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PUBLISHED
SEMI-MONTHLY.

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

SUBSCRIPTION
\$2.00 PER ANNUM

VOL. 3.

PETERBOROUGH, ONT., OCTOBER 1, 1883.

NO. 19.

THE TRENTON STEAM SAW MILLS.

During the past season Messrs Gilmour & Co. have made large additions to their mills, very much increasing their size and although the producing capacity has been increased one-third the improved and labor saving machinery introduced under the management of Mr. I. Paquet enables the firm to handle the increased amount of lumber with about the same number of men formerly used.

The first change is noticed by the visitor when he enters the mill premises in the long rows of dwellings erected during the past winter and spring for the use of the employees at the mills. They are very neat and compact buildings and no expense has been spared by the firm to make them comfortable for the inmates.

Upon entering the mill yard, the building we first approach is the planing mill and the general repair and workshop. Here there are two planing and matching machines, which are run day and night to supply the large demand for dressed lumber. A large timber planer and an iron planer besides drilling machines, wood, and iron, turning lathes, &c. are also in this building. The power is furnished by four Tubular Boilers and a 90 h. p. engine. Leaving this building and passing the blacksmith shops on our left and the general mill offices on our right hand side, we approach what is called the "Little Mill." This mill is in two sections one devoted to cutting lumber, bill timber, &c. and the other to cutting shingles, ties, &c. The lumber department contains a large circular saw also a stock gate and slabber gate and turns out about 80,000 feet of lumber per day. The shingle department contains besides the various circular saws used in cutting the logs into bolts, two double and one single shingles machines capable of cutting 150,000 shingles per day. The power here is furnished by eight Tubular boilers and two engines of 60 and 90 h. p. respectively. There are about 150 men and boys employed at this mill.

Leaving the little mill we approach the "Big Mill" the first thing that strikes our attention is the improved appearance of this vast building having been lately neatly encased in several coats of paint. To get any idea of the immense amount of work done in this mill we must follow the logs as they leave the waters of the bay through the various manipulations they undergo in the mill before they become lumber ready for sale. As the work is all done on the second floor of the mill the logs are drawn up into the mill by endless chains arranged upon log-ways reaching from the water to the upper floor, they are then sent (if very large) to the large circulars the saws of which are arranged one above the other so as to enable them to cut the largest logs that the pine forest produce or if medium sized or small they are sent to two sets of span or twin circulars to be sided down to regular sizes called stocks either 10, 12, 16, 20 as the case

may be, they are then put up in piles of four, six or nine stocks according to their size and run through the gang saws these are large frames containing 30 or 40 saws in an upright position and run at a speed of 200 strokes per minute. As the logs pass through these gates they are cut into boards and are at once sorted the good square edged boards going at once to the trimmer to have the ends squared and the waney edged boards go through the edgers and then also to the trimmer.

The lumber at this stage is culled or graded for the foreign market, each piece having its grade marked upon it. The lumber then passes on to the sorting room when each kind of grade is piled separately upon the rollers and run out upon cars when it is ready to be taken to the piling ground. In the mill there is no carrying of the lumber or slabs from place to place by hand as all transfers are made by means of live rollers and moving chains, in fact the machinery is made to do away almost entirely with manual labor. To get any correct impression of the completeness of the machinery and facilities for handling the immense quantity of lumber with so little labor, one must see the mill when working personally. On this floor are also situated the lath, heading, picket and shingle saws by which the lumber and edgings not fit for the market are cut up and utilized. The refuse slab wood and sawdust are conveyed by carriers to some distance from the mill to a sheet iron grate or "Gohenna" one hundred and twenty-five feet in height and then burned.

A peep at the works on the first floor presents nothing to the experienced eye but a perfect wilderness of wheels, pulleys and belts in rapid motion. The power used in driving the mass of machinery used in this building is furnished by 16 Tubular boilers of 100 h. p. each and a monster double or twin engine of over 1,500 h. p.

This mill cuts up daily over 3,000 saw logs and produces about 350,000 feet of lumber, 100,000 lath, 100,000 pickets heading and shingles, and employs in the mill and yards 500 men and boys making a total of over 600 men employed on the premises.

Leaving the mill we go to visit the piling grounds and shipping docks. Some idea of the size of these grounds can be formed from the facts that there is at present over thirty millions of feet of lumber piled on them and that the company have over ten miles of railway laid in them to facilitate shipping and handling it in this service. There are two locomotives and 100 cars used besides several horses.

Great improvements have been made by the firm in their appliances for extinguishing fires they having purchased one of the finest steam fire engines now in Canada. It was manufactured by the Amoskeag Co. of Manchester, N. H., and said by them to be the most powerful engine ever manufactured by them. It throws over 6000 galls. of water per minute and well

deserves the name of "The Monarch." In addition to this powerful engine they have placed in their new brick fire hall a stationary pumping engine capable of throwing 1,500 galls. per minute. These appliances in the hands of a well drilled fire brigade form one of the best systems for protection against fire we have ever seen.—*Trenton Courier.*

A GIANT RAFT.

The New York Times of August contains the following account of an immense raft which was brought from St. John, N. B., being the first attempt at raft towing in that direction:

The largest string of logs ever made into a raft was towed into the Erie Basin, South Brooklyn, at day-break yesterday morning by the tugs Cyclops and Haviland. The raft is 1,200 feet long, 24 feet wide, and twelve feet deep. It is composed of 11 sections, each of which contains about 500 logs, ranging in size from the diameter of a wagon wheel down to that of a telegraph pole. The logs are piled in huge bundles and strapped together with chains strong enough to tow the Great Eastern. These sections were placed in a string and fastened with a strong hawser to the Cyclops, and Capt. Gally of the Haviland, while the entire expedition was piloted and managed by Capt. Rufus Patterson, of St. John, New Brunswick, the veteran of the Province. The logs were bought by Mr. James Murry, of No. 26 Burling slip, in New Brunswick early this summer. The distance which they were towed is 650 miles, as the ships sail, and the freight would have been very heavy. Mr. Murray accordingly consulted with Capt. C. C. Ellis, of No. 60 South-street, a brother of the master of the Cyclops, who undertook to tow the raft to New York, at a saving of 50 per cent. in freight rates. The raft was constructed, and on Aug. 7 was started from the harbor of St. John. The trip was made without serious accident. The first three days were as calm as could be desired, but on the fourth day Capt. Patterson was obliged to seek shelter in Booth's Bay, where the raft was detained for three days. Pleasant weather was experienced after the storm until Newport was reached, on last Thursday night, when a strong gale separated the crib attached to the Cyclops, from the remainder of the string, which was sent adrift. This was a serious predicament, and the raft was in great danger of going to pieces on the breach at a loss of many thousands of dollars. The Haviland was immediately detached and sent to the rescue of the lost raft, and in the morning the two vessels came together with their charges resumed their original positions, which were maintained during the remainder of the voyage. The passage through Hell Gate was easily accomplished, Stand's Point was passed without any difficulty, and at 6 o'clock yesterday morning the great raft was securely anchored in the Erie Basin, where it will remain until it can be disposed of.

The voyage of the raft has occasioned great interest among shippers, as such a trip has never been made before, and it is the general impression that this mode of transporting timber will supersede the shipping on schooners to a very large extent. The Cyclops is the largest tug in the harbor, being 128 feet long. She is owned by Capt. C. C. Ellis.

FOREST FIRES.

In a late paper by Prof. C. S. Sargent, that gentleman gives a striking account of the loss, actual and prospective, suffered from forest fires, and of the necessity for stringent legislation for their prevention. He lays special stress upon the importance of the subject for the New England states, where so large a share of the soil is only adapted to forest growth, and where a goodly portion of our supplies of white pine must come from in future years. These states already have valuable forests of second-growth pine, now reaching a size when they can properly be thinned out, leaving the smaller trees for future need. But he states that in Massachusetts alone ten thousand acres of forests are, on the average, burned annually—about one-third of the fires originated from locomotive sparks, and nearly all the rest from carelessness, or other preventable causes.

This burning not only destroys the standing trees, but it makes the investment of capital in growing forests hazardous; it checks the growth of a very desirable industry; and it destroys, as he points out, the capacity of the ground to continue in pine growth. When properly cut, a pine forest may be propagated indefinitely. When burned, there is a long succession of weeds and briars, mountain cherry, gray birch, willows or poplars, maples and ash trees, until a hard wood growth is established. This maintains itself a long time if left alone; but if the ground be then cleared by cutting, cultivated for many years, and then left free from plow and scythe, and guarded from pasturing and fire, the white pine will spring up spontaneously after its long banishment. Fifty or one hundred years will pass before this desirable crop will return. In view of so long a life, Prof. Sargent holds, and of the considerable value that pine will soon command, it is well that special care should be given to protecting and preserving the second growth forest now approaching maturity.

The schooner Nelson Bartlett, a three-master, recently brought 3,000,000 lath, an unusually large cargo, from St. John, N. B., to Baltimore.

H. POOR & SON received at their tannery, at Winn, Me., 432 cords of hemlock bark from Wypoutlock station, which amounts to 1,311,600 pounds. About 10 pounds of bark are required for tanning one pound of leather.

THE FORESTRY CONGRESS.

The American Forestry Congress met in annual session August 8th, at St. Paul, Minn., and after an interesting session of three days, adjourned.

In his annual address, the President, Hon. George B. Loring, gave many valuable points of information concerning the forest area of the country, the pine supply, the value of the timber industry, etc. He said: "The forest lands of the United States amount to less than one fourth of the entire area. The proportion of wooded area is less than in Eastern, Northern and Central Europe, and is very unequally distributed. Norway has two-thirds of its area wooded, Sweden six tenths, Russia nearly one third, and Germany nearly one fourth. The countries having less forest area, arranged in order of proportion, from 18 down to 5 per cent. are Belgium, France, Switzerland, Sardinia, Naples, Holland, Spain, Denmark, Great Britain and Portugal. West of the line of prairies running southwest through Indiana, Illinois, and Missouri to the Indian Territory, the central prairies, the dryer plains and much of the southern belt of the Pacific slope are destitute of wood. The streams in all this great region are more or less fringed with trees of some sort, and the higher mountains, on the protected side, have a thin covering of forest. In the deep valleys of the western slope of the Sierra Nevada are forests of extraordinary density, filled with soft wooded evergreen trees of enormous size. Here the sequia gigantea or big tree flourishes in isolated patches, while the coast range is the home of the sequia semivivida, or red wood. From North Carolina to Louisiana nearly six tenths of the farm area is wooded, though most of the area thinly, and part of it has been culled and is in second growth. Including unoccupied areas not in farms which are in forest, something like three fourths of the entire South is wooded. Comparing the census returns of 1870 and 1880, we find a decrease of wood lands in farm areas in Michigan from 41 to 32 per cent; in Minnesota from 21 to 15, and in Iowa from 16 to 11 per cent. In Nebraska tree planting has changed the record from 3 to 10 per cent. From the increase of farms in the wooded area Wisconsin has 31 instead of 29 per cent. Of the value and importance of the forests covering these areas let me say: Next to the white pine of the Northern forests, the most valuable tree is undoubtedly the Pinus Australis, or long leafed pine of the southern coast land, forming a belt of varying breadth, up to 100 and 150 miles from the Atlantic and Gulf shores. The southern pine will come into still greater prominence, as railroad and steamboat lines extend facilities for transportation, which is now being done with great rapidity.

"The condition of the pine timber supply of the United States, in connection with the statements I have made, is interesting. The destruction of this tree by fire, and the axe of the lumberman is very great. Together with the spruce it is being rapidly consumed, and I think the following figures will show that the supply is to be obtained hereafter by allowing an exhausted region time to recuperate, while the comparatively uncut sections, are resorted to for filling the demands of the market. Investigations recently made show that the supply of pine in New Hampshire and Vermont is exhausted, and that the spruce lumber, at the rate the cutting is now going on, will last in the former State but 7 years, and in the latter but 4; in the State of Maine the pine will last four years and spruce 15 years; in South Carolina the pine forests will last 50 years at the present rate of cutting; in California, 150 years; in Arkansas, 300 years; in Pennsylvania, 15 years; in Georgia, 80 years; in Louisiana, 100 years; in North Carolina, 50 years; in Wisconsin, 20; in Michigan, 10; in Minnesota, 10 years; in Mississippi, 150 years; in Alabama, 90 years; in Florida, 30 years; in Texas 250 years. That the exhausted forests in this list of States can be restored in time there is no doubt, and every means of cultivation and protection should be applied by the people and the government, both State and Federal, each in accordance with its own jurisdiction."

"The black walnut, culled from western forests to meet a limited though important demand is really becoming scarce on the northern side

of the Ohio valley; but on the southern, along the foothills and in the valleys of the Appalachian range, it is abundant and almost untouched. It grows rapidly in the Western States, even beyond the Missouri. The millions of acres of existing forests in this great eastern chain of mountains has not yet been considered in the statistics of forestry here presented. Their resources have never been measured, are yet comparatively unknown, and almost untouched by the axe of the woodman."

"In addition to this the white pine of Minnesota is estimated at 6,100,000,000 feet exclusive of isolated timber in birch lands and amidst other hard wood growth. In Michigan, the estimate for the lower peninsula cover 7,000,000,000 feet. In the Saginaw district, 8,000,000,000 on the streams flowing into Lake Huron, and 14,000,000,000 on those flowing into Lake Michigan. The upper peninsula contains 6,000,000,000 more, making 35,000,000,000 feet in the principal pine districts in Michigan. The great pine forests of Wisconsin are estimated to contain 41,000,000,000 feet of lumber, the largest proportion in the Chippewa and Wisconsin districts. They cover an area of 22,500,000. The northern border of the pine area is less productive than the areas of the lower latitudes. The cedar swamps of Wisconsin scattered the pine belt are estimated to cover 1,365,000 acres, and to contain 62,800,000 posts, telegraph poles and railroad ties. There are also large supplies of tamarack and spruce and valuable oak timber, especially in Dunn, Pierce and St. Croix counties, and other hard woods are abundant through the southern border of the wooded districts. The united area of the States south of Maryland and the Ohio river is more than 500,000,000 acres, containing nearly 400,000,000 acres of forest land."

BRITISH COLUMBIA FOREST.

We extract from the Report of the Committee on Immigration and Colonization the following portions of the evidence of Dr. George W. Dawson, F. G. S., Assistant Director of the Geological Survey:—

Q. Will you please inform the Committee as to the timber resources of British Columbia, the country over which the Douglas pine occurs, and other timber trees at present or likely in future to be of value? The Douglas pine, I understand, is of the greatest commercial value just at present? This map (produced, published in Report of Geological Survey 1879-80) will illustrate some of these points. It shows the range of the Douglas fir and some of the other important timber trees. So far, the Douglas fir or Oregon pine, as it is also called, is the only tree that has attracted much commercial attention. It has been largely cut and exported. It is found on the whole eastern coast of Vancouver Island and on the coast of the mainland opposite to it. It extends northward a little back from the coast as far as the Skeena River, and in the northern part of the interior of the Province as far north as Tacla and Babine Lakes. The timber which occurs immediately on the coast, is, however, indisputably the best. There are magnificent forests there, composed almost entirely of the Douglas fir, and naturally, on account of the facilities for shipment, they have attracted the most attention. The quality of the timber is excellent and the size of the trees is great. One that was cut down at Burrard Inlet for the Philadelphia Exhibition, of which a section is in the Parliament grounds now, was measured to be 305 feet in height, had a thickness of 8 ft. 4 in., 20 ft. above the ground, and was perfectly sound throughout. Many of these logs measure as much. Commercially speaking, the medium sized logs are more useful in the mill than these exceedingly large ones. The localities chosen for the mills are selected in regard to facility of shipment, and those now working are chiefly situated on Burrard Inlet. In addition to the Douglas fir, there are a number of other trees in British Columbia which are exceedingly valuable, and which will eventually attract a good deal of attention. There is the cedar, which sometimes attains a diameter of 17 feet, though generally these very large trees are more or less hollow. There is the spruce, which is an excellent wood, not so soft as our spruce on this side of the continent, and a different species; the white pine,

not the same as the eastern white pine, but producing an equally good wood. As a rule this tree is remote from the sea coast, so that it has been utilized only to a small extent so far. The hemlock, again, grows to a much greater size than our hemlock, and produces good, clean lumber, and that tree is found along the whole of the coast and over a considerable part of the interior. The maple, which is rather an inferior wood, except for cabinet-making purposes, owing to the curly grain, is only found on the coast. The oak is confined to the southern part of the coast, and is not in sufficient quantity to be looked upon as a commercial wood on a large scale. The yellow cedar or yellow cypress is another wood that has attracted much notice. It is found chiefly on the northern part of the coast, and is an exceedingly fine wood for cabinet-making. It is a close wood, and very lasting, penetrated by resinous substances which protect from decay to a very great extent, and give it a peculiar odor. In the interior of the Province there is the yellow pine, which inhabits the dry southern part of the plateau, and is locally a tree of great value. In fact, it is the wood most used in the interior, in some districts even in preference to the Douglas fir, where that occurs, I might state, in general, that every part of British Columbia is amply and well provided with excellent wood for construction and other purposes. The coast has the pre-eminence in that respect, owing to the facility of export and to the gigantic size of their forests, due to the mildness of the climate and its humidity.

Q. Point out the northern and eastern limit of the Douglas fir?—The northern limit is on the Skeena, and on Tacla and Babine lakes. To the east the limit is at the Rocky Mountains. It is abundant even on the eastern slopes of the Rocky Mountains, as far east as the Porcupine Hills, and is now being extensively used for construction in the western part of the prairie region.

Q. Principally on the rivers that may be utilized for bringing it to market?—On the eastern slope of the Rockies, yes; but on the west the timber business is carried on by floating the logs down rivers as it is here, because of the large size of the logs and the rapidity of the streams. Nearly all the timber cut for exportation on the west coast is drawn out, either by teams or on small steam tramways, to the shore, launched into the sea and towed to the mill.

Q. Will you give us your opinion as to the timber resources of Vancouver and Queen Charlotte Islands respectively?—The chief difference between Vancouver and Queen Charlotte Islands, in regard to timber, is that on a large part of Vancouver Island the Douglas fir is found abundantly, while in the Queen Charlotte Islands it is not found at all. It is replaced there by cedar, hemlock and spruce, and the yellow cypress or yellow cedar. An area of about 1,900 square miles of the flat part of the Queen Charlotte Islands is covered very densely with excellent timber, but it does not include the Douglas fir and the Islands are rather north of the usual merchantile routes at present, it has not given rise, so far, to the erection of any mills. There are very excellent sites for mills, however, in the Islands, particularly at Naden and Massel Harbors, and other places where streams from the low country reach the sea. The timber of the Queen Charlotte Islands I look upon as one of the most valuable immediate resources of the Islands, and as soon as the demand for timber shall increase a little more, they will, no doubt, be utilized. Another feature with regard to these Islands is that, owing to the humidity of the climate, the woods have been very little affected by forest fires, and even where large quantities of rotten and decayed trunks, of great thickness, have accumulated on the ground, they lie there and go to decay rather than burn.

Q. Speaking of the cedar as a commercial wood, you say sometimes it grows to a diameter of 17 feet; are the trunks covered with branches, or are they comparatively free from branches for any considerable distance from the ground? The cedar is apt to give off a number of branches, but when it attains large dimensions, the living branches are generally near the top. These very large trees are more or less hollow

generally. The Indians select the largest sound cedars they find for their magnificent canoes, and the dimensions of those canoes show how large such trees may be found when one goes to search for them carefully. I might state, however, in connection with the Queen Charlotte and Vancouver Islands, that, as the area of Vancouver is considerably greater than Queen Charlotte Islands, doubtless the timber supply of Vancouver is more important than that of Queen Charlotte Islands, at least, in correspondence with the areas.

Q. What is the diameter of the largest tree you have seen in British Columbia, and are there very many of that size or nearly approaching it? I cannot state precisely the diameter of the largest Douglas fir I have ever seen; when a specimen was selected to send to Philadelphia Exhibition, one was chosen which was sure to be sound throughout, and there were larger trees they were not sure about. This tree had a diameter of 8 ft. 4 in., and a height of 103 ft., and there were a great many in the vicinity of Burrard Inlet approaching to this size. In fact, whole areas of forest are composed of trees of similar size.

Q. What is the average size of logs sawn in the mills at Burrard Inlet?—I should say the average size must be between 4 feet and 6 feet.

Q. In diameter?—Yes, in diameter.

Q. What class of spars can be got out, i. e., their length and diameter?—Spars and masts of any size desirable for shipping can be easily got in British Columbia, and are unsurpassed for straightness and strength. I believe masts have been usually shipped hewn to octagonal form from 20 to 30 inches in diameter and 60 to 120 feet long. They have been shipped to special orders as large as 42 inches in diameter and 120 feet long. Yards are generally from 12 to 24 inches in diameter and 50 to 102 feet long.

Q. How does the timber at Burrard Inlet compare with that at Puget Sound, as to size, quality and market prices?—It is probably about the same in both places; or Burrard Inlet, not being as much cut into as Puget Sound, probably contains in proportion to its area more valuable timber at the present time.

Q. Are there any places in Vancouver Island adapted for the erection of saw-mills?—A great number of localities. For instance, in the vicinity of Cowichan and northwest towards Comox, where there is a large area of flat country covered with fine timber, besides Alberni Canal and other places on the coast.

Q. Have you any means of knowing the principal markets to which British Columbia lumber and spars are shipped, the prices obtainable in those markets, and the general opinion of its quality?—I cannot state the prices obtainable in the markets. It has been shipped to a small extent to San Francisco—not in large quantity because of the duty. A good deal has been sent to South America, and to Australia, some occasionally to China, and masts and spars have been exported to England and France. Its quality, tested by strength and in other ways, is excellent, particularly for masts and spars. The only respect in which the Douglas fir compares unfavorably with white pine is its somewhat coarser grain, and that is connected of course with its greater strength.

The last raft of square timber of the season has passed through the Calumet slides.

The Hasting Star says that Rathbun & Son's drive of 150,000 logs has passed through there.

In a description of the great Bell Farm in our Northwest Territory a correspondent of the London Ont., Free Press says:—The farm is ten miles square, and there is being planted a grand avenue of 10,000 poplar trees, ten miles in length. Some of the trees were planted last year and are healthy, and average from 12 to 15 feet in height.

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FOREST FIRES.

Several weeks ago we especially urged extra precaution everywhere to prevent forest fires, which, owing to the conditions attendant on the dry and decaying vegetation, were liable to break out on the very least provocation. The advice given at that time was timely and suggestive; and people have exhibited great laxity in precautionary measures, so much so that we see accounts of great destruction in many directions. All over New England vast damage has resulted from forest fires of late. They are the result of the very causes to which we alluded at the time mentioned. The drouth has dried up the brooks, and transformed the country there into a veritable tinder box. Many of these New England fires are caused by carelessness on the part of hunters, who leave their unquenched camp fires or carelessly drop their matches with which they light their pipes, and in a very few hours an uncontrollable flame carries destruction with it in every direction, until cities and villages are threatened with complete destruction. The damage from this source already amounts to hundreds and thousands of dollars, and in many directions the people en masse are compelled to desist from their usual vocations to fight the destroying element. The danger in Michigan from the same source is not yet past and will not be until the setting in of the heavy fall rains, and the utmost care, and every precautionary measure is desirable in order that the great danger may be averted, and a repetition of the desolation of 1880 avoided. Every local paper in the Wolverine state should not desist from sounding the alarm until the dry season is at an end.—*Lumberman's Gazette.*

RAFTS ARRIVED.

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

SEPT. 20.—J. J. Calvin & Co., white pine, oak, &c., rundry cove.

Stokes & Kelly, walnut logs, Bowen's (Sillery).

British Canadian Timber Co. white pine, etc., St. Lawrence Docks.

J. B. Charleson, staves, Union cove.

E. L. Kelsey (2), staves, Woodfield and Spencer coves.

Stokes & Son, staves, Dobell's (Sillery).
Collins Bay Co., oak, etc., Spencer cove.

Tree-Planting Extraordinary.

The Mexican Government has contracted with Mr. Oscar A. Droege, to plant 2,000,000 trees in the Valley of Mexico within four years from March 15, 1884—500,000 a year, in such places as the Government shall choose. The contractor pledges himself to establish a number of nurseries and to have in them each year at least 800,000 ash, 35,000 willows, 120,000 poplars, 60,000 eucalyptus trees, 60,000 trans-japores, 60,000 mountain cypress cedars, 60,000 acacias, and 120,000 of miscellaneous varieties. The trees must be in plantations of from 50,000

to 100,000 each, and Mr. Droege has to maintain them for two years after planting. He is not compelled to plant trees along the highways, however. Three graduates of the School of Agriculture are to be received into the nurseries each year, there to study the science of forestry. He is also to raise fruit and other useful plants for free distribution. There is to be translated from the German every year a work on arboriculture of recognized merit. An inspector is to superintend, and Mr. Droege is to receive annually 40,000 dollars (£8,500) till the sum reaches a total of 200,000 dollars (£42,500).—*Pall Mall Gazette.*

Jailing Logs.

The *Northwestern Lumberman* says:—It is a common thing for people to be jailed, but it is for the C. N. Nelson Lumber Company, of Cloquet, Minn., to introduce a practice of jailing saw logs. Last week this company was driving into what is termed up there a "jail boom" a quantity of logs, belonging to the Duluth Lumber Company and other Duluth parties; and as a continuance of the unpleasantness that has existed on the St. Louis for some time, the logs will be held in chancery until the tolls exacted by the Cloquet company are paid.

Deal Culler's Deputation.

An Ottawa despatch of Sept. 20th, says:—A deputation of deal cullers from Quebec, accompanied by the Supervisor, waited on the Deputy-Minister of Inland Revenue, seeking a more equitable distribution of the earnings of the staff. They subsequently waited on Sir Hector Langevin.

A manufactory of barrels, kegs and wooden ware generally is being established in Montreal with \$100,000 capital.

"LEAVES have their time to fall," says the poet, but Wild Strawberry leaves are on the rise just now, being utilized in such enormous quantities in making Dr. Fowler's Extract of Wild Strawberry—the infallible remedy for Cholera Morbus, Diarrhoea and other Summer Complaints.

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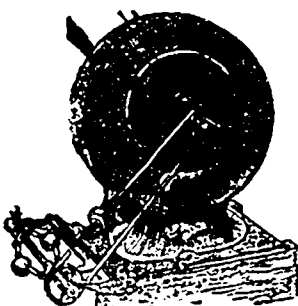
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Lake Shore & Mich. So. R.R. Shops, Elyria, O.
Index Printing Office, Evanston, Ill.
Republican, Johnstown, N. Y.
Tribune, Salt Lake, Utah.
Alton Printing Co., Alton, Ill.
A. F. Worthington & Co., Cincinnati, Ohio.

Lemon & Co., Waverly, N. Y.
Braun & Jones, Cedar Rapids, Iowa.
Gates, Douglas & Co., Cedar Rapids, Iowa.
Village of Rutland, Rutland, Vt.
W. L. Randall, Chicago, Ill.
A. J. Stoll, Sandusky, Ohio.
Killets & Wayland, Chillicothe, Ohio.
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N. Shelton, Omaha, Neb.
H. J. Lowelling, St. Helena, Cal., and others..

Do not fool your time away trying other Motors, but send for the Tuerk Motor, which is warranted to do better work with less water than any other Motor or Water Engine made.

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

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BOTANIC GARDENS.

We take the following extract from "Hasty Notes on Trees and Shrubs of Northern Europe and Asia," by Charles Gibb, Abbotsford, Quebec:

"Europe may well be proud of her Botanic Gardens. The large outlay of the European Governments seems to have been money well invested. Botany in its relations to Agriculture, Horticulture and Forestry is a science deemed too valuable to be suffered to remain untaught. Russia is in no way behind in this matter. At St. Petersburg what cannot be grown out of doors must be grown within, thence they have there the largest number of species under glass in the world. Not only in the larger cities, Moscow, Warsaw and Kioy, but in the smaller towns like Kazan, Voronezh, Orel and Penza (the last not visited by us), we find Botanic Gardens such as we might feel proud to own.

A generation or two ago, when Loudon and Lindley were at work in England, the Royal Horticultural Society imported from all parts of the world the plants likely to be useful or ornamental in England. They sent agents to China. Robert Fortune, however, spent much of his time at Canton, almost in the tropics. He was not in search of plants suited to the climate of Quebec, and yet some of our best hardy shrubs were brought to light at that time. This was probably the age of greatest Horticultural interchange the mild temperate regions have ever seen, and upon it is largely based their present advanced horticulture; and yet this work has been only of minor use to us.

In the tropics, and in the sub-tropical climates, the British Colonies have taken the lead in this matter of Botanic Gardens: wherever there is a Colony of any size there almost always is a Botanic Garden. Ceylon, India, (several), Singapore, Hong Kong, Queensland, Victoria, South Australia, New Zealand, Tasmania, Mauritius, Cape of Good Hope, and many others which I am not sure enough to note have their Botanic Gardens. Also in the West Indies, Jamaica, Trinidad and Demarara. The East and West Indies have interchanged for over 100 years! Read the reports of the Jamaica and other Botanic Gardens in the library of the Montreal Horticultural Society, and you will see that it is this botanic interchange which has built up the enormous export trade of the Tropics.

Now there are two points to which I wish to draw special attention.

I. We in the cold north have hardly begun to exchange with our like climates in the old world.

II. In Canada we have no Botanic Gardens.

As to exchange with our like climates, that will begin next fall. As to Botanic Gardens we must speak less hopefully. Our Horticultural Societies have done good work. Our Universities do not neglect the science of Botany. We have some fair collections of trees, some Horticultural Gardens; but our Government has never seen the need of expenditure upon Botanic Gardens, as have the Governments of the European powers, and the Governments of other British Colonies. That this great Dominion of Canada, which stretches from the Atlantic to the Pacific, should be without a Botanic Garden, or a series of such gardens, is a fact without parallel in British Colonial history.

On the European Forestry plantations I must say a few words. The planted districts in France we did not pass through, but we obtained some idea of their method of work by visiting the Forest School at Nancy. That work one may get some idea of by reading their reports now in the Montreal Horticultural Society's library. In Germany we were continually passing extensive plantations of Scotch Pine (*Pinus sylvestris*), bordered with Norway Spruce (*Abies excelsa*). The Germans are most economical in the use of wood, so that pine so extensively planted must ere long become an article of export. But where are the hardwoods needed for a thousand different purposes. Strange this exclusive planting of one species. So well are the forest plantations of Wurtemberg cared for, that the term "high culture" could with justice be applied to them. Evergreens are easily and cheaply propagated in the climate of Germany, and hence the method of

planting adopted is that of close crowded planting, which of course, necessitates continued thinning.

In Russia the Government controls, in fact "works," a large proportion of the forests of the Empire. Of natural and planted forest the Government held in 1878 what is equal to 351,730,000 acres, exclusive of Siberia, besides about 51,590,000 acres of scrub at the far north. In 1878 they received from these forests an income of 10,648,000 roubles, and expended on new plantations, and working expenses, 6,400,000, leaving a profit for the year of 4,248,000 roubles, or about \$2,124,000. The extent of the plantations in Russia I cannot state. I know, however, that in three of the Stoppo Governments in Southern Russia, 22,880 acres have been planted within the last eight years. There are 702 forest stations under the charge of a like number of Foresters, and as we journeyed over the prairie regions of Russia, we were continually coming across some Forestry Station with its surrounding plantations. Like the beet sugar factories they are scattered all over the otherwise treeless plains. Unlike the plantations in Germany the Russians have planted not only their native forms of the Silver pine and Norway Spruce, but largely of Pedunculata oak, ash and basswood, and somewhat of larch, birch and poplar; also in the Southern Stoppo regions, yellow locust, maple, elm, honey locust and others.

HOW FORESTS CHANGE.

It is only in what novel-writers call "the depth of the primeval forest" that a fair opportunity is afforded of studying the mixed growth of our woodlands, and of observing the changes which take place as one generation of forest trees succeeds another. Such opportunities are comparatively rare in the Eastern States at present. Much of the most valuable standing timber in New England to-day is to be found upon land that has one or more times been cleared or cut over. It is therefore generally of few varieties and nearly uniform age. But if we penetrate a virgin forest beyond the devastation of the woodman's axe and the fire which follows his track, we shall find it made up of trees in every stage of growth and of every variety indigenous to that section of the country. We will find hemlocks and spruces centuries old, their branches veiled with long pendants of gray moss, towering high above the hazel and moosewood. Rarely is there the monotony of a single growth. Evergreen trees mingle with deciduous. Sunshine and shadow alternate. Now we are in a comparatively clear spot where the leaves overhead are only thick enough to fleck the ground beneath with shadow; a moment later and hardly a ray of light can penetrate the curtain overhead. Alike on the dry, stony ridges, and in the soft, moist earth of the valleys the growth is mixed. Hemlock, spruce, pine, birch, willow, maple, poplar, oak and many other varieties are intermingled with a seeming irregularity that leads us to wonder how all these varieties, with so widely diverse requirements as to soil and other conditions, can flourish in such close proximity. Yet all is easily explainable if we but understand the un-failing care with which nature provides for the wants of all her children.

All through such a forest we will find at intervals the prostrate wrecks of what were once monarchs of the forest. Sometimes these have abdicated their sway by reason of their own weight and the decay of old age, sometimes their lofty heads have been laid low before the power of the nihilist wind. The latter catastrophe occurs most frequently where a thin layer—two or three feet—of rich vegetable mould overlies a coarse, loose gravel. The roots of the trees which spring up upon the rich soil above are repelled by the cold moisture of the gravel beneath and spread out for some distance around without striking deeply in. Then comes a tremendous storm, and the tall hemlock or pine is overthrown—literally torn up by the roots, bringing with them several square rods of the dark, rich earth with which they were covered. The gravelly sub soil is thus left exposed, and there the seeds of birch, willow and maple, carried by wind, bird, or squirrel, will flourish. The dirt carried up by the roots will sink down, as the tree decays, into a knoll that

will mark the death of the monarch for ages, and on it will spring up cherry, poplar and sumach. Thus, side by side, will be a marked variation in types. Not only this, but where the tree fell it swept down smaller trees and underbrush along with it, admitting warmth and light to soil which the sunbeams had not perhaps touched for centuries. In this manner the climate of that particular spot would be as much altered as the soil, and the final result might be an almost complete alteration of the character of the forest at that point. All this, too, would be accomplished by the orderly working of natural laws.

Again, on sandy plains, where the fire that destroyed the forest growth at the same time consumed the vegetable mould that gave the soil its fertility, it is curious to note nature's method of recuperating from the injury. The first step towards re-establishing a forest is made by the pitch pine or similar trees which require but little moisture. These send down their long roots, ten, twenty or thirty feet through the loose, barren gravel, to find and bring to the surface the potash and other soluble salts that are required. These elements are taken up by the tree for its own nutrition and then returned to the surface soil by the falling leaves. Thus the earth is gradually enriched and in the course of time becomes capable of supporting beech, poplar and oak again, and thus nature herself repairs the damage that the ignorance or carelessness of men inflicts upon her.

On the other hand equal provision is made for those trees which do not love the black, loamy soil, but prosper upon a poor and sandy home. Just as the surface of the plains is gradually enriched by the elements brought up from a depth, so is silicious sand from some distance below deposited upon the surface of bogs and swamps, and enables trees to thrive there which could not otherwise find a home. Everyone who has noticed with care the cultivated lands of New England has observed that where hemlock trees have fallen and decayed the soil is exceptionally poor—so much so that often, after several ploughings, the outline of the tree can be traced by the poorer growth of grass or grain, and the sorrel and coreopsis, which abhor a fertile soil, thrive there. If the decaying wood be pulverized it will be found gritty, and grains of sand can be detected with the naked eye. These are crystals of silicic acid taken up in solution into the circulation of the tree, and on its death reverting to their crystalline form. They are evident to workers of wood because they dull the edges of their tools. Now, just this silicious matter is what is wanted by various deciduous trees, some of which cannot live upon a wet, peaty soil. Therefore, if a hemlock, spruce or pine be uprooted from such a soil, its very trunk decaying will supply a foothold for hazel, willow, and yellow and white birch. As these grow in strength they will send down roots inside the bark of the fast decaying evergreen, which, piercing the damp mould will lay firm hold upon the sandy subsoil. Finally, the trunk of the fallen tree will waste entirely away, and there the observer will find the birches growing, on soil so wet and rich that they could never have taken root there but for the death of the tree that gave them birth.—*Lumber World.*

MANAGEMENT OF BURNED FORESTS.

At the Forestry Congress in St. Paul, a paper by B. E. Vernon was read on this subject. In the management of a burnt forest, the essayist showed it is necessary to study the influence of the fire on the soil and on the standing timber before deciding upon the treatment. The vitality of the timber left standing may be injured by the scorching flames. In hardwood forests where the reproduction is expected from the stocks, as in the coppice, the reproductive power is injured in proportion to the degree of heat developed by the fire. In pines, where reproduction can only be expected from the seed, the young seedling falls the first victim to the merciless fire. When the fire kills its original growth or causes its speedy death, the conditions of forest growth are at once changed and those alternations of species occur, which are the natural consequence of the change of their conditions. The essayist went on to show how, in the case of a destroyed pine forest, the light-

seeded species first takes the place of the old growth. Gradually, however, acorns and nuts will be deposited in the shade of the new growth, and as the light-seeded trees die off, the more valuable trees get a chance to grow and gradually occupy the lands. This new forest of hardwood trees if protected by fire will long occupy the ground, but the original pine forest will not appear again until the land, long enriched by an annual deposit of leaves, has been again stripped of its trees and mellowed by years of cultivation. The forest fire, then, which destroyed the original pine forest, also destroyed the capacity of the land to reproduce a similar crop of trees for a period which may be set down at from 50 to 100 years.

The essayist showed from this the importance of protecting the forests by dividing them into blocks, for instance, by means of avenues from two to six rods in width. Where the risk of fire is caused by the proximity of a railroad, safety belts along the endangered line are recommended. Where forests have been partially destroyed, various measures are recommended according to the character of the forest. Where the destruction of heavy timber is a total one the wisest plan is the immediate replanting of the land. Dead trees should not be allowed to remain, as they form the very best opportunities for the development of injurious insects. In forests of deciduous trees, where the heat generally is not as intense as in pine woods, it may be a cheap plan to await a new growth from the stocks and carefully nurse the more valuable species, in time filling up the bare spaces by planting shade-enduring species. In this, as in every other problem of forestry, it is impossible to prescribe any definite rules that will cover all the requirements of particular cases. A thorough elementary knowledge of the conditions of forest growth alone will enable the forester to decide what methods to adopt for the restoration of lost growths and reparation of the damage inflicted by fires on the soil and the forest.—*Lumber World.*

THE MARKET IN ENGLAND.

James Smith & Co.'s *Woods Circular and Prices Current*, dated Liverpool, 1st September, says, under the head of "Colonial woods:—"
Yellow pine is arriving freely, chiefly on timber merchants' account. The only sales reported have been of waxy board, 20 inches average at 2s 3d per foot for second quality and 2s 6d to 2s 8d per foot for first class, G. F. A. Square at 21d per foot for 50 feet average. Of Newfoundland pine a cargo has been sold at 13d per foot. Red pine, of good size and quality, is in fair demand. Oak is only in moderate request, save for long lengths: a few orders are in the market, but this wood is much interfered with by the scantlings from the States. A parcel of 65 feet average, mixed quality, is reported sold at about 2s 8d per foot ex quay. Elm is in good demand, especially for primo fresh wood; large average has been sold at 2s 3d and small at 2s per foot. Ash is wanted, and has been sold at from 2s 4d to 2s 5d per foot. Hickory is quoted at from 2s 2d to 2s 6d per foot. Black Walnut continues to arrive freely from the States, and prices are lower. Birch is in fair demand, and has been sold at 17d per foot for Dalhousie, 1½ inch average, 2s per foot for Quebec, and at auction 1128 logs from Pictou were offered, and realized from 14½d to 17½d per foot, and 594 logs from Campbelltown, realized 16 per foot. N. B. and N. S. Spruce Deals. The import has exceeded that of last year by 3353 standards, and, as there has been a smaller consumption, stocks have increased and prices have fallen, while there is a strong feeling among buyers that prices will be still lower. Sales in the early part of the month ruled at £7 2s 6d per standard for St. John, and £6 15s to £7 per standard for Miramichi, Halifax and Musquash, latterly prices have been accepted at fully 6d less per standard. By auction the cargo, ex Mark Twain, from St. John, averaged £7 0s 6d per standard, and several other cargoes were only partly sold. The cargo ex Canada, from Bathurst, averaged £6 13s 7d per standard ft. 3 inch spruce, and £6 18s 9d for 2½ inch, the scantling bringing £6 4s 1d per standard. Yesterday by auction the cargoes, ex Director from St. John, averaged £6 19s 6d; ex Moss Glen from St.

John, £6 17s 6d, and ox Strathmore, from West Bay, £6 18s 9d per standards. Pine deals from Bathurst, ex Canada, have been sold at auction at £8 10s for 15 inches and upwards, but most of the parcel was withdrawn. Richibucto have been sold at £7 per standard, c. i. f., and Dalhousie 1sts at £8 15s, 2nd at £5 12s 6d to £7, and 3rds at £5 7s 6d to £6 10s per standard. Quebec pine deals—1st and 2nd quality are scarce and 3rds are not so readily sold, having come forward more freely; 4th quality have been sold at £7 per standard. The late sales have been at auction of 2nds at £14 15s and 3rds at £9 per standard c. i. f., and 3rd Bright at £11 2s 6d for 12 inches and upwards, and £8 15s to £9 12s 6d for 11 inches and under. Red pine deals have been sold at £8 10s to £9 per standard. Quebec staves are dull of sale and stocks of all kinds are excessive. Palings are in good demand, and spruce have been sold at 42s 6d for 45x3x3/4 inch, and at 97s 6d for 4 to 6 feet 3x1, and pine palings realized 115s for 4 to 6 foot x1x1 inch. Laths are but seldom inquired for.

READY MADE HOUSES AGAIN.

The *Northwestern Lumberman* says if there is an industry of especial consequence which is not prosecuted in the great enterprising state of Maine it is yet to be heard from. In the matter of ready-made houses the down-easters are abreast with the times. The Kennebec Framing Company is the name of a corporation in this line of business, at Fairfield, which is called the largest in existence, but pride may have got the better of judgment in the estimate of size. Regarding the enterprise the *Bangor Mining and Industrial Journal* has the following: "Dwelling houses are made like boots and shoes, in any quantity or of any size or style, and for any market in the wide world. Not long since this firm received a single order for 50 houses for Cape May, to be delivered speedily and in complete finish. These houses were not to be sheds, nor shanties, but regularly ordered dwellings, and they were made accordingly, and so delivered, and contain hundreds of occupants at this moment. An order will be received for a \$10,000 hotel, or an ornate French roof cottage for a fine country estate, and these are as easily and expeditiously furnished as an ordinary boarding-house for a country village or a barn for a ranch in Kansas or Colorado. It is not to be supposed that only a coarse, rough frame is thus sent out, to be trimmed into shape on the spot where it is delivered. On the contrary, the house is complete when it leaves the factory, and as ready to go together as is a musket when it leaves the armory in Springfield; all the parts being found, even to the knobs for the doors and windows, according to specifications. Great trains of freight cars stand waiting about, and are freighted almost daily here. The refuse trimmings and edgcuttings of the lumber are carted off to a neighboring pulp mill, and there speedily turned into material for paper, or other products. Machinery for almost every conceivable use in connection with wood is at hand, and house materials, of any kind, or size, or shape, seem to drop out like meal from a hopper. In a recent instance, where a large building was furnished for a southern order, the parts were thus made, and when put together in the city where the building is now standing its length was found to vary not the eighth of an inch from the original specifications, although its length on the front numbered hundreds of feet. Every inch of this building, from the sill to the last shingle, was sent ready prepared from the factory, and 'set up' as readily and almost as quickly as a nail case."

THE WOOD-LOT IN WINTER.

A few acres in trees is one of the most valuable of a farmer's possessions; yet no part of the farm is so mistreated, if not utterly neglected. Aside from the fuel the wood-lot affords, it is both a great saving and a great convenience to have a stick of ash, oak, or hickory on hand, to repair a breakdown, or to build some kind of a rack or other appliance. As a general thing such timber as one needs is cut off, without any reference to what is left. By a proper selection in cutting, and the encouragement of the young growth, the wood-lot will not only continue to

give a supply indefinitely, but even increase in value. A beginning, and often the whole, of the improvement of the wood-lot, is usually to send a man or two to "brush it", or clean away the underbrush. This is a great mistake. The average laborer will cut down everything; fine young trees, five or six years old, go into the heap with young poplars, and the soft underbrush. The first point in the management of the wood-lot is to provide for its continuance, and generally there are young trees in abundance, ready to grow on as soon as given a chance. In the bracing winter mornings one can find no more genial and profitable exercise than in the wood-lot. Hardwood and useful young trees should not have to struggle with a mass of useless brush, and a judicious clearing up may well be the first step. In timber, we need a clean, straight, gradually tapering and thoroughly sound trunk. In the dense forest nature provides this. The trees are so crowded that they grow only at the upper branches. The lower branches, while young, are starved out and perish, the wound soon healing over and out of sight. In our open wood-lots, the trees have often large heads and the growth that should forming the trunk is scattered over a great number of useless branches. Only general rules can be given in pruning neglected timber-trees; the naked trunk, according to age, should be from one-third to one-half the whole height of the tree; hence some of the lower branches may need to be cut away. All the branches are to be so shortened or cut back as to give the head an oval or egg-shaped outline. Many sometimes remove half of the head, but good effects will be seen in a few years. In removing branches, leave no projecting stub on the timber, and cover all large wounds with coal-tar. Whatsoever works in this manner thoughtfully can not go far astray.—*Ex.*

TIMBER FOR HUBS.

The *Hub* gives the following advice regarding the getting out and preparing of timber for wagon hubs: "Cut the hub timber in months when the sap is down and the bark is tight. Cut the ordinary butt lengths, say four or five feet; remove the outer bark or riss, from the center of the sticks, leaving a covering of rough bark at the extreme ends. Sticks prepared in this manner should be cross-piled under dry sheds, where there is a good circulation of air. After drying in this manner for nine months or one year, according to sizes, the sticks can then be sawed into hub blocks, which have each end dipped into an elastic cement, made by melting resin to which is added sufficient grease to temper it. A hole should also be bored through the heart of each block. Prepared in this manner they will soon finish seasoning, or they can be forced in heated rooms, without danger from checking. Steaming the blocks to hasten the seasoning is practiced to a considerable extent, and, many claim, without injury to the fiber of the wood; but we do not recommend it, as some of the substance is dissolved by this process, and as the hub plays such an important part in the wheel it is necessary to preserve all the natural qualities of the timber."

The Big Raft.

The *Lumberman's Gazette* says the big raft towed from St. John, N. B., to New York, of which the particulars were given last week, contained more timber than we estimated. It consisted mainly of piling and contained 3,300,000 feet. It was therefore entitled to more respect than was paid to it. Some 75 tons of chains were used in binding the timbers together. A good saving in the cost of transportation was made, but the risk will probably stand in the way of the experiment being often repeated.

If you would escape the ravages of that scourge of the summer—Cholera Morbus, keep Dr. Fowler's Extract of Wild Strawberry at hand for use. In that and all other forms of Bowel Complaint it is infallible.

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Burdock
BLOOD
BITTERS



DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & CO. PETERBOROUGH.

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Advertising Rates:
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All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

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

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

PETERBOROUGH, Ont., OCT. 1, 1883.

It has been decided by the United States Courts that hemlock bark is not dutiable under the new tariff.

SPRUCE timber cannot be all extinct in Maine, as over \$130,000 worth of spruce gum was produced in the Pine Tree state last year.

The late log jam in Wolf river, above the Bay boom, is said to have cost the owners \$5,000 in damages for the stoppage of navigation.

LUMBER is fast going out of the piling grounds at the Chaudiere. Not ten per cent of the American barges there last month remain there now.

LARGE gangs of raftsmen are being despatched daily for the lumber shanties. During the past week about 1,000 have left Ottawa and suburbs.

BROWNLEE & Co, of Detroit, have obtained a contract to furnish 5,000 poles to the new postal telegraph line between Detroit and St. Louis, Michigan.

CANAL lumber freights from Buffalo and Tonawanda to Albany last week were \$2.40 a thousand, and to New York \$3—the highest points reached this season.

F. R. HULBERT is getting out 600 cords of poplar on Drummond's island, Lake Huron, for a paper firm at Niagara Falls. He has 4,000,000 feet of pine on the island to cut.

The Ottawa Citizen says that the shareholders of the Algoma Lumber Co. have met in that city for organization. The company is composed of some of the most energetic lumbermen in the Ottawa Valley.

ADVICES for the week ending Sept. 15, show that the sawn lumber market has taken a decided change for the better. Several prominent New York merchants have been in Ottawa and the purchases are said to have aggregated eight millions of feet, principally comprised of the higher grades. An advance of 25 cents per thousand feet is quoted in these qualities.

EXTENSIVE forest fires are reported as having raged in eastern and northern Maine, in New Jersey, Massachusetts, Maryland and Virginia. Michigan is getting into condition for a visitation, and special precaution should be exercised.

THE receipts of lumber at San Francisco for July were 36,528,184 feet, of which 13,367,060 feet were redwood, 20,813,493 pine, 1,094,002 spruce, 580,517 cedar, and 72,207 hardwood. The amount of shingles received for the month was 14,362,500, and of lath 4,011,600.

A NEW method of binding shingles has been invented by Win. Newson, of Manitow. It consists in the use of a wire of the same length as the common brand, chisel-pointed at each end, and bent at an angle of about 20 degrees, and notched to prevent drawing out.

A QUEBEC correspondent says:—Messrs. Dobell & Co., of Quebec, have purchased from Messrs. Barnard & Mackay, of Pembroke, a raft from Nipissing, white pine, comprising some 240,000 feet. The price is believed to be about 2 1/2 cents, but the actual cost has not transpired.

THE Brandon Mail of Sept. 18th, says:—Mr. McLaren and Mr. Chistie, lumber dealers of this city, to-day purchased the entire old season's cut of spruce lumber from Shields & Co's saw mill, consisting of over a million feet. The price paid was in the neighborhood of \$50,000.

AN Ottawa despatch says:—Eighty-four men have left for Mackinaw to work for an American lumber company. They were hired for \$16 per month and board. Another gang will leave in a day or two for the Diamond Match Company, at wages averaging from \$18 to \$20 per month.

IN the three rafts to be towed from French Bay for the Collins Bay Rafting Company, there is 480,000 feet of timber, or equal to 30 vessel loads. If the tow scheme succeeds, vessels will suffer. In each raft there is used forty tons of chain, so that they are able to stand tossing about.—Mail.

THE publishers of the Farm, Field and Fireside, Chicago, are meeting with great success in securing subscribers to their publication. In addition to furnishing an excellent paper at the low price of 50 cents for six months, they propose to distribute \$40,000 in presents to their readers. See their announcement in advertising columns.

WHEN Cobb & Mitchell, of Cadillac, Mich., received a telegraphic order for timber for a temporary bridge on the Grand Rapids & Indiana railroad, they stopped other work, sawed 30,000 feet for the bridge, and loaded the lumber on cars in one hour and 30 minutes. That was sawing "on order" and doing it quickly.

ADOLPH LEITELT, of Grand Rapids, Mich., is president of a new corporation that owns Cockburn island, at the head of Lake Superior. The name of the company is the Cockburn Island Timber Company. About forty men will be employed on the island the coming season, getting out telegraph poles, ties and pulp wood.

BRY & HORN, of Frankfort, Ky., have since last March shipped about 2,500 walnut logs to Berlin, Germany, for manufacture into veneers. The logs contained about 680,000 feet of an average value of \$55, and amounting to about \$37,000. The cost of transportation amounted to \$15,000 on the lot. The rate from Frankfort to New York is \$85 a car.

THE steambargo Oakland, lumber laden and bound from Bay City to Erie, Pa., on September 17 water logged in Lake Erie, during a storm, and foundered. She had on board 350,000 feet of lumber belonging to Carroll Brothers, of Erie. All but four of the crew took to a boat and reached Connaught harbor in safety. The men that preferred to take their chances with the wreck were lost. The Oakland was one of the oldest boats on the lake and was valued at \$10,000.

ALEX. MCKAY, of Ottawa, Ontario, and a party of timber lookers have been into the Lake Winnipeg region, particularly in the Bearing river district. They report plenty of spruce, but were surprised at the small amount of pine found there. Mr. McKay has a 50-mile limit on Bearing river. The stream is rapid and rocky, but can be driven.

THE Commercial Bulletin, of New York, predicts that it will not be long before the lumber business of the South will amount to \$100,000,000 per annum. The growing trade with the North in the yellow pine lumber alone sustains the calculation, and with all the other varieties of timber there that will surely be drawn upon heavily, the Bulletin has, we think, made a safe prediction.

THE Northwestern Lumberman says:—At the state land sale at Madison, Wis., lately, the average price realized was \$3.60 an acre. Lumbermen of the Chippewa Valley formed a pool and bought a large amount of good land in Sawyer county, and it is said that they will clear \$50,000 by the deal. The greater portion of the lands sold in Ashland, Bayfield, Chippewa, Douglas, Lincoln, Price, Sawyer and Taylor counties.

R. A. LABREE, formerly of Gardiner, Me., put in a saw mill at Jacksonville, Fla., about two years since, and added a box-cutting machine, and finally a new boiler and engine. During 1882 he shipped \$60,000 worth of boxes to parties along the river. It was found difficult to obtain steamboats for this purpose, and after suffering inconvenience for two years Mr. Labree has built a boat of his own, that can carry 10,000 boxes—the daily product of his mill—and run near enough to the shore to discharge the cargo in shallow water without a dock.

THE McKellar correspondent of the Parry Sound North Star says:—Messrs. S. & J. Armstrong are making preparations for an extensive seasons work in the lumber woods this winter. Wm. Little has already started one camp for this firm, and they intend starting four other camps immediately. They have contracted with the Parry Sound Lumber Company to get out and drive eight million feet. They have also a contract to get out and drive two million feet for the Midland and North Shore Lumber Co. This will give employment to a large number of men and horses.

PRESERVATION OF FORESTS.

At the instance of the Government of the Province of Ontario, an exhaustive report upon the necessity of preservation and replanting forest, has just been compiled by Mr. R. W. Phipps, of Toronto. The subject is one in which increasing interest is being shown in the Dominion, and the report in question deals with it very comprehensively. The writer first calls attention to the vast wealth the Province originally possessed in its forests. When the paddles of the Frenchmen first broke the waters of the Toronto bay, he remarks, Ontario, from the Detroit to the Ottawa, was under the roof of the forest, and contained, in the opinion of one of the best qualified judges of the United States, perhaps the most valuable masses of timber which ever existed in a region of its size. Pine, maple, beech, ash, and white oak were possibly most prominent, but hickory, hemlock, ironwood, and the silver birch were scarcely less abundant. The early settlers, however, directly after arrival, began the work of destruction with a ruthless hand. They required the land, and there was no demand for timber. Hence square mile after square mile of forest was destroyed by fire—a process which went on for years, and which has been followed up by the operations of the lumbermen. The result is that the cultivated portions of Ontario will speedily become almost denuded of trees, while the lumbermen are compelled now to go great distances for the superior quality of pine which they used to get much nearer home a few years ago. Apart from any considerations as to the future of the lumber trade which it may suggest, this state of things is obviously of much significance to the agriculturists; and it is chief-

ly this aspect of the matter which is discussed in Mr. Phipps's report. The consequences are, indeed, likely to prove so serious that, in the opinion of the writer, the whole of Ontario is in great danger of heavy loss, unless action be taken in time by the authorities. At the close of a somewhat elaborated enquiry, the report recommends the preservation of the higher lands in forest, and the acquisition and replanting of such lands where they have been already cleared; economy in utilization of the great forest in the north-eastern and north-western portions of the Province; the adoption of adequate measures for protection against forest fires; and lastly, the planting of trees, as "wind-breaks," on highways and the dividing lines of farms. By these means it is thought the climatic influence of the forest may be preserved, and the lumber supply &c. maintained in perpetuity. What action the Ontario Government may take on the strength of the recommendations is not yet known, but their appreciation of the importance of the subject is shown by their authorizing the gratuitous distribution of a large number of copies of the report among the farmers of the Province.—London Times.

FOREST DENUDATION.

The effect of the operations of the lumbermen in the woods upon the rainfall, etc., is often discussed as though the writers believed that in lumbering operations the forests were utterly exterminated, all the trees being felled and the underbrush cut leaving the land a barren Sahara. This, of course, is an absurd view, for it is seldom that more than one-half the trees on the best tracts are worth cutting, and trees are not felled for pasture or because the loggers have nothing else to do. A great cry has been raised against the lumbermen operating in the forests of the Adirondacks, and dire results have been predicted. A tourist, however, exposes the absurdity of the fears, showing that the outcry is void of good sense and knowledge of the real condition there. He says truly that only pine, spruce and cedar are now cut, because the coniferous woods only will float down the streams to the mills, and no logs of less than 27 to 30 inches in circumference are marketable. The result is that the lumbermen takes, on the average, 10 or 15 of the largest and most mature trees from an acre. Is it not better that those mature trees should be utilized by the present generation of men, than that they should fall and decay uselessly, except to generations of trees that may revel in their elements a hundred or a thousand years hence? When this subject was discussed in the New York legislature last winter, a trustworthy expert stated that if he could take the whole assembly over the Adirondack region in a balloon, not one in fifty of the members could tell where the lumbermen had cut all the saleable trees and where he had not. He was right. None but an expert, and one, too, who had viewed the premises before the despoliation could tell; and then only by missing the black tops of the spruces.—Ex.

A LUMBER CENTRE.

We find the following in the Chicago Northwestern Lumberman:—The Lumberman has heretofore called attention to Selkirk, or East Selkirk, Manitoba, as probable to be the most important lumber manufacturing and market centre in the Canadian Northwest. It has based this prophecy on its situation on the Red River of the North, a few miles from its outlet into Lake Winnipeg. Thus it is the gateway through which must pass the untold millions of feet of lumber and timber yet to be derived from the forests that hover along the hundreds of miles of shore inclosing the great northern lake and the lower Saskatchewan, Cedar, and other lakes, and rivers tributary to the major waters. The vast prairie territory to the west and south makes it necessary for this wealth of timber in the Lake Winnipeg region to be manufactured and distributed; it will be an inevitable result of the settlement of the country. We have received a pamphlet from officials of East Selkirk that sets forth some features of the manifest destiny of that point, which include the lumber business. The shipping interests of the place are mentioned as follows: At Colville landing, the port of East Selkirk, the wharves are usually piled up be-

yond their capacity with cordwood, shingles, lath, ties, and other products of the extensive mills of Lake Winnipeg, while the spacious warehouses of the Hudson Bay Company are all filled to overflowing with goods ready to ship to Prince Albert, Edmonton, and other points on the Saskatchewan river, as well as to various ports on Lake Winnipeg and Lake Manitoba. The Red River at East Selkirk is wide and spacious, entering Lake Winnipeg a few miles below, and here is the best harbor on the river, it being commodious and accessible. Nineteen steamers now run out of this harbor to the various ports on the navigable waters to the north and west. East Selkirk is also now quite a railroad centre, having a line of the Canadian Pacific running to Rat Portage and Thunder Bay, and a branch from Winnipeg, and another branch from Winnipeg on the west side of the River is being built. The facilities for reaching Selkirk thus being furnished by the Canadian Pacific Company show how important that corporation regards it as a shipping centre. It is needless to say that the citizens of the place have great expectations, and already are comparing their destiny with that of Chicago, the criterion of all modern urban growth. In this case, however, they do not reckon wholly without reason, as other places have done. If their locality did not hug the north pole quite so snugly their would be no question but that Selkirk is a future great city.

KEEWATIN DISTRICT.

From our own Correspondent.

VERMILLION BAY, Sept. 10.—This lively little village was further enlivened last week by the hum of the new circular mill of Messrs. McDonald & Shields, which then commenced regular operation on several acres of logs lying in this beautiful bay of Eagle Lake. There is about 3,000,000 feet of stock, nine-tenths of which is red pine of excellent quality. The engine and machinery is from the shops of Wm. Hamilton & Co., of your good town of Peterborough, and it works admirably. The amount of logs obtainable at this point not being large and being generally of moderate size, business economy suggested a mill in character with its work. A 54 inch saw, of number 8 guage, is run with a pony carriage of a new and improved pattern with steam fuel engine, 16x20, supplied with steam by two 4x14 feet boilers. The cutting capacity is limited only by the strength of the saws, a No. 7 guage would be better in this firm red pine. The convenience of the carriage makes up for the slight deficiency of the saw. One man performs all the operations on it with ease, and so quickly that generally not a second is lost in rolling on or canting. Though this mill is well arranged for cutting and disposing of lumber for the present, at least it is defective in regard to the disposition of the refuse. Complete machinery for this purpose is a necessity in this country of high wages, and is the true economy.

The mills at Keowatin village are deficient in their supply of water, the lakes being unusually low. The Winnipeg Lumber Co.'s new mill at Rat Portage is not expected to start this season. Their two mills in Winnipeg have lately started on the stock carried over from last season, their new cut of logs having not yet arrived.

Mr. Sprague's mill at Winnipeg lately cut 51,000 feet in 11 hours, at one time of the day 1,100 feet was cut in six minutes, no doubt the logs were selected, but this is good cutting for a single circular in red pine and is another score for Wm. Hamilton's manufacture.

Mr. Wm. Tait, formerly of Gravenhurst, keeps the Sutherland mill active throughout the season. Building operations have slightly improved and the labor market is better equalized than formerly.

HEMLOCK AND PINE.

The Warsaw Wis., Correspondent of the *Northwestern Lumberman* says:—There are other important facts in connection with the question of the timber supply to be considered. Hemlock, the coming lumber, grows in such abundance along the Wisconsin river as to be beyond estimate, and its quality is of great excellence. There are those who believe there is nothing so suitable for piece stuff as hemlock. Until quite recently but little attention was paid to hem-

lock, but latterly certain operators have put in 1,000,000 feet, or thereabouts, with their other logs, and they will gradually increase the amount. To what do these facts point? That while the rate of lumber production is very certain to increase year by year, the proportionate amount of pine consumed is likely to decrease in a few years. The nearer the owners of stumpage and mills approach the end of pine, the greater will be the effort, it is reasonable to suppose, to husband the resources. Necessarily a continuing demand must spring up for hemlock, and as much as possible of that timber will finally be cut to spin out the pine. Why then, should there not be considerable fair pine to cut 20, or even 25 years from this date?

In discussing the life of the pine supply theorists usually take the ground that the timber will be cut at an increased rate so long as a tree stands, and it might be inferred that the haste of the manufacturers to saw the last log would be so great and such their blind recklessness, that on the last season of the waning supply, they would prepare to put in twice the amount of pine that was left standing. There is no shrewder class of men than the lumberman, and they may be relied upon to look out for their own interests. When the pine is really on its last legs no one will discover it sooner than the men who own it. There seems to be reckless consumption now, but the fact is there is so much pine that the manufacturers have not been gun to be scared. There is reason to believe that the efforts at annihilating pine will be tempered with moderation as fast as wisdom may suggest. No one can say at what time the Wisconsin forests will be bare of pine, and it is to be expected that certain parties will reserve virgin tracts for a number of years, not allowing the timber to be cut, and holding it for its future value, so that more or less good pine will be left for other generations. Neither is all the good pine owned by the mill men. A Stevens Point man having 250,000,000 feet is one of the heaviest owners, and the larger part of the timber is said to be owned by parties outside the state.

Burglaries.

The *Midland Free Press* of Sept. says on Sunday morning last, the office of the B. C. L. and T. Co., was entered, and the books of the Company were taken. A reward of \$10 is offered for their recovery. On Sunday night the station was entered by burglars, but before they could secure anything valuable they were frightened off.

Forestry Exhibition.

An Industrial Forestry Exhibition is to be held at Edinburgh next year. The *Courant* says the promoters are making rapid progress with their arrangements. The programme has been completed and the classification of exhibits has been arranged. Promises of contributions exceed the most sanguine expectations. Canada makes a good display at the Fisheries Exhibition in London. No doubt the Dominion will be represented at the Forestry Exhibition.

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

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James Shearer, Saw and Planing Mill, Montreal; James Crossen, (car builder), Colborne, Ont.; Canada Pacific R.R., Perth, Ont.; Kingston Car Works, Kingston, Ont.; Pike & Richardson (Cooperage Co.), Chatham, Ont.; Eversy Manufacturing Co., Sash, Doors, Blinds, Mouldings, &c., Toronto, Ont.; Grand Trunk R.R., London, Ont.; Steinhoff, Schnoor & Co., Staves and Hoopings, Wallaceburg, Ont. 1221

THE FOREST AND THEIR MANAGEMENT.

We take the following from Mr. R. W. Phipps' report to the Ontario Government:

FRANCE.

The administration of forests in France is entrusted to the Ministry of Finance, and the head of the Department is the Director-General, assisted by two administrators, one charged with the management of the forests and the sale of the products, the other with the police of the forests and the forest laws. In the Department there are thirty-two conservators, each in charge of one or more departments, according to the extent of the forests in each. The immediate supervision is entrusted to inspectors, who are assisted by sub-inspectors and *gardes-général*, who live near, and personally superintend all operations and work of the forest guards. The brigadiers and forest guards live in houses in the forest and serve as a police over a certain range. They are required to be present at all operations, and to go round their ranges at least once a day to report any violation of forest law that may take place.

The saw-mills in the forests are usually owned by the Government and hired at a certain rate to the wood merchants, who buy the cuttings. The timber is allowed to be earned up before it is inspected and marked by the forest guard under the superintendence of an inspector.

The forests under the management of the bureau are (State and Commune) about 7,500,000 acres. There were nearly a million more, which went with Alsace and Lorraine to Germany. Also, there are in France 15,000,000 acres of private forests.

Of schools of forestry, the French have, at Nancy, one of the best in the world, where pupils are instructed both experimentally and theoretically in all forest learning, the collegiate home studies being constantly varied by excursions of pupils, under charge of professors, to those forests where, at the time, most can be learned. Proficiency in these schools forms, of course, a strong recommendation to future advancement in the Government or private forest service. For admission to the school candidates must bring a letter of authorization from the Director-General of Forests, which can only be obtained by those from nineteen to twenty-two, without infirmities, and having a diploma of Bachelor of Letters, or attainments in classical studies to warrant such diploma. They must also have an income of \$300 per annum, or a pledge from friends to provide it, and \$120 afterwards till employed as *garde-général* on active duty.

In the difficulties which have hindered the efforts being made, especially in America, to preserve a due amount of forest, one of the most formidable has been the disinclination to interfere with private rights. It will be of service in Canada in this matter to notice how summarily, in France, this matter has been managed. I will therefore quote the principles of law upon which the forest code of France is founded, as stated with great precision by Professor Macarel (a writer deservedly of the highest estimation) in his "*Cours de Droit Administratif*." As they embrace views applicable to other countries under like necessities—being in fact an extension of the right of eminent domain, or that maxim of Roman law, *salus populi suprema lex*—they will be especially germane to our purpose. He says:—

"Restrictions Implied in the Free Enjoyment of the Soil."

"As to the woods and forests:

"The preservation of forests is one of the first interests of society, and consequently one of the first duties of Government. It is not alone from the wealth which they offer that we may judge. Their existence is of itself of incalculable benefit, as well in the protection and feeding of the springs and rivers as in their prevention of the washing away of the soil from mountains, and in the beneficial influence which they exert upon the atmosphere.

"Large forests deaden and break the force of heavy winds that beat out the seeds and injure the growth of plants; they form reservoirs of moisture; they shelter the growth of the fields; and upon hillsides, where the rainwaters, checked in their descent by the thousand obstacles they present by their roots and by the trunks of trees, have time to filter into the soil

and only find their way by slow degrees to the rivers. They regulate, in a certain degree, the flow of the waters and the hygrometrical condition of the atmosphere, and their destruction accordingly increases the duration of droughts and give rise to the injuries of inundations, which denude the face of the mountains.

"Penetrated with these truths, legislators have in all ages made the preservation of forests an object of special solicitude.

"Unfortunately, private interests—that is to say, the action of those who do not directly feel the power of the Government—are often opposed to this great national interest, and the laws framed for protection are often powerless.

"In France, the ordinances prior to the revolution carried too far the restrictions imposed on private owners. The new regulations fell into the opposite extreme, and allowed the proprietors free and absolute liberty to dispose of their woods.

"A large destruction followed this imprudent transition from excess of restraint to excess of liberty. The proprietors abused this unwonted freedom, and clearings multiplied indefinitely, without distinction as to the places where they were made, so that in many localities the rushing down of the denuded soil and the deforesting of mountains caused the soil needed for vegetation to disappear and left the rocks naked. The rise in the price of wood and the easy and certain resources offered to proprietors in the clearing of a planted tract, when compared with the remote and eventual advantages offered in their preservation; the hope of compensation, and, beyond this, the advantages, in one way and another, of cultivation, may be recognized as among the causes which sufficiently explain the inducements offered to many of these proprietors, which led them to undertake these clearings."

I would here notice that this is precisely what we have been doing in Canada, and that the ill effects which followed in France will surely in no long time be felt in Ontario. They are already felt; we have not the climate we had, nor the favouring moisture when most needed. Yet we could get along as we are. But that is just what is impossible. We must, while there is time, use some means of averting the evil, or we shall certainly become much worse off than we are. M. Macarel goes on:—

"At length, this progressive deforesting of the soil of France, joined with the incessant need of firewood, and the demand for wood by manufactories and ships, have, during forty years, made sad havoc with our forest wealth.

"A renewal of the ancient prohibitions by the law of 9 Floreal, year XI, was deemed necessary to oppose this excessive clearing of woods by private owners. It was accordingly decreed that, during the twenty-five years dating from the date of the promulgation, no wood should be cut or carried off unless six months' notice had been given by the proprietor to the forest conservator of the arrondissement of the district in which the wood was located. Within this time the forest administration might object to the clearing of the wood, and was charged to refer the question before the end of this time to the Minister of Finance, upon whose report the Government might definitely decide within the same time. It therefore resulted in this, that to make a clearing an authorization precedent by the administration was necessary, and that if the administration thought proper not to grant this, the proprietor was restrained against cutting.

"Thus, according to this branch of agricultural industry, the general law of France is, that owners are free to vary, within certain limits, the cultivation and working of their lands; but, as to woods and forests, the public interests demand that individuals shall not be free to clear them from the soil whenever they please. From hence it follows, that the administration has a right to pronounce its prohibition against clearing whenever it is deemed that the public interests require that this be done."

The penalties for clearing when forbidden are, I may state, a fine of about \$200 per acre, and compulsory replanting within three years. This law was, I conceive, in full force in 1874, as this quotation forms a part of a report to the U. S. Congress of that year. It probably is in force

still, and justly so. The voice of the people, not of solitary citizens, should decide in so important a matter as deforestation a country.

The French Government have, at great expense, replanted vast and almost barren districts; they have also established great forests along the sea shore where formerly the sand threatened to destroy whole departments, and have averted the evil. But the chief means is the prohibition of clearing; for it is the interest of an owner who does not clear to plant and improve his forest, so as to receive an increased income from the trees arriving at maturity in increased numbers yearly.

SWITZERLAND.

In no country in Europe has the waste of forests been more rapid or destructive than in Switzerland, and in none, perhaps, has this providence been followed by more disastrous results. The woods, being considered common property, were uprooted and the soil on the mountains being exposed to the wash of the rains, was rapidly carried away, leaving broad areas of naked rock, from which the water would at once sweep down the valleys in sudden and destructive inundations. The autumn of 1868 is memorable on account of these floods.

Public attention has, however, been thoroughly awakened, and active measures are in progress to remedy, as far as may be, these evils. The cantons which have charge of these operations have for some time, at great expense, been constructing works to control the streams, and planting trees wherever practicable.

I would here remark that this is a very difficult matter compared with what it might have been. It is easy to preserve a forest on a hill-side, but the soil once washed to the rock, it is another matter. I could point out places in Ontario where splendid forests stood, and yet might have stood, now for many miles

"White rock and gray rock, barren and bare."

The matter is now in Switzerland taken into the hands of the national Government, and the following article gives the idea:—

"Art. XXII.—The Federal Union of Switzerland has the right of supervising structures for the protection of water courses, and of the forest police in mountain regions. It will assist in protective structures for water courses, and in the planting of forests at their sources. It will enact the requisite regulations for maintaining these works and the forests now existing."

RUSSIA.

In this vast empire, where, as in the United States, we have been accustomed to believe the forest is interminable, and where, in fact, the amount of woodland in the northern two-thirds is more than twice as great in proportion to its area as in the United States, the Government has turned its attention energetically to the subject of forestry, and has undertaken to establish by regulation conservative measures. As yet, private persons and establishments owning forests enjoy the absolute right to cut and clear as will. But these do not own nearly so much as the Government, which has about three hundred and thirty million acres of wood; the others holding about one hundred and fifty. About forty per cent. of the country (Russia in Europe) is timbered. I must remark that this amount, after so long an occupation, shows that the timber has been taken some care of already. For the immense Government woods, they have been placed under the care of the Minister of Public Domains, who has a director of the Forest Department, and the organization of the service is very complete. For the purpose of fitting young men for the duties of forest agents and agriculturists, either for the Government service or upon private estates, two special schools of agriculture and forestry have been established—once at St. Petersburg, and one near Moscow. The course of instruction extends through three or four years, and the schools are placed near forests, where every detail is illustrated. There is also another forest school at Lissino, of the second grade, where the course is very practical.

SWEDEN.

In 1859 a bureau of Forest Administration was created. Forest regulations, however, extend back to 1647, and even before that, private owners were required to plant and protect from cattle two trees for each one cut.

In 1868 a commission was appointed, under

the direction of Mr. E. V. Alinquist, to enquire into the need of further legislation, and in December, 1870, he submitted a report with a bill, making 392 pages, besides numerous tables.

One clause in the reported bill is a compulsory feature, which, though less stringent, is in the spirit of the enactments now in force in most of the countries of continental Europe, namely, forbidding trees to be cut for sale smaller than eleven inches at the butt, or eight inches a tceon Swedish feet therefrom.

(To be continued.)

PREPARING LUMBER FOR MARKET.

A correspondent of the *Southern Lumberman*, who evidently understands his business, has the following to say to saw mill men who cut lumber for the eastern market:

We know that trade is dull. We are told of it often enough, goodness knows; but for all that, even if the market is dull, good stock, properly prepared, will always bring a good price. Our saw mill men, and dealers, too, are too much in the habit of shipping poor stock to the eastern market, and, if they have nearly a car-load of passably fair lumber, they will fill up by putting in a few hundred feet of stuff containing loose knots, or heart on one side and various other defects, thinking that, as the greater part of the car is good, that the poor will be accepted. Mistaken idea; it will be thrown out, and if they receive any pay for it at all, the amount will be less than the cost of transportation, and thus they lessen the profits on their really fair lumber.

There is no use talking; this matter of properly preparing lumber for the market is an all-important one, and there should be a thorough canvas of the matter between the mill men and the manufacturers. It will result in much good to both.

Let me again say to the mill men: If you expect to realize a good price for your ash and walnut lumber, do not fail to see that it is properly manufactured before it leaves the mill. It must have square edges; sap taken off; leave no boards with hearts in them; trim the ends off square, and to even lengths, and see that it is not split by careless handling; and bear in mind also that thick lumber, one and a half inches and over, must be more nearly clear than thinner boards, if they pass into the grades of firsts and seconds. If you are cutting ash—4 inches thick—do not imagine for a moment that a board with heart showing on one side will pass as merchantable lumber. It will not. Put such boards back on your head-blocks and saw them into thinner ones. The writer of this, who handles perhaps as much or more than any other dealer in the country, would gladly be willing to pay a better price, if lumber was brought to him in proper shape.

GAS FROM SAWDUST.

The *London Timber Trades Journal* says:—So far as we are aware, the making of illuminating gas from sawdust is a new branch of trade; certainly it is one of considerable importance from the fact that it deals with what, in the majority of cases, is a waste product. We are advised that Mr. R. Tomlinson, late manager of the Cottingham Gas Works, near Hull, has just completed the erection of the gasworks and lighting the town of Deseronto, Ontario, Canada, the works being erected for the purpose of making gas from fine sawdust. The gas produced is said to be far superior to that made from the best Silkatone coal, and to be equal to that made from the best cannel coal. It would appear that Mr. Tomlinson is specially commissioned in the above matter, for we learn that upon completion of some water mains, which he has also in hand, he intends returning to England.

As a basis for the manufacture of illuminating gas, sawdust lays claim to many specialities, more so in the wood-producing countries of Northern Europe and America, where coal has to be obtained at great cost, and where sawdust is a greater drug and a nuisance, than in our own country. Side by side with coal, they have a raw material ready to their hands, one which in many cases they would cast in the rivers, but are prohibited from so doing on the ground that it sinks to the bottom upon saturation, and, like the bark of trees, becomes injurious to

the fish. In most cases it is piled up on the banks of the rivers, where, from the size of the heap, they are justly called "mountains of sawdust." We have seen sawdust as cast aside form features in the landscape of the Swedish river banks altogether dwarfing the mills and their surroundings, and we have no doubt but other countries, such as Russia and Canada, can give like experience of this waste product. In England sawdust is not generally a waste product; it is compressed with a solution of resin, and becomes an article of commerce for lighting fires; it is also used for strowing on the floors of certain shops after the manner of sand, as bedding for horses, and for packing purposes, &c., but the bulk of it is mixed with coal and other refuse and burnt under the steam boilers.

As sawdust can be practically applied to the manufacture of illuminating gas, it is clear, as in the above instance, that, where the supply is at hand, towns may be illuminated by it; but it strikes us as being applicable in a smaller and more general degree in the case of illuminating saw-mills, joinery works, and other establishments where sawdust is produced. We take it that its manufacture could be conducted on a simpler plan than that of coal gas, because it would be more free from mineral residue, and require less labor and plant in connection with its purification. Further, the coke or ash remaining would be a valuable fuel for heating and cooking purposes, where sulphurous fumes were objected to. We can well understand that sawdust would produce a good illuminating gas, for it is of all materials the most combustible, or capable of producing flame; for domestic purpose, it would be most valuable, as its combustion would be free from such deleterious ingredients as sulphur. We think there is an opening here for the operations of our engineers to produce small cheap plants for gas-making from sawdust; such plants, although not largely applicable in England, where there is plenty of coal and but little sawdust, would be freely used on the Continent, where there is little or no coal and plenty of sawdust or waste wood.

REDUCE THE CUT.

The London *Timber Trades Journal* says:—Now that the time approaches when arrangements for work in the forests will have to be made, we cannot too strongly urge upon manufacturers at the various shipping ports the necessity there is for conducting these operations on a scale that will assist in adjusting the balance between supply and demand, which has been sadly thrown out of gear the past few years. Cutting this year should be considerably reduced, and certainly no fancy prices ought to be paid by mills for log lots.

The cause this year of the unsatisfactory state of the trade and the consequent falling prices may in a great measure be accounted for by the large winter operations of 1881-1882.

As long as the supply is in excess of the demand there is no chance for prices to recover; on the contrary they must continue their downward tendency, and no first cost, however low the scale, will be reliable as coming within the scope of the markets over here while the over-production lasts.

It is generally believed that not alone in the timber trade, but in other manufactures, the wave of depression which is passing over the commercial world is traceable to their being "too much of the commodity." The result has been greater clearance sales either by public auction or in the ordinary way, but in which the first cost of the article disposed of has been left out of consideration altogether. The present condition of trade has reached a climax that necessitates some alteration or another if it is to be conducted on any system at all. The haphazard style of doing things cannot possibly be satisfactory to the manufacturer, and must lead ultimately to immense losses on one side or another.

Even if goods could be bought first hand to leave a profit at the prices now current, unless the over-stock ceased the downward tendency would remain unchecked. Hence from every point of view it is most desirable, especially at the Swedish ports from whence the bulk of the timber supplies come, that the forest cutting should be kept this winter within moderate

limits, so that the following season might admit of the present over-stock being realized at something like paying prices.

WHOLESALE TIMBER REMOVAL.

A consequence of the greedy wholesale removal of timber, which is well worthy of consideration, is mentioned in William Morris' article on "Irish Local Government," in the last *Macmillan*. He is writing of the spread of bog in certain districts, and he says:—"On the bottom are found the stools of immense trees which kept those areas free from the clinging black peat. These trees were cut down, and furnished in many cases the export timber trade in Ireland in the seventeenth century. Subsequently to this original state the land grew under—or brushwood, and as peat grew simultaneously this growth of wood dwindled till finally it ceased, and so the hazel stools are left at certain heights in the peat as mill-stones, marking the progress in the age or rather state of bog, and after this depth of peat had been attained the areas only grow heather and the other moorland plants." The following expedient is pointed out as the remedy for this waste:—"Taking the waters into the stone by deepening the old channels and opening up new would arrest the development of this process."

LUMBER TO MAURITIUS.

Mauritius is an island in the Indian ocean, lying east of Madagascar, and belongs to Great Britain. Far away as it is the lumber market there depends on Sweden mainly for its supply of pine. It comes either direct from Scandinavia or by way of England. It is shipped in the shape of 3-inch deals, and some of it is re-sawed into 1½-inch and 1-inch stuff, with the ends left joined so that the 3-inch sawed piece can be handled as one instead of two or three pieces. The lumber is very evenly cut; and importers believing that lumber could be sawed equally as well in America, ordered lumber from here sawed in a similar way, but were disappointed at the "shallow" way the work was done, considering the perfection we claim for our wood-working machinery. Alexander Duff & Co., of Boston, have shipped lumber and shingles to Mauritius, T. B. Robinson having charge of their trade at Port Louis, the principal place on the island.—*Northwestern Lumberman*.

AN ILL WIND BLOWS GOOD.

The *Timber Trades Journal* says:—The great destruction of property caused by the recent heavy gales cannot help giving the consumption of timber some stimulus. The damage to many of the piers and piers at the watering-places of the south coast will have to be made good in the first instance by timber, and the local demand at those which have suffered the most severely will doubtless become active for a time. It is a true saying that it is an ill wind which blows nobody any good, for the winds of Saturday and Sunday evidently blow the timber merchants, down Channel way, a plum. So with the destruction of shipping, due to these gales, repairs will be necessitated that will call into requisition timber of different kinds, and which, though small in themselves, must mount up in the aggregate to something like a respectable total, which will assist shipbuilders in reducing their stocks, and thus promote the trade.

New Brunswick Exports.

The business of shipping piling and firewood from the port of St. John has been more extensive this season than ever before, and greater preparations will be made for next season. The amount of piling shipped was 94 cargoes, containing 49,252 pieces of piling, and the large shipment made in the cribs is excluded from this. The greater portion of the piling was shipped to New York, but some cargoes were sent to St. John's, Newfoundland, to be used in the construction of the dry docks at that port. The firewood shipped was 133 cargoes, containing 8,462 cords. Of this quantity, by far the larger part was shipped to Rock and Rockport, Me. Many schooners are constantly engaged in the latter trade. Besides this quantity, many cargoes of both piling and firewood were shipped from Quaco, Musquash and Lepreaux.

Clips.

A HOTEL to go up at St. Augustine, Fla., will require 2,000,000 feet of lumber.

TERRIFIC forest fires have been raging in the neighborhood of Hall's Bay, Newfoundland.

A SALE of 600,000 feet of black ash lumber was made recently at Saginaw, Mich., at \$13 a thousand.

THE *Bolleville Intelligencer* says that another consignment of timber is on the way here, from Bobcaygeon.

THE *Brandon Mail* says: "The American Lumber Company have sold their business in this city to Mr. P. McLaren. Mr. R. F. Edgar, wood dealer, will be connected with this firm."

THE *Monetary Times* says: "At the Rankine mill, on the St. John, the wharves have been rebuilt, fitted with tramways, and so enlarged that they have now capacity for 10,000,000 feet of lumber."

RUSSIA has been for a long time suffering the effects of reckless forest devastation. *Nevce Vremya* says that the wanton destruction of timber threatens to turn some of the best wooded provinces into a barren waste.

A WRITER in the *Home and Farm* used about a quart of sawdust on each hill of a plot of potatoes and none in another plot. The sawdust hills yielded nearly twice as much as the others, and the potatoes were larger and smoother.

THE total length of public roads in Franco is 18,750 miles, of which 7,250 are bordered with trees, while 4,500 miles are at present being planted. The number of trees already planted is 2,678,003, consisting of elm, poplar, acacia, plane, ash, sycamore and lime.

THE *Monetary Times* says: "The quantity of lumber shipped down the St. Clair River is very great. On one day, between Detroit and Baby's Point no less than twenty two propellers and vessels were met laden with lumber of various kinds and shingles, one carrying tan bark and another cedar posts."

AN Ottawa correspondent says:—The Chaudiere mill men are filling up their yards rather than sell at a reduced price. Many of them are extending their piling grounds. There is considerable of a stir among American boatmen just now and freight rates have been somewhat reduced. Many of them are taking their last cargo for the season, which accounts for the reduction.

THE *Northwestern Lumberman* says:—Lively logging is reported from Hubbard Lake, Mich., district. On Tuesday, September 4, 338 pine trees were standing in that locality, and by the Friday following the trees were cut down, sawed into logs, hauled to the railroad, carried to Lake Huron, 30 miles, towed to Oshtemo, Alpena County, and when scaled were found to measure 250,000 feet.

THE republic of Guatemala has engaged a Celon planter to introduce into that country 500,000 cinchona trees, for obtaining peruvian bark, from which is distilled the salt known as quinine. President Barrios was led to try this experiment owing to the great increase in the use of cinchona bark, not only for quinine and as an ingredient in a substitute for hops, but for various commercial purposes.

AN Ottawa despatch of Sept. 12th says:—At the Russell House to-day the extensive timber limits of A. & P. White, Penoroko, were offered for sale. The first parcel offered was nearly four hundred square miles, on the Magnissipi; the highest bid was \$200,000, but the owner considered the figure too low, and withdrew the parcel. Seventy nine miles square and a small saw mill on the Deux Rivieres were then put up and withdrawn.

THE *Kingston News* of Sept. 19th, says:—Mr. W. Leslie has had three rafts made at French Bay, each of which is five tier deep. One of them has arrived at Port Dalhousie in tow of the tug McArthur. In the three rafts there are 480,000 feet of timber, equal to about thirty vessel loads. In the formation of each raft about 40 tons of chain is used, so that it will stand the sea as well as a barge. If the experiment of bringing timber down the lake in rafts is a success the timber vessels will suffer.

THE *Monetary Times* thus summarizes a portion of Mr. W. J. Paterson's valuable report on the trade of Montreal: "Exports of lumber and deals, especially to South America, which had declined some years ago, have recovered. The figures indicate that Montreal is attracting a good share of the deal export business. This increase is by no means accounted for by the revival of the River Plate trade, which had declined from 36,673,919 ft. in 1873 to 3,487,000 ft. in 1876, but now gives evidence of assuming its former proportions, the quantity exported last year from Montreal being 21,733,292 ft., some 48 vessels sailing hence for the Plata.

The *Toronto Globe* of Sept. 15 says:—A case has arisen in the township of Glamorgan which is likely to prove of great interest to lumbermen generally. Mr. Hilliard, of Peterborough, and a number of other, timber licensees from the Government, have been assessed for their interest in timber in question. This is the first time that such an interest has ever been assessed. A rule nisi for a prohibition to the township from proceeding with the assessment was applied for by Mr. Barron, of Lindsay, and granted yesterday. Lumbermen in the township are much interested in the result of the case, which will shortly be argued at Osgoode Hall.

W. A. EDGARS, of Frankville, was cured of Liver and Kidney Complaint after life was despaired of. He had remained from ten to fifteen days without an action of the bowels. Burdock Blood Bitters cured him, and he writes that he is a better man than he has been for twenty years past.

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Market Reports.

TORONTO.

From Our Own Correspondent.

SEPT. 23.—Business at the retail yards has been quiet during the last two weeks, owing to the exposition in progress here. That being over trade will resume its nominal state, and the retail trade will doubtless be brisk for the remainder of the building season. Prices remain at nominally the same as previously quoted, at there are instances which have come under my own notice where some cutting in figures below quotations has been done, although, as before stated, this cannot be done to any great extent without making it a losing game.

Shipments from our docks are more lively than at any previous period of the season, since my last letter the following quantities of lumber and shingles have left our docks: 4,000,000 feet of lumber and 500,000 M sawn shingles, so that daylight is now showing on our docks, and I trust not to be shut out again by such accumulations of lumber during the remainder of the season.

No lumber worth mentioning is being shipped by rail on through shipment to western Ontario, nearly all orders being filled from shipments made by water to Sarnia and other points, so that the Midland and N. & N. W. R. R. companies may yet find out to their cost that they have been strangling the geese that laid their golden eggs. It is a manifestly unjust proceeding on their part to charge fourth class rates on all excess weight, and yet provide no means of weighing the load at the point of shipment. It is said that the main agitator in this crusade against the interests of the lumbermen, is Mr. Robert Kerr, freight agent for the N. & N. W. R. R., backed up, of course, by that gigantic monopoly the G. T. R. R. Co., and, as a matter of course, the Midland Railway is held in leading strings, and the lumbermen know full well that to fight out this matter in the courts would be perhaps somewhat costly, as the whole resources of this railroad combination would be available, and the odds of justice be defeated. If the heads of freight departments of the Midland and N. & N. W. Railroads were not blind as to their own interests they would plainly see that they are playing a losing game, and the G. T. R. R. Co., are the gainers. The latter know full well that they will have the carrying of a large portion of the lumber which finds its way by the water routes, when it comes to be distributed to the customers, and the N. & N. W. R. R. Co., will find out when too late that it is much easier to drive traffic from their road than to coax it back again.

Table with 2 columns: Item description and Price. Includes Mill cull boards, Shipping cull boards, cantling and joist, Cutting up planks to dry, Sound dressing stocks, Picks Am. Inspection, Three uppers, Am. Inspection.

MONTREAL.

From Our Own Correspondent.

SEPT. 24.—Local trade has been moderately active and for some lines an improved demand has been experienced, which has caused a good deal of firmness without making any change in prices. Prospects are good for the fall trade and stocks are full so that dealers are prepared for the anticipated enquiry. There is fair enquiry on United States account, especially for hardwood, but common lumber is rather a drag

in the market. Laths are steady and sell freely at quotations. We quote prices in the yards as follows:—

Table with 2 columns: Lumber type and Price. Includes Pine, 1st quality, Pine, 2nd, Pine, shipping culls, Pine, 4th quality deals, Pine mill culls, Spruce, Hemlock, Ash, run of log culls out, Laths, Oak, Walnut, Cherry, Butternut, Birch, Hard Maple, Lath, Shingles, 1st, Shingles, 2nd.

CORDWOOD.

Stocks are fair and likely to continue so all the fall. Prices keep pretty firm, and the present high prices seem to tempt the country people as a number of them have been in the city offering wood for sale. The local demand has only been moderate. Wholesale prices are as follows:—

Table with 2 columns: Cordwood type and Price. Includes Long Maple, Short, Long Birch, Long Beech, Short, Tamarack.

LIVERPOOL MARKETS.

Latest mail advices state the consumption during the past month has been large, and as there has been a great pressure to sell, prices are lower, and 2nd quality and uniform lumber is difficult to place. Spruce deals sold at prices ranging from £6 17s. 6d. to £7 2s. 6d. per standard. A parcel of Quebec ash averaging 14 inches was placed at 2s. 3jd. per foot, elm 2s. per foot and walnut 4s. 6d. to 5s. 10d. per foot.

WINNIPEG.

The Winnipeg Commercial of Sept. 18, says: There is a good steady demand for lumber. The supply on hand is large and will be much more than sufficient for all requirements this season. The great number of buildings now in course of erection in the city will, however, consume a large quantity before winter sets in. The following are the quotations:—Pine lumber, 1st, common boards dressed, \$26.50; 2nd do. dressed, \$25.50; 1st do. rough, \$26.50; 2nd do. \$25.50; sheathing, rough, \$25; timber 16 feet and under, \$24; do. over 16 feet, for each additional 2 feet, \$1; dimension and joists 16 feet and under, \$24; do. over 16 feet for each, \$1; fencing, \$25; 2 and 3 inch battens, \$30; A stock boards, all widths, \$50; B do \$45; C do. \$40; D. do. \$35; 1st clear, 1, 1 1/2, 1 3/4, and 2 inch, \$60; 2nd do. \$56; window and door casings, \$50; base boards, dressed, \$50; 1st pine flooring, siding and ceiling, \$40; 2nd do. \$35; 3rd do. \$30; 1/2 inch split siding, dressed, \$30. Spruce lumber—timber 16 feet and under, \$22; do., over 16 feet for each additional 2 feet, \$1; dimensions and joists, 16 feet and under, \$23; do., over 16 feet for each additional 2 feet, \$1; boards, \$22; 1st flooring, siding and ceiling, \$23; XX shingles, \$3.25; Star A shingles, \$3.25; X shingles, \$5.00; A do. \$4.50; lath \$4.50.

QUEBEC.

A Quebec despatch of Sept. 20, says:—Our market is still without animation, and considering the season of the year, very few sales have taken place. A good raft of about 54 feet, is reported to have been sold at about 27 cents; and a fine raft of Nipissing timber of about 36 feet average, at prices which have not transpired, but stated to be about 29 cents. In hardwood we do not hear of anything doing.

A Quebec despatch states that there is a slight improvement in the timber market, and some rafts are reported as having changed hands. Thisle's white pine 55 feet average, has been sold at 27 cents, and a Nipissing raft of white pine at 29 cents. The fleets this fall are late in arriving, which accounts in a great measure for the prevailing dullness, and as great change for the better is expected before the end of the month.

BOSTON.

Cotton, Wool and Iron of Sept. 22nd, says:—There has been no particular change in the tone affairs since our last. A good fall business is progressing and values are on quite a steady basis for general assortments. Eastern lumber is firmer, because of the continued drought.

Western and southern lumber are steady, with a moderate demand. In hardwoods there is a good call for desirable walnut and cherry. Ash and whitewood are comparatively quiet.

CANADA PINE.

Table with 2 columns: Lumber type and Price. Includes Selects, Dressed, Shelving, Dressed, 1st, 2nds, Dressed Shippers, Dressed Box, Sheathing, 1st quality, 2nd.

ALBANY.

Table with 2 columns: Lumber type and Price. Includes Pine, clear, Pine, fourths, Pine, selects, Pine, good box, Pine, 10-in. plank, culls, Pine, 10-in. plank, culls, each, Pine boards, 10-in., Pine, 10-in. boards, culls, Pine, 10-in. boards, 16 ft., Pine, 12-in. boards, 16 ft., Pine, 12-in. boards, 18 ft., Pine, 1 1/2 in. siding, select, Pine, 1 1/2 in. siding, common, Pine, 1 in. siding, select, Pine, 1 in. siding, common, Spruce, boards, each, Spruce, plank, 1 1/2 in., each, Spruce, plank, 2 in., each, Spruce, wall strips, each, Hemlock, boards, each, Hemlock, joist, 4x4, each, Hemlock, joist, 2x4, each, Hemlock, wall strips, 2x4, each, Ash, good, Cherry, good, Cherry, common, Oak, good, Oak, second quality, Basswood, Hickory, Maple, Canada, Maple, American, per M., Chestnut, Shingles, shaved, pine, 2nd quality, extra, sawed, pine, clear, cedar, mixed, cedar, XXX, hemlock, Lath, hemlock, Lath, spruce.

BUFFALO.

Table with 2 columns: Lumber type and Price. Includes Uppers, Common, Culls.

CHICAGO.

The Northwestern Lumberman of Sept. 22, says: The number of lumber laden vessels arrived at this port during the week exceeded the arrivals for the week previous, the comparison standing 289 this week to 241 the week before. A large proportionate number has stopped at the market docks. On Monday there was one of the largest fleets seen at the market this season, Sunday's arrivals in port being 52 and Monday's 77, the usual proportion going on the market. But, though the market was so well loaded, by Tuesday noon the fleet had been all cleaned out, and the hookers were making w'at speed they could for the east shore for new loads. Vessels that discharged cargoes on Saturday were seen back again Tuesday, which showed an eagerness to get around lively with the lumber, so as to take the market at high tide before an ebb should come. The activity and strength noticed as beginning week before last, and really pronounced last week, was fully maintained until about Tuesday of the present week, when the market manifested a little weariness under the intense labor it had performed, and slowed a little, though prices remained steadfast and firm. The gain of 25 cents a thousand on piece stuff that was claimed last week is now sufficiently established so that the \$9 figure can be safely advanced to \$9.25, though it may have to be dropped again next week, that contingency depending on the weather and the feeling in the yards, to some degree.

It is a rather remarkable circumstance that this market is devouring lumber so ravenously, when the existing condition of yard trade is considered. Not that it is intimated that the volume of demand for distribution is not fairly large, for that would not be true. When we speak of the existing condition as unfavorable to yard trade, we mean that prices are so demoralized, and margins so thin and uncertain, that the rate at which wholesale dealers are stocking up is really something to be wondered at.

The rush of shingles has somewhat abated, and prices are steadying down, though not showing any advance. It is scarcely possible

that shingles of common and inferior grades can be worth more than now for some time to come, and really good shingles have all along sold for fair prices.

Table with 2 columns: Lumber type and Price. Includes Quotations as follows, Short dimension, green, Long dimension, green, Boards and strips, No. 2, Boards and strips—Medium, Boards and strips—No. 1, Shingles, standard, Extra A, Lath.

STOCK ON HAND SEPT. 1.

Table with 3 columns: Year (1883, 1882, 1881) and Lumber type (Lumber, Shingles, Lath, Pickets, Cedar posts).

OSWEGO, N. Y.

From Our Own Correspondent.

No change in quotations. There has been a sharp upturn in lake and canal rates, advancing cost of transportation between Canadian ports and New York fully \$1 per M ft., and between Michigan ports and New York \$1.75 per M.

Table with 2 columns: Lumber type and Price. Includes 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, culls, 1x6 selected for clapboards, Shingles, XXX, 18 inch, pine, XXX, 18 inch, cedar, Lath.

YONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Table with 2 columns: Lumber type and Price. Includes Three uppers, Common, Culls.

LEITE.

The Timber Trades Journal of Sept. 8, says: The arrivals at this port during the past seven days has been pretty numerous, the most important, perhaps, being a large steamer shipment of deals and battens from Cronstadt for Messrs. Ferguson, Davidson & Co. Though the demand is fairly good, stocks are now assuming large proportions, and considerable quantities have yet to arrive. Unlike Baltic goods, the importation of American timber has been heavier this season than last, the result being that prices are difficult to maintain, consumers being perfectly well aware that the market is heavily stocked. In this district, also, pitch pine is now frequently used in place of yellow pine, and this is becoming daily more common. No public sales have been held during the past week, but Messrs. Mitchell, Somerville & Co. have one announced for Tuesday last.

CARDIFF.

The Timber Trades Journal of Sept. 8 says:—Since our last report numerous arrivals have come to hand, amongst them being one cargo of floorings, from Drammen, another with pulp, from the same place, two large Quebec cargoes, two from Miramichi, one steamer with sleepers from Narva, one from the Baltic, and the largest cargo ever imported to Cardiff, viz., 1,040 standards, from St. John. This latter cargo will be landed at Penarth Dock, where, as a rule good despatch is obtained. It is a pity it did not come into the Bute Dock, as it would have been a test for the Bute people's capabilities for discharging. As it appears now that at least half of the import of timber and deals to this place will be effected by steam tonnage, our merchants will scarcely be able to compete with neighboring ports if the despatch of steamers continues to be as slow as has been the case up to this time, as owners cannot afford to give eight to ten days for discharging 500 to 600 standards.

LIVERPOOL.

The Timber Trades Journal of Sept. 8, says: The import during the past week has been more than sufficient for the wants of the trade, and with the continued depression in cotton manufacturing districts there is not likely to be any improvement, so far as can be seen at present, since the settlement of the disputes now existing between the artisans and their employers seems as far off as ever. Apart from the generally

dull and languid condition of business, the import for the present season is apparently likely to be beyond the wants of the trade, and so long as supplies are forced upon the market in the way they are being pressed forward we cannot hope to have any better prices than those now ruling.

Spruce deals continue to come forward freely, and although some shipments are being stored on account of importers, others are being sold on best terms obtainable, and unless shipments are considerably diminished for the remainder of the season, there is apparently no reason why prices should not descend even below the figures they have touched at present.

Several lots of Quebec timber have come upon the market on consignment, and have been sold at fair prices, mostly to the local trade.

On the 30th of August, Messrs. A. F. & D. Mackay held one of their periodical auction sales of deals, birch and other woods, which was well attended. Spruce deals showed a slight decline in value, but the birch timber sold readily, and both the St. John, N. B., and the Pictou wood realized good prices.

The *Timber Trades Journal* of Sept. 15, says: There is no change in the tone of the reports of trade from the great centres of business in this locality, as all still continue to convey a deeply felt state of depression which may take some time before relief is felt. All the great manufacturing districts are evidently embarrassed with an overplus of manufactured goods, and the probability of having large supplies of the raw material to come forward. This is evidently the case with the timber trade here, as the imports continue to be far beyond the demands upon it, and the stocks on hand are increasing to a large extent.

In fact, it is possible, or even more, it is probable, that quotations may yet see a lower point if consignments continue to be pressed upon an already overladen market.

These remarks apply with greater force to the North American and Canadian shipments, as the recent heavy deliveries of hewn pitch pine timber have lightened this stock materially, and this article is now within reasonable bounds.

LONDON.

The *Timber Trades Journal* of Sept. 15, says: With bidding plentiful for goods which have a limitation on them, the activity of the trade can be better ascertained, and we take it as a hopeful sign that so many of such lots on Wednesday changed hands, though, as already stated, outside of these the prices did not betray any advance on those recently recorded, and it was only in respect of Canadian goods that the unreserved were sought after by the room. There were some heavy parcels of Ulaborg and Abo battens without reserve in Wednesday's sale that went cheap, but bidders seemed to think the prices quite sufficient, as though apparently anxious to secure the goods they showed no disposition to do so at any advance.

GLASGOW.

The *Timber Trades Journal* of Sept. 15, says: Imports of wood to Clyde during the past week comprise four cargoes of Quebec timber at Greenock, the aggregate tonnage of the vessels 4,891 tons; and at Glasgow about 2,000 loads, consisting chiefly of sundry parcels per steam liners. The importation of deals from Quebec to Clyde this year to date has been about the same as corresponding period last year (say 400,000 pieces). The arrivals of Quebec log timber in 1882 were unusually light, and this year shows a decided increase. Following are the amounts (to end of August) for the past three years:—Quebec waxy boardwood and yellow and red pine: 1881, 33,500 logs; 1882, 19,000; 1883, 35,000 Quebec oak, elm, ash, and Quebec and lower port birch: 1881, 14,400 logs; 1882, 6,500; 1883, 11,000.

Much of what is imported is no doubt with the view of supplying the wants of ship-builders, who may be considered the largest consumers, for there is little movement here as yet in housebuilding, and it remains to be seen how the importers' estimate as to the quantity and character of the wood imported turns out. First-class yellow pine for deck plank no doubt is safe, and may in some cases be sold to arrive,

Shipbuilders buying for the most part privately, prices do not transpire.

MONTEREAL NOTES.

The *Montreal Gazette* of Sept. 21st, says:—A fair business has transpired since our last report, showing a slight improvement in the local demand at steady prices. Laths have met with fair enquiry at \$1.60 per M. Stocks now are well assorted and better seasoned, and a good trade is confidently expected between now and the close of navigation. There is still some enquiry for hardwood on American account, the sale of a boat load of ash being made on p. t., but believed to be at within range of quotations. Advertisers state that the mills in the New England combination agreed to give no discount after the 15th instant. They previously allowed 5 per cent. There is a good demand for pine in Boston, with prices firm for best stock. A Boston dealer in pine and in hardwoods, who has just returned from an extensive business tour at the west, remarked:—"I was never more surprised than I have been to find how very scarce good lumber is becoming. You see, all through the hard times all who had timber cut off the good, because it was the only stock that it would pay to cut. Then, again people in buying timber lots bought the best, those which would give the best lumber, and now what is left is mostly Norway and common stock. Why, I went right into the forests regions of Michigan, and in one central place where there are a dozen manufacturers I could only find one who had any good lumber in any quantity. One manufacturer who had 1,000,000 feet had only a few carloads of the best quality, and it was all mostly Norway and common. There is even a great change with what it was a year ago. Manufacturers don't have to seek customers for their good lumber, and stock that I had engaged ahead could have been sold many times over. On the other hand, common lumber is accumulating, and while prices are not so easy as they have been, they are not strong. Common pine, however, has a good western outlet, but common hardwoods are not much wanted."

OTTAWA.

The *Ottawa Citizen* of Sept. 22, says:—The Ottawa lumbermen who have commenced to hire hands for the coming season's operations have opened a wages list with an average reduction of \$4 per month all around for bush hands. Wages run from \$15 to \$22, with a prospect of a further reduction next month, when the harvest is finished and farm hands begin to look for a winter's engagement in the woods. There will be a great reduction in operations on some parts of the Ottawa, for instance, Mr. J. R. Booth, it is said, will have no shanties on the Opeongo, Madawaska or Mississippi next winter, which means that there will be 300 men dispensed with there. The McLachlan Bros. will also curtail their winter's work in the same district, owing to the fact that they have over 100,000 logs left over on the Madawaska ready for next season's sawing. A new slide at the High Falls is to be built during the coming winter, which will greatly facilitate the passage of timber at that dangerous spot.

THE CLYDE TRADE.

Singleton, Dunn & Co.'s timber circular dated Glasgow, 6th Sept., says:—Most of the spring fleet came forward during last month, and almost all the vessels have again cleared for Quebec for fall business. The stocks of Quebec timber are fair, and rates may be maintained if only caution is exercised later on in regard to supplies. Should the fall import be as large as the spring import, we do not think the market will support prices. No doubt the consumption is fair, but the principal factor in this is the shipbuilding branch (which continues fully employed), in which there is an outlet for only the higher grades. A slight improvement is manifest in the building trades, consequent mainly on the progress of some extensive public buildings and local railway works. North of Europe wood goods continue very moderate in price, white deals costing less c. i. l. to Grangemouth than is quoted for Canadian spruce to Clyde ports.

WHITE PINE.—An entire shipment, contract lot, was sold at, for prime deck plankwood, 50

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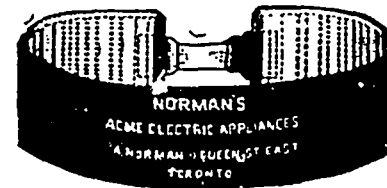
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And all other Kinds of HARDWOOD LUMBER.

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

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

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

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

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NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1877

feet average, 2s. 7½d., and 60 feet average, 2s. 5½d., delivered at Glasgow. A fair quantity of primo 55 feet average was sold at 2s. 7d. per cubic foot, in ponds, and 50 feet average at 2s. 6d. Some large sales of deckwood were made to arrive, and prices for these are not disclosed, but surmised to be quite in favor of importers.

DEALS.—1st pine.—For ordinary sizes there is little enquiry, and prices low. The trade wish wide deals only. For 12 ft.x7 to 11x3, 2s. 6d. per cubic foot, was made, and for long deals rather more. 2nd pine.—few sold. Prices from 18d. to 23d. per cubic ft., according to size.

A LONDON SALE.

The *London Timber Trades Journal* of Sept. 8 says Messrs. Foy, Morgan, & Co.'s sale was well attended.

The prices of Archangel goods did not look as if the corner had been turned, and we fail to trace any favourable tendency in the market when 1st yellow from the port named realizes no more than £13 15s.

For the yellow pine timber ex *Deaside* from Quebec prices took a wide range, the two first lots going at 57s. 6d., and the remaining three at a little more than half the figure named. It is true the dimensions might account for some of the difference, but they were hardly so divergent as to reduce the value so materially as the sales prices seemed to indicate.

The waxy pine ex this ship went from 62s. 6d. to 72s. 7d., but there were very few pieces over 20 in. wide. Prices for goods of this description were nevertheless very unfavorable, and with respect to the flooring disposed of on Wednesday also, values were decidedly lower than

at previous sales, but every stick of it was without reserve, representing some 800 standards or so of this class of goods.

FOREST FIRES.

ELLSWORTH, Me. Sept. 24.—A forest fire at West Bay, Gouldsboro, consumed the Union church, town house, and the residence of A. G. Guptill, with stables, yesterday. The fire is still raging, and other buildings are in immediate danger. The present damage to buildings is estimated at \$8,000, and heavy damage has been done to the forest.

CALAIS, Me., Sept. 26.—Forest fires are very prevalent along the shore line between Calais and Machias, and along the line of the St. Croix and Penobscot railroad. They are doing a great deal of damage in Alexander, Charlotte, Baileyville, and other places. Considerable timber land has been burned over. Violent winds are prevailing, and the fires are being fought by large crowds day and night.

SANTA CRUZ, Cal., Sept. 26.—Immense fires are raging. The forests and ranches above here are already terribly damaged. A despatch from Davenport's Landing states that the entire country is in flames. One hundred and forty men went from here to aid in the arrest of the fire. The Santa Cruz Water Company have 50 men fighting the flames, which are within five miles of here. Fears are entertained for the city.

Do not delay, if suffering any form of Bowel Complaint, however mild apparently may be the attack, but use Dr. Fowler's Extract of Wild Strawberry. It is the old reliable cure for all forms of Summer Complaint that require prompt treatment. Ask your druggist and all dealers in patent medicines.

A REMINISCENCE OF THE FRUIT BOX INDUSTRY.

"It is generally supposed," says the New York Maritime Register, "that the boxes in which oranges and lemons are sent to this country from the Mediterranean, are made along the shores of that sea. This was the case years ago, but it is so no longer. Formerly the shooks were hewed out of the log by hand in Italy and sent down to the packers. But a few years ago, Capt. T. J. Stewart, a native of Maine, a ship-mate who had traded with the Italian ports, came to the conclusion that these shooks could be made much cheaper in his native state and shipped thence to the fruit districts at a profit. With him to think was to act. He accordingly retired from the sea and proceeded to Bangor, the centre of the Maine lumbering interests, where he put his new idea into practice. It has proved highly successful. Mills were erected in the woods miles back of Bangor, and shooks of all description were quickly turned out by the thousands. Shooks for orange, lemon and cranberry boxes, for onion boxes, oil and fish cases, were made in these woods, forwarded to Bangor by rail, and exported thence to our great ports and the Mediterranean fruit districts. The trade has now grown to important proportions, and it is said that few oranges and lemons arrive in this country that are not in boxes of Maine make. Our poetical friend, who at the sight of tempting boxes of oranges lets his mind wander to the sunny skies of Italy, and thinks of scented groves and the blue waters of the famous sea, can let his thoughts also wander to the forest covered hills of the Pine Tree state, whence comes the wood that holds the brilliant-hued fruit. The more practical mind, however, will rejoice in the fact that much of the timber which in former years, was literally wasted in Maine is now turned to such good advantage. By shipping orange and lemon box shooks, not only is a large and lucrative trade opened, but the transport of these goods brings additional business to Bangor in the supplies furnished there to vessels employed in the trade. It is difficult to estimate the money extent by this, but it is easy to see that it must be of great value to the port."

OTTAWA NOTES.

An Ottawa correspondent says. — "The sawn lumber market has taken a decided change for the better within the past few days. Several prominent New York dealers have been in the city, and their purchases are said to have aggregated 8,000,000 million feet, principally of the higher grades, and an advance of 25 cents per thousand feet is quoted on these qualities. This has given an impetus to shipping, and the lumber docks have resumed their usual bustle. There is a fair prospect of this state of things being continued now until the close of navigation. Freight rates average about the same as last year. The activity of the market will not, it is said, interfere with the determination of mill men to curtail operations during the coming winter. Present indications now lead to the supposition that the quantity of upper grade lumber to be wintered here will be somewhat smaller than last season, and should this prove correct mill men generally will close this year with a fairly good record. Lumbermen this year are using more beef in connection with their shanties. Some time ago nothing but pork was used, the supplies being drawn principally from Chicago, but since the export trade in cattle has assumed so large proportions farmers in the Ottawa Valley have devoted more time and attention to cattle raising, and are now supplying many of the lumber shanties with beef. During the past week several hundred head of cattle have been shipped for the Upper Ottawa, and the prospects are that the pork trade will, in the course of a few years, be seriously affected."

TIMBER SALES IN NEW BRUNSWICK.

The New Brunswick Government recently made a change in its system of granting timber leases on its lands. By the old plan leases were good for five years only. Now the time has been extended to ten years, and the new way has been found to work exceedingly well, lumbermen being more anxious to secure leases for that time than for the shorter period. The stump-

ago has been raised from \$0.80 cents to one dollar per thousand this year, and \$1.25 for each subsequent year, on logs, and a prohibitory charge put upon small lumber. An important sale of these limits took place at Fredricton last week, and the Government is well satisfied with the result of the three days' proceedings. Over thirty-eight thousand dollars were realized, and the number of square miles leased was 3,185½. In the sales made on the 7th instant 1,270 square miles were offered, of which 1,046½ square miles were sold—939 at upset price, \$7,672, and 57½ at competition, for \$4,231; total \$11,903. The highest bid was for six square miles at Dungarvon, Miramichi, when \$141 per square mile was offered. Last year, the sales amounted to \$31,000 for about 4,800 square miles. The Telegraph is jubilant over the result, and says, "this fact shows that the lumbermen appreciate the new regulations and have been prompt to avail themselves of them. The handsome sum realized,—\$38,000,—is, we think, the largest ever received at any sale, and less than \$3,000 under the aggregate receipts from all sales last year."

NEW BRUNSWICK TRADE.

The St. John's N. B. News of September 10th says:—Four million feet of logs recently changed hands in St. John, at \$9 per M., for shipment to the American market, which exhibits marked improvement over prices prevalent in the early part of the season. Another lumberman has between four and five million feet on hand, which he is holding for \$9.30 per M. The above transaction must have netted the seller at least \$2,000. There is a good deal of vitality in the "waning industry" after all. The European market shows no signs of improvement, but the prospect is that there will be the heaviest shipment this month that has been recorded for years. It is apparent that a more moderate cut of logs in this Province is necessary to ensure good prices. At present £12 Gs. per standard is the best offered on the other side, which is about equal to \$7 per M. on this side of the water. Freight figures are dull. The

Crown Lands revenues from sales, &c., this year will, it is expected, aggregate over \$50,000 — an excess of about 15 per cent. over last year's receipts."

EXPLORING NEWFOUNDLAND.

Mr. Hall, one of the largest lumber manufacturers in the world, and one of Canada's leading merchants, arrived here, says the St. John, Newfoundland, Mercury, on Thursday by the steamship Polino. He brought a party of explorers with him, who departed in the Polino for the purpose of being landed in the Bay of Islands, where, should the explorers' reports prove favorable, he proposes to establish a large lumbering manufacturing business. The initiation of the scheme also depends upon the terms upon which the Government will be able to make grants of land; and it is to be hoped that nothing will be left undone to assist in the establishment of an enterprise so well calculated to develop a portion of this country. Mr. Hall has also an idea of exploring the Exploits river. He has been looking at our dry-dock, and says that in all his vast experience he has never seen finer timber used in such work—an opinion of great value because of his knowledge of the subject.

On Thirty Days Trial.

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

Convincing Proof.

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

I am yours truly,

W. H. DICKISON, 218 St. Constant St., Montreal. To Henry, Johnson & Lord, Montreal. Arnica and Oil Liniment is sold by all Druggists.

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FOR 50 CENTS

We will enter your name on our subscription book and mail the FARM, FIELD AND FIRESIDE regularly to you for Six Months and immediately send a printed numbered receipt, which will entitle the holder to one of the following Presents to be given away at our THANKSGIVING FESTIVAL.

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10 U. S. Greenbacks of \$50..... 5000 00
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1 Silver Dinner Service..... 100 00
5 Top Buggies..... 1000 00
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1000 Photograph Albums \$5 each..... 5000 00
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1 Pony Phaeton..... 100 00
1000 Pocket Silver Fruit Knives..... \$1000 00
1000 Gent's Hair Brushes..... 1000 00
1000 U. S. Greenbacks of \$1 each..... 1000 00
10 Gent's Gold Watches, English Movement..... 800 00
10 Ladies' Gold Watches, English Movement..... 800 00
20 Boys' Silver Watches, American Movement..... 200 00
5 Hollow Diamond Finger Rings..... 400 00
3 Patent Harvesters..... 1000 00
1 Normandy Work Horse..... 500 00
100 Negatif Photograph Pictures..... 500 00
1 New Silk Parlor Suite Furniture..... 1000 00
110 Gold Finger Rings, Ladies' Breast Pins, Gents' Scarf Pins, Lockets, Fans and Chains.

And 99,999 other presents valued from 25 cents to \$1.00, which makes a grand aggregation of 100,000 presents, thus guaranteeing a present to each and every new subscriber who sends us 50 Cts. as directed. All of the above presents will be awarded in a fair and impartial manner by committee chosen at the Festival by the subscribers; this festival will take place without fail. It will not be necessary for subscribers to attend the festival, as presents will be sent to any part of the United States or Canada. Yet it is to be hoped as many will be present as possible. THESE 50 CENTS which you send us is the regular price for Six Months' Subscription, and therefore we charge nothing for the presents. OUR PROFIT will be in your future patronage, as we believe you will like our paper so well that you will always remain a subscriber. YOUR SUBSCRIPTION YEAR. Desires of your friends to join you by cutting this out and showing it to them. Send us \$1.50 and we will send you the FARM, FIELD AND FIRESIDE for six months, and a numbered receipt for each of your subscribers and one extra for your trouble. SEND US THESE 50 CENTS with \$1 and we will send 12 subscriptions and twelve numbered receipts. We shall list the number of new subscriptions to 100,000, so we would advise all our friends to forward subscriptions early.

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is one of the oldest and ablest edited Family and Agricultural papers. It contains twenty large pages (Eighty Columns), including elegant cover, bound, stitched and cut. And now has a circulation of 65,000 copies, and we are sure to reach the 100,000 at the time set, and the distribution of presents will take place on that date. It contains Stories, Sketches, Poetry, Farm, Garden, Household and Agricultural Departments by the best Contributors of the day, as well as an Illustrated Fashion Department, Needle and Embroidery Work. Illustrations of different parts of the UNITED STATES and Biographical Sketches of Eminent Men and Women. In short, it contains that which will interest, instruct and amuse the whole family. THE PROPRIETORS are men of means, who always have done as they agree, and our paper is long established and reliable, with sufficient capital to carry out and fulfill to the letter any offer we may make. TO THOSE WHO DO NOT ATTEND THE FESTIVAL we will send a printed list of the Awards, and all Presents will be forwarded to holders of Receipts as they may direct. If you have not seen this elegant and beautiful paper, send for a Sample Copy which will be Sent Free. ONLY 50 CENTS secures the FARM, FIELD AND FIRESIDE Six Months, and a numbered receipt. The paper is worth double the subscription price. As a reliability we refer to those who do not use it as a specialty publisher in Chicago. Money in sum of \$1.00 or less may be sent in ordinary letter at our risk; larger sums should be sent by Registered Letter, P. O. money order or Express. (Mention This Paper.)

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CHICAGO, Aug. 21, 1888. We have furnished the paper for the FARM, FIELD AND FIRESIDE for several months, and have always found it Proprietors honorable in their dealings, and prompt in their payments. CHICAGO PAPER CO.

CHICAGO, Aug. 21, 1888. The Proprietors of the FARM, FIELD AND FIRESIDE have paid me several thousand dollars for press-work on their paper. I have always found them prompt in all transactions. A. G. NEWELL.

August 15, 1888. I am highly pleased with your paper. The information concerning Poultry management alone is worth five times the price of your paper, as I am getting at the valuable Farm information and interesting stories, etc. W. E. SIMPSON, SLIPUP, Morgan Co., Ala.

BRADWOOD, Ill., Aug. 11, 1888. I am very much pleased with your paper. Every number seems to me to become more attractive and profitable. I have shown it to several of my friends, who were all so delighted with it. Mrs. J. F. ELLER.

WAUSEON, O., Aug. 11, 1888. I received a copy of the FARM, FIELD AND FIRESIDE some days ago and must say that I was well pleased with it. I find it a first-class journal for the farmers, of whom I am one. With such an agricultural journal every farmer should have such benefit. M. H. HAYES.

MEXICO, Junata Co., Pa., July 24, 1888. I herewith send you the names of fifteen subscribers to the FARM, FIELD AND FIRESIDE, which I secured in less than an hour. B. L. SHUMAN.

SOUTH UNION, Ky., July 18, 1888. It is certainly the best paper I ever saw, neat, plain, instructive and beautifully illustrated. E. L. HOTE.

ILDERTON, ONT., Aug. 8, 1888. I have lately been a subscriber to your tasty and profitable paper, and must say I am more than pleased with it. I gave my subscription, in the first place, more to have a chance for one of the many presents than for anything contained in the paper; but I find the paper is worth three or four times the money beside all presents. S. W. FAISLEY.

PORTSMOUTH, Va., July 9, 1888. I received the paper all right and am delighted. My friends and subscribers say they are surprised at its size and beauty. Every person that has seen the paper acknowledges it to be the best paper printed, and say it is worth \$2 per year. TIMOTHY MOSELEY.

A MAN

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By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects all Union Depots with all the principal lines of road between the Atlantic and the Pacific Ocean. Its equipment is unrivaled and magnificent, being composed of most comfortable and luxurious Day Coaches, magnificent Horton Reclining Chair Cars, Pullman's Palace Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the famous

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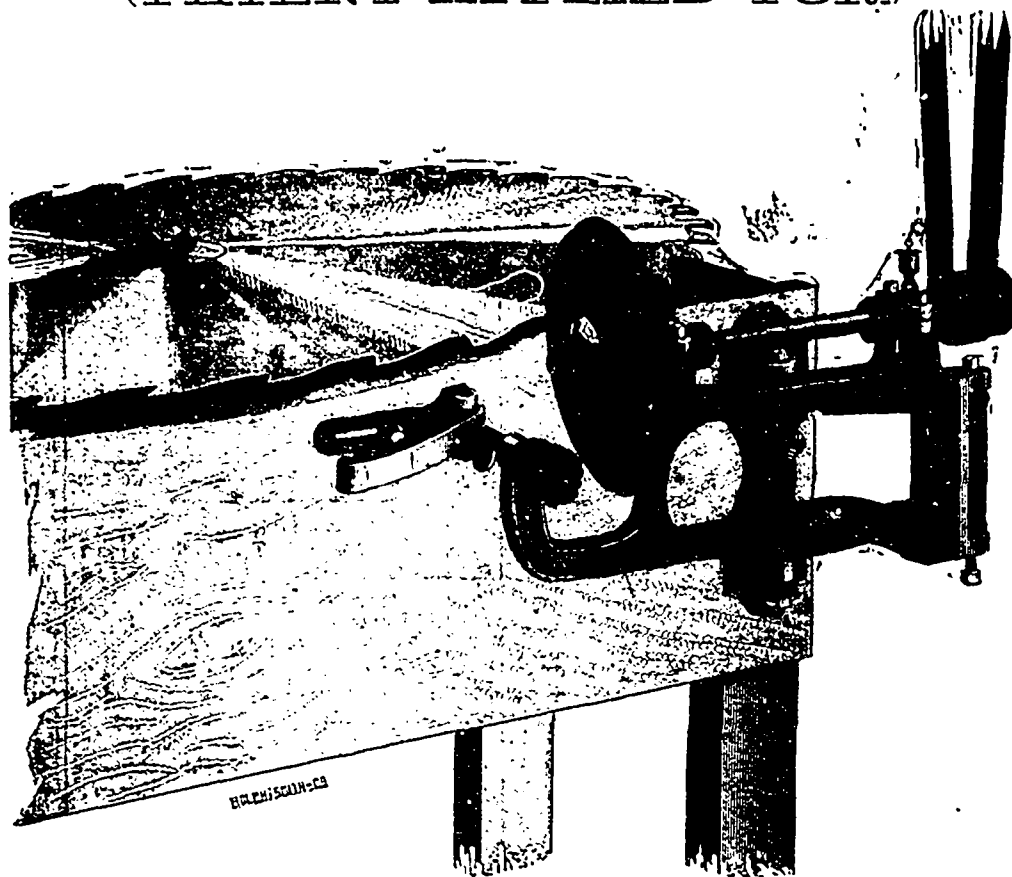
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SEEDLING TREES.

Prices of forest-tree seedlings are such as to place them within reach of the very poorest. In fact, as the great bulk planted are of spontaneous origin, they are to be had for more gathering, in regions where found. When trafficked in, prices range, owing to variety and size, from six inches to four feet, all along from 50 cents to \$3 per thousand. Nursery-grown grades range higher. Many millions are now planted annually. The cost of planting depends much on circumstances, price of land, labor, varieties planted, skill in planting and many other minor details. Cottonwood seedling can be furnished in quantity, from 50 cents to a \$1 per thousand; box elder and soft maple from \$1 to \$2, and oaks, ash, walnut, hickory, catalpa and chestnut from \$5 to \$10. The usual distance apart are by multiples 4-8 12-16, etc., that intermediate ground may be utilized by being cultivated in other crops until trees are sufficient size to protect themselves, when, in farm parlance, they are permitted to "take the ground."

Most experimenters at first planted tree seeds where they were to remain permanently. Experience has shown this a mistake, for numerous reasons. Principally by this mode uneven stand, growth, grade, size and vigor are to contend with. By planting seeds first in beds and, say at one year's growth, assorting, grading and transplanting permanently, each grade to itself, better results are secured. Same grades as to size and vigor do better together; grow more evenly; the weak are not crowded out or overshadowed by the stronger,—a practical illustration of "survival of the fittest."

By this plan small plants, if healthy, do about as well in the end as large. No variety is known not readily transplanting at one year old. Even varieties of top root characteristics, oaks, walnuts, hickories and chestnuts are really better, I am convinced, for tap root pruning. By it laterals or fibrous feeding roots are induced. Or if larger sizes are desired before transplanting, root-pruning, by running a tree-digger under the rows and allowing them to remain a year or two longer, good results are obtained. As a rule, however, better success is had by transplanting young trees, when near as possible all the roots are preserved. Small trees cost less to purchase, transport, handle and transplant. Alternating—especially certain varieties—has not given satisfaction. Trees in some respects are not unlike mankind—will not fraternize. For instance, oaks, walnuts and hickories will not fraternize with maples, cottonwoods and elms. When planted near each other, the latter will invariably lean away from the former, assuming a crooked, gnarly appearance, and in the end virtually die out.—*Lumber Trade Journal.*

INTERESTING CASE.

The Assize Court at Ottawa has to-day been occupied with a case having a close interest for shippers, that of the Canadian Pacific Railway vs. Allen Grant, to recover \$2,700 for carrying lumber from Mattawa to Quebec. The defendant refused to pay on the ground that he contracted for the delivery of the timber last fall in time to sell in the fall market, and that through the scarcity of rolling stock the timber was not delivered for several months after the contract time had expired. He therefore puts in an offset of \$60,000 damages. Judge Armour, in giving judgment, declared that the claim for freight should only have been \$2,100, and allowed defendant an offset of \$1,400 for losses sustained by defendant's men having to remain idle through scarcity of cars. The question of losses sustained in the sale of timber was reserved for the consideration of the Court of Appeal.

TIMBER LAND FRAUD.

WASHINGTON, Sept. 13.—The commissioner of the general land office said to-day, in reply to enquiries with regard to timber land frauds discovered in California: "I have had a knowledge of these operations for some time, and have had agents out there making investigations. In consequence of reports received from them, I have suspended action upon all timber land cases in California, Oregon and Washington territory, and persons interested are not getting any patents and

they will not get any until I am fully satisfied of the honesty of their entries. In explanation of the nature of the illegal operations, Commissioner McFarland said Congress by special act provided for the sale to individuals of separate tracts of timber land in California, Oregon and Washington Territory at \$3.50 per acre. Fraud in those cases consisted in the procurement by one person of a large number of such lands, through the co-operation of others who purchased them, only to transfer them to him in clear violation of the spirit of the law. Commissioner McFarland also says that frauds of a similar character have been discovered in connection with entries of coal lands in Colorado; that he now had a force of special agents at work there, and he intended to examine carefully every entry of such land. Land officers in Colorado have been directed to suspend action in coal land entries, until the results of the examination becomes known.

Prospects in the States.

The *Northwestern Lumberman* says:—A glance at some salient points in existing circumstances will make this assumption appear plain. At Saginaw there is a stagnation in sales and shipment that is unwonted for that great source of supply. This is attributed to a lack of choice lumber and an accumulation of coarse stock. Probably this is the correct conclusion to some extent, for we find that the Lake Superior country is sending a great deal of lumber to the East, while more than the usual amount is going from northern Lake Michigan ports and some from Green Bay. Yet the condition of affairs at Albany, New York, Connecticut points and other New England places of consumption must be taken into account as an index of the dullness at Saginaw Valley, as well as the situation in Ohio. At the East trade has been very cautious all the season, and the discretion of handlers seems to increase this fall rather than diminish. Albany reports indicate nothing like a brisk demand. Steadiness, and an ordinary attendance of buyers is the best report that can be given. At great points of consumption, like New York, there is little urgency to business, dealers having only to meet a steady call, and buying simply for that purpose. The demand can almost be termed moderate.

Mill Refuse.

The Wausau, Wis., correspondent of the *Northwestern Lumberman* says:—The disposal of refuse is becoming something of a question. There is so much timber that the slabs, edgings and trimmings are of little account. They are used to fill in and make piling ground, and can be had to burn for the asking. The mill men have gone to no special pains about burning the refuse. It has been dumped from tramways on to the ground, or against the sides of brick walls, and burned without ceremony. The first burner to be put in was that of the Michigan Lumber Company, rather recently built. It is of iron, 35 feet in diameter and 78 feet high. The first glance would lead to the impression that it was entirely safe, for the smoke floats through the dome of netting that surmounts the burner, entirely free from sparks. The secret of this is that in order to be safe the company placed a second spark arrester directly across the top of the burner, which cannot be seen from the ground. The dome is of one-half-inch mesh, and the inside netting has a quarter-inch mesh. It has worked entirely satisfactorily.

Setting out Fires.

There is a law in Washington Territory against the careless or malicious setting of fires in field, on prairie or in forest, either on one's own land or the land of another. If anybody sets a fire on any land not his own, and it spreads and does damage, the penalty is a fine of \$5 to \$500. If maliciously any one kindles a fire on his own land with the object of having it spread to the land of another and do damage, the penalty is a fine of \$20 to \$1,000 and imprisonment for from 3 to 12 months. When a person wishes to kindle a fire on his own land, for the purpose of clearing it of logs, brush, or otherwise, he "shall do so at such time and in such manner, and shall take such care of it to prevent it from spreading and doing damage to

other persons' property, as a prudent and careful man would do, and if he fall so to do he shall be liable in action to any person suffering damage thereby to full extent of such damage." Hunters and fishers are liable to the penalties inflicted on others for carelessness with fire. Is it possible that the citizens of a territory are wiser regarding the protection of their timber from fire than the "old heads" of the three great pine states of the Northwest?—*Northwestern Lumberman.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Mast, Bowspits, Spars, Staves, &c. measured and culled to Sept. 31:—

	1881.	1882.	1883.
Waney White Pine.....	1,007,810	2,135,250	2,270,002
White Pine.....	4,827,905	7,023,350	4,097,208
Red Pine.....	1,702,604	1,323,803	352,007
Oak.....	2,400,731	1,015,625	1,423,630
Elm.....	935,013	570,470	302,620
Ash.....	377,615	213,518	222,108
Basewood.....	3,510	1,273	2,244
Butternut.....	2,030	2,635	1,028
Tamarac.....	24,237	8,234	5,036
Birch & Maple.....	140,828	203,812	133,760
Masts.....	25 pcs	33 pcs	— pcs
Spars.....	— pcs	51 pcs	— pcs
Std. Staves.....	\$177.0.7	\$16.0.3.25	\$69.5.2.10
W. I. Staves.....	\$32.1.3.2	\$104.0.0.10	\$49.1.2.0
Bri. Staves.....	—	\$2.8.1.17	\$7.1.1.27

JAMES PATTON,
Supervisor of Cullers.
Quebec, Sept. 21.

Rat Portage.

A correspondent of the *Toronto Globe* says:—Rat Portage is the seat of an extensive lumber trade. The splendid mill of the Rainy Lake Lumber Company was unfortunately burned down a few weeks ago. Jarvis & Burrige have a large saw mill, not yet ready to begin cutting. There are three other large saw mills in the immediate vicinity of Rat Portage. Only about a mile west of the town is the steam mill of Bulmer, Bailey & Co., with a cutting capacity of 80,000 feet per day. A little farther on is Hunter & Co's mill, rated at 100,000 feet per day; Dick & Banning's mill, with a capacity of 50,000 feet per day; and the Keowatin mills, under the managing directorship of D. L. Mather, having a cutting capacity of 75,000 feet per day.

Trees for Prairies.

Mr. Eggleston gives the following as the order of preference as to successful growth of trees grown in Minnesota: First, cottonwood; 2nd, white willow; 3rd, soft maple; 4th, box elder; 5th, white ash; 6th, poplar; 7th, black walnut; 8th, white elm; 9th, butternut; 10th, white oak; 11th, black ash; 12th, hard maple; 13th, Norway pine; 14th, red oak and grey willow; 15th, basswood; 16th, red elm. For value for different purposes the order is as follows: For fuel in the near future, or wind breaks—willows, cottonwood and poplar; for fuel for next generation—maples and ash; for lumber—white oak, walnut, catalpa, ash, elm; for shade—box elder, white elm, ash, walnut, maple.

"Deal."

Readers of technical journals are often puzzled by the use made of the word "deal" by nearly all foreign publications, and some home ones. As generally used it means simply a piece of softwood lumber; but the strict definition of the word, as understood by the English timber merchant, is, softwood timber, imported and sawn to the section of 9x3 inches, or 8x4 inches, or 10x4 inches. Similarly "planks" are 12x3 inches or 12x4 inches, and "battens" 7x2½ inches, or 7x3 inches, all irrespective of length, which varies considerably, and of the country port they come from.—*Wood-Worker.*

Mills Burned.

NEW YORK, 21.—A fire early this morning in the planing mill of Robert Ellis swept through the building with such speed that the workmen were compelled to flee, leaving their coats behind. In less than five minutes the entire mill was in flames. Fifty lumber piles were burned or damaged. G. L. Schuyler & Co. estimate their loss on the lumber at \$70,000; Ellis' loss on the planing mill is \$15,000.
ROCHESTER, 21.—Crouch's sawmill was burned to-night. Loss \$30,000.

OTTAWA NOTES.

There are at present a gang of men busily engaged in fishing oak out of the canal in the vicinity of the Deep Cut. The foreman told a reporter that the oak which they got was worth from sixty to seventy dollars per thousand feet, which is quite an inducement for those fishers of oak.

McLaren's New Edinburgh saw mill is about to be demolished and a new mill erected on the site at a cost of \$35,000. The new structure will not, it is thought, be commenced until after the sawing season has closed.

Mr. H. McLean on Sept. 23rd sent a gang of 200 men to the Coulongo to work in the shanties. Another gang of shanty hands left on the same day for Michigan.

The last raft of square timber of the season has passed through the Calumet slides.

Gigantic Land Fraud.

SAN FRANCISCO, Sept. 12.—A proposed gigantic land steal, involving several million dollars worth of United States redeemed timber lands, has been discovered. The lands are situated in the northern part of California, and comprised the most valuable redwood timber on the coast. Applications for possession were signed by dummies. Several hundred applications of this kind have been filed with the Government officials here, and it is alleged Government officials are in collusion with the parties engineering the scheme.

The *Northwestern Lumberman* says:—A proposed gigantic land steal, involving several million dollars worth of United States redeemed timber lands, has just been brought to light. The lands which are situated in the northern part of California, comprise the most valuable timber lands on the coast. Applications for possession have been prepared and signed by dummies. Hundreds of these have been filed with Government authorities, and it is believed that the Government officials are acting in collusion with the parties engineering the scheme. If these schemes should succeed they will control one-sixth of the lumber supply of the state.

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 cure 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.

\$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 TRUX & Co., Augusta, Maine.

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It has the Largest Circulation; the Latest News, both Local and Foreign. A Splendid Story Page. First-class Agricultural Page. Reliable Market Reports. Legal Column Household Department, Children's Department, etc.
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3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only \$2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

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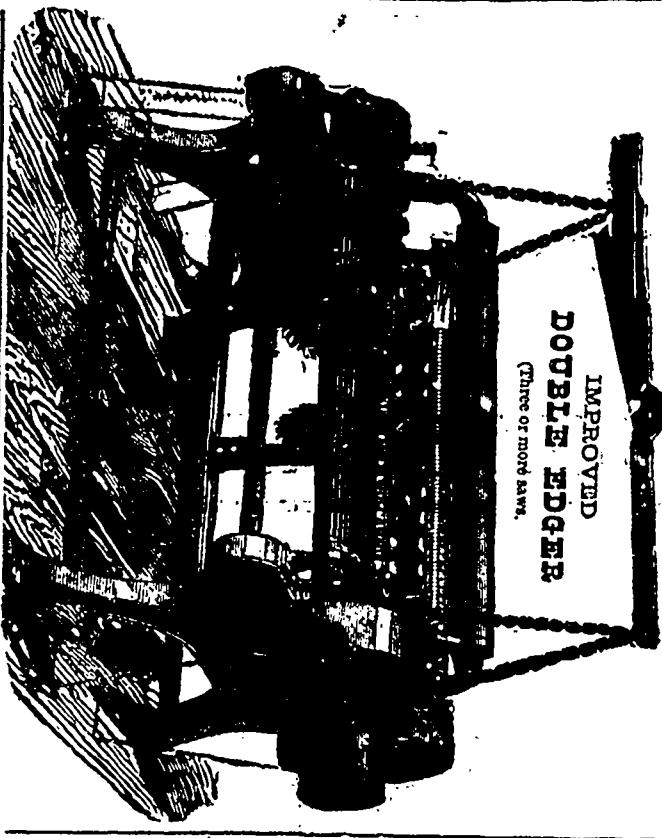
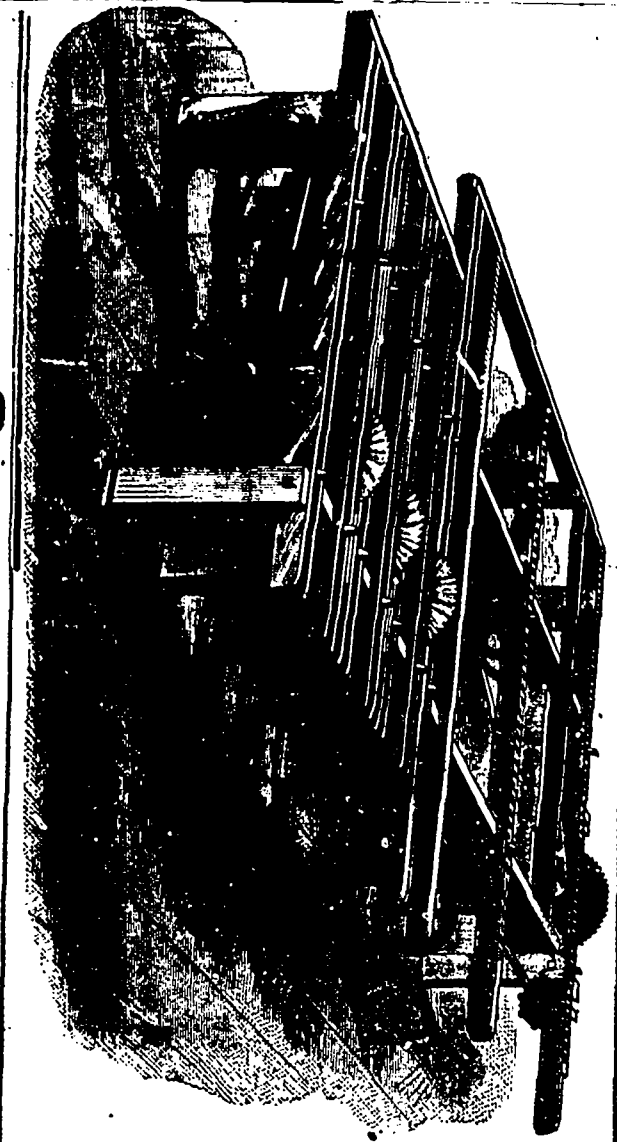
It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

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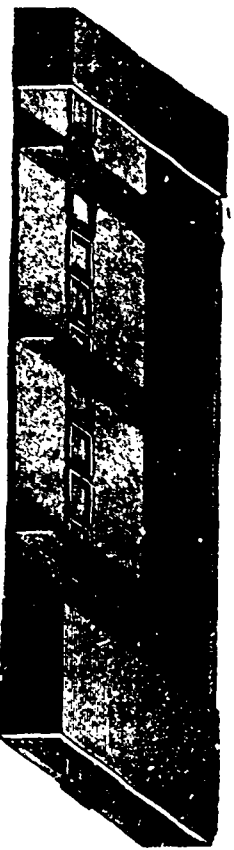
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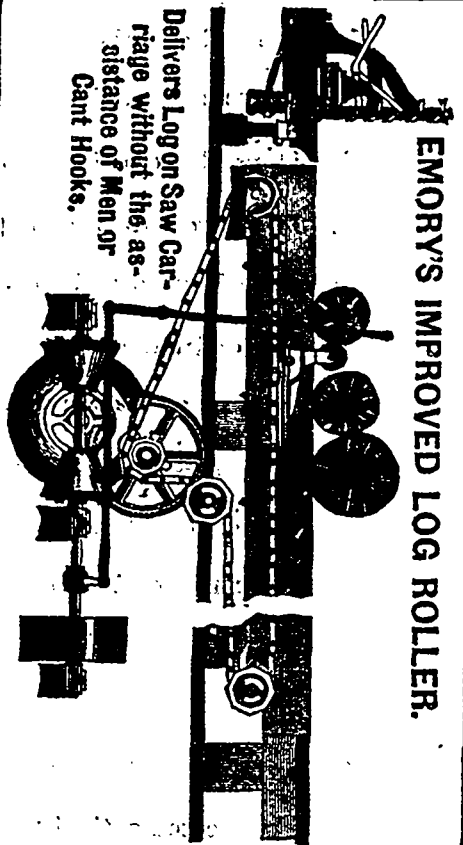
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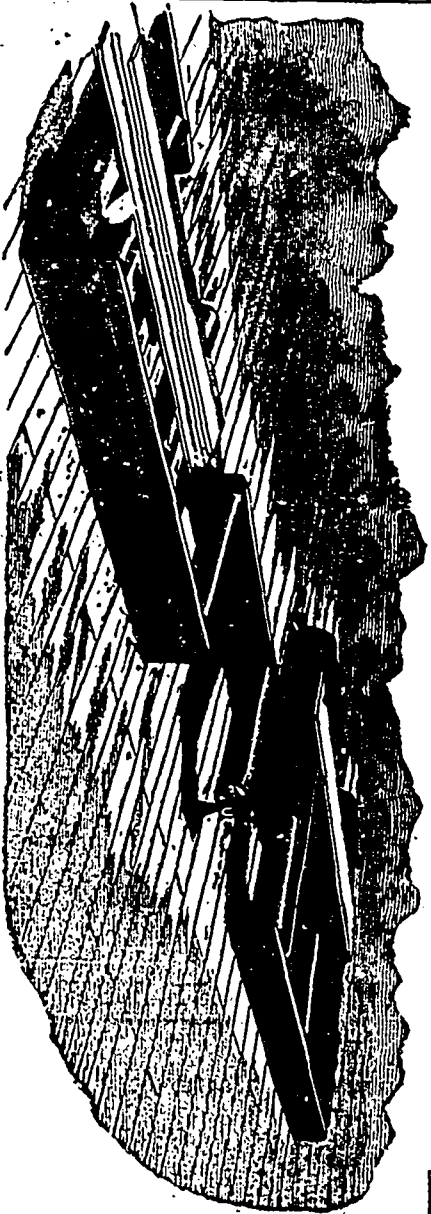
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6-ply Stronger than Double Leather.
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Runs perfectly true without stretching; not affected by steam or dampness.
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Sawdust & Refuse Carrier Chain

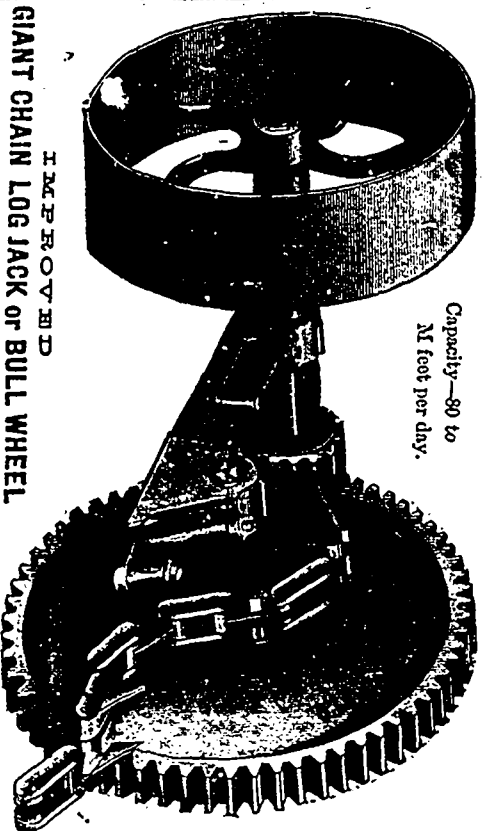
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