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NO. 18.

A TOW 1,200 FEET LONG.

The large sea-going towboats, Cyclops, Captain Lounsbury, and the Bertram T. Haviland, Captain Gully, from St. John, N. B., were this morning off Chatham Light, Cape Cod. The raft which they are towing to this city was reported to be intact, and they were making an average speed of sixty miles a day. They expect to arrive in New York early next week. On Saturday last the towboats encountered a severe northeast gale off Cape Elizabeth, and the hawser with which they were towing the raft parted. This necessitated about four hours' delay, until they could pick up the parted hawser, and pass to the tow two hawsers, one leading to each steamer. That day the boats put into Portland, owing to the heavy weather, but on the day following they resumed the voyage. From that time until last night nothing was heard of the tow, and fears were entertained that the raft had been lost or cast adrift by the towboats.

The great danger to be feared was the probability of a heavy sea being encountered. The raft itself is about twelve hundred feet long and thirty feet wide. It draws nearly eight feet of water. It is divided into sections of about 70 feet in length. The sections are cribs, into which, when they were made at St. John, the logs (about 65 feet long by 18 inches in diameter at the butt) were rolled and stowed. Then over and around the cribs strong chains were fastened. Between each crib there is a ten-foot space to permit free working of the raft in a heavy sea, for, in the length of 1,200 feet which the raft covers, during a storm there may be ten or twelve different large waves, and, were the raft all of one piece, there was every probability that before they had gone 100 miles it would become a wreck.

In the raft are twenty-four cargoes of 250 tons each. Were the contractor who owns it to have the spiling, of which the raft is composed, brought to New York by a sailing vessel it would have cost in the neighborhood of \$26,000, as the vessels that are engaged in this kind of business demanded, on account of the enormous length of the logs, extra compensation, they not being able to take as much as a full cargo. This the contractor, Mr. James Murray, of Burling slip and Front street, refused to accede to and chartered the tugs Haviland and Cyclops. The tug Haviland belongs to Mr. W. H. Tebb, corner of South street and Coenties slip; the Cyclops belongs to Captain C. C. Ellis, of No. 60 South street. Mr. Murray, when asked for information concerning the venture refused to have anything to say, stating that he had rather wait till the boats arrived in New York before making any statement. Mr. J. C. Ellis, son of Captain J. C. Ellis, of the Cyclops, said this morning that in the event of the undertaking proving successful, there would be a revolution in the coastwise timber trade, between New

York and ports east of Boston. "By the mode of bringing this raft here which Mr. Murray had adopted," Mr. Ellis said, "there is a saving of some \$8,000 or \$10,000. The charter price of the tugs I am not at liberty to state, but they are hired by the day, and, of course, no matter how long it takes to bring the rafts here we will lose nothing. The tow left St. John on the 7th inst. and will be here Monday. Captain Bragg, of the Portland Line steamer Eleapora, which arrived this morning, reports that he met the raft about 30 miles northeast of Cape Cod; that at that time they were getting along splendidly. They laid their course straight across from Cape Elizabeth to Cape Cod, and the greatest fear of Captains Gully and Lounsbury was that they might be caught by an easterly gale and be carried down into Cape Cod Bay, where there were ten chances to one that tugs, rafts and all would be lost. But everything is propitious for us now and there is no doubt that the raft will be anchored safe and intact in New York harbor within seventy-two hours.

"If the thing proves a success," said one of the most prominent towboat owners in the city, "within six months you will see the finest fleet of towboats in the world ready for service between the ports east of Boston and New York. In New Brunswick, of which St. John is the principal port, there is not one tug that can at all compare with our large ocean tugs, and it will be out of the question for them to attempt to compete with us. There is, of course, a considerable amount of shingles, laths, &c., that come by sailing vessels, and these undoubtedly will be left to the coasters, but the majority of the trade is done in spiling, of which, in a short while I hope we shall be the masters. St. John is about 800 miles, by water, from New York."

NORWEGIAN TIMBER HOUSES.

Mr. J. C. Wilcocks, of Plymouth, writing to the *Field*, says: "Since information on this subject was asked for I happened to meet the owner of the house mentioned, and some time since visited there. It is a most commodious country residence, having side walls reaching 6ft. above the level of the ground, with capacious collarage beneath. The whole of the superstructure is of timber, excepting the partitions through which the flues of the stoves (also Norwegian) pass. These partitions are of brick. The walls and ceilings and doors are all of varnished wood, and the decoration consists of the stem and fruit of the wild strawberry plant, the effect of which is very good indeed, and much more opposite than any decoration of more elaborate character. The stoves are very much like in appearance to church towers in miniature, and stand off about 2 ft. from the brick flue walls; they are of cast open ironwork, allowing thus the heat to pass off into the room with the greatest facility, and an elbow flue carries of the products of combus-

tion into the chimney, and peat and wood are the chief kinds of fuel used. The entire absence of draughts and facilities for warming the building are both remarkable. The cost, I am informed by the owner, has amounted to about a third of that of an English built residence of the same dimensions and accommodation. Fire insurance about 1s. per cent. extra. Externally the house is twice painted annually, owing to our extremely uncertain climate, combined with an exposed position to south and west winds. The interior ceilings and hall being entirely varnished, no dust or dirt adheres to this smooth surface, nor is there any paper to soil or spoil. There is not a sign of damp in the house. Labour being cheaper in Norway than England, I imagine it cheaper to import a house from Norway than to prepare material in England."

Old Building Material.

The *Scientific American* says that an extensive trade in second-hand building material has been carried on uninterruptedly in New York city for fifty years, and is largely supported by builders and joiners. The stone and brick of an old building is used in the construction of a new one, the lime-whitened bricks making the inside of the outer walls and the partitions, and the stone going into the foundations. But it is generally known that the inside woodwork is used again, frequently without radical alternation. Many builders prefer this old timber because it is thoroughly seasoned, having been defended from the weather and been subjected to the influences of a measurable even temperature for years. The richer woods which are admired for their color mellow tones by age and become more valuable as the years pass. Everybody knows that furniture of mahogany and rosewood that has outlived several generations is much handsomer than that made from new wood. But it has an added value as mere material. An article made from the old wood will remain its integrity in all its joints, its shrinking days are over. For the same reason the timbering, wainscoting and flooring of old buildings has an added value, although its selling price is less than that of new material.

New Method for Drying Timber.

Although steam-pipes are largely used in drying timber, hot air circulation is being introduced, and several improvements have been made in America in this mode of treatment. Professor Carvalho's method is described as follows: "A continuous volume of heated air is forced over the timber by means of a fan blower, the temperature of which is gradually increased, until the boiling point of water is reached, then the water in the albumen or other substance is converted into steam. This degree of heat also coagulates the albumen, and the pores of the inner cells of the timber become filled up with the solid coagulum." The hot air is made to en-

ter at the bottom of room, which is air tight, and after circulating round the timber, and through the wood, is discharged through another pipe at the opposite end of the room. It is asserted that this method of drying does not discolour the wood, and is a preservative against dry rot.

A Wooden Costume.

A very unique costume was made for the Olympian Club carnival, Boston the entire outfit of dress boots, mask, wig, and parasol being of wood. The chief garment was a princess dress made of various kinds of Spurr's papered veneers. It had a brocaded front and basque and trimmings of knife-plaiting ficus and loops of wood ribbon, and was ornamented with rosettes and leaves in wood of various shades in their natural colours. At the sides there was a substitute for embroidery in inlaid work of fancy designs. The sleeves were of cord paper, trimmed to imitate puffing, and at the bottom was a deep border of black walnut knife-plaiting. The boots and gloves were of birch bark, and the mask of matched woods with a fringe of plaiting. The wig was composed of about ten curls, consisting of white pine shavings artistically grouped. The parasol, Chinese pattern, was covered with various coloured veneers, and similar lined. This attempt was thoroughly successful, the effect of the different kinds and colours of wood in the combination being very striking and artistic. The veneers were so thin that the costume was not very heavy, and so flexible that it was not liable to injury.

Cottonwood.

Cottonwood, it is said, will make four rails in seven to nine years, and maple the same in from eight to ten years. Cottonwood, soft maple and California redwood are regarded by many as the best trees for forest planting when quickness of growth is desired, and also when shelter belts around orchards, gardens, barns and stock yards are necessary. Many farmers have learned from sad experience that by cutting down their forests indiscriminately they have made the way clear for chilling, biting winds and frost to nip their growing fruit.

Another Trail.

A man in Washington, who, it is stated, has failed in business exactly 85 times, has now started to retrieve the last break in his fortune by engaging extensively in the lumber business in Florida. He has rented a dock in New York, and although 65 years of age is said to be pushing his new venture with the energy of a young man.

The tug Alice M. Campbell towed 4,000,000 feet of logs for 40 miles on Lake Superior for the Oneota Lumber Company, without losing a log.

DISEASE AMONG SPRUCE TREES.

The following letter appears in the Montreal Witness:

SIR.—Mr. Vennor, in your number of the 18th, gives rather a novel cure by introducing woodpeckers and other tree creepers. Will he kindly let us know where these birds can be caught, and how caught? He can scarcely be sincere in proposing such a cure. Woodpeckers could never be trapped, and if he introduced a million in a grove of spruce, in a few hours there would be very few left in the grove, as they are continually on the wing, and the woodpecker is miles away in the evening from where he took his morning meal. Having some knowledge of the Maine timber lands and these localities, I may say the disease alluded to among the spruce trees arises from the fact that all the first and second quality spruce deals have been cut down all through Maine, and what has been left standing by the lumberman, were the faulty trees, culls and dead standing timber, which of course will be the favorite localities for the wood borer, of which there is a numerous family. One of the most destructive is the *Monohammus Confusor*, it is remarkable for the length of its antennae, or horns, which sometimes are twice the length of its body, the latter being an inch and a half long. It is produced from a grub of a whitish color with a large broad head and very powerful jaws, with which it cuts into the trees. It attacks all newly cut timber with the bark left on and all injured timber, blown down, burnt and sickly trees. I had an opportunity of demonstrating the facts after a forest fire had passed through a considerable grove of mixed timber. The borers in question made their appearance in large numbers and attacked all the fallen trees, depositing eggs in every crack and crevice or knot hole. The damage done by this beetle is in some instances enormous. I had one season several thousand pine and spruce logs which stuck on the drive. The waters getting so low they remained stranded on the rocks and beach till the following spring, and every log was attacked by them and bored from one to two inches inward, which caused a loss of several thousand dollars on the value of the logs. The *Monohammus Scutellatus* is another borer and more numerous than the one I have described, but the habits of both are similar. The *Chalcophora Liberta* and *Virginica* are also wood borers. I never knew the Coddling moth or worm to attack the forest trees. It is known to be most destructive to the apple, as it makes its attack upon the fruit. The insect deposits its eggs in the apple blossom, the eggs are soon hatched and penetrate into the growing fruit. Every apple grower knows something of its ravages. I made an extensive exploration through the Canadian forests bordering on Maine and found the spruce trees, both scattered and in groves, in a perfectly healthy state and did not see any signs of the disease referred to. Mr. Vennor's cure by woodpeckers would only be making the evil worse and the trees less valuable, as the woodpecker makes a considerable hole in the tree before he can reach the grub with his speared tongue. The prevention must be with the beetle, not with the grub. In May the beetle comes out of the grub in immense numbers. The crow is the only bird that devours them. Hens and turkeys eat them also. I have seen them in the new settlements, where the slash has been made during the winter, running and flying from tree to tree devouring the beetle most vigorously.

CHARLES HUGHES.

Montreal, 25th August, 1883.

FORESTRY IN AUSTRALIA.

The colonies of Australia are awakening to the importance of forest conservation and restoration, and South Australia is the first to establish a system of forestry, that promises good results. Legislation upon this subject, was begun in 1871, when Mr. Krichauff, M. P., called for a return, eliciting information from persons resident in the different districts of the colony, in regard to the supply, preservation, and culture of forests. The answers were prepared by Dr. Schomburgk, director of the Botanical Gardens at Adelaide. In 1873 he introduced a bill, and secured its passage. It was entitled "An Act to Encourage the Planting of Forest Trees," and provided for the pay-

ment of £5 per acre for every acre planted by a land-owner in certain districts of the colony, upon certain conditions specified. A report on Forest Reserves was submitted during the same session, prepared for the Hon. the Commissioner of Crown Lands, by G. W. Goyder, Esq., the Surveyor-General, in which it was suggested, that certain portions of the country should be set apart by proclamation as Forest Reserves, and the subject of the formation of a department of forests, was discussed at length.

In 1875, a bill was brought in by Mr. Krichauff, and passed, entitled "An Act to make Provision for the Appointment of a Forest Board, and for other Purposes." It defined the districts pointed out as proper for forest reserves, in the previous report of Mr. Goyder, and specified the duties of the Board. It did not, however, survive long enough to test its merits, and was superseded, in October, 1878, by the "Forest Trees Act," and this again by "The Woods and Forests Act of 1882," which has been passed during the current year.

A cumbersome arrangement under the Forest Board having failed to meet the requirements, the three non-official members resigned; upon which the Government, considering that the operations of the system could be better conducted by the Conservator of Forests, placed directly under the Honorable Commissioner of Crown Lands and Forests, this mode of management is now in operation.

The principal fault of the system appears to consist in the smallness of means provided, amounting we believe, to about £5,000 per annum. This, when applied to the expenses of office management, and to the care of something like 240,000 acres, of which two-thirds are timberless, or covered with a useless growth of dwarf Eucalypti, Acacias, and the like, should not raise great expectations of grand results.

From the official report for 1881-2, it appears that there were then 19 Forest Reserves, containing 239,336 acres, which, with the exception of the Travelling Stock Reserves, were all leased for pasturage purposes at rates ranging from 1d. to 2s. 8d. per acre. There were four well established nurseries, having together an area of about 20 acres. Planting, and other forest conservancy operations, were being conducted upon eight reserves. The force consisted of three foresters and four nurserymen, with an average force of 25 laborers. About 4,043 acres had been enclosed and set apart for planting and other forest operations. The average income from the Forest Reserves, in the last six years, had been £5,581, and the expenditures of the board, £5,787. About 440,000 young trees were doing well, from the results of the board's planting; some 300,000 saplings and seedlings of natural growth had been pruned, in connection with the system of encouragement for the renovation of the indigenous forests, and about fifty thousand seedlings of natural growth had been reared in the Natural Regeneration inclosures.

The following extract from regulations, dated January 13th, 1879, and applicable to the Wirrabara Reserve, will prove of interest to our readers:

1. All standing trees disposed of by the Forest Board in this reserve, by private contract or otherwise, must be previously marked by the Conservator or officer in charge.
2. The official mark will consist of a longitudinal chip taken off two opposite sides of the tree and stamped F. B. in distinct characters.
3. Each tree must be cut off from its base at a height not greater than two feet from the ground.
4. In cutting down trees, care must always be taken to fell them in such a manner that they will not interfere with or injure any of the other trees, saplings, or seedlings, left standing on the ground; and should any damage arise in this way from the carelessness of the workmen, the officer in charge of the reserve (whose decision on such matters shall be final) is empowered to value such damage at a rate equal to the deterioration effected, and collect the amount from the party to whom the tree felled has been sold.
5. Any party or parties found felling trees which have not been marked and sold to them, will incur a penalty of not more than five pounds, in addition to the value of the material.

6. No purchaser shall be permitted, on any pretence whatever, to light fires within the forest, except on such sites and for such special purposes as shall be defined by written permission from the conservator.

7. The purchaser of any tree must remove the whole of the same that is convertible into a marketable commodity, and pile together all refuse ready for burning, to the satisfaction of the forest officer. Any breach of the two last regulations, will incur dismissal from the forest.

8. Purchasers will be allowed sufficient time for the removal of their timber from the forest. This time will in all cases be specified and entered in the forest sales book. Should any purchaser fail in having it removed within the period stated, then it will be optional for the officer in charge to declare it forfeited or give an extension of time for its removal.

9. Splitters applying for timber, on satisfying the Conservator of their respectability, and on giving a guarantee that they will not attempt to evade the regulations, will be allowed to erect temporary huts on such sites as the Conservator shall deem expedient; but they will not be allowed to keep stock of any kind in the forest further than may be necessary at certain times for the removal of their timber to market—this to be decided by the Conservator, whose decision shall be final.

10. All standing timber will be sold per cubic foot, or in lots by valuation, to suit purchasers.

11. As soon as the trees are marked and sold, they will be at the entire risk of the purchaser; but the purchaser will not be allowed to cut or ring trees bought, until a proper settlement for the same be made to the satisfaction of the forest officer.

12. All sales amounting to less than £2 to be paid for in full before the timber is interfered with; and all sales realizing more than that amount, the purchaser shall pay half such sum in advance, the remainder before any of the timber is removed from the ground.

13. Sites for the erection of saw mills will be granted on payment of a nominal charge per annum, and licenses given for materials, sinking wells, erection of huts, and stabling for accommodation of horses used in the haulage of timber. Special arrangements for the purchase of timber will be entered into with parties erecting saw mills.

14. Sites for the erection of saw-pits will be granted free of charge, with liberty to erect temporary camps and depasture working bullocks actually employed in the hauling of timber, etc.; all subject to approval of the Conservator.

15. Licenses to split posts and rails from dead wood in localities named in body of licenses, will be granted at 20s. per annum each, with an additional fee of 10s. per 100 for all posts and rails removed from the forest.

16. Licenses to procure straining or corner posts of dead timber from localities to be named in license, will be granted at 1s. for each post.

17. Licenses to remove firewood from the dead timber lying upon the ground from localities to be named in body of the license, will be granted at the following rates:—

- 8s. for one horse load;
- 1s. 6d., for load of two horses or bullocks;
- 2s., for load of four horses or bullock;
- 4s., per load where more than four horses or bullocks are used.

STONE, SAND AND GRAVEL.

18. Licenses to remove stone, sand and gravel, will be granted at 20s. per month each.

19. Splitters will be allowed to erect temporary huts only in the forest, and only on such sites as may be approved by the Conservator.

New regulations dated March 20, 1883, and received too late for further notice in this number, have been issued under the Woods and Forests Act of 1882. They vest in the Conservator of forests, their immediate control and management, the sale of timber, employment of laborers, etc., but subject to the approval of the commissioner of forest lands.

These regulations forbid the lighting of fires for any occasion during the summer months (May to October), and provide for the sale of licenses for various purposes, besides the cutting of timber,

LAKE ST. JOHN VALLEY.

In an account of the Lake St. John Valley a special correspondent of the Toronto Globe says:—

"The forests around Lake St. John contain pine, elm, tamarac, ash, spruce, cedar, barwood, fir, white poplar, birch, and some hard maple. This, says Michaux, is the most northerly region where white spruce and cedar have been observed. White pine is found in abundance, and hemlock literally fills the forest. Poplar some times attains a height of 80 feet and a diameter of three feet. Mr. Robert Bell in 1858, reported that acorns were found on the shore of Lake St. John, showing that oak must exist on some of the rivers.

In his description of the town of Chicoutimi the same writer says:—

"The Government pier, at which the steam boat lands, is at the end of a cross street, half a mile from the Court-house, and a mile east of the old Hudson Bay post. This pier was commenced in 1873, by the St. Lawrence Tow-boat Company, and completed by the Dominion Government, by whom it is now maintained. The total Government expenditure upon this work to date has been \$17,017. The depth of water at the end of the pier was originally ten feet, but it has since been reduced to seven feet by slabs and sawdust from the mills above. The tide rises for some distance above Chicoutimi, and sea-going vessels can ascend with a draught of ten feet during low water, and with a draught of 18 feet during high tide. The *Mario's Hospital*, a two-story brick structure 35x45, will be finished this year. It is situated on the top of the hill in the rear of the College, and is opposite the stone monument erected to the memory of the late William Price. In consequence of the depositing of slabs and other refuse in the Sagouay, it has been found necessary to take steps to clear the channel. The total expenditure by the Dominion Government upon the improvement of this channel up to 1882 was \$13,559. No less than from twenty-seven to forty-five ocean vessels, besides many schooners, have come to load lumber at Chicoutimi every year since 1872, and at the smaller ports lower down quite a number also obtain cargoes."

EXTENSIVE PLANTING.

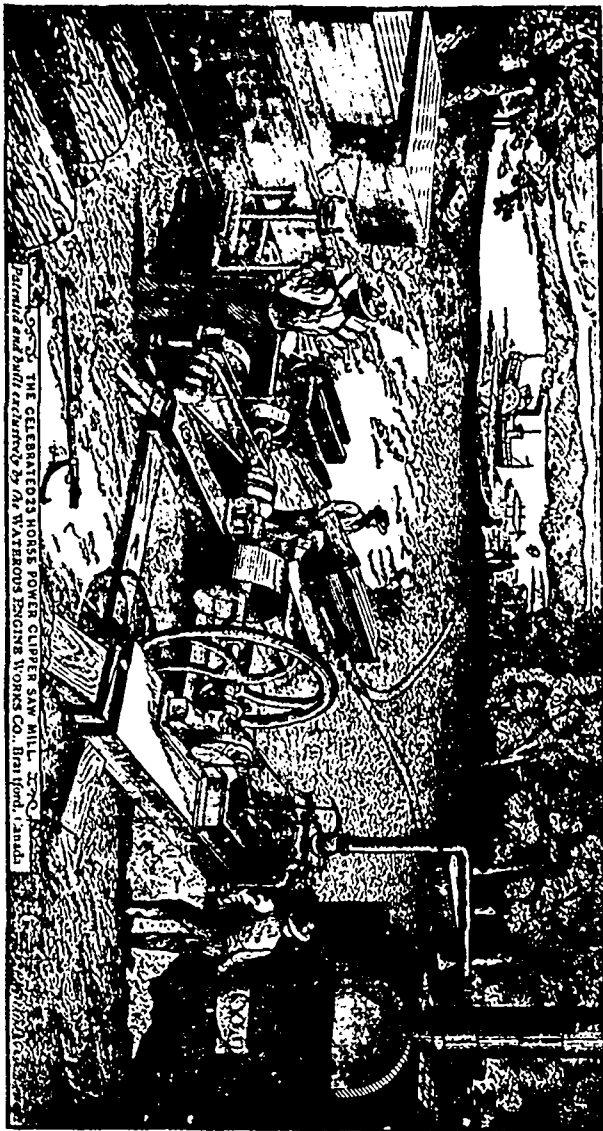
The *Lumberman's Gazette* says:—Nebraska believes in forestry, and demonstrates the strength of her belief by practical results. On the last arbor day 500,000 trees were planted within her territorial domain, which, if they arrive at maturity, will not only furnish lumber for building purposes in the future, but will be of inestimable value to the people in the cooling shade they afford and the protection against the biting blasts of winter, but their climatic effects possibly will never be measured. As much attention to this question in all the states and territories as in Nebraska would very much tend to relieve that great source of an anxiety, —the denudation of the American forests. Kansas last year also came to the front nobly in this connection by planting 93,000 acres with timber. The constant agitation which has been so persistently maintained in the class of journals of the country is thus bearing excellent fruit.

The Pacific Coast.

The lumber industry, says the *San Francisco Journal of Commerce*, is going to be *par excellence* one of the great industries of our Pacific coast future. There is no region on earth except tropical South America that possesses anything like the forest that clothes the great mountain chain whose principal summits roar above the deserts of Arizona. These are fully 700 miles of mountains covered with virgin forests, which it would seem as if the whole world could not exhaust. The estimated quantity of lumber contained in these forests is not less than 4,032,000,000, or 4,000,000,000 feet, worth in log, at a very low estimate, \$25,000,000,000. California itself has 12,000,000 acres of woodlands, the annual production being about 500,000,000 feet. The total average product of the coast is estimated as follows:—California, 500,000,000 feet; Washington, 300,000,000; Oregon, 200,000,000; British Columbia, 50,000,000; other sections, 60,000,000—total, 1,110,000,000 feet. The value of this for export is about \$10,000,000.

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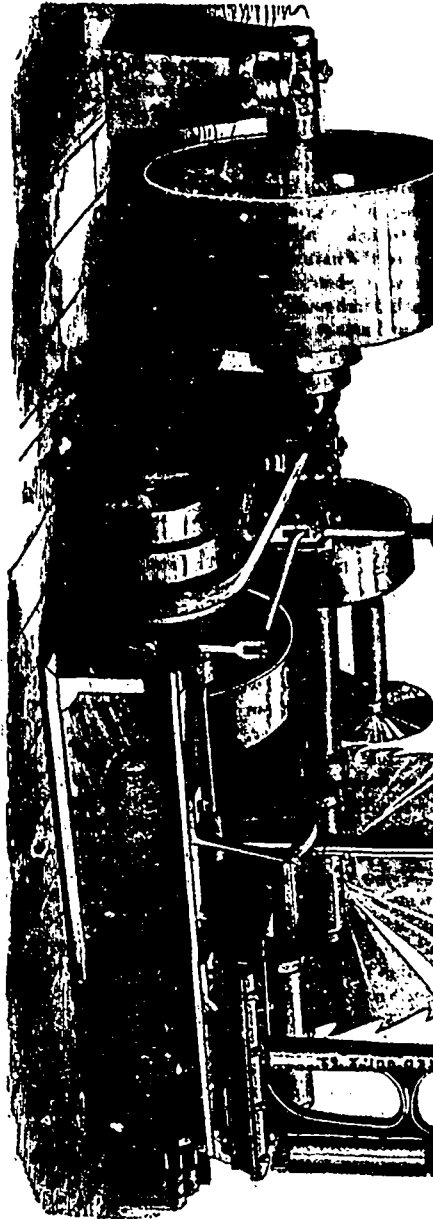
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Using 4 to 1 1/2 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2 1/2 to 6 inches wide, takes 72 inch Saw and under. CARRIAGES to cut any length desired for abutting or stock purposes, ship yards, etc.; Hatchet or Gaulty's Friction Set Works; Eagle Claw Dogs, Tiger Dogs, Recessed Attachment, and special features.



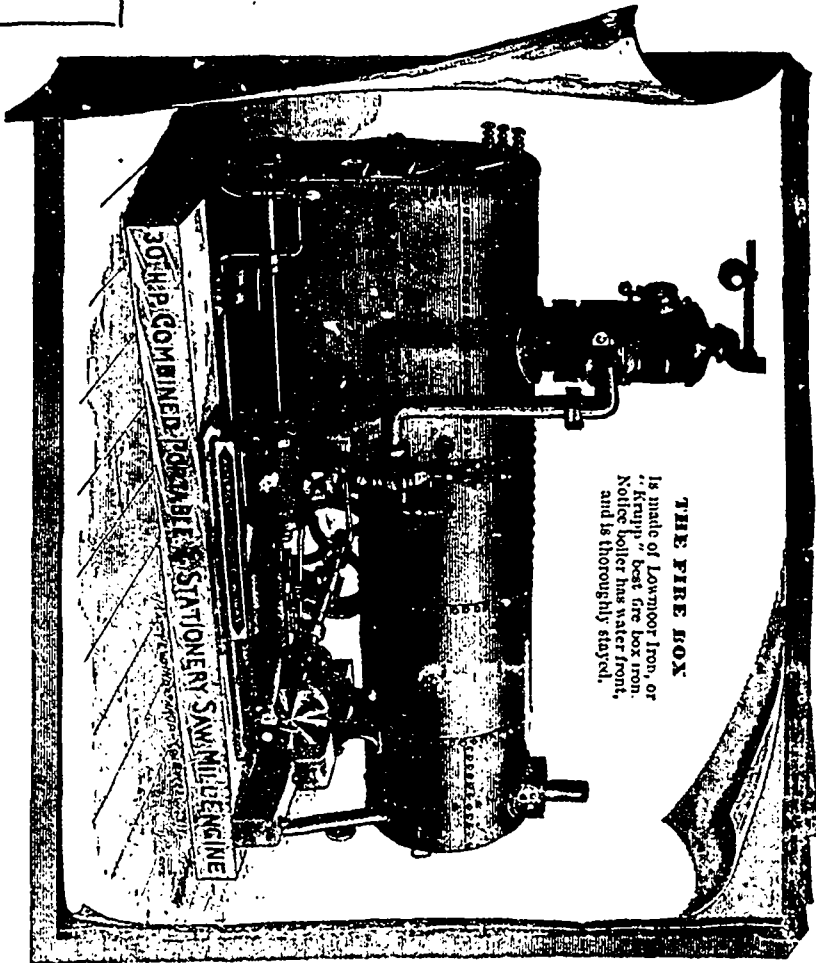
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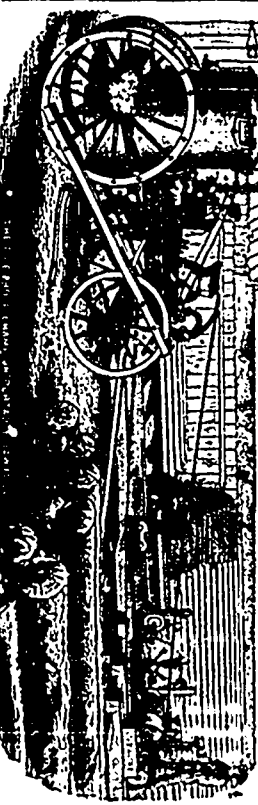
THE FIRE BOX
Is made of Lowmoor Iron, or "Krupps" best fire box iron. Notice boiler has water front, and is thoroughly stayed.

A. & P. White, Pembroke, have one of these 30 H. P. mills at Doux Rivieres, C. P. R. R. G. C. V. Hall, Quebec, has one of these 30 H. P. mills at St. Agnes, Quebec. Also, W. & R. Wallace, Gardner's Creek, N.B., with 60 foot Ship Yard Carrago.

Champion Portable Saw Mills

12, 16, and 20 H. P.

George Dorr writes as follows:—"St. J. V. O. R. July 5th, 1882. I have just finished setting with your 20 horse power engine. It does not get down, and cut 325,000 feet, mostly fresh, 70,000 better, and in one week. We were just fed, mostly from time we moved mill, till we finished, how's that? We were at the sawmill with our 20 horse engine or delay of an hour. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the latest of valves. I can run 2,000 feet 12 inch lumber in an hour.



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

- Canada Pacific R. R. Co., G. B. Hall & Co., Que. (2)
- Dominion, Land & C. Co., Sherbrooke, Que. (2)
- Sorel R. R. Co., Que. (2)
- Cochran, Rancho Co., Bow River, N. W. T.
- Nor. W. at Stirling and Mining Co., Bow River, N. W. T.
- Toronto and Nor. West Colonization Co., near Brandon, Morton, Henry & Kanning Co., Fort St. John, Alta.
- Allan Grant, C. W. A., Geo. Perley, Ottawa.
- Michigan-Native Copper Co., W. W. Stewart, Montreal.

FORESTS OF NORTH AMERICA.

It is only within the last few years that public attention has been directed to the subject of the preservation of the forests and that efforts have been made to stay the wholesale destruction of trees, which threatened before long to denude the country almost entirely of its woods.

The mere utilitarian will regard the matter of consequence only from his industrial standpoint, and will regret the destruction of trees from a consideration of their marketable values, relegating to the scientist the more abstruse and less tangible reflection of the climatic and other effects of such denudation. That the latter consideration is not the least important is becoming now evident, when it is almost too late to remedy the evil. Whole sections of the country have been divested of their natural summer verdure of foliage, except in isolated patches, and the consequence has been a decreasing rainfall, a more dry and less fertile soil, while it is also generally admitted that in such sections the climate is less salubrious than previous to the clearance of the forests. Aesthetic considerations, it is presumable, ought to weigh less in the public estimation, still to many it is a subject of sincere regret that the charming variety and beauty of wooded hills and valleys have wholly disappeared in large areas all over the country, and that cool shade and summer foliage may be found frequently more readily in the environs and parks of cities than in the country. The sameness of aspect and absence of scenic effect resulting from the disappearance of the forests has seriously marred the beauty of the country, and in the level sections the uniform, dull monotony of the landscape is only relieved by an occasional orchard surrounding the farm houses from an unvarying uniformly totally destructive of beauty.

GEOGRAPHICAL DISTRIBUTION OF TREES.

The Continent of North America possesses a great variety of forest trees, so many as 340 different species being known to exist. Of this number about 100 species exist in Canada, its less varied climatic conditions precluding such a general diffusion of arboreal growth. Some species of trees are not only widely diffused but are persistent over great areas, being found almost everywhere within the limits of their distribution, while others although having an extensive range are nowhere very common and are sometimes absent for considerable intervals. Other species are confined to comparatively small tracts, or appear in detached sections, where the nature of the soil and the locality is favorable to their growth.

As a general rule the more northern species occupy the greatest extent of country, while the southern ones are more and more restricted as we proceed south. This is owing to the great difference existing in climatic conditions in going from the east to the west in the more southern latitudes. Along the northern borders of the forests of the continent the elevation of the land above the sea level is more uniform and comparatively slight, and other physical conditions are tolerably regular. As a consequence of this we find the most northern group of trees extending from Newfoundland to Alaska—a distance of 4,000 miles.

The study of the distribution of the various forest trees possesses an interest even to the geologist, as bearing upon questions in regard to the condition of the continent in later geological times. The outlines of the areas occupied by the different species and other circumstances connected with their characters and distribution may throw some light on their dissemination from certain centres or lines, or possibly in some cases their contraction from wider limits, or it may be found that some of them still have a tendency to retire or to advance.

FORESTS IN CANADA.

The correctness of the Frenchman's provision, of the time of Jacques Cartier, would no doubt be questioned who would predict within even centuries the disappearance of the apparently interminable forests extending in almost unbroken solitude from the Atlantic to the Pacific Ocean. The continuity of the vast canopy of foliage was only occasionally broken by meadow marshes, and the small clearances of underwood surrounding the wigwams of the aborigines. In

other sections the vegetation was so luxuriant that only an occasional gleam of sunlight could dart through the interspaces of the thick mantle of green to the ground below. Then, as now, the vast prairies in the centre of the continent were destitute of trees, but to the Frenchman first landing in Canada, and his progeny for more than two centuries, these regions were a *terra incognita*, far removed from the range of vision and observation. So far as he had penetrated during over two hundred years the vast sea of foliage, extending everywhere, awayed and quivered in the sunlight, or changed from the light green of early summer to the darker shades as the season progressed, finally ending in the vermilion, carnation and the thousand various tints that still throw a glamour of glory peculiarly their own over Canadian forests preceding the fall of the leaf. Into those sublime and gloomy solitudes, undisturbed save by the whoop of the savages, the howl of the beast of prey, or the moan of the wind through the needles of the pine, the Trappist Fathers penetrated, and, far removed from the verge of civilization, acted as the pioneers of progress in sacrificing the comforts of life, and frequently life itself, in their noble efforts to Christianize the heathen.

Habits of self denial incalculated by their order, and a gloomy asceticism which had nursed religious ideas until they became a second nature, peculiarly fitted them for such a work. Social ties they had few or none, and the dominating idea or object of their mission became so all absorbing as to render a life long residence in those profound and gloomy forest shades the only phase of existence they could really desire. Their day has long since gone by, but the historian who would fail to credit them as the pioneers of the now existing age of progress would be guilty of an act of injustice as well as of falsifying the records of the past.

At the period of the conquest of Canada by the British in 1759, the forest had been cleared only from detached sections of the country adjacent to the St. Lawrence, but in no instance had the labor of the colonists extended to any considerable distance from the river toward the interior. At that time Upper Canada was an unbroken wilderness, the few settlements that existed being restricted to the banks of the St. Lawrence and the shores of Lake Ontario and Erie.

WOODS OF ONTARIO.

So late as 1850 the Western peninsula of Upper Canada (now Ontario) was a tree covered expanse, the settlements being confined to the shores of Lake Huron, Simcoe and the Georgian Bay. Since then, however, the progress of the settlement has proceeded with such rapidity that but few sections remain now unoccupied. As the trees formed the primary and chief obstacle to cultivation it was but natural that the squatter would regard the forests with no favor, and that he would in consequence direct all his energies to the speedy clearing of the land and the destruction of what involved years of the hardest labor before he could expect any but the most meagre returns for his toil. All that he cared for was to leave enough of the timber for fuel and for rails, and such was and is the existing dislike to trees that the spontaneous growths of such along the fences and boundaries of farms were and are ruthlessly destroyed. So much is this the case that in large areas in Ontario some of the farms are entirely destitute of timber, even pasture fields being unprovided by a solitary tree to shade the cattle from the glare of the noon day sun.

A reaction, however, has set in and the idea has dawned upon the public mind quite recently that the wholesale destruction of the woods is a great evil, and efforts are now being made to retard the process as much as possible where it is now in progress, or to partially remedy the evil where it has gone too far.

This spring a number of advanced thinkers inaugurated a movement looking to a partial restoration of the destroyed forests, and an "arbor day" in all the large cities of the Dominion, and towns and villages, will doubtless result in not only making tree planting fashionable, but will, before long succeed in enhancing the beauty and salubrity of the country.

In the uncleared portions of Ontario the forests present a remarkable richness in the

number of species to be found growing together. In some localities as many as fifty different kinds are to be found on one farm. Maples, alms, beeches, basswood, with a proportion of evergreens, the hemlock and balsam being the most common, except where the pine flourishes. The underwood is usually of the same species as the larger trees, unless on low ground, where other varieties peculiar to such localities prevail. In isolated places, where the nature of the soil is suitable, groups of wild cherry, butternut, oak, white and black ash, birch and many other trees grow luxuriantly and attain great dimensions. The forests of Ontario are, however, now but shadows of what they were, and the glory of their foliage and the mysterious depths of their dim umbrageous spaces have disappeared before the woodman's axe and firebrand, and like other vanished things, good and bad, have been consigned to the region of the past. The pioneer now recalls, with visible pride and a sigh for his departed strength, the time forty years ago, when he carried the flour for the sustenance of his family a distance of forty miles through an almost trackless expanse of wood to his steading on the shores of the Georgian Bay or Lake Huron. He recalls also with regret that early period when life, even with all its hardships, was happy and free from care, and primitive wants, few in number, were almost entirely supplied from the virgin soil, and he and his family, if possessing fewer luxuries, had fewer desires, and the free and exhilarating air of the forest, a simple diet and constant occupation precluded those enervating influences so frequently accompanying the more complex and luxurious modern style of living.

LUMBER SUPPLIES.

Commercially considered the most valuable products of the Canadian forests are the pines which have now been very effectually culled from the settled portions of Ontario and other parts of the Dominion. With the exception of detached clumps scattered over the inhabited part of the country, the lumberman must now seek his supply in the region of the Upper Ottawa, in the Nipissing and Muskoka districts, and in the occasional patches existing on the north shores of Lake Huron and Superior, British Columbia, Quebec and New Brunswick. The dense pine forests in the latter provinces have virtually disappeared, while the supply from Quebec, never large, is now less than ever before.

Still, the quantity of lumber now exported is larger than a number of years ago, which is doubtless owing to higher prices, more vigorous prosecution of the trade in lumber, and the extension of the labour of the lumberman to newer and more distant forests, which now, instead of supplementing the ordinary production, are almost the sole sources of supply. That the limit of the production of pine has now been reached in Canada is generally conceded by experienced dealers, and they contemplate with anything but a feeling of satisfaction the approach of the time, by no means distant, when the most difficult problem presented to them for solution will be that of supplying the market demand for lumber when the sources of supply have become exhausted. That this exhaustion is now taking place at a rate that seriously threatens the complete extinction of this valuable tree at no distant date it is needless to deny, and it is quite as undeniable that the generation now living, the present process of destruction continuing unabated, will witness the supply so seriously impaired as to make pine lumber too valuable to be applied to many of the uses for which it is now considered indispensable.

The same destructive influences are at work in our own country, and the day is probably not far distant when the principal sources of pine in Maine, North Carolina, Michigan, Oregon and other sections, shall have become exhausted, and the builders will be confronted with the difficult question of supplying the place of boards by other materials combining their advantages of lightness and ease of workmanship with cheapness.

Next to pine, hemlock is the most valuable tree to the builder, for the rougher sorts of lumber. It existed in connection with hard wood over a more uniform and extended range of country, but never like the pine in separate sec-

tions, to the almost entire exclusion of other species of wood. It has now become almost as scarce as pine in many sections, and on farms where thousands of trees were destroyed the owner would now find it impossible, unless in rare instances, to secure sufficient hemlock to furnish lumber for the erection of a barn. Maple, one of the most valuable and most plentiful of Canadian trees, is also rapidly disappearing, the vast quantities used for fuel and firing purposes on trains, added to the quantities destroyed in clearing the bush lands, having reduced this most useful and beautiful of trees to straggling and narrow limits.

TREES OF BRITISH COLUMBIA.

The most valuable trees in British Columbia are the Douglas spruce, yellow and red pine, which extend from the Pacific to the Rocky Mountains. The other varieties of trees are the western larch, found in the Rocky Mountains and the valley of the Selkirk and Gold ranges; hemlock and vine and other maples, and western scrub pine, which forms dense groves in the interior of the province.

Douglas spruce, commercially known as Oregon pine, is the most important timber tree of British Columbia, and is the only one of which the wood has yet become an article of export on a large scale. It is found in all parts of Vancouver's Island, with the exception of the exposed Western coast. On the mainland, near the 49th parallel, it extends from the sea to the Rocky Mountains, being found even growing at an altitude of 8,000 feet in a stunted form. In the dry southern portions of the interior it is confined to the higher uplands between the various river valleys, coming down northward to the general level of the country. The best grown specimens are to be found near the coast in proximity to the numerous bays and inlets by which it is indented.

In those places it forms prodigious and dark forests, the foliage being so dense as to be impervious to sunlight. The trees here attain very large dimensions, many of them being over ten feet in diameter and two hundred to over three hundred feet high.

REGION NORTH OF THE LAKES.

The region north of Lake Huron is generally timbered with beech, maple, pine and cedar, where the land is fertile, but as a great extent of this section is sandy and rocky, the area of timber is rather detached and restricted. At some distance from the shores of Lake Superior and extending from Sault St. Marie to Fort William, a large portion of good rolling land, occasionally broken by trap rock, and heavily timbered exists. On approaching the lake the country becomes mountainous and barren, varied at intervals with richly wooded fertile areas.

The Nipigon River, the largest to the north of Lake Superior, takes its rise in Lake Nipigon, and flowing through several smaller lakes empties itself through a wide, deep channel into Nipigon Bay. Adjacent to its banks are many fine white and Norway pine and other varieties of trees. The river swarms with trout, weighing from one to twelve pounds each, and in it and the surrounding lakes and rivers the most enthusiastic disciple of Isak Wilton would find ample means for enjoying his favorite sport.

Lake Nipigon, 120 miles long by 60 wide, is dotted with beautiful islands, some of which are very large and heavily timbered. The coast of the lake is generally mountainous and barren and but sparsely wooded.

Black Sturgeon River, connecting Lake Nipigon with Lake Superior, flows through a valley about six miles wide, which contains excellent soil, composed of disintegrated trap rock, of which the surrounding hills are composed. The adjoining country is wooded with large birch, elm, poplar, spruce and balsam trees.

The Kaministiquia, the only river on the Canadian side of Lake Superior that is navigable for vessels for any distance from the mouth, flows into Thunder Bay at Fort William. For the latter part of its course it winds through a rich valley of alluvial soil, between banks varying from five to forty feet in height. The valley is covered with a profuse growth of elm, ash, poplar, birch, spruce, pine and a thick underbrush of flowering shrubs.

This region of country is the sportsman's paradise, and is becoming yearly more fashion-

able as a favorite retreat in which to spend the warmest period of summer. Tourists from New York, Boston and Philadelphia, as well as from the principal Canadian cities, have discovered it to be an excellent fishing and hunting ground, and are high in their praises of the coolness and salubrity of the climate and the unparalleled facilities for fishing and shooting.

THE WOODS OF MANITOBA.

The largest portion of the area of the Province of Manitoba is entirely destitute of timber, and in sections where trees do exist they are crowded together along the margins of the rivers and lakes.

The principal trees in the woods is the poplar, the next in importance is the oak, and near the rivers will be noticed large elms. One of the most beautiful trees of this locality is the ash leaf maple, its fresh, green leaves opening out quite early in the spring. It is a most vigorous grower, bears transplanting well, and very its qualities better known would be valued as an ornamental shade tree in any northern country. In the spring the ash leaf maple yields a sweet sap from which superior sugar and syrup are made, but, as the flooding of the river occurs at this season of the year, the are difficult to reach in order to secure the sap. On the shores of the streams which enter the Red River, and especially near their mouths, basswood grows in great abundance, and Ironwood of a large size can be met with. Commercially, the trees of Manitoba are of but inconsiderable value, and even used for fuel are but indifferent substitutes for the maple and hard woods of Ontario.

HUDSON BAY A HER SECTIONS.

It is not generally known that valuable forests of white, red and pitch pine, black and white spruce, balsam, larch, white cedar and birch exist along the banks of the rivers emptying into James Bay, one of the arms of Hudson Bay. That these woods will be utilized in the near future is not at all doubtful. The head of Hudson Bay is nearer the fertile country of the northwest by 1,500 miles than Quebec, and already the project of connecting the interior of the continent by rail with Hudson Bay is mentioned, and will become no doubt an accomplished fact before long. Recently Dr. Robert Bell, the well known geologist and veteran explorer, made a survey of a large portion of the coast of the bay, and in his opinion, based upon observations then and upon information gathered at various times during his explorations in the North, is that the bay and straits are perfectly navigable for a large part of the year, and that the passage is probably open both winter and summer.

Other well wooded localities are the Manitoulin Islands and the Nipissing and Muskoka districts. These sections, however, merit no special mention as the extent of timber is but limited.

The reference made to the woods of Ontario would apply with but slight modification to those of Quebec, New Brunswick and other portions of the Dominion which have not been noticed in detail.

The same destructive influences have likewise been at work in those places, and the country has been rapidly denuded of its timber. Forests have been swept away until scarcely a trace of them is left, and now complaints are made of a scarcity of wood for fuel and lumber, where, not so long ago, the ground was completely covered by the thick leafage of the overshadowing woods.—Brooklyn Eagle.

An Old Forester.

The Brantford Courier says:—"The present alarm which is being manifested throughout the country with reference to the consequences likely to accrue upon the wholesale destruction of forests, had its key-note struck as far back as the sixteenth century by a Mr. Hanssen, who in an 'Historical description of the Island of Britain' devotes a curious chapter on Wood and Marshes, after referring to the general decay of the forests in the land he goes on to say: 'I would wish that I might live no longer than to see four things in this land reformed, that is: The want of discipline in the church; the courteous dealings of some of our merchants in the preferment of the commodities of other countries, and hindrance of our own holding of fair, and mar-

kets upon the sundays to be abolished and refer to the wednesdays; and that every man in whatsoever part of the champaign soil enioth forty acres of lands, and upwards, after that rate either by free deed, copie held or fee farms, might plant one acre of wood, or sowa the same in oke mast, hassell, beech, and sufficient provision be made that may be cherished and kept. Mr. Hanssen was evidently a philosophical old gentleman, for he ends his reflection thus: 'But I feare me that I should live too long, and so long that I should be wearie of the world or the world of me.'

Second Growth of Timber.

The Northwestern Lumberman says:—From a pamphlet by the board of trade, Bangor, Me., we learn that the value of the products turned out in 1882 from the wood-working establishments of that city, omitting ship-building and the furniture and carriage business, is placed at \$3,552,427, or something over half of the value of the entire products of all the mills and factories of the city. It is also estimated that the amount of lumber cut on the Penobscot from 1816 to the close of 1882 was, in round figures, 4,843,000,000 feet, 1,277,000,000 of it being pine, 3,026,000,000 spruce, and the balance, 440,000,000, hemlock and other woods. Notwithstanding this drain on the timber tributary to the river the compiler of the report says:

The trade in lumber, which in the past has been the leading industry and the chief source of income to the inhabitants, is still in the flourishing condition, and the timber supply shows no sign of exhaustion. The quantity now standing is likely to last for generations to come, and meanwhile new forests are springing up and growing with marvellous rapidity. It is said by competent judges that there is more standing timber in Hancock county to-day than 20 years ago, and the same may be truthfully said of other sections of the state. Furthermore the system of cutting only the larger trees and carefully protecting the remainder prevails in northern Maine, and allows the forests to be profitable work over at state intervals, thus insuring their permanence. It is true the immense pine logs of former years are no longer seen floating down our rivers to the mills, but the numberless new and important uses which have been found for the smaller and cheaper woods, all of which are of rapid growth, have more than supplied the deficiency caused by the diminished size of the pine and spruce.

Their Value Appreciated.

The Northwestern Lumberman says:—"A treeless country is never a pleasant one, and no one fully appreciates the value of trees until he is once set down where they do not grow. Many of the people who have settled in Dakota complain more about the absence of timber than all other disadvantages combined. One gentleman in a letter says: 'A tree, next to the faces of my best friends, is what I long to see most.' This gentleman migrated from Wisconsin, and used the think, he says, that his native state was so productive of trees that they were a nuisance, but now he believes he would prefer a home 'in the woods' rather than on the treeless plains of Dakota. The fact that for miles and miles there is not a tree for fuel, shade or wind-break renders a man who is used to seeing, and being benefited by, trees, a little lonesome up there."

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, regulate 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.

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

The CANADA LUMBERMAN is filed at the Offices of Messrs. SAMUEL DEACON & Co., 151 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., SEPT. 15, 1883.

LARGE shipments of telegraph poles are being made from Duluth westward for the Northern Pacific roads.

The Winnipeg Commercial says that a Forestry and Horticultural Society has been organized in Winnipeg.

An application for letters patent has been made by the Pigeon River Log Driving Association and Improvement Company.

The electric light was started in connection with Mr. Booth's saw mill at Ottawa on the evening of August 27th. The test was satisfactory. There were in all twenty lamps.

A MICHIGAN farmer of Northfield recently sold for \$5,000 clean money, 100 black walnut trees from his 120 acres of land. The Saginaw Courier says that they will "scale a total of 9,000 cubic feet," and are to be shipped to Europe by way of Quebec.

The Dominion Mechanical and Milling News says:—The history of wood-working machinery, as we understand that term, dates back a little over one hundred years, and England has the credit of being its birthplace. Daniel Benthams, Inspector General of the Naval Works, in 1779, invented the first machine for planing wood.

Ingoldsbay says:—

"There are three social duties, the whole of the war"

In this great human hive of ours ought to perform, And that, too, as soon as conveniently may be: The first of the three is the planting a Tree, The next the producing a Book—then a Baby."

About the end of last month the lumbermen at Duluth were fervently supplicating for rain to bring down the hung up logs on the St. Louis & Nemadji. It was said that twenty-four hours of steady rain would bring down as many as 35,000,000 feet into the Fond du Lac boom, and also a large number down the Nemadji. Duncan, Gamble & Co. were making a determined effort to get some of their logs over the Dalles by a process of flooding, with some success.

OWNERS of steamers running between Stillwater, Minn., and Taylor's Falls have begun action against the St. Croix Boom Corporation for damages for interrupting navigation during a log jam that lasted several weeks. They claim several thousands of dollars.

The Winnipeg Commercial says that Messrs. Walkley, Burrows & Bradley, who recently sold out their interest in the Northwest Lumbering Company, have been succeeded in the directorate by Messrs. Renwick, Boxer and J. B. McArthur. Mr. McArthur has been elected vice-president, and Mr. F. H. Cameron, secretary.

The Ottawa Free Press of September 6th says:—There are seventy barges lying at the Chaudiere docks awaiting loads. This is a good indication of the unusual dullness in the lumber market. There is a large stock on hand, and very few sales made. Quotations keep the same. The output of logs in the limits next season will be full twenty per cent less than last winter. Wages are decreasing.

Messrs. W. C. Edwards & Co. of Rockland (on the Lower Ottawa), who have hitherto confined their milling operations to the manufacture of boards and deals, have decided to commence the manufacture of shingles in their new mill. This branch of their business will, it is estimated, give employment to about 100 hands. The firm at present employs about 400 hands at Rockland.

The Winnipeg Times says:—The news comes from Milwaukee that suit has been begun by the Milwaukee road against the Omaha, involving some 200,000 acres of valuable pine land in Douglas county, Wis., besides other properties and franchises. The matter grows out of an arrangement made last year between the two roads regarding the contest over the old St. Croix land grant to the Chicago, Superior & Pacific Air line.

On Ottawa despatch of Sept. 10th says that Mr. David Moore has sold his square timber for 36 cents per foot. It was a splendid average. The price is somewhat lower than last year's quotations. Lumbermen generally complain of an unusual dullness in the timber market. Already large gangs of raftsmen are leaving daily for the shanties on the Ottawa and its tributaries. Operations will be greatly curtailed this season, and it is thought that the cut will be reduced 25 per cent.

ON THE MIDLAND R. R.

On that portion of the Midland Railway known as the Coboconk branch a large business is being done by Messrs. McKenzie Brothers and Campbell, of Kirkfield, in telegraph poles. Their shipment this season will foot up about 30,000 poles, all of which has been sold to the Western Union Telegraph Company, delivered at various points in the States. As the gauge on the Coboconk branch had not been widened, all these poles had to be transhipped at Lorneville Junction, which added unnecessarily to the cost of transporting them to their destination. The Coboconk branch has now been widened to the same gauge as the rest of the line. There has also been a quantity of cedar taken from this section for the harbor works at Toronto.

There was a movement on foot some time ago at Orillia to have a canal dug between Lakes St. John and Couchiching at the portage, so as to enable Messrs. R. & G. Strickland who have bought Thompson, Smith & Son's mill at Bradford, and who own large limits on waters whose outlet is by way of Lake St. John, to move the Bradford mill to Orillia, and manufacture their lumber there instead of at some other point, but a survey revealed the fact that at the average height of these lakes, Lake St. John is the lowest and as a consequence the project has had to be abandoned.

At Foxmeade is to be found about the only log railway in Ontario. It is the property of Mr. James Maddon and runs from his mill a distance of about two miles into the bush. This mill has been chiefly engaged clearing some limits for the British Canadian Lumber Co.,

but after this season it will cut from a limit owned by the proprietor.

From Coldwater a branch of about nine miles has been built by the Midland to reach the Modesto Lumber Co.'s mill. The Modesto Company have been at work about four seasons, but as yet have shipped none of their stock, which amounts to between four and five million feet. They are in a section where there is a large quantity of fine grey oak.

The North River Lumber Company have erected a new mill at Fessertou. They have a contract with the British Canadian Company to clear certain lands for them. The B. C. Co. guarantees them 4,000,000 a year for six years. The cut to vary according to the times. Bushy & Wood have also erected a mill here, having a capacity of about a million and half and have some good limits to stock it from.

Mr. R. Power, of Victoria Harbor, has entered into partnership with Mr. Misscampbell, formerly manager for the British Canadian Co.—the firm to be known as R. Power & Co., and Mr. Misscampbell is to take the management of the business. This year's stock will be about ten million feet of lumber and twenty million shingles, which latter have been purchased by Messrs. Christie, Kerr & Co., of Toronto. This is about the largest individual stock of shingles in this section of the country. The season has been a bad one for towing, and this firm lost their first tow, owing to the stormy weather.

Business at Midland City seems to be very good. Two vessels cleared last week with lumber, one for Amherstburg and the other for Courtwright. The cut of the B. C. L. Co. this year was expected to be about 30,000,000 at their two mills, but the destruction of one of their mills by fire will prevent this anticipation being realized. Rathbun & Son, of Deseronto, are operating here too. Their inspector Mr. McCallum, is here shipping ties which have been delivered from various points on the Bay. They will ship about 30,000 ties and 10,000 posts from here this season. The lumber for the elevator at Fort William has been shipped from here by the propeller Argyle. It was brought here from Waubushene and dressed by Mr. Garnet at his planing mill before being shipped. Mr. Garnet is very busy, having quite as much work as he can attend to, and therefore does not think he shall have any reason to complain of having located at this point.

The general feeling seems to be that the out got of logs next season will not be so large as it has been during the last two seasons.

TREE PLANTING AND PRESERVATION.

Mr. Phipps is sending out the following circular, and would be glad if any of our readers could send him information, so as to further his work in a matter of so great public importance:—
SIR,—Having been instructed by the Ontario Government to make certain inquiries relative to the desirability of tree planting and forest preservation, I should be much obliged if you would send me word if any plantations of forest trees have been established in your neighborhood, whether only a few trees or many, as even the experiment of a solitary tree is valuable. Also, if you happen to know or can readily ascertain, when such were planted, what varieties have been found to thrive best, and on what soils, and what method of planting has been used. I may be passing your way, and would be glad to see and inquire personally into any improvements of the sort; but circumstances may forbid this, and a line from you would be valuable in the meantime. At the same time, I would gladly know whether, in your neighborhood, any change in rainfall, or drying up of creeks or rivers, seems to have followed the clearing of the forest. An early answer will greatly assist.

Yours truly,

R. W. PHIPPS,

Clerk of Preservation of
Forests, Ontario.

233 Richmond Street west, Toronto,

Sept. 3rd, 1883.

THE EFFECTS OF LIGHTNING ON TREES.

Our Geneva correspondent writes:—The frequency of thunder storms in Switzerland this summer (we have on an average two a week) has afforded Prof. Colladon, of Geneva, a great

authority on electricity and meteorology, ample opportunity of continuing his observations on the effect of lightning on trees and vegetation generally. He has ascertained that when lightning strikes a tree it leaves very few marks of its passage on the upper part and middle of the trunk, a peculiarity which he ascribes to the fact of those parts being more impregnated with sugar, a good conductor, than the lower part. As the electric fluid descends to the neighborhood of the heavier branches, where there is less saccharine matter, it tears upon the bark and in many instances shivers the tree. It is no uncommon thing to find the lower part of a tree literally cut by the lightning, while the upper portion and the higher branches seem to have suffered hardly at all. Oaks, however, would appear to present an exception to this rule, or they are often found with tops quite blasted and the passage of the lightning lower down marked by a gouge-like furrow. These furrows sometimes go completely around the tree like a screw, the reason of which, says Prof. Colladon, is that the lightning follows the coils of which the bark is composed lengthwise, and in certain sorts of wood, these coils are disposed spirally. A curious effect of lightning on vines is that it invariably strikes a great many vine stocks at the same time over a space, for the most part circular, from 8 metres to 25 metres in diameter, and containing, therefore, several hundred vines. The plants most effected are those in the centre of the circle, and the number of burned and yellowed leaves diminished in proportion to their distance from that point. In July two vineyards in this canton were struck by lightning, and the first idea of their proprietors, on seeing their shrivelled vines, was that a still more dreaded foe, phylloxera, had been at work, but when the Professor was called in he speedily enlightened them as to the cause of the mischief, and, in proof of his diagnosis, pointed out that the ground in the centre of the circle was strewn with torn leaves and freshly broken twigs.—*London (England) Times.*

CANADA WHITE PINE.

Dr. Bell, Assistant Director of the Geological Survey of Canada, says respecting the white pine: "This and the next species have so nearly the same limit throughout the greater part of their northward range, that they are represented on the map both by one line. The red pine, however, does not extend so far east as the white, so that in this direction the line represents only the boundary of the latter. Contrary to popular belief, the white pine is confined to a comparatively small part of the dominion, as will be observed by an inspection of the map. Its northern limit in Canada extends east as far as Mingan, while to the west it does not reach Lake Winnipeg, or Red River. It reaches its lowest latitude opposite to Ottawa City, about 43°, and its highest about 52°, in the Lonely Lake Region. It occurs in favorable situations throughout the greater part of Newfoundland, but it is of best quality and most abundant along the Cander and Exploit rivers on the north, and the Humber on the west side of the island. On the last named stream, I have cut into the centres of several good sized trees, and found the wood of excellent quality. In the country immediately north of Lake St. John, the Messrs. Price have cut large quantities of fine white pine timber for export. When coming from Lake Mistassini to Ottawa, by way of the Gatineau river, Mr. Richardson, of the Geological Survey, first met this species at 230 miles north of that city. It occurs of fair size on the head waters of all the principal branches of the Moone River, and in former times is said to have extended considerably further north along these streams; but having been entirely destroyed by extensive forest fires, it has been replaced by other trees. Owing to these fires it is now very scarce in most of the region north of Lake Superior, but small groves of it have been observed as far north as represented."

RAFTS ON THE OTTAWA.

The Ottawa Free Press of Sept. 10th, says: The lumber trade is the staple industry of Ottawa, and consequently the citizens take a deep interest in the same, as anything injuriously affecting the business would prove hurtful to

the community. The market during the present season has been rather quiet, lumbermen holding back for better prices while purchasers have been waiting until later on in the fall before buying. As a consequence the shipment of lumber so far has been very small when compared with past years. This fact can easily be seen when it is noticed that the lumbermen in this district have considerable difficulty in finding piling ground for their output. Some mill-owners are engaged in taking their lumber some distance down the Ottawa on barges and piling it there. The expenses of handling the lumber so often before shipment must be quite an item, but this season it is observed that Messrs. Bronson & Weston have introduced a rather simple, but, nevertheless, excellent and cheap plan for saving labor while engaged in this work. The lumber is placed on the barges in lots or tiers consisting of quite a number of pieces, and is transhipped with a crane at the wharf, afterwards being placed on lorries and run back on rails to the piling ground. This system saves the lumber being handled piece by piece, and the expense of paying for labor in performing this work is greatly lessened when compared with the old system. The other day a *Free Press* representative had a conversation with Mr. B. Grier, of the firm of J. & B. Grier, Lachine, who was in the city looking after one of his rafts which arrived from the Kippewa. The reporter and Mr. Grier visited the raft together and found that the timber, which consisted of square and waney, was of excellent quality. Indeed for size, straightness and appearance it can be said with all truth that the raft was the best down the Ottawa this season. Some of the pieces of timber contained no less than 200 feet, and it took some trouble before Mr. Grier and the reporter could find a piece with a bend in it, which of course detracts from the value of timber. The quality of the Kippewa timber excels that of Michigan, and is almost as good as that of the St. Lawrence. To give the uninitiated an idea of the time it takes to bring a raft from Kippewa it may be stated that the one in question left in April, when navigation opened, then taking upwards of four months to reach Ottawa.

Speaking of the outlook of the timber market Mr. Grier stated that while it was comparatively dull during the season, still prices were fair and the outlook was that in a very short time, as purchasers were not supplied, and as lumbermen were holding on to their output, the market would be good and a good figure the result. A splendid raft that was alongside of the Messrs. Grier's, and belonged to Mr. Latour was also visited, and the timber, too, was of good quality, although not nearly so heavy as the first mentioned. This one also, which consisted of square timber, came from the Kippewa. While referring to the lumber trade in the Ottawa district it might be interesting to give some statistics in regard to the trade generally. There are engaged in the getting out and manufacture of lumber in Canada about 100,000 men, who support families forming a grand total of half a million, or about one-ninth the population of the Dominion. In all the industrial establishments of Canada, \$165,000,000 of capital is invested; in saw mills and machinery over \$25,000,000, is placed. The amount invested in lands and lumbering outfits is about \$50,000,000 in all, or more than one-third the amount invested in all other industrial establishments. The total product of lumber in 1881 was \$38,541,762, or nine dollars for each inhabitant of the country, of which enough was sold to bring into the country \$23,991,052. As a revenue paying class the lumbermen take a high place, the half million persons who are supported by this industry paying five millions of dollars into the revenue of the country.

The lumber trade is far from being on the decrease and forms to-day, next to agriculture, the most important industry of our people.

THE WINNIPEG TRADE.

The *Winnipeg Times*, has been publishing a series of interviews with business men from which we take the following:—Mr. James Sutherland said that business during the summer had been good, although there had been a considerable fall in prices. This decline commenced in the spring and continued until it

represented a fall of about twenty-five per cent; but he thinks that prices have now touched bottom, and expects a rise in the fall. There has been a very fair demand for lumber all summer, but on the other hand there has been a greater competition, owing to the overflow of trade from Minnesota and from the Georgian Bay district, in both of which business has been somewhat dull. The opinion is, however, that the Minneapolis and Georgian Bay dealers are now pretty well out of the trade, finding that they cannot bring in lumber and make a profit at the prices at which the home manufacturers are able to sell. Altogether the sales have been nearly as large as last year. There is a prospect of a very fair fall trade. Messrs. S. R. Sutherland & Co. will have a large stock of dry lumber, something which the manufacturers have never been able to supply before. Heretofore the quantity of lumber sawn has always been so small that the manufacturers have been able to sell it almost direct from the saw. This year Messrs. Sutherland will go into the winter with ten million feet on hand, of white pine floated down the Red River from Minnesota. Mr. Sutherland believes that the home manufacturers will now be able to supply all the wants of the country. Payments are being made fairly not.

SAW MILL IDEAS.

In some mills the driving pulley is so far from the husk that the belt is nearly horizontal. This will be the case where there are very long belts coming from below, or where the husk is not upon the floor above the engine or the counter shaft. In such cases the highly desirable arbor belt gig cannot be used; but the same arrangement of the rag shaft and the pulley shaft, and the frictions can be used, the gig friction shaft having an extension with a bearing on the pulley outside the husk, and the cross belt making the connection with the engine or the counter shaft. As this cross belt extends beyond the arbor and will be so long as to be more durable than cross belts generally are, this independent gig may be driven either by belts direct from the engine on the same level, or from a counter shaft above. The belt should be as long as possible, to relieve the cross belt from excessive friction and wear; and in this case it will gig as promptly and saw as fast as though the direct arbor belt gig were employed.

Although the cross belts have more wrap and hence more driving power than open ones, it is best to avoid them where it is possible. If the land be dry; there may be a pit dug about 6 ft. deep, and then the arbor belt gig can be applied. Depth of pit may be saved by raising the track about 4 feet, and drawing the sawdust away from the pit to the boiler by an endless chain or rubber belt conveyor. It is best to have the logs taken from ground a few feet higher than at the mill, then there will be no power needed to draw the logs in. In those cases where the ground is level, the log may be drawn in by a light rope or chain, with spool and friction wheels.

In order to have the engine and boiler out of the way of the logs, they may be at the rear of the carriage; a counter shaft passing under the track, in the pit, to belt to the arbor. Where there is a pit the front side of the carriage is open, so that the lumber need not be carried a long way to the edgers, slab-cutters, lath machines, etc., these being right near.

The advantages of the double saw need not be here rehearsed. There are cases where single mills have no provision for altering to double, by attaching the frame of an upper saw to the husk. In this case the top saw may be hung from an inverted hanger; the arbor beam being raised and lowered by screws, and held to the hangers by large turned bolts, wide apart. The upper arbor may be driven either from the lower one, or by a belt coming through the floor from the counter shaft below.—*Mechanical and Milling News.*

MAKING CIGAR BOXES.

The *Canadian Manufacturer* in a description of the industries of Galt says:—A little room breathing the incense of natural woods and occupied by a courteous gentleman, is the office of Wm. Beck & Co., who are engaged in making cigar boxes from domestic and imported woods,

Canadian elm, and Spanish and Mexican cedar. The machinery used consists of small saws, planers and an exact machine that nails the scented boards together. The boxes are made to order, and the sizes are greatly diversified. Then they make whole and half-boxes, or those holding 100 and 50 cigars respectively. Twenty employees make 900 boxes each day. Upstairs, in a cheery, bright room, six girls were finishing and decorating the boxes with strips of paper, trade marks and vignettes. The girls were tastefully dressed and looked so happy that we asked them if they enjoyed their work. They assured us that they did enjoy it; that it was not from necessity that they were engaged in it, as their parents are comfortable people owning their own homes. But the girls are proud to earn their independent pocket money, from which fund they draw for dainty dresses, fees to instructors of music, drawing and the purchase of books and pictures. Here is the beginning of the disappearance of the clinging vine idea about these young women, refreshing as a breeze from the ocean on a hot day. It speaks of a healthy moral vigor and a sturdy spirit of self helpfulness amongst these young people that insures the strength that is the pride of any country.

Peterborough, Ont.

The lumbering season has commenced. Messrs. Ulyott & Sadler sent a number of men north to their limits last week, and a further force on Friday. Their timber limits are in the townships of Burleigh and Anstruther, Peterborough County, and Anson, Victoria County. The first week in September is about the usual time the work in the woods is commenced. It is expected that the total cut this year will be smaller than last year. It will probably not amount to over two thirds of last year's cut. Mr. Irwin has also sent men north to his limits.

The people of Brooklyn, Conn., deem their old oak the most beautiful tree in New England. A hundred years ago its top was cut off to use in bushing in hay seed, and the young tree then put off many branches near the ground. Some of these have grown to a length of 50 feet, and are very large. (The trunk is 15½ feet in circumference.)

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THE FORESTS AND THEIR MANAGEMENT.

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

SILVER FIR AND SPRUCE IN THE BLACK FOREST

The Black Forest mountains are the home of the silver fir. The winters are severe—five to eight feet of snow on the hills from November till April; three feet in the valley from December till March. They are partly regulated forest, in which, however, a gradual felling for their reproduction is carried on over one-third or one-fourth of the whole area at once, from which every year during thirty or forty years the largest trees are removed, while the rest are allowed to grow larger during the remaining years. This is done, as the price these large trees fetch is much higher in proportion than that of the smaller ones, and all are felled and removed in one piece if possible. Natural reproduction is chiefly resorted to in these forests, which, in consequence of the young plant growing well in the shade of the old trees, is very easily accomplished, even though it is extended over such a long period as thirty or forty years. To be able to keep as many trees as possible growing on the lands on which the regeneration of the forest is going on, the branches up to one or two-thirds of the height of the tree are sawn off to admit air and light to the young plants below, which does no harm to the silver fir, but, on the contrary, is said to aid the more rapid increase of the trunk, while the branches are used for litter. This sawing off of the branches is commenced from above by men who earn about forty-five cents a day. Regular seed-bearing seasons occur at longer or shorter intervals, but nearly every year there is sufficient seed to increase the number of young plants where it is wanted. Moss cover is very favorable for the germination of the seed, whilst in such places as get covered with grass or weeds, or where for other reasons the seed does not germinate freely, the soil is at once prepared, by clearing and slightly loosening it in strips and patches for the reception of the seed, the germination of which is thus facilitated. If the open space in the forest is so large that the seed from the old trees does not reach the whole of it, sowing by hand is resorted to early, so as to let the young plants be as nearly as possible of the same age. If, by the time the old trees are nearly all removed, there are still some parts not covered with young trees, planting is resorted to. For the better growth of such planted trees the existing groups are somewhat rounded off, to avoid the young trees planted having to struggle with the others, perhaps already twenty to thirty years old; and where, on incompletely stocked spaces, which have to be filled up by planting, there are single trees of some twenty or thirty years, they are cut down altogether; or, if they are standing in numbers, and are not quite so large, some of the lower branches are lopped off the outer ones, so as not to interfere with those planted. These plants are either taken from nurseries or out of the forest, if the latter have not grown in too deep shade, which would render them liable to suffer on being removed to open places.

The seed is collected with some risk from the trees in October, before the cones open and it falls out. As the seeds are very oily, they are best kept in the cones or sown at once. The sowing is done in prepared beds in rows four inches apart, and after germination the ground is covered with moss to keep in the moisture. The seedlings one year old are transplanted into rows six or seven inches apart, and three inches between the plants in the rows, after which the soil between them is covered with moss. Here they remain for two or three years before they are fit for transplanting. Shade from the side is very beneficial for the seed beds as well as for the nursery. Plants from the nursery are preferable to those out of the forest; and the latter, when used, are as a rule removed with some of the soil adhering to the roots. Planting is better done in spring than in autumn, and in the usual way, the roots of the young plants being cut as may be necessary. They have to be sheltered as far as possible against sun, dryness, or spring frosts, and the plants as a rule thrive better on the cool northerly and easterly slopes of the mountains than anywhere else. The silver fir grows very slowly at first, and does not get much higher than six inches in the first four

or five years. At the age of twenty-five years it begins to grow very fast, and increases most between the ages of eighty and a hundred and twenty years. It likes best a deep, cool, moist and loamy soil with a covering of moss, and sends its roots deeper than the spruce, in consequence of which it suffers less from wind and storm than the latter. There are many spruce intermixed, used when natural reproduction of the silver fir fails. Thinnings are necessary in the thirtieth year, and have then to be repeated every tenth year, till the gradual felling of the largest trees commences. These fellings are regulated by the needs of the young seedlings, and are carried out only sufficiently to admit light to the young plants, leaving as many of the old trees to stand as can be permitted.

MOORPAN.—In Hanover and elsewhere, where the Government is breaking up thousands of acres of heath for the purpose of planting forests, great difficulty is found in penetrating and converting into good soil a hard layer called "moorpan." This is broken by plough and pick-axe, and Scotch firs planted, whose deep tap-root passes down into the layer of better soil below. The Government pay about \$11 an acre for the land.

ITALY.

Soon after the present Kingdom of Italy was established, a central forest school was organized near Florence, under the direction of A. di Berenger, formerly in the Austrian forest service of Venezia, and author of an excellent work on the history of forest management in Italy. The school is located in the splendid silver fir forest of Vallombrosa. We all remember

"Thick as autumn leaves that strow the brooks,
In Vallombrosa."

This is below the crest of the Appenines, on their western slope, about twenty miles east of Florence. In winter it is transferred to a lower station at Paterno, in the region of the olive. Italian forest literature of direct practical application is comparatively modern, but of late the publications of the Ministry of Agriculture, to which sylviculture is entrusted, contain much that is valuable. The two most important of these give the statistics of forests and the forest law of Italy. There are over five million acres of communal forests, over six million of private forests, and only half a million acres of State forests. One-fifth of the land is in forest. This is scant enough, apparently, or the nominal forests have been culled to depreciation, for we are told that—

"Projects of a general forest law for the whole of Italy have been repeatedly submitted to the Italian Parliament. The evil effects of denudation have been severely felt in many parts of the country, and the aim of these proposed legislative enactments has hitherto been to guard against further mischief by determining beforehand which lands shall, in the public interest, be clothed with forest or kept under forest, and then to place the whole of these lands under the supervision or control of the public forest officers without distinction, whether they belonged to state, village, commune, or private persons. From a report with which the Minister of Agriculture submitted the project of a general forest law in 1870, it appears that the financial exigencies of the country had rendered imperative the alienation of the greater part of the forests at the disposal of the State, and that it was only intended to retain a limited area of state forests, mainly with the view of supplying the timber required by the navy, and the forests required for this purpose the bill proposed to declare inalienable.

"Thus, with regard to forest matters," says Captain Walker, "it seems probable that Italy will pursue a policy different from that which has of late years been initiated in most provinces of India. In those provinces we acknowledge the necessity of maintaining certain areas under forest, or of clothing them with forest when they are bare; but we do not expect any satisfactory success in those attempts, unless the forests to be thus maintained or created are under the entire control of the State, and we entertain no serious hopes of effecting any real good by the supervision of private forests, or by any general kind of control over communal forests, unless the administration or management of such communal forests can be vested

entirely in the hands of the public forest officers.

"In those provinces, therefore, of the Indian Empire, to which I now refer, our principal aim is, in the first place to consolidate the State forests wherever the State has suitable forest lands at its disposal; and we hope that eventually, when the majority of public forest officers shall have acquired that professional knowledge, skill, and experience which is necessary for a satisfactory management of forest land, that they may be found competent not only to manage the state forests entrusted to their charge, but also to induce large landed proprietors to follow their example in the management of their own estates, and, if such should ever be found necessary and expedient, to exercise an efficient supervision over private and communal forest lands; but we think that any attempt to exercise supervision and control over private and communal forest lands through the agency of forest officers who have not actually charge of public forests entirely under their own control, and who cannot point to the management of their own forests as an example to be followed in the management of the private or communal forests, would lead to unsatisfactory results. The further development of the general forest policy in Italy will doubtless be followed with great interest by Indian foresters, and on this account it appeared to me right to add the present remarks."

It may be valuable here to notice that in this, as in other points, the practical ideas of the Indian commissioner might well be applied in Canada. There is good reason to fear over-denudation here; there is also reason to believe that we shall have an interval in which to take measures for avoiding the evil. In that interval the course stated by the commissioner as likely to be followed in India might, it appears to me, profitably be pursued here, namely, the taking in hand by Government of any amount of forest fit for the purpose, and which could be spared from the operation of the system at present pursued, and preserving them on the European plan. This will further on be more fully treated.

(To be Continued.)

TIMBER AND DEALS IN GREAT BRITAIN.

Reports from the principal timber markets of Great Britain up to the 20th Aug., show a slightly improved tendency in prices. At the Baltic sale rooms in London on the 15th a parcel of pine sold well, the wide stuff bringing £26 15s., a better price than has been obtained for weeks. But wide stuff has been and still is scarce, and this price is out of proportion to regulars, which sold at under £22, while 9 inch went under £18. The reserve price for waney board was under £5. Quebec spruce, ex Electric, sold at £3 for regulars, "a non-paying price."

At Liverpool, a large fleet of vessels arrived during the week ending the 18th of August, including a considerable part of the Quebec spring fleet, and a number of spruce deal-laden vessels from the lower ports, which temporarily weakened the market for spruce deals. The timber trade, like other kinds of business was dull at that point, but an inquiry sent out for the Mersey docks and Harbor Board, for about 100,000 cubic feet of timber, of various descriptions, principally pitch pine, infused a little animation. At a sale of Alfred Dobell & Co. on the 10th, Dalhousie spruce deals, 3x11, 9 to 24 ft. brought \$7 7s. 6d.; 3x9 brought £7 2s. 6d. and 2x6 brought £6 12s. 6d.

On the Tyne, trade continued very good up to 16th, and prices for all wood goods were firm. At Sunderland, imports were light, the Baltic oak trade fairly brisk. At Cardiff, the iron-workers' strike being over, the week was the busiest in timber for a long time, arrivals being numerous from Canada, Florida, the Baltic and the White Sea.

Arrivals of Quebec timber to Clyde ports were heavy during the week, over 11,000 tons being reported. Messrs. Edmiston & Mitchells held a sale on the 15th; there were offered parcels of States black walnut and Quebec birch, ash, and pine timber, and a few lots of deals; when shipbuilders were well represented and the following sales by auction were made: States black walnut, a parcel of 33 logs, averag-

ing square (string measure) about 18 in., sold at 4s. to 6s. 3d., averaging 5s. 0d. per cubic foot; Quebec birch, 14 in. to 18 in. average square, sold at 1s. 8d. per cubic foot.

The imports of hewn and sawn wood into the United Kingdom for the seven months ended with July last were 1,021,727 loads hewn and 1,718,583 loads sawn, as compared with 1,045,876 of hewn and 1,879,874 sawn in a like period of 1882. The total was thus 183,150 loads or six per cent less. London shows an increase, but other leading points a decrease from last year. The export of deals from St. John for these seven months was smaller than for any similar period since 1879, being 103,253,003 feet, as compared with 117,679,000 feet same time 1882 and 114,978,000 feet 1881. Shipments from that port to Scotland, Wales and Ireland were larger this year than last, but to Liverpool, Bristol and the continent they were decidedly lessened.—*Monetary Times.*

WIDE DIMENSION PINE.

The London *Timber Trades Journal* of Aug. 18, says:—The pine parcel, ex Eugene, sold well, the wide stuff going at £26 15s., a value that has not been recorded in the public sales for a long while, and which cannot be other than satisfactory. Regulars, however, went under £22, which is not a whit better than similar descriptions have been realizing for some time past, and the 9 in. under £18 were also plain evidence that there was no actual improvement as yet in the market. That values of broad pine are so disproportionate to that of other dimensions is entirely due to its present scarcity, but with such an apparent demand the inquiry for board timber, in the ordinary course, may be expected to take an active turn. Dealers now are so accustomed to everything ready sawn that they are disinclined to press business in what we may term the raw material, as leading them into deep water.

It is one thing to pay a good price for an article ready to hand, but another thing altogether to buy the material in its rough state to convert to the sizes required. In the one, the question is merely that of what you pay and what you receive, the other has lots of things hanging to it that may leave a wrong balance unless closely watched. For those that have plenty of saw machinery under their own control we should think just now at the present price of pine timber a profitable trade could be done in manufacturing board pine into saleable sizes. The reserve price on waney board was under £5, which, with the cheap rates sawing is now done at, on paper leaves a wide margin for contingencies. Why the stuff is not converted on the other side it is not easy to conjecture; the quantity of best quality each log would supply is the problem which would first have to be solved, and possibly this might give a different colouring to the calculation altogether.

That wide dimensions are obtainable at other shipping ports of the St. Lawrence as well as Quebec we have plenty of evidence of by the quotations supplied in the journals at the timber localities of the United States, which now and again appear in a tabulated form. Not that alone, but the sizes of the logs shipped in the partly rough state to this side are also given. We doubt if the high prices now obtainable could be depended on were the market better supplied with wide deals, and it probably suits the mills to keep more to the regular sizes, even if they get proportionately less money for them.

On Thirty Days Trial.

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

THERE is no excuse for suffering from Headache, Constipation and all the wearying train of symptoms of a disordered liver, when Burdock Blood Bitters is an unfailing remedy, and only costs One Dollar a bottle. Why suffer on without a trial? 25,000 bottles sold during the last three months, with almost universal satisfaction.

Chips.

THE Paris Municipal Council have voted 490,000 for the erection of wooden buildings in the bastions of the fortifications to serve as hospitals in view of an outbreak of cholera.

THE factory of John McGregor, at South Lincoln, Me., turns out from 30,000 to 40,000 gross of spools per month, and consumes annually from 2,000 to 3,000 cords of birch. Fifty hands are employed.

THE Quebec Chronicle of Aug. 31st says:—Messrs. John Sharples, Sons & Co. have purchased a raft of white pine from Mr. Barrett, of Renfrew, of about 45 feet average, at 19 1/2 cents per foot.

Freyberg Bros., of Washington island, mouth of Green bay, Wis., recently lost 150,000 feet of pine logs, as they were being towed in raft from point Aux Bark to Washington island. A heavy sea broke up the raft.

G. W. Frost & Co., at Saco, Me., have a large new box factory, the building being 80x125 feet on the ground. The consume 5,000,000 feet of pine a year in packing-boxes of all kinds. They employ 40 to 50 hands.

DURING July two vessels with lumber left Puget Sound mills for Honolulu, Sandwich Islands, two for Sydney, Australia, one for Callao, and one for Guaymas. The cargoes aggregated 4,500,000 feet, and a value of \$60,000.

A PARTY of Wisconsin loggers recently put in an appearance at Olympia, W. T., and were dumbfounded at the size of the fir and cedar of Puget Sound, as compared with the pine timber to which they were accustomed.

THE Minnesota correspondent of the Winnipeg Commercial says:—Messrs. Sword & Moore, of Brandon, are bringing in a large stock of sash, doork and fine lumber, and have opened business in Barker's block on Tilson street.

THE Parcels Post, on the second day of coming into operation, brought to the House of Commons a small tree addressed to Mr. Gladstone. In the absence of other explanation it is supposed that this was a joke, and had some reference to the right hon. gentleman's well known skill in the use of the axe.

THE Winnipeg Commercial of Aug. 28 says:—There has been a more active movement in lumber during the past ten days than for some time. Considerable building operations in the city, and also at different points out west, have caused quite a demand. The mills are busy and it will keep them fully employed to cut all the logs on hand between now and winter.

THE Winnipeg Times says:—The sawmill at Fort Alexander has been rented to Mr. Schneider, of Winnipeg, who will run it for the remainder of the season. It is understood that Mr. Schneider intends erecting a first-class steam sawmill on Winnipeg River, a few miles above the Fort, this coming fall.

THE Lumberman's Gazette says:—Many people suppose the United States has the heaviest percentage of woodland of any country in the world and are inclined to treat all that may be said in reference to the destruction of our forests with utter indifference. But the fact is, we have only one fourth of our territory covered with wood, which is a smaller area relatively than eastern, western and northern Europe. Pine timber is being rapidly denuded and ere many years shall have passed into history, the southern states will be the only source of supply for pine lumber.

THE Timber Trades Journal, says:—A list of 82 arrivals of timber laden vessels in London, in the seven days ending the 15th of August, is a pretty considerable contribution to the stocks on hand, but not so heavy an importation as some preceding weeks have shown. About a third of them are from Canadian ports, and we seem to be getting more than usual from the St. Lawrence shores. Steamers are less plentiful in the list than they have latterly been, two-thirds of the whole number being sailing vessels. We should judge from the features of this week's importation that the scale of supply is rather abating. The comparatively few steamers in this week's report suggests that they, or many of them, have found other employment which suits them better.

EVEN sawdust is being utilized in heretofore unheard of ways: Pine sawdust, highly compressed, has been successfully used to make up centre frames of carriage wheels. It is said to be so solid that it will bear a pressure equal to 33 tons per square inch. As sawdust has also been used for partitions and bricks, its application to the production of complex carvings and mouldings does not seem to be far off.

THE Winnipeg Times says:—A new departure in the lumber trade has been inaugurated by Mr. D. Ross, of Whitemouth, who intends to hold periodical auction sales in bulk of lumber at the mills, thus allowing the buyers to fix the current market of the stuff. From the known quality of the product of Mr. Ross' mills it will be a fair test of what good quality and grade of lumber is worth in open market. Mr. Wolf has been selected to wield the hammer on this important occasion.

THE Northwestern Lumberman says:—The statement made by our Ashland, Neb., correspondent that Tennessee poplar is being used in that state for finishing purposes is a significant one. It is one illustration of what this paper has claimed for some time, that the kinds of lumber used in the different sections will be more varied year after year. It was not long ago that white pine was about the only wood called for or expected to be had for building purposes in the Northwest. This was largely because the other woods were not well known.

PUGET SOUND.

The Lumber industry of Puget Sound, says the Post-Intelligencer, has reached a point of development which must command attention. There will be cut in Washington Territory during the present year 500,000,000 feet of lumber. This product is distributed, as nearly as can be estimated as follows:—

Export to California.....250,000,000
Export to foreign ports..... 80,000,000
Home consumption.....170,000,000

This vast product represents in round numbers a value on the wharves ready for shipment, or at local mills ready for delivery, of \$12 per thousand, or an aggregate of \$6,000,000, which is net revenue to the territory from this one industry. The 330,000,000 feet exported require the service of a goodly number of vessels. Taking all classes of craft on which lumber is exported, the average cargo is about 500,000 feet, which would make necessary the shipment of 600 cargoes. Another and the most notable feature, one which more than others evidences the rapid settlement of the territory adjacent to Puget Sound, and the cities and villages situated thereon, is the item of home consumption. The lumber for export is mainly cut by seven large mills on the Sound. That for home consumption employs as many as 40 smaller ones, with a daily output of from 2,500 to 75,000 feet each, and an average of about 12,000 feet. These mills are constantly crowded with orders. Builders are forced to wait their turn, and there is no evidence of a falling off in the demand. The amount of improvement this large quantity of lumber represents in buildings of various classes, wharves, sidewalks, railway ties, etc., etc., is an evidence of prosperity conclusive and incontrovertible. Within the city limits of Seattle there is being cut at this writing an average of 160,000 feet per day, and within 30 days this capacity will be increased to 200,000 feet per day. All this lumber is used here, and the demand is still greatly in advance of the supply. The prospective magnitude of the lumber interest of northwestern Washington is as yet hardly realized. It is to be the most potent factor in the growth and production of permanent wealth to our people. From Puget Sound ten years hence the exports of lumber direct to foreign ports will exceed those of the balance of the Pacific coast. We shall ship to every known port, and the flags of every nation will be seen floating at mast head in our harbors. The interior will also demand attention and our home consumption should and will double every year. We shall be prepared, and will furnish our brethren east of the Cascades and on the line of the Northern Pacific railroad, as far east as the demand may reach, houses made of the finest of pine, cedar and fir, framed, fitted and ready for immediate erection, put up

in packages and shipped to destination for less money and of better class than they can be built upon the ground, saving freight, wastage and time to our eastern customers and creating for ourselves an industry of illimitable extent and undoubted stability.

COMPRESSING SAWDUST.

To the Editor of the Canada Lumberman.

DEAR SIR,—I was reading lately an article in your paper of the 1st Aug., about compressing sawdust into fuel. I have large mills here turning out about 250,000 sup. ft., per day, of spruce deals three inches in thickness, and, consequently, there is much sawdust. If you feel satisfied that the machine will work spruce sawdust, please hand this letter to the patentee. If he can fit it up at any reasonable price I would like him to communicate with me, as I would feel inclined to embark in the enterprise.

Yours truly, J. B. SNOWBALL.

Chatham, Miramichi, N. B., Aug. 28, 1883.

The Port of Quebec.

From a comparative statement printed in a recent issue of the Quebec Chronicle, showing the number of sailing vessels and steamers entered inwards and outwards at the port of Quebec from the opening of navigation to June, 30th, 1882 and 1883, we find that 311 vessels arrived this year, against 239 vessels in same period of 1882, showing a good increase on 1883. Of this number there were this year 193 vessels under the British flag, and 223 arriving from the United Kingdom, against 150 and 173 vessels respectively last year. The outward vessels this year numbered 198, in total of which 121 were British, and 178 for this country, against 165 vessels, 115 British, and 141 for the United Kingdom last year. This likewise shows an increase for the present year. Another statement gives the following return of vessels inwards and outwards for the fiscal years ending June 30th, 1882 and 1883:—Inwards, 1883, 682 vessels, British 447, steamers 152, sailing vessels 530, from United Kingdom 516. 1882, 642 vessels, steamers 148, sailers 494, British 412, from United Kingdom 499. Outwards, 1883, 653 vessels, steamers 111, sailers 542, British 417, to United Kingdom 550. 1882, 680 vessels, 146 steamers, 534 sailers, 460 British, and 568 to United Kingdom. As will be seen, there was an increase of forty vessels inward this year, but a decrease of twenty-seven leaving the port.

Looking for Timber.

The Winnipeg Times of Aug. 28 says:—Mr. Alex. McKay, of Ottawa, accompanied by a friend, a gentleman also belonging to that city, have returned to Winnipeg after quite a lengthy trip to Lake Winnipeg and vicinity.

In reply to a question by a TIMES representative one of the gentlemen said:

"We spent considerable time looking over the Lake Winnipeg and Bearings rivers district."

"With what result?"

"Well, we are satisfied that there is considerable spruce there. We were disappointed in not seeing any pine. There is none of any size."

"What do you think of the Bearings River?"

"It is pretty rough and the rapids are numerous. I think, however, that there should be no trouble in driving logs on it."

"Have you a limit in the districts you visited?"

"Mr. McKay has a 50 mile limit at Bearings River. I have no interest."

"What will be the outcome of your trip?"

"That we cannot say as yet. The cost of handling the logs will be considerable, but all considered lumbering there may be made to pay."

W. A. ENOANS, 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.

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.

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, Johnsons & Lord, Montreal. Arnica and Oil Liniment is sold by all Druggists.

READER, if you suffer from any disorder of the Liver, Stomach, Bowels, Kidneys, Skin or Blood, try Burdock Blood Bitters, Nature's specific medicine for acting on those organs for the outlet of disease. 25,000 bottles sold in the last three months.

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

\$500 Reward!

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. wed112122

Health is Wealth.



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

BAKTER'S MANDRAKE BITTERS THE ONLY VEGETABLE CURE FOR DYSPEPSIA, Loss of Appetite, Indigestion, Sour Stomach, Habitual Costiveness, Sick Headache and Biliousness. Price, 25c. per bottle. Sold by all Druggists.

Burdock BLOOD BITTERS

Market Reports.

TORONTO.

From Our Own Correspondent.

SEPT. 10.—The retail trade in this city at the present time is fairly good; on making inquiries at the various yards I received the same replies, —doing all we can conveniently handle, but keen competition leads to a cutting in prices to some extent. In bill stuff this cannot be done, unless the dealer is able to make it up on some other portions of the order. Mill men hold firm to former figures for all classes of dimension-timber, and, as long as this is the case, prices cannot be cut unless the dealer makes it up on the coarser grades of boards and plank. There are no private tenders taken by builders from dealers in this city. The usual course adopted is something like the following: A builder enters the office of a dealer and opens out his list of stuff required for a building, or buildings, and modestly asks for figures for his bill delivered on the ground. After he has received this he proceeds to visit another dealer and obtains figures from him, if said figures are below those already obtained he at once travels on to another, but if above the first figures obtained he opens out the offer received from dealer No. 1 for the inspection of dealer No. 2, and in nine cases out of ten the latter is ready to come down a few dollars for the privilege of supplying the order; the builder, however, is not quite ready to leave his order just at present, he has the offer made in writing and goes on his way quietly to visit dealer No. 3, and if the offer received there is not lower than the offer made by dealer No. 2, why, of course, he shows number No. 3 the tender made by No. 2, taking care to keep the offer made by No. 1 in his pocket, and in this way he will go the rounds of six or eight dealers and then take the lowest tender. I presume it is useless to point out through the journal how this suicidal policy on the part of dealers can be brought to an end. I have urged time and again, both by word of mouth and use of pen, the true remedy, but many dealers seem to consider that the bulk of business done by them is the only road to prosperity, ignoring entirely the plain fact that it would be much better to sell 1,000,000 feet of lumber and obtain a profit of \$1,000 than to sell 2,000,000 and only make the same, and only half the risk by bad debts incurred, and if dealers cannot be made to see this why then to use a homely Scotch saying they must "gang their ain gait."

Shipments over our docks to American ports have somewhat improved, but most of that being sent forward is on consignment, direct sales being few and far between, although dealers affirm that returns so far made on consignments have been fully up to expectations.

Table with 2 columns: Item description and Price. Includes Mill cull boards and scantling, Shipping cull boards, and various sizes of cantling and joist.

Table with 2 columns: Item description and Price. Includes Cutting up planks to dry, Sound dressing stocks, Hicks Am inspection, and Three uppers, Am. inspection.

MONTREAL.

From Our Own Correspondent.

SEPT. 11.—Business for the past two weeks has been quiet, but stocks are sold assorted. Coarse lumber has been somewhat shaded in price this summer, but the price of a good article continues high, and it is in good demand. The enquiry for hardwood has been fair, for ash and cherry in particular. Laths are still held for

our quotation. Prospects are that the output of logs this season will be considerably under that of last year. There appears to be an over-production of sawn lumber, as millers seem to manufacture as much lumber when the demand is light as when it is brisk, thus keeping the market overstocked, and for low prices they have only themselves to blame. Quotations on yard are unchanged as under:

Table with 2 columns: Item description and Price. Includes Pine, 1st quality, Spruce, Hemlock, Ash, Bass, Oak, Walnut, Cherry, Butternut, Birch, Hard Maple, Lath, Shingles, 1st, Shingles, 2nd.

CORDWOOD.

The late cold weather has helped to give an impetus to the demand, and although we do not alter quotations, for large lots they would probably be shaded. Imports are keeping pace with all requirements and the stocks on the wharves are pretty full. We quote prices ex cartage as follows:—

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

WINNIPEG.

The Winnipeg Commercial of Sept. 4, says: There has been a better demand for lumber lately than for some time past, and business will likely be fairly good during the balance of the season. The mills are actively at work, and the cut between now and winter will be heavy. The supply will no doubt be largely in excess of the demand. Quotations are as follows, but they are by no means fixed:—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, \$23; 2 and 3 inch battens, \$33; 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. \$32; 1/2 inch split siding, dressed, \$30. Spruce lumber—timber 16 feet and under, \$23; 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, \$23; 1st flooring, siding and ceiling, \$32; XX shingles, \$5.50; Star A shingles, \$5.50; X shingles, \$5.50; A do. \$5; lath \$4.50.

ALBANY.

Table with 2 columns: Item description and Price. Includes Pine, clear, Pine, fourths, Pine, selects, Pine, good box, Pine, 10-in. plank, each, 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, 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, joint, 4x4, each, Hemlock, joint, 2x4, each, Hemlock, wall strips, 2x4, each, Ash, good, Pine, Ash, second quality, Cherry, good, Cherry, common, Oak, good, Oak, second quality, Barwood, Hickory, Maple, Canada, Maple, American, per M, Chestnut, Shingles, shored, pine, 2nd quality, extra, sawed, pine, clear, cedar, mixed, cedar, XXX, hemlock, Lath, hemlock, Lath, spruce.

BOSTON.

Cotton, Wool and Iron of Sept. 8th, says:— Eastern lumber is arriving moderately, with prices about as of late. Hemlock is rather quiet and easy. Spruce is moving well and steadily. Southern pine is in only limited request. Western pine is moving in a moderate way at about previous prices. As to hardwoods, there is quite a good trade in desirable grades of walnut, especially from the furniture manufacturers and prices are steady. Oak is having a fair request. Cherry of good grades finds a good demand. Whitewood is in large supply and fair movement at low prices.

CANADA PINE.

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

BUFFALO.

Table with 2 columns: Item description and Price. Includes Uppers, Common, Culls.

OSWEGO, N. Y.

From Our Own Correspondent.

We cannot change quotations; demand is very light; prices are well maintained. Collections are fair and the trade is in a healthy condition. The new cut now arriving is in a much better condition owing to the dry weather through the month of August. Canal freights are \$1.75 to Albany and \$1.25 to New York.

Table with 2 columns: Item description and Price. Includes Three uppers, Pickings, Pine, 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.

CHICAGO.

The Northwestern Lumberman of Sept. 8th, says:—There are indications clear and pronounced that lumber is beginning to move in larger volume than during the summer months. This increase is more noticeable in the prairie states than elsewhere. There is a decided change for the better in this city, both on the cargo market and at the yards. The interior begins to call for lumber more urgently. Yard dealers throughout the country have been going slow and cautiously all summer. In the majority of instances they have let their stocks run down. Everybody has been waiting to see the crop outcome. The average agricultural result has been good this year, and a large sale of lumber must be the consequence. The fact that assorted stocks are nowhere excessive, and in many yards are really short, points to a demand this fall that will be unusual. Buyers everywhere have laid in stocks cautiously this season. Reports from New England and New York mention the same conservative feature. The rising of a powerful demand would soon make the lack of stocks in the yards felt.

The number of cargo arrivals at this port for the week ending Wednesday was not quite as large as the week previous, it standing 218 this week to 260 last week. The wind was favorable during Saturday and over Sunday, so that on Saturday, Sunday and Monday 120 vessels had put in an appearance. On Monday and Tuesday the market was crowded with loads, the wind continuing favorable, but it was noticeable that the fleet was rapidly thinned out, indicating greater activity than characterized the weeks before. The revival of demand at the yards was beginning to be felt on the market, and it is safe to repeat that the week has been a fairly active one. Cargoes have been taken more quickly, with less preliminary talking, and there has been less disagreement about prices. While values cannot be quoted higher, they are stiffer, and buyers have not questioned them as much as formerly. It may be said that the aggregate below quotations that has all along been noticed has been restored to a straight line. It is even claimed by some brokers that prices are a little

higher, though they do not demand that quotations be raised.

Table with 2 columns: Item description and Price. Includes 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.

Receipts of lumber, shingles, etc., for the week ending Sept. 6, as reported by the Lumberman's Exchange:—

Table with 2 columns: Year and Receipts. Includes 1883, 1882, and Receipts from January 1, 1883, to September 6, 1883, inclusive.

Table with 2 columns: Item description and Price. Includes Increase, Decrease, Stock on hand Aug. 1, 1883, 1882, 1881.

Table with 2 columns: Item description and Price. Includes Lumber, Shingles, Lath, Pickets, Cedar posts.

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

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

LONDON.

The Timber Trades Journal of Aug. 25 says:— The prices of wood have as yet apparently made no upward movement, although there is an evident disposition on the part of those who hold stock to keep it out of the market rather than accept the low values now obtainable. Of course what turn the market will take during the dead season depends greatly on the shape the fall stocks will assume. If these, contrary to expectations, are of a heavy character, it is quite possible the recovery of values will be delayed till well into the following spring. On the other hand, should the closing shipments of the year be on a moderate scale, an advance in the market may be expected to speedily follow.

We had some years since begun to recognize the fact that the forest yield in timber producing countries was gradually lessening, and the trees themselves by becoming scarcer were intrinsically rising in value; but, from whatever cause it may arise, we seem now to have an overplus of the commodity, and that too in the teeth of the greatly extended area of consumption which the magnified proportions of the trade have led up to. If this immense exhaustion is going on daily, surely prices might not unnaturally be supposed to feel its effects.

Several thousands of standards have been taken out of consumption this season by fires at the yards both in Sweden and Russia; but this has had no appreciable influence on the market. So with the pine stocks here, which, though still confined to moderate proportions, have not helped prices to advance, because large quantities that stood over from last year are known to be available, and may come forward yet before the shipping season terminates. We have no faith in these rumours of heavy fall supplies, especially from the Quebec side, the rise in freights probably checking any tendency to ship heavily on speculation.

LIVERPOOL.

The Timber Trades Journal of Aug. 25, says:— Apart from the order for about 100,000 cubic feet of timber from the Mersey Docks and Harbor Board, which is now in process of being delivered, there is also a good and steady demand from the country, induced, no doubt, by the low prices now ruling, especially for pitch pine and spruce deals. The latter have come forward far too freely for the wants of the market, and with the dull condition of trade in the manufacturing districts, there is no likelihood of any advance in the present price, unless the shipments are materially curtailed.

Advices from St. John, N. B., state that several of the largest mill have shut down, and will remain so until prices on this side improve, and that the stocks held there have advanced nearly five shillings per standard. All this may be perfectly true, but at the same time this market is well supplied already, and there is a

good stock in the manufacturing districts in the hands of the consumers, who are therefore reluctant buyers at any price. On the other hand, it must be admitted that some cargoes are now being stored on account of the shippers, who have faith in the future, but whose hopes may not be fulfilled if imports continue to come forward as they have done recently.

On Friday last, the 17th August, Messrs. A. F. & D. Mackay offered one cargo each of St. John, N. B., Shediac, N. B., and Pictou, N. S., spruce deals, birch timber, &c., together with other woods. Although there was a good attendance of buyers, not only from the country but from the local trade, there was but little spirit of competition shown, and evidently a large portion of the audience were there as spectators only.—

The cargo of St. John, N. B., spruce deals sold as under:—

Table with 3 columns: Quantity (e.g., 10 to 20 ft 3x11), Price (£ s. d.), and another Price (£ s. d.).

The bidding for the cargo of Shediac was very slow, and apparently this class of goods was not wanted, about one-third of the cargo being withdrawn.

About 1,130 logs of Pictou birch were offered, but of these about 382 logs were withdrawn; these were all of the larger sizes, say 17 to 20 deep, but the remainder was sold 12 to 16 1/2 in. at an average of about 16 1/2 d. per foot.

On Wednesday, Messrs. James Smith & Co. sold by auction a cargo of Bathurst spruce, and pine deals, &c., and "to arrive" about fifty standards red pine deals.

HULL.

The Timber Trades Journal of Aug. 25, says: The import of wood goods into Hull during the past week is again a full average, amounting to 19,343 loads, of which the following are the particulars:—

Table with 2 columns: Port (e.g., Quebec, Riga, Cronstadt) and Quantity (e.g., 3,699 lds, 9,235, 2,186).

Other ports, 132 loads.

The Quebec goods are timely arrivals, and come to replenish a very bare market for there are but few deals held here, and none in Grimsby, except it be a small cargo passing through for a Lincoln firm. Quebec goods are falling out of use on this coast, no doubt owing to their high price, a detail that must be attributed to their in some degree becoming a scarce article. The trade is very active here, the new arrivals and the old stocks having largely passed into consumption.

LEITH.

The Timber Trades Journal of Aug. 25, says: The import list for the past week is heavy for deals and battens, some large cargoes having arrived, amongst which may be noted two large shipments per steamer from Riga and Cronstadt, for Messrs. Ferguson, Davidson & Co.

On Tuesday last Messrs. A. Garland & Roger exposed for sale by public auction their spring shipment of American goods. The weather was everything that could be desired, and a large company turned out, including many well-known purchasers. At previous sales this summer buyers have held back, apparently laboring under the impression that, owing to the heavy spring importations of American stuffs to this port, prices will decline considerably. On Tuesday, however, there seemed to be a greater tendency to come forward, although the prices were not altogether satisfactory in some cases. A considerable portion of the waxy yellow pine was sold at from 2s. 8 1/2 d. for the large tim-

ber down to 2s. 5 1/2 d. for the small, American walnut found a few buyers at 5s. per cubic foot, while birch went away pretty well, though, to be sure, the price was very low indeed. Yellow pine deals did not seem to be in great demand, only a few lots being sold. After the American goods had been exposed, the usual variety of deals and battens, flooring, etc., were offered, and a good few lots found purchasers. The following is a note of the principal prices realized:—

Table with 3 columns: Wood type (e.g., American birch, Waxy yellow pine), Price (e.g., 1s. 9d. to 2s.), and Unit (e.g., per cub. ft.).

GLASGOW.

The Timber Trades Journal of Aug. 25, says: During the past week the imports of wood goods to Clyde have been heavy—in all about 5,600 loads, chiefly log timber; and at Grangemouth the arrivals, consisting principally of battens, amount to about the same quantity.

An auction sale of timber and deals was held at Greenock on 16th inst., and one here on 21st inst. At the former sale a large quantity of wood changed hands, there being a good attendance, and prices on the whole compare favorably with recent rates.

The sale here on the 21st inst. was pretty well attended, and a number of lots of deals were disposed of; but a large proportion of catalogue was [withdrawn, prices offered not being satisfactory to the broker.

On 16th inst., at Greenock, Messrs. Edmiston & Mitchells, brokers. The following are some of the sales:—

Table with 3 columns: Wood type (e.g., Quebec waxy boardwood), Price (e.g., 4s. 6d.), and Unit (e.g., per cub. ft.).

CARDIFF.

The Timber Trades Journal of Aug. 25 says:— We have not had this week such heavy arrivals as recorded in our last report. A cargo of pitch pine has come to hand from Mobile; the first, so far as we can learn, imported here from that place. There have also arrived two steamer cargoes and a couple of sailing cargoes from the Baltic, and several Canadian shipments. There is, likewise, expected in a day or two a steamer from Finland, with about 700 standards, which will be the largest cargo ever brought to Cardiff in one bottom, and it will be interesting to see whether the despatch the dock authorities will be able to give will be such as to tempt owners to repeat the chartering for this place.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Aug. 31:—

Table with 4 columns: Wood type (e.g., Waxy White Pine), Quantity (e.g., 1,520,799), Price (e.g., 1,478,304), and another Price (e.g., 2,114,484).

JAMES PATTON, Supervisor of Cullers.

SWEDEN.

Consul Drummond Hay, in his report on the trade of Stockholm and the eastern coast of Sweden for 1882, says:—The prospects of trade were far from favourable in the commencement of last year, owing to the prejudicial effects of the bad harvest of 1881, the consequence being a fall in exports and a rise in imports. In the summer, however, the crops throughout the country were most promising; business there-

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

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

upon became brisker, especially in the wood and iron markets, and the exceptionally fine harvest which followed gave a decided impulse to commerce generally.

The exportation of wood goods at Stockholm in 1881 amounted to 22,564 cubic metres, and in 1882 to 24,800 cubic metres, of which, 13,475 cubic metres were shipped to Great Britain.

The figures must, however, not be taken as an example of the general condition of the timber trade in Sweden. According to the annual report of the Saw mills and Timber Association for 1882, it appears that the value of the timber trade was about 15,000,000 kronors higher than the preceding year.

Favoured by extraordinary facilities for floating timber during the whole of the season, the transport to the sawmills was unusually large, and consequently the timber, which, under ordinary circumstances forms a reserve for the following year, has already floated down to the coast.

The association are further of opinion that there will only be small consignments this year, as nearly all the goods have been sold for delivery in this country.

The stored wood goods ready for exportation at the opening of the ports north of Stockholm in 1883 are as follows:—Gefle, 55,000 standards; Soderhamn, 74,000; Hudikswall, 26,300; Sundswall, 110,000; Hornosand, 57,000; Ornskoldsvik, 19,352; Umea, 14,000; Skolleftea, 8,616; Pitea, 15,560; Lulea, 23,846; total, 404,704 standards; against 356, 253 standards in 1881.

In the trade and commerce of the principal Vice-Consulates on the east coast of Sweden, Vice-Consul Koperitz reports as follows on the commerce and navigation of Gelfe:—The year under review opened with stocks of sawn wood in Great Britain and on the Continent, causing a great demand up to the end of July, and most of the first open-water supply was bought up at remunerative prices. As it was apparent, about the beginning of August, that the production would be unprecedentedly large, by reason of the favourable floating season, prices began gradually to recede from the comparatively high figures obtained for spring delivery, and this depression continued up the close of the navigation. At the present time the timber trade of the district is more depressed than it has been for the three previous seasons.—Timber Trades Journal.

A Bushel of Coal.

In consequence of the practice of peddlers of coal in Boston of selling by means of short measure, getting retail price for three pecks of coal for a nominal bushel, a law has been passed specifying that in the sale by measure of coal in quantities less than five hundred pounds, the baskets or measures used shall be of a cylindrical form, of the following dimension: nineteen inches in diameter in every part, and nine inches in depth, measured from the highest part of the bottom, each of which shall be deemed to be of the capacity of one bushel; or nineteen inches

in diameter in every part, and four and one-half in depth, measured from the highest part of the bottom, each of which shall be deemed to be of the capacity of one-half bushel. Such measures, in selling, shall be filled level full, and shall be sealed by a seal of the city or town in which the person using the same usually resides or does business.

RAFTS ARRIVED.

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

- AUG. 30.—J. J. Calvin & Co., oak, &c., sundry covers. J. R. Booth, white pine, &c., St. Lawrence Docks. John McAllister, walnut, Roche's cove. Thos. Buck, elm, &c., Wolfe and Ottawa wharves. SEPT. 6.—J. J. Calvin & Co., oak, &c., sundry covers. J. R. Booth, white pine, &c., St. Lawrence Docks. John McAllister, walnut, Roche's cove. Plamondon & Auger, tamarac, Archer & Co's wharf. Fra Burk, elm, &c., Wolfe and Ottawa cove. R. & G. Strickland, white pine, &c., Cap Rouge. F. & W. Murray, white pine, &c., St. Michael's cove. Thompson & Son, white pine, Woodfield. D. Moore, white and red pine, Cap Rouge.

Steel Nails.

At first the extra cost of steel nails was one and a half cents per pound, or \$1.50 per keg, but it has now been reduced to \$1. The great advantage of the steel nails is that they can be driven into hardwood as easily as an iron nail will go into a pine board. Steel nails have been driven into a white oak knot without bending. Nothing else is now used in laying hardwood floors, as they require no boring, but are driven readily. For all kinds of finish they are especially adapted, and as so much hard finish is now employed, their use must be on the increase. They are also used largely by builders, and box makers are increasing their demand for them. Box makers have been using the better grades of iron nails, as they desire those that can be drawn and re-driven.

Journalistic.

A new organ of our manufacturing industries has just appeared under the name of The Dominion Mechanical and Milling News. It is published in Toronto by the Beaver Publishing Company, and its first number gives promise of a valuable addition to our periodical literature. It is full of news and technical information of interest to the class it addresses, and both the letter press and illustration are very clearly printed on excellent paper, so that its appearance is as interesting as its contents are useful. Such a periodical is another evidence of the progress of Canada as a manufacturing country.

DRY ROT.

This is a disease in timber, which occasions the destruction of its fibres, and reduces it eventually to a mass of dry dust. It occurs most frequently in a warm, moist, stagnant atmosphere; while wet rot is the result of exposure of wood to repeated changes of climatic conditions. In both diseases, however, spontaneous combustion or decomposition goes on in the wood; water, carbonic acid gas, and probably carburetted hydrogen are evolved, and a pulverulent substance or humus remains. Although the appearance of fungi accelerates the process of dry rot, its true origin is in the incipient decomposition of the sap in wood.

The commonest precaution against the occurrence of the disease in wood is to expose it to the air, or, in other words, season it.

Charring, steaming and boiling have been resorted to as a means of desiccation. Mr. Lukin, at Woolwich dockyard in England, experimented on green oak logs, with pulverized charcoal heated and applied as a coating to the timber. This process had the effect to lighten the wood, but disintegrated the fibre, thus rendering it useless. He then attempted to replace moisture in these heated logs with a distillation of pitch pine and sawdust, but failed to accomplish any favorable results. Since then, other processes have been perfected, by which wood is exposed to currents of rapidly moving hot air, and in kilns; these have been used successfully for years, and many of our large saw-mill manufactories have dryers attached to them whereby to put seasoned lumber on market in the shortest space of time possible. The ancients understood the advantages of felling trees when the sap was out of them. As early as the reign of King James, of England, a statute was enacted prohibiting the felling of oak trees, except from April 1st to June 30th, even for the King's use, except to repair his majesty's ships of war. In 1771, Mr. Barnard, of Deptford, England, stated in the House of Commons that timber should be barked in the spring, but not felled until the winter time.

In France, the timber cutting season was from the 1st of October to the 15th of April, until Napoleon I.'s reign, when the limited period was fixed from November to March, and then only on the decline of the moon, on account of the supposed rapid decay of wood from fermentation of the sap when cut at any other period.

Submerging timber in water has for centuries been considered a prevention from dry rot, and certain it is that by that process the disease has been arrested. The frigate, "Resistance," whose timbers were badly affected, was rendered sound by sinking her for one month in the harbor at Malta. The "Eden," similarly affected, and sunk in the harbor at Plymouth (England) was raised in a perfectly sound condition after 18 months' submersion, and was once more a seaworthy craft.

Salt has been found an efficacious preventive of the disease though it has the objectionable quality of attracting too much moisture. The subject of preserving wood has been one of constant interest to builders, naval architects, and in fact, to every one it is a question worthy of constant thought; hence scientists have devoted much time and study to discovering substances for preserving it. In 1832, corrosive sublimate was tested, this was soon followed by zinc chloride, and copperas, followed by sodium carbonate. It was in 1838 that Bethel introduced the treatment of wood by crude creosote and oil of coal tar. This discovery has been found the most valuable of any, and when the wood is injected with coal tar, in a cylinder at a temperature of 120 deg. Fahrenheit, and a pressure of 150 pounds to the square inch, ordinary soft wood will absorb about ten pounds of the material per square foot, and afterwards become almost indestructible.—*Lumberman's Gazette.*

AGED TIMBER.

A few miles from San Francisco a tree was recently felled which, as American writers think, is one of the oldest, if not the oldest tree in the world. It was one of the *Wellingtonia* species, and, according to the rings which were counted, its age was no less than 4,340 years. It was partly hollow, and within the bark three

hundred persons could find standing-room. It was only with reluctance that this ancient giant of the forest was cut down; but its removal was imperative, as it threatened to come down of itself during the first violent gale. Another ancient tree which was recently destroyed was a cypress tree near Sparta. It is stated that this was the very tree spoken of more than two thousand years ago by the ancient Greek writer Pausanias, and was then very old. It was accidentally destroyed by fire, a band of gipsies having lit a fire under it to cook their food and incautiously allowed the flames to reach it.

VALUABLE SOUTH AMERICA TREES

Some investigations by M. Thanneur, says *Engineering*, show that South America is rich in woods for engineering purposes. The yandubay is exceedingly hard and durable; the couroupay is also very hard and rich in tannin. The quebracho is, however, more interesting than any, and grows abundantly in the forests of La Plata and Brazil. It resembles oak in the trunk, and is used for railway sleepers, telegraph poles, girders, and so on. It is heavier than water, its specific gravity varying between 1.203 and 1.333. Its colour at first is reddish, like mahogany, but grows darker with time. Being rich in tannin, it is employed for tanning leather in Brazil and has recently been introduced for that purpose in France. A mixture of one-third of powdered quebracho and two-thirds of ordinary tan gives good results.

Proposed New Ship Canal in England.

A ship canal is projected from Bristol Channel across the peninsula of Somerset and Devon to the English Channel. The length of the canal will be 62 miles; the waterway will be 125 feet wide at the surface, 36 feet at the bottom, and 21 feet deep, the dimensions being similar to the grand ship canal of Holland from Amsterdam to the Helder. Such a canal will accommodate ships of 1,500 tons drawing 18 feet. The cost of the new canal is estimated at about fifteen millions of dollars; and twelve per cent annual dividends on this cost are expected.

Elm Tree.

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

Saw-Mill Boys.

Saw-mills, and places where steam and circular saws are used, employ a large number of boys. If you were to give a tea-party to saw-mill boys the thing that would astonish you would be the difficulty of finding half a dozen of your guests with the proper number of fingers. I know one little lad who is employed at pulling out the planks which have been pushed through the machine by men, and he has one hand now on which only the thumb is left. (!) "How the poor live," by G. R. Sims, *Pictorial World.*

THE MISSING LUDWIG.

Hope for the SS. Ludwig appears now to have been abandoned alike by the owners and agents, the friends and relatives of those on board and the public generally. She is sixty days out from Antwerp to-day, and her longest antecedent time for making the passage being from fourteen to twenty days, little doubt can be entertained as to her fate. The more hopeful refer to the fact that the Dominion steamship Quebec was fifty-two days in making her voyage from Liverpool to our port last spring and was forty days without being sighted or spoken; but she was sighted and frequently spoken subsequently. Of the Ludwig no vestige has been discovered. Theories as to her fate are various, but the most feasible and the one indeed given expression to by those more directly interested in the ship is, that she has struck an iceberg or been run into by some other vessel during the night, breaking in two or more of her

compartments and sinking almost instantly. Under such circumstances no time would be left to get out the boats or arouse the passengers.

The Messrs. Steinmann & Ludwig, founders and owners of the "White Cross" line of steamers, the line to which the ill-fated ship belongs, are among the most substantial and enterprising promoters of Atlantic transport service in Europe. Their line consists of eight first-class steamships, six of which run between Antwerp and New York, and the remaining two, the Helvetia and the Ludwig between Antwerp and this port. The line was established about forty years ago, and the Messrs. Steinmann and Ludwig may be considered in the fullest sense the pioneers of naval commerce between Antwerp and Montreal. For many years they used sailing ships, but more recently exchanged them for steamers, trade having expanded and they having entered into contract with the Dominion Government. The Company have chartered the SS. Surrey, in Antwerp to take the place of the supposed lost ship Ludwig, but they intend to build a first-class vessel at once to fill up the gap in their line. The Surrey sails for Montreal on September 5th.

The proprietors have lost only two vessels since the establishment of the line, these being on the New York route. Their voyages to and from Montreal have been singularly successful, the Ludwig, if lost, being the only disaster worthy of the name. This is saying much when the perils of the sea, especially from ice in the straits of Belle Isle, are considered. In connection with this matter, a glance at some statistics regarding British shipping in general for some years past may be interesting. Taking the year 1882 as an example, we find in *Lloyds' Register* that no less than 996 vessels sailing under British colors, were returned as lost, broken up or not heard from. The aggregate tonnage of these vessels was 373,700 tons. The number of ships built during that time was 578; an aggregate of 928,369 tons, showing that there were 118 more ships lost belonging to the United Kingdom than were built there and registered. The aggregate tonnage of those built exceeded those lost by 554,664 tons. During the year four ships a day were lost.

The present season appears to have been unusually prolific of disasters such as that which has probably befallen the Ludwig; the number of steamships, in all waters taken together, during the first six months of the year, which sailed from their ports and have never since been heard of, being no less than 27.

A THRILLING SCENE.

Recently at Ferranporth, near Truro, England, the driver of a waggone party wandering on the beach found his retreat cut off by the tide. He essayed to climb the cliffs, but when half-way up he found progress impossible and descent certainly fatal. The ledge on which he was supported would only give space for one foot, and the ground to which he clung above was loose and crumbling. For some hours he endured his suspense, when the visitors descried him from above. The news spread, and a crowd congregated, but none dared venture along the slight ledge by which alone the man could be approached. To have thrown a rope would have been useless, for the effort to catch it would certainly have caused the poor fellow to fall.

A coastguardman, named Regan, volunteered to be let down 100 feet over the face of the cliff, and while he descended the excitement was quickened tenfold. The man below could only hold out a little longer, and the least disturbance of the earth around him would inevitably cause his destruction. In breathless eagerness the spectators saw the one man near the other.

By a sudden effort the coastguardman clasped the man he had endeavored to save with a sudden and strong grip, and they swung off the ledge together. Even then danger was not at an end; but a descent was safely effected to a ledge below, when access to the summit was gradually gained.

The spectators were too overcome to cheer, but they did what was better—collected a good round sum for the gallant coastguardman.

TERRIBLE STORM.

St. Pierre, Sept. 4.—Thursday's storm exceeded in violence the cyclone of the previous Sunday. The damage to shipping is incalculable. A large proportion of the fishing fleet is disabled. Some fifty vessels have already arrived completely stripped. The loss of life is appalling. Jacquet's banker lost six men, Hardy's

vessel six, Vincent's six, Leoni Coase's four, Demalvillain's two, and almost all one or two men. Louis Jourdan's vessel foundered after the storm subsided. The crew were saved. Over thirty vessels are missing. Not the slightest intimation of the approach of the storm was given, except a rising of a dense black cloud on the eastern sky with loud peals of thunder. Before half an hour elapsed this wind was at its height and the sea mountains high.

"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.

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

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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,
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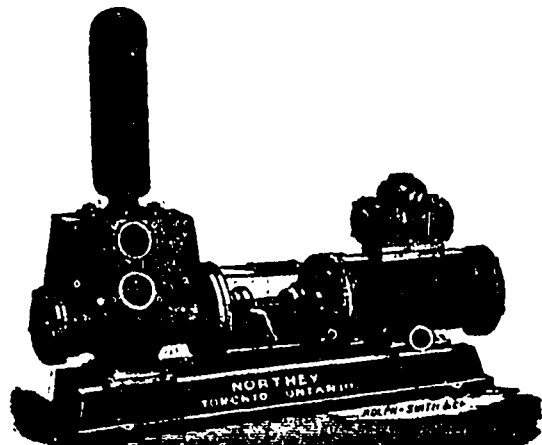
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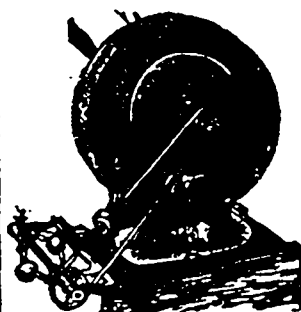
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**TUERK'S
WATER MOTOR.**

Patented November 8th, 1881.



View of Tuerk's Pressure Motor, with Tuerk's Improved Governor Attachment.

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

HYDRANT PRESSURE.

Cheaper, Quicker and Safer than Steam.

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

Names of a few who have taken out Backus Motors and put in the Tuerk Motor in their place:

- C. W. Melkel, Indianapolis, Ind.
- Columbus Telephone Co., Columbus, Ohio.
- James Egan, Chicago, Ill.
- H. C. Hawkins, Cleveland, Ohio.
- Printing Office, Hannibal, Mo.
- A. Solmens, Hat Manufactory, So. Norwalk, Ct.
- 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.
- Killits & Wayland, Chillicothe, Ohio.
- S. A. Morrow, Springfield, Ohio.
- R. Putnam, Chillicothe, Ohio.
- 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 in particulars and Water Pressure per square inch.

TUERK BROS. & JOHNSTON,

86 and 88 Market Street, Chicago, Ill.

DEVICE FOR DISCHARGING WATER FROM VESSELS.

Last week a successful practical trial was made in this harbor of Keating's improved device for discharging water from ships without pumping. The invention consists of a valved tube which passes through the hull of the vessel, at or about midships. The tube is arranged to be pushed down outside of the hull when in use, and withdrawn even with hull when not in use. The tube carries a valve, by opening which communication between the inside of the hull and the water outside may be established. The extremity of the tube, looking toward the stern of the vessel, has an orifice, but the front portion of the tube is solid. When the tube is pushed down through the ship's bottom, the forward motion of the vessel will produce a suction in the tube, and if the valve is opened the water in the hull will be drawn out.

The inventor expects that sailing and steam vessels may be kept dry and prevented from sinking by simply adjusting the tube and valve as above indicated. On the recent trial here the valve was applied to an old scow sixty feet long, towed by a tug. The valve was open and water was allowed to flow in and fill the scow until it was almost ready to sink; the tug was then started, and under a speed of three miles an hour the scow was in ten minutes relieved of its water in the manner described. A similar trial was lately made at Buffalo, N. Y., with equal success. The invention has realized in practice all that the inventor claims, as far as it has been tried. How it will work on deep draught vessels, where the water pressure against the bottom of the hull is increased, has yet to be shown. The Keating Company, No 86 Duane Street, New York, is now ready to furnish and attach this novel appliance to vessels of all descriptions.

Brooklyn Bridge Traction Cable.

Splicing the endless cable that is to be used in propelling cars over the New York and Brooklyn Suspension Bridge was a work requiring unusual skill, as it was an unusual task. The rope is a compound of a hemp core or center and an envelope of steel wire. It is 11,600 feet long, or about two miles. Its weight is 3.1 pounds per foot, which gives it 35,900 pounds for a total weight. The diameter is 1½ inches, and it has a breaking strength of 50 net tons. The splice is 160 feet long. It would be useless to our readers to attempt a description of the method of splicing, which, however, is similar to that of hemp or Manila rope splicing so far as that is applicable to this composition cable. The skill particularly required in this work is the union of the steel wire envelope. And this work is so exactly completed that to designate the splice from the other portions of the cable it has been painted white. It is probable the longest rope splice ever made.

Timber and Earthquakes.

Consul Donius, in his annual report, says: Wood for the construction of houses is an important item among the imports of Smyrna, as the houses of the lower orders are built entirely of wood; and those of the better class, which outwardly appear to be solid construction, have skeletons of wood merely faced with stone—a system adopted to lessen the danger arising from earthquakes. Both timber planks come chiefly from Austria, Russia, Roumania, and European Turkey. In 1877 the import was confined to planks, which accounts for the small import for that year, amounting only to £11,600, against an average of £136,000 for the four following years, in which there was little variation in the quantity of planks, while from 13,000 to 16,000 tons of timber were added to the import each year.

Important Purchase.

The Montreal Star says that at the meeting of the Directors of the Franco-Canadian Colonization Company held at Quebec, it was decided to purchase from Mr. Senecal all the timber limits of the Hall estate, the mills, wharves, etc., including some 2,700 square miles, for \$2,500,000, and Mr. Meredith, M. P., of Quebec, was instructed to draw the deed of sale. Mr. Shirley, a well known English engineer who was sent out by the shareholders in Europe to examine the property, and upon whose report

the purchase was made, states the yearly output of timber alone will amount to eighty million feet, and he speaks of the timber wharves at Montmorency, which extend to some eight miles, as being the finest of their kind in the world. The Star is authority for the statement that "Mr. Senecal's profit on this transaction is about \$500,000 and he still holds a large tract of the Hall property which he has not sold to the company. The stock books, which were opened about a fortnight ago, show that a million and a half has been subscribed in Canada."

A Reduced Cut.

The Buffalo Lumber World says:—There is already much talk of reducing next winter's crop of logs. If fewer logs were brought down to the mills next summer, it would be an excellent thing for the trade, but we don't look with any degree of confidence to see the cut reduced. If the experience of past seasons be any criterion for the future, the talk about a short log crop will be kept up until the men get into the woods, and on up to about driving season. Then it will be discovered that each operator has calculated that if the others cut less timber, he had better make hay while the sun shines by getting out as much as he can. Result—just as many logs as the last season and a good many more than there is any urgent demand for. This has happened a good many times, and it is likely to keep on happening just as long as poor, weak human nature is what it is.

Dakota Enterprise.

The following newspaper item well illustrates the rapid utilization of lumber in new sections of the country: "Towns grow out West. A denizen of La Beau, Dakota, was recently asked what the population of that town was, and he replied: "Well, the first lumber was received two weeks ago last Sunday. Now there are six general stores, one dry goods store, one hardware store, five saloons, one meat market, three lumber yards, one bank, one newspaper office, one telegraph office, a post office (with 280 calls and 80 lock boxes of the Yale pattern, in a building 20x20, two stories high), two hotels, and some structures. Since then there has been started another bank, a 50 room hotel, a hardware store, a dry goods house 30x80, and a Presbyterian church."

THE St. John, N. B., Telegraph says that shipments of hachmatac railway sleepers have been made this season by Mr. A. B. Spence, to Philadelphia, to the amount of about 40,000. The sleepers were loaded at St. John, various points on the river, Moncton and Hillsboro. Mr. Spence is also a large dealer in ship-knees, of which he has shipped to the United States ports about 20,000 since May last.

He Believes in the Millstone.

A letter under the above heading and written from this town appears in the Dominion Mechanical and Milling News as follows:—

Sir,—I am pleased to learn that a journal devoted to the interests of the milling fraternity is to be published and I wish the enterprise every success.

I would like to say a "few words" anent Rolls v. Burra. I have worked at milling from boyhood, am thoroughly conversant with the different kinds of wheat, and the methods in use for reducing the same to flour. I would like to ask a question and it is this: How is it that so many millers are rolling their mill-stones out, and allowing the rolls to roll into their place? Pardon this lame attempt at a pun. I still cling to the "time honoured" mill-stone, and assert without fear of contradiction that if burrs are properly cared for no "complets" (?) roller system can afford to dispense with them. It is not my intention to speak disparagingly of rolls, as I think they may be good in their place for crushing grain, etc., but for good bread-making quality of flour together with close yields, and consequently profitable milling, give me the "old fashioned way."

I would like to hear from some "brother duster" who has become a convert to the "new process" or "gradual reduction" style of milling, and I can assure him that I am prepared to "enter the lists" with him, provided that I am allowed the same bolting facilities which are given to roller mills, and therefore as a mill-stone miller, I will not yield the palm to the roller mill, and am determined to die hard.

Apologising for trespassing on your time and space,

I am, yours truly,
JOHN KING.

Peterborough, 27th August, 1883.

Giant Rafts.

That "giant" raft, the arrival of which in New York harbor from St. John, created so much comment among the lumbermen of the metropolis, was a smaller affair compared with the one now on its way from Lake Superior to Alpena for the Frontiers Lumber Company. The New Brunswick raft contained but a little more than one million feet, while the Lake Superior raft contains three million feet. The New York arrival was noticeable only because it was the first attempt to transport timber in that way from St. John. Such rafts are of every day occurrence on the lakes, although not made up as the ocean raft was. It is not necessary to bind the logs with chains.

The Bay City Lumberman's Gazette says that lumbermen are beginning to get ready for the woods, and some heavy contracts on the Tittabawassee, Muskegon and other streams have already been placed. At present prices for supplies, compared with last year, the cost of keeping men and teams in the woods should be less than last season.

LAST blocks are said to be an important article of manufacture in the towns of eastern and northern Maine. Blanchard, Lagrange, Alton, and Katahdin Iron Works will each ship about 25 car loads this season over the Bangor and Piscataquis railroad. Large numbers are also cut on the line of the Eastern & North American division of the Maine Central, and also in the towns to the eastward of Bangor. The blocks are cut from rock maple, and the work of getting them out gives quite remunerative employment to the farmers and their sons during the long winter months. A million and a half of these blocks, valued at about \$36,000, were shipped from Bangor last year, principally to western Maine, New Hampshire, and Massachusetts shoe towns. This, however, by no means includes all the last business of this section, as large quantities are shipped each season by way of Calais.

The Jordan Canal.

Although the Jordan Canal would wipe away many interesting landmarks of Biblical history, Sir Admiral Inglefield states that so far he has received only encouragement to go on with the work from clergymen who have written to him upon the subject. They regard the enterprise, it appears, as the fulfilment of a prophecy to be found in the forty-seventh chapter of Ezekiel. If one will turn to that portion of the Old Testament he will see how it speaks about bringing out the waters towards the east country into the desert and then down to the sea. It mentions, moreover, the healing of the waters and the appearance of a great multitude of fish. The coincidence of these passages with the details of the Palestine channel scheme is very curious, for the first may be taken to indicate the eastern flow from the Mediterranean through the cutting across the plain of Esdraelon, and thus on by way of the desert to the Red Sea, while the second may be thought to foreshadow the fate of the Great Dead Lake of the Scriptures, its waters sweetened by contact with the invading stream.

Fruitless Ingenuity.

A Detroit convict showed rare ingenuity in planning an escape from prison. He collected the tin foil in which tobacco was wrapped, and with this made an impression of the key that locked the door of the corridor leading to the cells. He then waited till workmen were summoned to repair the closet in the ward, and contrived to secrete a piece of the lead pipe used by them. This he melted in an old tin can over a gas burner, at which the prisoners lighted their pipes during the hours when smoking is allowed. He previously secreted the handle of an old knife, in which a small fragment of a blade remained, and with this he fashioned a mould out of a piece of wood, poured in the melted lead, and turned out a key that with a little whittling fitted the corridor door perfectly. A leg was then wrenched from an iron bedstead for use as a club, the other prisoners were taken into a lot, and a general goal delivery was decreed. The keeper was to be called upon some pretext to the door of the corridor, which was to be unlocked previously, and at a signal a rush was to be made for him by the convicts. The plot was discovered in the nick of time by a mere accident.

A Slight Mistake.

She was a thin, narrow, dark-visaged woman with "specs" on, and she carried a package of tracklets and leaflets which she scattered broadcast among the sinners in the Cass avenue car in which she rode. When only one or two of the pamphlets were left a man got in. He was on his way to the depot, a countryman, going home evidently. He had a big watermelon, which he disposed of tenderly on the seat next to him, and a glass flask with a rubber cork boldly out of his coat pocket.

"Hough!" he panted as he stuffed his fare in the box. "Hotter than hesterin' up here, ain't it?"

Everybody looked cold disapproval at him, as good, polite, Christian people do when spoken to in a street car: all but the woman with the "tracks." She fished one out and extended it to him.

"Thank's," he said, receiving it in a brown paw, "comic almanac, hey?"

"No sir," said the woman, firmly, in a high falsetto voice. "It's to save your immortal soul. Touch not, taste not, handle not the wine," and she pointed with a crooked forefinger to the glass flask protruding from the breast pocket.

"Oh, I see," said the man, smiling good-humouredly on his sour visaged vis-a-vis; "but this bottle ain't for me, ma'am."

"Woe unto him that giveth his neighbour drink," quoted the woman fiercely.

"He ain't eggactly my neighbour eyther," said the man. "You see, it's the new baby, and wife calculates to bring him up by hand, and this bottle's for him, bless his pooty tooty. Where's the rigging of it?" and diving into another pocket he fished out some India rubber tubing, etc.

The woman didn't wait to finish her dissertation on temperance, but got out without asking the driver to stop.

A New Invention.

A Chicago inventor, named M. H. Dement, claims to have at last solved the problem of setting type by machinery. He does it by avoiding the setting of type altogether. His invention is a combination of two others, the type-writer and the stereotype process. The machine makes impression of letters on strips of soft paper like that used in stereotype matrices. These stripes, when corrected, are arranged in a sheet which is used as the matrix in which to cast the plate. The advantage the machine has over nearly all former attempts at solving this problem is that it admits of "justifying" the lines,—that is, spacing the words in each line out so as to make the ends even all down the column. The inventor claims that the composition of a large daily paper which now costs from \$1,500 to \$2,500 a week can be done by means of his machine for from \$200 to \$300. He promises to have machines on the market in four months.

Some Interesting Facts.

The Financial and Mining News has evolved the following: Tennyson can take a worthless sheet of paper and by writing a poem on it make it worth \$5,000. That's genius. Vanderbilt can write a few words on a sheet and make it worth \$5,000,000. That's capital. The United States can take an ounce and a quarter of gold and stamp upon it an "eagle bird" and "twenty dollars." That's money. The mechanic can take the material worth \$5, and make it into a watch worth \$100. That's skill. The merchant can take an article worth twenty-five cents and sell it for \$1. That's business. A lady can purchase a very comfortable bonnet for \$10, but she prefers to pay \$100. That's foolishness. The ditch digger works ten hours a day and shovels out three or four tons of earth for \$1. That's labor.

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FOR THE FOLLOWING REASONS:

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

TO ADVERTISERS.

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

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

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

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

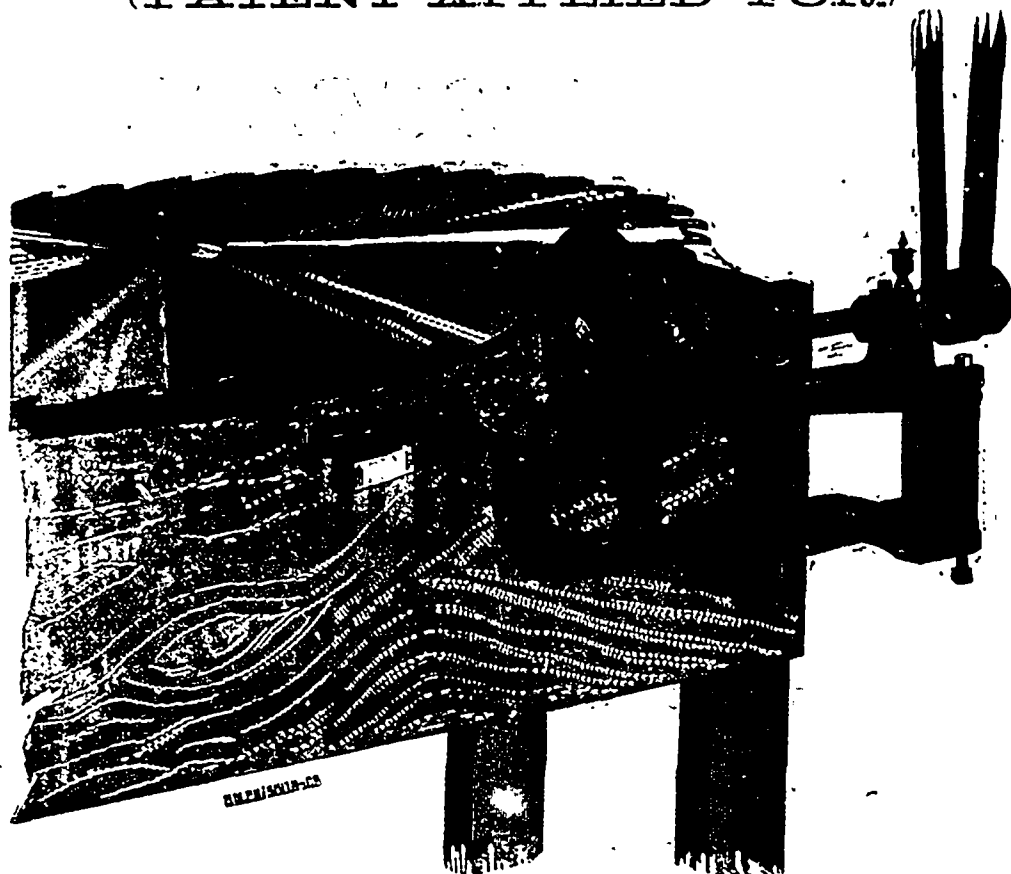
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