917,829 feet, and on Jan. 1, 1883, to 101,258,635 feet. The total sales of white pine during the calendar year amounted to 252,673,700 feet. The receipts were 453,932,358 feet. The stocks of Norway pine increased from 1,077,260 feet, Jan. 1, 1882, to 2,988,072 feet on Jan. 1, 1883, the sales amounting to but 311,010 feet during the year, and the receipts to 3,269,082 feet. The total sales in 1882 "of measured and tally lumber" amounted to 440,400,227 feet, and the aggregate of stocks on hand Jan. 1 last was 112,256,933 feet against something over 106,000,000 feet on Jan. 1, 1882, a gain in stocks on the year of about 6,000,000 feet.

Spruce Beams.

Experiments have proven that spruce beams, loaded from one-half to two-thirds their breaking strain, finally break after a long and steady deflection, which continually increases until the final rupture occurs. If substantiated by additional experiments this fact will, the *United States Miller* believes, go far towards explaining the frequent falling of mill and warehouse floors, under loads supposed by the builders to be perfectly safe. The floors of all such buildings, says the journal referred to, should be sufficiently strong to carry at least three times the weight that can by any possibility be put on them, and at least five times as strong as the

ordinary load. When there is running machinery in the building, which is likely to produce jar or tremble, these figures must be exceeded—according to the same authority—as the effect of a continuous jar or strain combined is very destructive to the building in which they are found.

A BIG PLANER.

A Maine paper says that in one of the Bath ship-yards is a planer, said to be the largest in the world. It is capable of working a piece of timber 66 feet long, five feet wide and two and a half feet deep. The keel comes out of the machine ready for laying on the blocks, and perfectly smooth and true on all sides. A beveling saw is another capacious machine, which turns out timber sawed at any desired angle from the horizontal, and by it curved timber and ship-knees can be worked true to a line. The steam engine which runs these machines runs also a bolt-cutting machine which will nip off round iron of any diameter up to two inches; also a large and small circular saw, a machine for making tree-nails, and, in the finishing shop, a band circular saw, a planer, moulding machine, and a plug and wedge machine. The waste steam is used in bending timber.

North West "Pine."

The *Chicago Northwestern Lumberman* says: The *Lumberman*, in a recent issue, mentioned that Mr. Louis Sands, of Manistee, Michigan, had made a large purchase of pine in the Cypress Hills, in the Northwestern Territory, Canada. A Canadian correspondent seeks to make a correction, and states that there is not a pine tree between Winnipeg and the Rocky mountains, north of the forty-ninth parallel of latitude. He knows there is not, he writes, for he has traveled over that country. Mr. Sands calls the timber cypress pine, and says that if it is not pine it will at least sell for it, and answer the purpose. It lies between the forty-ninth and fiftieth parallels of latitude. A specimen of the wood is in this office, and while it does not have the exact appearance of white pine, it is timber of very fine quality, and undoubtedly, as Mr. Sands says, "will answer the purpose."

A Deferred Investment.

The Stockholm correspondent of the *Timber Trades Journal* says:—A very extensive purchase has lately been effected, by a consortium here, of growing timber along the East Dal River, a few miles above the Siljan Lake. The purchase is estimated to cover over 1,000,000 mature trees, and the price is understood to be reasonable. The timber, however, will not be available until somewhere about, 1890 the Government survey of the forest, preparatory to its division amongst those entitled to the same, being yet incomplete. This purchase is a proof that capitalists have an abounding faith in the future of forest property and the products obtained therefrom, when they are prepared to wait eight or ten years before they get even a partial return on the capital.

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

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These Wheels are

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Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

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Our facilities for BOOK-BINDING enables us to execute every description of work as well as it can be done in the cities, and at current CITY PRICES.

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Printers, Bookbinders, &c., PETERBOROUGH, Ont.

THE RE-AFFORESTING OF IRELAND.

The *Timber Trades Journal* says:—With reference to Dr. Lyons' plan for re-afforesting the mountain sides and other waste lands in Ireland it appears from a contemporary that the forestry accounts for Prussia were recently published at Berlin, and since that time there have been issued in England two consular reports relating to the same species of property in France and Bavaria. It appears that in Prussia there are about 7,000,000 acres of State forest, about 11,000,000 acres of woodland owned by private persons, and about 2,000,000 acres managed by the local corporations. Very little of this is planted with anything except pine, fir or beech, and almost the whole extent is cropped according to the strictest rules with a view to profit. The net return per acre, taking the State forests and private properties together amounts to about 3s 7d., which is made up by deducting 4s 2d., as the cost of culture, cutting and carrying, from the gross return of 7s 9d. produced by the sales of timber. In Bavaria the State forests cover considerably more than 2,000,000 acres, and the gross return is rather under 23,000,000 marks, or almost exactly 10s. per acre, the expenses come to 13,000,000 marks, or 5s 8d. per acre, leaving a net profit of 9,750,000 marks, or 4s 4d. per acre. In France the forests form an important part of the public domain, yielding more than two-thirds of the total revenue derived from it. The net annual profits may be set down at an average of a million and a half sterling; but then a large part of this sum, especially since the fall of the Empire, has been made by letting out the forests by auction for sporting purposes.

Now we do not consider that the small annual return per acre of forest lands offers any discouragement whatever to the scheme of Dr. Lyons, for the replanting of a tract of country now producing nothing and affording no employment to the native inhabitants of the land is quite a different thing from commencing public works, with a view to give people temporary occupation, such as the building of a pier, a court-house, a jail, or a workhouse, because these attract workmen to the neighborhood, who when the buildings are finished often encumber it with additions to a population which was already too great for the means of living to be obtained thereabout. But the planting of lands, with a view to profit, would be a source of perpetual employment to the laborers once engaged in it, in a cheery and healthful way, a kind of life which is denied to the weavers and spinners of Manchester, except when a brief holiday gives them a chance to sniff the fresh air of the country. Bare plains and bleak hill-sides, not affording a rag of shelter now for man or beast, would soon become fit for human habitation, and under the forest screen little clearances might be made, and cottage homes erected, which would tend to diffuse peace and contentment through a whole district. A vivid fancy might conceive many pleasant rural combinations arising therefrom, and some future Gray, who had visited the region in its forest glory, might exclaim:—

"How jocund did they drive their team afield,
How bowed the woods beneath their sturdy stroke!"

But we have to deal with facts, not poetry, whose essence is fiction, and since we have taken up the subject we have seen it stated that the Russian forests do not return above 1d. per acre per annum to the Government. Possibly the Czar is satisfied with them if they support a contented peasantry, though they contribute so little to his exchequer.

UPPER OTTAWA IMPROVEMENT COMPANY.

The following tariff of tolls for 1883 has been approved by the Governor-General in Council.

THROUGH DES JOACHIMS BOOM.	
	Per Piece.
Saw logs, 17 feet and under.....	2-5 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	8-15 "
do do 25 to 35 ft. long.....	3 "
do do 35 ft. and upwards in length.....	21-15 "
Red and white pine, tamarac, spruce and hemlock, square.....	13-6 "
Oak, elm, and other hardwood, square or flatted.....	2-5 "

THROUGH FORT WILLIAM BOOM.

Saw logs, 17 ft. and under.....	3 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	4-9 "
do do 25 to 35 feet long.....	5-9 "
do do 35 ft. and upwards in length.....	8-9 "
Red and white pine, tamarac, spruce and hemlock, square.....	1 1/2 "
Oak, elm, and other hardwood, square or flatted.....	2 "

THROUGH ALLUMETTE BOOM.

Saw logs, 17 ft. and under.....	3-10 "
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	2-5 "
do do 25 to 35 ft. long.....	3 "
do do 35 ft. and upwards in length.....	4-5 "
Red and white pine, tamarac, spruce and hemlock, square.....	11-5 "
Oak, elm, and other hardwood, square or flatted.....	14-5 "

THROUGH MELONS CHENAIL BOOM.

Saw logs 17 ft. and under.....	1-10 "
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	2-15 "
do do 25 to 35 ft. long.....	1-6 "
do do 35 ft. and upwards in length.....	4-15 "
Red and white pine, tamarac, spruce and hemlock, square.....	2-5 "
Oak, elm and other hardwood, square or flatted.....	3-5 "

PASSING LAPASSE BOOM.

Same as Fort William boom.

THROUGH IMPROVEMENTS IN MISSISSIPPI CHENAIL, CHATS RAPIDS, AND QUIO BOOM, OR ANY OF THEM.

Saw logs, 17 ft. and under.....	3 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	1 "
do do 25 to 35 ft. long.....	1 1/2 "
do do 35 ft. and upwards in length.....	2 "
Red and white pine, tamarac, spruce and hemlock, square.....	3 "
Oak, elm and other hardwood, square or flatted.....	4 1/2 "

THROUGH IMPROVEMENTS FROM DESCHENES TO HEAD OF HALL SLIDE, NORTH SIDE.

Saw logs, 17 ft. and under.....	1/2 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	3 "
do do 25 to 35 ft. long.....	5-0 "
do do 35 ft. and upwards in length.....	1 1/2 "
Red and white pine, tamarac, spruce and hemlock, square.....	2 "
Oak, elm and other hardwood, square or flatted.....	3 "

THROUGH IMPROVEMENTS IN THOMSON'S BAY.

Saw logs, 17 ft. and under.....	1/2 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, 17 ft. and under 25 ft. long.....	5-0 "
do do 25 to 35 ft. long.....	11-24 "
do do 35 ft. and upwards in length.....	1 1/2 "
Red and white pine, tamarac, spruce and hemlock, square.....	2 1/2 "
Oak, elm and other hardwood, square or flatted.....	3 1/2 "

THROUGH IMPROVEMENTS IN LIMERIKEN BDDY.

Saw logs, 17 ft. and under.....	1/2 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	1/2 "

do do 25 to 35 ft. long.....	5-24 cent.
do do 35 ft. and upwards in length.....	3 "
Red and white pine, tamarac, spruce and hemlock, square.....	1/2 "
Oak, elm and other hardwood, square or flatted.....	3 "

THROUGH BOOM BELOW THE OUTLET OF HULL SLIDE.

Saw logs, 17 ft. and under.....	1-5 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	4-15 "
do do 25 to 35 ft. long.....	3 "
do do 35 ft. and upwards in length.....	8-15 "
Red and white pine, tamarac, spruce and hemlock, square.....	4-5 "
Oak, elm and other hardwood, square or flatted.....	11-5 "

BOOM WORKING EXPENSE RATES THROUGH DES JOACHIMS BOOM.

Saw logs, 17 ft. and under.....	2 cents.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	2 1/2 "
do do 25 to 35 ft. long.....	3 1/2 "
do do 35 ft. and upwards in length.....	5 1/2 "
Red and white pine, tamarac, spruce and hemlock, square.....	8 "
Oak, elm and other hardwood, square or flatted.....	12 "

THROUGH FORT WILLIAM BOOM.

Saw logs, 17 ft. and under.....	1 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	1 1/2 "
do do 25 to 35 ft. long.....	1 3/4 "
do do 35 ft. and upwards in length.....	2 1/2 "
Red and white pine, tamarac, spruce and hemlock, square.....	4 "
Oak, elm and other hardwood, square or flatted.....	6 "

THROUGH ALLUMETTE BOOM.

Same as Fort William boom.

THROUGH MELONS CHENAIL BOOM.

Same as Fort William boom.

THROUGH IMPROVEMENTS IN MISSISSIPPI CHENAIL, CHATS RAPIDS, AND QUIO BOOM, OR ANY OF THEM.

Saw logs, 17 ft. and under.....	1 1/2 cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long.....	2 "
do do 25 to 35 ft. long.....	2 1/2 "
do do 35 ft. and upwards in length.....	4 "
Red and white pine, tamarac, spruce and hemlock, square.....	9 "
Oak, elm and other hardwood, square or flatted.....	9 "

THROUGH IMPROVEMENTS IN THOMSON'S BAY.

Same as Fort William boom.

EXAGGERATED ACCOUNTS.

The *Northwestern Lumberman* says:—There is still considerable afloat about straw lumber, and some of the facts are highly exaggerated. Some of the newspapers 'hing up the oft-repeated statement about; the invention are inclined to claim more for the article than the manufacturers of it would care to claim. One of the points that seems a little mixed is the assertion that it will enter into competition with wide walnut lumber, at about one-half the price of the latter. It has not been shown that the product is much of a competitor with walnut,

while it costs much more. Referring to the price-list of the company making the straw lumber, it is seen that the cost of a thousand feet is at the rate of \$10 per ply for three ply and under, and \$8.50 for four-ply and over, the plies running one-sixteenth inch in thickness. Reckoning 16 plies for inch thick, at \$8.50 per ply, the result is \$136, which would buy a fair grade of counter tops, or 2,000 feet of firsts and seconds. It is well enough to let straw lumber stand on its own merits, without getting beyond the bounds of facts and probabilities.

Advice to Mothers.

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

LITTLE BY LITTLE.—The constant dropping of water will wear away even the hardest stone. So the constant irritation of a cough will so wear upon the lungs as to induce incurable Consumption. Hagar's Pectoral Balsam will cure the worst cough, speedily and effectually.

FORTUNATELY Valvular disease of the heart is not very common, its disturbed action may be due to indigestion, liver irregularities &c. A Stomach disturbed with wind, or indigestible food will cause pain and fluttering by crowding on the nerves of the heart. Burdock Blood Bitters will speedily remedy all such difficulties.

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

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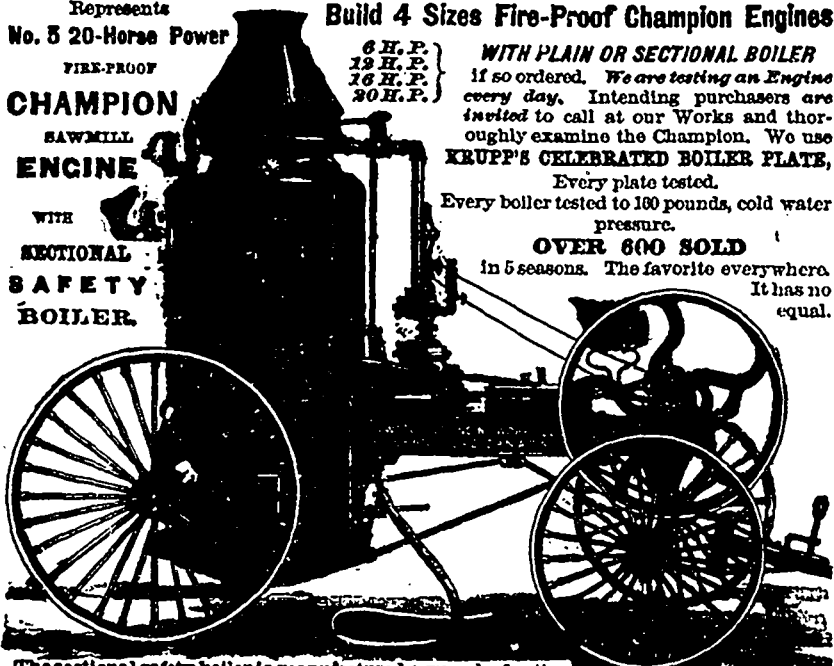
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