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

SUBSCRIPTION  
\$2.00 PER ANNUM

VOL. 6.

PETERBOROUGH, ONT., AUGUST 15, 1886.

NO. 16

#### ALASKA'S TIMBER RESOURCES.

A correspondent writes to the *Western World*:—"Alaska is square-shaped, with two horns projecting from the southeast and south west corners, the former called southeastern Alaska, the latter being the Aleutian islands. This southeastern horn is the place where is congregated nearly all the white population engaged in those industries over which the government has thrown no special protection.

"Nearly all of Alaska south of the Arctic circle may be covered with timber, except an immaterial portion facing Behring sea and the Aleutian islands, although, in the broadest sense, none of it is fit for more than local use, except southeastern Alaska, and most of this, from its remoteness, can never expect to compete with the more valuable and vast timber fields of British Columbia, Oregon and Washington territory until the latter are exhausted. There is one exception to this general rule, however, in a very valuable kind of timber found near the tip of the southeastern horn, along the Pacific coast. I refer to the yellow cedar of Alaskan parlance. For a number of years it has been used upon the northwest coast as a fancy wood, from its exceeding fine texture, great durability, and odor which, though agreeable to the genus homo, is a sure preventive to moths, and other good qualities for cabinet making, special woodwork and so on.

"The yellow cedar attains enormous size compared with the dwarfed species by which it is surrounded often reaching a height of over 100 feet and corresponding diameter at the butt, shown by the conifer family. When I was in Boca de Quadra inlet, Alaska, not from Dixon entrance, that separates this territory from British Columbia, we had to unload 65 tons of freight a salmon cannery there, and this was done in two loads by a raft made of two logs of yellow cedar not yet thoroughly seasoned. I thought they were ten feet at the butt, so grand were the logs, but probably two-thirds that would be about the truth. Even in the region that this extremely valuable tree occupies—the third of southeastern Alaska—it is not found in large districts, either in compact forests or straggling cases among other kinds, but rather in little isolated groups, or patches here and there, 10-acre and 100-acre lots, so to speak, but, once found, this patch is quite densely populated with them. This would really be greatly in its favor in securing these 'groups' as timber land. Some of them, however, are quite large, and many have never been well outlined, and others, no doubt, are yet to be discovered in this almost wild country. Most of it grows near the water, and this phase, in an Alpine country, cut up by numberless channels and inlets of water running in every direction and creating thousands of islands, may be readily appreciated. Near by the old Russian towns the clumps have been extermin-

ated by them before we came in possession of Russian America, and had they held it I have but little doubt it would now be worked on a large scale, or monopolized by some Moscowite favorites. While living in Oregon and the adjacent territories I often heard these valuable fields of timber discussed by parties who desired some law to protect them in securing them, and I was more than impressed with their sayings when I afterwards visited the districts. I look on the industry based on this timber as one of the future 'bonanzas' of Alaska, and the only one in the line of timber."

#### TREES ON THE PACIFIC SLOPE.

George H. Hamm, the well known correspondent, who is "dying" British Columbia in the interests of the *Western World*, writes as follows:—"The timber supply of the province is apparently inexhaustible, and will doubtless prove a mine of wealth before many years. Already shipments are made to the Australian, South American and Chinese markets, but the volume of trade has not as yet reached the proportion that it is capable of. The principal tree is the Douglas fir, which ranges from four to twelve feet in diameter, and from two hundred to three hundred feet high. It is straight and tough, and capable of bearing a great strain and is almost unequalled for bridging, framework and for shipbuilding, while its great length and straightness make it especially adapted for masts and spars. Besides the Douglas, the following trees are to be found in the province: the lists being obtained from a work issued by the local government. Western hemlock, large, found on coast and Columbia river, Englemann's spruce, eastern part of province and interior plateau, Menzies spruce, very large, mostly on coast, great silver fir, coast tree of great size, balsam spruce, abundant in Gold and Selkirk ranges, and east of McLeod's Lake, Williamson's Alpine hemlock, too scarce and too high up to be of much use, red pine (yellow pine or pitch pine), a variety of the heavy yellow pine of California and Oregon, very handsome, four feet diameter, common in drier parts of interior, white pine (mountain pine), Columbia region, Shuswap and Adams' Lakes—also interior of Vancouver's island, white barked pine, small, western cedar (giant cedar or red cedar), wood pale, yellow or reddish color, very durable, often found 100 to 150 feet high, and 15 feet thick, yellow cypress (yellow cedar), mainland coast, Vancouver and Queen Charlotte islands, western larch, (tamarac), Rocky Mountains, Selkirk and Gold ranges, west to Shuswap Lake, large tree, yield a strong, coarse, durable wood; maple valuable hardwood on Vancouver and adjacent islands, Queen Charlotte island and the mainland coast, up to 50', attains a diameter of four feet; vine maple, very strong, tough whitewood, confined to coast; yew, Van-

cover and opposite mainland shores, very tough and hard, and of a beautiful rose color; crab apple, along all the coasts, wood very hard, takes good polish, and withstands great wear; alder, two feet thick, on the Lower Fraser and along coast, good furniture wood; western birch (paper or canoe birch), Columbia region, Upper Fraser, Peace River, range and value not much known, oak, on Vancouver Island 70 feet in height, and three feet in diameter; dogwood, Vancouver and coast opposite. Arbutus, close-grained, heavy, resembling box, reaches 50 feet in height, and 20 inches in diameter, found on Vancouver and neighboring islands. Aspen poplar, abounds over the whole interior, reaching a thickness of two feet. Three other varieties of poplar are found, commonly included under the name cottonwood. One does not extend above Yale, and is the same wood largely used in Puget Sound to make staves for sugar barrels for San Francisco. The other two kinds occur in valleys in the interior. Mountain ash, in the interior; Juniper (red cedar or pencil cedar), east coast of Vancouver, and along the shores of Kamloops and other lakes in the interior.

There are already some very extensive saw mills in operation—and have been cutting for a quarter of a century—and yet this branch of industry is only in its infancy. Not only is there the trans-Pacific trade, gigantic as it should soon be, but with cheap freight rates the treeless plains of the Northwest could be readily supplied and profitable interchange of commodities spring up.

#### A THRILLING EXPERIENCE.

DETROIT, Mich., July 31.—A Chicago special says: The Canadian steamer Isaac May staggered into harbor at a late hour on Thursday night without fuel and almost destitute of provisions. Captain Muir, her master, relates a thrilling experience. The May left Chicago three weeks ago, towing three barges. After a run of five days they arrived at the Manitowish island, on the Canadian side of Lake Huron, the largest island in the great lakes, covered with cedar trees. When the vessel arrived the inhabitants were badly frightened. For weeks not a drop of rain had fallen. The steamer and her tow began to take on cargoes of posts and ties, when the woods suddenly burst into a great blaze. No sooner had the fire started than a severe wind storm swept over the island driving the flames in every direction. The people fled in terror to the beach and sought shelter on board the vessels, which pulled out into the lake. Scores of bears, roaring with pain, ran out of the woods, with the hair singed from their hides, and plunged into the lake. The flames raged for five days, burning over acres of valuable timber and destroying a vast amount of stock piled on the beach for shipment. Then a drenching rain

storm set in, and continued until the fire was put out. It was ten days from the time the vessels reached there before they were ready to leave, and their stock of provisions was almost exhausted in caring for the people who took refuge there. Still Capt. Muir thought he could make his provisions hold out until they reached Chicago, but he did not count on having head winds all the way.

The vessels left the island last Saturday morning, and as dense clouds of smoke from the burning timber had settled down over the water, the vessels had to pick their way slowly through the darkness. The steamers passed Lake Michigan when they ran into another band of smoke that shut out everything from view. So thick was the atmosphere that the first barge of the tow could not be seen from the decks of the steamer. On all sides could be heard the fog signals of passing steamers. By moving slowly and sounding whistles at frequent intervals, the steamer made her way through the smoke in safety. Her progress had been so greatly impeded, however, that when one hundred miles north of Chicago the engineer reported the coal bunkers empty, and the steward informed the captain that nothing was left to eat but salt pork. The crew were put under short rations and the deck load posts were drawn on to feed the furnaces, but the cedar was so green that the boilers could hardly be kept warm. Finally the steamer cut her consort adrift and came to Chicago under sail without them. The experience of the steamer at the Manitowish island during the fire was thrilling. The scene from the vessels as told by a spectator was grand beyond description. The flames shot into the air for hundreds of feet and turned night into day, while the heat was so intense that the vessels were obliged to push out into the lake. The noise was deafening, and amid all the din and confusion thousands of birds fluttered around their late homes, until, tired with constant flight, they dropped into the lake or fell into the flames. Deer and bears rushed from the woods together, and throw themselves into the cooling waters of the lake. For five days the flames held their sway before the lumbermen could return to island to finish loading the vessels. The barges were found off Racine and towed into port yesterday.

#### Timber Movement.

Mr. J. M. Irwin has sent forward from Lakefield to Quebec by all rail communication eight hundred and fifty picas of square timber during the past week. This is the first time the all rail route from here has been utilized by lumbermen for the transshipment of square timber. This mode of transport has the advantages of being quicker, less risky, and the insurance on the stock is less. Mr. Irwin will send more square timber by the same route.

## Chips.

A SIDE line has been built from the Messrs. Rathbun's mill at Campbellford to the Grand Junction track. Five sub lines have been laid down in the yards.

New piers, says the Campbellford News are about to be constructed by Messrs. Rathbun which will greatly improve the appearance of their premises and give stability to the made portion of their yard.

MR. JOHN WOODS' saw mill situated about 15 miles above Maniwaki, Quebec, on the river Desert, was on Aug. 3rd destroyed by fire; the loss is estimated at \$1 500, no insurance. It is supposed to be the work of an incendiary.

An employe of the Delta Lumber Company, at Thompson, upper Michigan, lost an arm in one of the company's mills. He sued for \$12,000 damages, and was awarded \$5,000. The case has been appealed.

ISRAEL MERRITT, a lumberman, of Bristol, N. B., has assigned. His liabilities are placed at \$30,000. He gives preferences to the extent of \$12 000. Among his creditors are several St. John firms. To one firm there he owes \$4,000, to another \$2 000.

STURSON & PAST, at Seattle, W. T., lately hired a few Chinamen to pack shingles. In the afternoon of the day when the Chinamen were first employed the mill hands struck and demanded the discharge of the Mongolians. The firm yielded, and the serenity of a Puget sound climate again brooded over the mill.

OWING to the low price of deals, as well as the limited demand for them, says the St John Globe, some of the mills are closing down and others are likely soon to do likewise. Messrs. Randolph & Baker's mill suspended operations last week; Messrs. S. T. King's, at Mosquito Cove, stopped work on Saturday last.

PARDEE, COOK & Co's mill, at Gun Lake, Mich., together with the firms store, trainway, 350,000 feet of lumber, and seven cars belonging to the Flint & Pere Marquette railroad, were burned Aug. 3rd. The mill was valued at \$40,000, and the total loss was placed at \$80,000, against which there was but \$20,000 insurance.

WHAT has come to be recognized as the best or standard speed for the main shaft of saw-mills, says the Timber Trades Journal, is 250 revolutions per minute, and if a second or third shaft be used to give motion to lighter machines, this speed may be increased with advantage to 300 revolutions per minute, but not above as a general rule.

TRENTON, Ont., Aug. 10.—About 12-30 to-day a fire broke out in the fanning mill factory owned by Wm Fitzpatrick. The flames spread very quickly, and soon an adjoining planing factory, owned by Seeds Bros., was also in flames, and both were completely destroyed in a very short time. Cause of fire unknown. No insurance. Loss about \$5000.

French prope, instead of advancing as customary at this season, remain at the low figure of something like 15s 6d. per ton, ex ship. This, we understand, is mostly owing to a rather large contract having been taken at even lower figures. Evidently there are some people with sufficient courage to speculate on even lower prices and lower rates of freight than are ruling now.

HOODLESS & SON, through their magnificent display at the Colonial Exhibition, received yesterday a tidy order for bedroom sets in elm, and walnut rockers. The orders came from Gitten & Co., furniture dealers, Camden town, London, who state that their articles have been much admired and that quite a demand may be expected for them. This is news which ought

to swell the heart of every Hamiltonian with pride. The order will be shipped at once.—Hamilton Spectator.

THE Lumberman's Gazette, of Bay City, Mich., says:—"The Emery Lumber Company brought over another load of logs from their Georgian Bay possession last Saturday, the Wahnapetac barge being loaded with 600,000 feet of pine logs. Having made all their arrangements to cut the products of their Canadian timber limits on the Saginaw river, they are not to be deterred by the additional export tax."

THE Deseronto Tribune says:—"On Tuesday morning the tug Rescue brought in a tow of timber from Mill Island near Trenton. They were taken from the old Star mill which was erected many years ago by Messrs. Morton & Baker of Kingston, and afterwards owned by A. S. Page, Esq., of Oswego. The mill has not been run since it came into the hands of the Rathbun Company and now the timbers have been taken out to be used for other purposes. They are large and sound. The island so long known as Baker's or Mill Island is beautifully located and can be utilized for many purposes."

MR E. WALTER RATHBUN, says the Deseronto Tribune, writing from Mr. M. Butler's camp in Algoma, states that they are making fair progress with their survey of the new townships. The country is rather rough in parts, and many sections having been burnt over in former years are now grown up with young poplar, hazel, &c. The weather has been variable, very hot during the day and very cold at night. Water on several nights was frozen in the pail. The expedition is not unaccompanied with hardships. Transportations are difficult, packing being the favorite method, the load being supported by a brand across the forehead. The loads vary from sixty to ninety pounds, though Indians and other natives sometimes carry from one hundred to one hundred and eight pounds weight. The hungry mosquito, ferocious black fly, and maddening sand fly, all abound and make life miserable. The party expect to be through with the survey by the first of September.

### BLACK BIRCH.

A writer in the Hamilton Spectator, who have been visiting the Muskoka Lakes, says:—"Lumbering is at present the most important industry in the whole of the Muskoka country, but the lumbermen interest themselves only in the pine. The woods are, however, filled with timber destined to be of very great economic importance to Canada. The black walnut of Ontario is nearly exhausted. When it is gone back birch must take its place. This wood has already attracted the notice of cabinet makers and builders; and its value for furniture and house furnishing is very great, while its beauty is remarkable. Several members of the party secured specimens; and Mr. Hoodless, of Hamilton, who takes great interest in the matter, is making arrangements to show the capabilities of this wood in fine furniture. A fine field is before it."

### RAFTS ARRIVED.

We take the following list of rafts arrived from the Quebec Chronicle:—  
July 28—McArthur Bros. Co., (Limited) staves, U. S., New London cove.  
July 29—J. B. Weller, waney white pine, Michigan, Dobell's Sillery.  
July 30—Collins' Bay R & T. Co., waney white pine, Western Canada, New London cove.  
Aug. 2—D D Calvin & Co., spars and masts, Dobell's cove  
Aug 4—Barnett & Mackie, white and red pine, Cap Rouge.  
J. B. Weller, waney white pine, Dobell's, Sillery cove

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To regulate the bowels and drive away the sick or bilious headache which is the result of constipation. But don't rack your frame and overburden your organs by taking the old-fashioned great, drastic, griping pills. Scenoco makes rapid advances, and Dr. Pierce's "Pleasant Purgative Pellets" are the result of careful study and skillful preparation. They are entirely vegetable, and operate without disturbance to the organs of the body, or to the occupation or diet of the patient.

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DR. PIERCE'S PELLETS—A. I. Bilious and Cathartic. 25c a vial, by druggists.

## MURRAY CANAL

### Notice to Bridge-Builders.

SEALED TENDERS addressed to the undersigned and endorsed "Tenders for Bridges, Murray Canal," will be received at this office until the arrival of the eastern and western mails on FRIDAY, 20th DAY OF AUGUST, next, for the construction of swing bridges at several places on the line of the Murray Canal. Those for the highway are to be a combination of iron and wood and the one for railway purposes to be of mild steel or wrought iron.

Plans, specifications and general conditions can be seen at this office on and after FRIDAY, 6th DAY OF AUGUST, next, where forms of tender can also be obtained. Parties tendering are expected to have a practical knowledge of the class of works required, and are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms, and—in the case of firms—except there are attached the actual signatures and nature of the occupation of each member of the same. Further, a bank deposit receipt for the sum of \$250, for each bridge for which the offer is made, must accompany the tender, which sum shall be forfeited if the party tendering declines to enter into contract at the rates stated in the offer submitted.

The deposit receipt thus sent in will be returned to the respective parties whose tenders are not accepted. This Department does not, however, bind itself to accept the lowest or any tender.

By order,  
A. P. BRADLEY,  
Secretary.

Department of Railways and Canals,  
Ottawa, 27th July, 1880. 3d2

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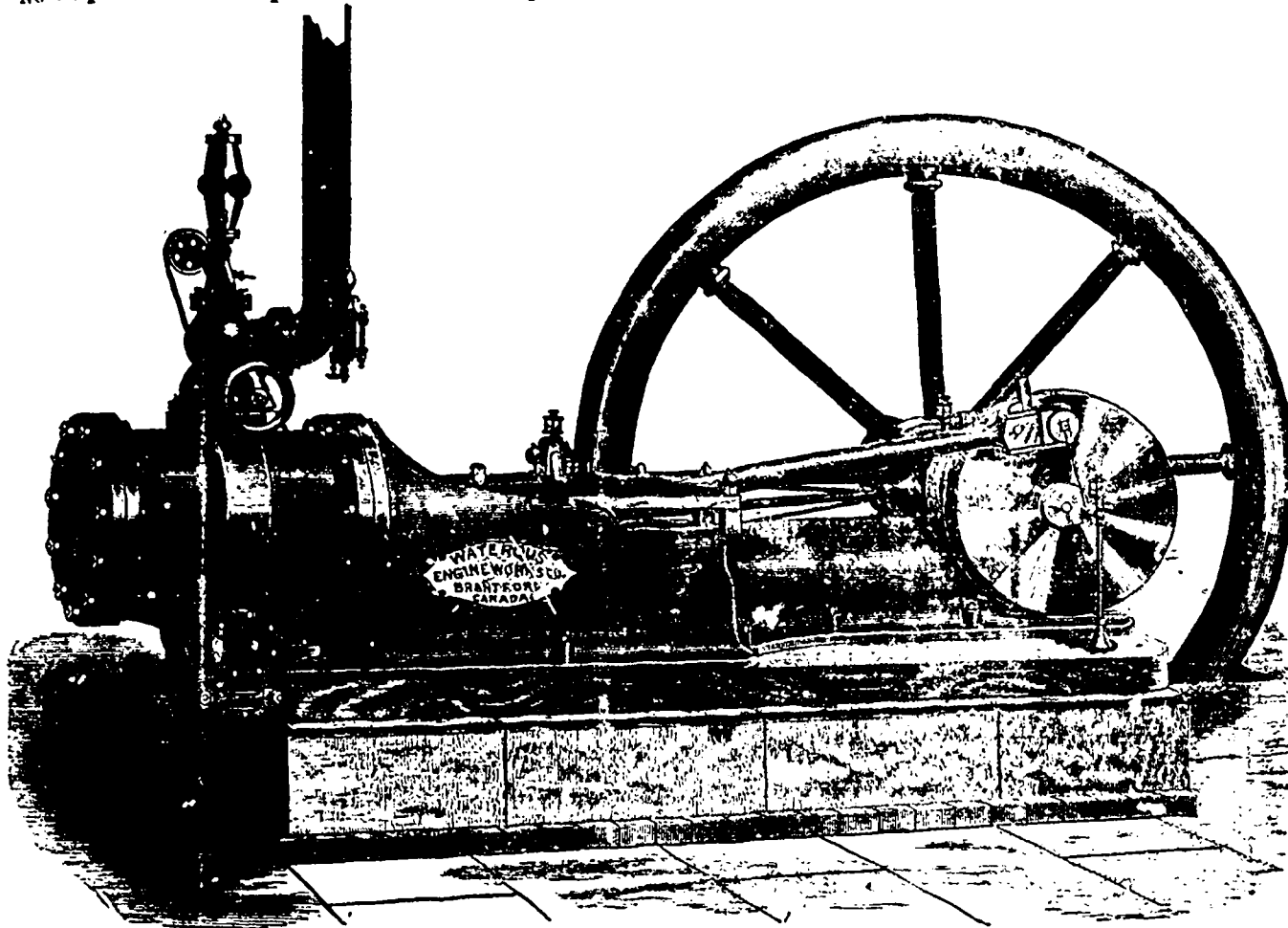
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#### PERSONAL.

MARY DAWSON, of Victoria, British Columbia, the Widow of the Late JOHN DAWSON, late of Spanish B. O. and formerly of the County of Peterborough, Ontario, is desirous of communicating with the relatives of her late Husband. Letters addressed to her at Victoria, B. C. in care of Messrs. Eberts & Taylor, Barristers, or in care of the undersigned, will be duly forwarded.

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**AUSTRALIAN WOODS.**

A correspondent of the *Montreal Herald* writing from the Colonial Exhibition says:—

Queensland shows 437 specimens of timbers, of every size, quality and kind. There is the Buaya-Buaya (or "Monkey Puzzle"), the pine cone, which produces a delicious nut, and which the natives will travel miles to procure. Here too are the "biggest" logs in the entire exhibition, from the district of Moreton. One of these measures in girth 30 feet 5 inches and another 18 feet 8 inches, and each weighing five tons. Their grain is exceedingly pretty and the wood will bear the highest polish. These are named the Karri tree and some of them measure over 400 feet in height, and in some cases the stems are 300 feet high, measured from the ground to the first branch, and the circumference around the base measured 60 feet. Canada is proud of her birches, her oaks, maples and pines. But for greatness and grandeur she is excelled by this little colony in the Pacific.

The entrance gateway to the Western Australia Court is made of Jane wood, shingled with the oak or Casuarina. To the right of this porch may be seen a grove of Jarrah trees, and to the left the Karri woods. Here you stand in the presence of three giants of the forest, 300 to 400 feet in height, rivalled only by the Eucalyptus and the monsters of the grove of Mariposa. Jarrah is a very heavy wood, weighing one and a half ton to the 50 cubic feet, and is impervious to the sea worm and the white ant. Amongst the splendid specimens of this timber to be found in this court are a slab which had lain on the Bunbury beach for the last 36 years, washed by the waves, heated by the sun, and showered by the sand, and a huge block which had been absolutely under water for twenty-two years. There is a trophy, too, of massive beams, 21 feet high of Jarrah wood, surmounted by specimens of "Tuart" wood nearly as hard as iron. On this trophy there is a star with numerous rays composed of various colored woods marvellous to behold, and adorned with shields in white and red—woo-ma-gaha, dowarks boomerangs, kyleys—the latter arranged as river rays. On either side of the arch are two large blocks of yellow sandal wood, a marked contrast to the bright red of the Jarrah tree. Here, also, is a staffenden grass tree, 20 feet high, called a "Black-boy," and a lawyer's hat made of curious paper bark impervious to rain, as well as other grass trees, with the Kingess in flower, and a fine display of woods such as gum, morrel, tuart and native pear, well adapted for coach building and furniture. Conspicuous is a splendid wood case with glass widows made of a variety of native woods, and containing about three hundred beautiful specimens of the fauna of the colony and a most interesting exhibit of its birds and mammals.

**MATTAWA.**

Mattawa is the Indian name for the "meeting of the waters" and nestling in a vale, or glen at the junction of the Mattawa and Ottawa rivers is the pretty village of Mattawa. The Hudson's Bay Company has had a post here for upwards of sixty years and Mr. Colin Rankin, one of its most experienced servants, is now in charge. Mr. Gorman, of the firm of Messrs. Timmins & Gorman, one of the largest establishments, and Mr. A. M. Earl are, after the Hudson's Bay Company, the oldest settlers in Mattawa. The last named gentleman informs me that in 1869 there were only two white families in the village. To day I counted seven first-class stores, besides many others in smaller way, and all doing well. There is a population of perhaps 900. Mr. Earl, who seems to know the territory thoroughly, tells me that the country for hundreds of miles is practically surrounded by beautiful water systems. Twelve miles away is the Amable du port, then there is the Montreal river, and then again the Boesfrind, not yet fully explored, which is in fact a series of small lakes running for many miles north and northeast and draining a vast area of country. All these waters eventually find their way to the Ottawa. According to the same authority there is a large tract of good farming and yielding thirty bushels of fall wheat to the acre and other crops in proportion. A road is being constructed to these lands. Then the

growth of timber is immense, and yields large supplies. White oak, four feet through, and cherry twenty inches diameter are common. There is timber enough in this district equal to the demands of many years to come. Silver mines have also been discovered; asbestos too, besides mica and other valuable minerals. Except in one instance, that of a silver mine, nothing has yet been done towards developing their resources.—*Monetary Times.*

**THAT MONSTER RAFT.**

HALIFAX, N. S., July 31.—The launch of the monster timber raft at Two Rivers, Cumberland, advertised for to-day, attracted the largest assemblage of people ever seen in that part of the country. At one o'clock all available vantage ground from which a view could be obtained, was fully occupied. The shores were quickly severed by axemen and amidst almost breathless anxiety the last one was cut away, but the raft did not show any signs of moving. The foreman gloomily shook his head and declared the first attempt a failure. Bitter disappointment was depicted on every face, and the launch declared by many an impossibility. The superintendent of the launching, Isaac Oliver, of St. John, did not lose confidence, however, and at once set to work to get things in readiness for another attempt. At midnight it is generally believed that this will be successful. The cause of the failure is variously conjectured. The most plausible reason advanced is that grease was put on the launchways too early and evaporated. This great raft has been under construction since January 1st. It is 420 feet long, 55 wide and 30 feet deep, weight 8,000 tons, and contains two and a half million superficial feet of piling and other timber. It is cigar-shaped, was designed by H. R. Robertson, and built under contract by B. B. Barnhill, of Two Rivers, for Wilson Godfrey, of New York. The timber is estimated to be worth \$30,000.

**IRON THAT WILL NOT RUST.**

James S. C. Wells, in *Popular Science Monthly*, for July:—The liability of iron to rust is a great drawback to its use for many purposes, and the practical value of a process which will protect it, at a slight expense, is self-evident. That the process is successful in accomplishing this object seems no longer a matter of doubt, and at less cost than galvanizing or tinning. The color on cast and wrought iron is a bluish-grey, which to some may be objectionable, but, as the coating takes paint far better than untreated iron, this object is easily overcome, and with the assurance that the paint will remain, and not soon be thrown off as it is generally. For polished work the color is a lustrous blue-black, adding greatly to the beauty of the article treated. This process seems peculiarly well adapted for gas and water pipes. Any one has had occasion to use water which has passed through a new iron pipe, or one that has not been used for some time, knows how full of rust it is, and that only after months of constant use does it become clear again. With pipe coated with the magnetic oxide by the Bower-Barff process, no trouble of the kind can occur. The water runs pure from the first day, and if for any reason the pipes are emptied, and left so, there is no danger of their becoming coated with rust. Another important fact is, that the water coming through one of these rustless pipes is just as pure as when it entered, for the water can dissolve none of the coating of oxide, as it always does with lead or galvanized pipes. It is a well known fact that water running through lead pipes is very apt to contain lead in solution, and the continued use of such water causes lead-poisoning, for, although the amount of lead dissolved may be very small, still it accumulates in the system, and finally causes sickness and disease.

THE BURK'S FALLS ARROW says:—Messrs. S. & J. Armstrong have sold their mill at Burk's Falls, to Messrs. Saunders & McPherson, of Orillia, who expect to do an extensive cutting next season. They have taken possession and are cutting lumber for the Ontario Lumber Company, contracted for before the transfer of the mill. Business in the lumber trade is to be lively for the balance of the season.

**SWAMP LANDS BEING RECLAIMED.**

There are very many of the older residents of Bay City, who well recollect when all the land from the southern limits of Bay City to the northern limits of East Saginaw on the east side of the Saginaw river, and also all the land on the west side of the river from the northern limits of Saginaw City to the southern limits of Wenona, now West Bay City, was one continuous swamp for miles in width, and the railroads on either side of the river were built on embankments thrown up by the dredge or shovel, and the ditches were constantly filled with water on both sides of the tracks.

Very few passengers on these railroads, as they viewed the vast waste spread out before their vision, ever supposed these lands would possess any value for agricultural purposes, and in fact hundreds of acres were purchased by sportsmen to be retained as duck hunting privileges.

But mark the change! Hundreds of acres of these lands have been reclaimed, by a peculiar process, which was conceived by Judge Albert Miller, of this city, one of the oldest settlers in the valley, still living, and quite active, considering his years, and William Daglish, deceased. These parties became possessed of a lot of these lands, which was a continuous swamp, and on which the water stood the year round to a depth of from one to four or five feet. They dredged a deep and wide channel around several hundred acres of this swamp land, the channels being several feet below the lowest surface of the land. The ground dredged from the immense ditches was thrown up, and formed a heavy and high embankment on the outside of the ditches, on which several teams abreast might be driven, and which was of sufficient width to be proof against leakage; and when this was completed steam and windmill pumps, which combined threw 2,000 gallons of water per minute out of the ditch and over the embankment were set at work. In a very short time the water was all pumped out of this immense territory which now resembles a great basin. Lateral ditches were run into the main ditch, and these drained the land constantly, and the pumps kept the ditches dry. The result is that the land has been found exceedingly productive, and enormous crops of corn and other farm products have been harvested each year.

The Holland farm on the west side of the river, containing 700 acres, has also been made after the same method, and a brickyard established thereon, which is now furnishing the brick for the new opera house here, and other mammoth brick blocks which are being erected.

T. H. McGraw & Co. have also a fine farm from the same land, and W. A. Beebe & Co. are progressing at present in good shape with the two and one-half miles of dredging on the east side of the Flint & Pere Marquette track for T. H. McGraw. The work when completed will reclaim over 1,000 of prairie land in Bay County. Mr. McGraw will put in a separate pump, and in less than three years will have a fine farm on land that has been considered almost worthless. The work this season on the and will cost over \$6,000. About 300 acres of land on the west side of the Flint & Pere Marquette railroad, also belonging to T. H. McGraw, along the river, will be dredged around and put in shape for cultivation as soon as Beebe & Co. get through with the job they are at now. Mr. Azure, who has charge of Mr. McGraw's big farm, has clearly demonstrated that there is no better land in the United States, when properly drained and cultivated, than what was formerly a frog pond along the river.—*Bay City, Mich., Gazette.*

THE Maritime Chemical Pulp Company is the name of an industry shortly to be established in Chatham, N. B. Hamilton will be the headquarters for the company, which is to have a capital stock of \$150,000 in 1,500 shares of \$100 each. The applicants for incorporation are: John A. Fisher, Dundas; John Stewart and Alexander Bruce, Hamilton; and Arthur Lee, John Leys and Richard Brown, of Toronto. Messrs. Fisher, Stuart and Lee are to be the first directors, with A. A. Anderson as secretary.

**ASH FOR CARRIAGE WORK.**

An authority on carriage building says, in seasoning ash, we must take into consideration the large quantities used in carriage building, also the bulky nature of the timber whilst in its unconverted state, which compels us to use the simplest and readiest means in seasoning without sacrificing the qualities of the timber. The best way to do this is to convert the bulk into plank as soon as possible, and, whilst seasoning to assist nature in every way without forcing, and when nearly seasoned to cut into sizes for use. For instance, brougham pillars, brackets, beds for under carriages, and especially the heavier seats. Before stacking ash, it is well to see the character of the timber, for if it is of a twisted nature it must be stacked one plank over the other, if not it may be placed on edge or on end, which will season it better and quicker. Besides being used in framing and such parts, it is largely used for bent work, such as steamed rims for wheels, futchels for carriages, top-calls in white chapel's segments pieces in brougham fronts. But the action of steam in dissolving the gummy matters within it deprives it of its native toughness.—*Timber Trades Journal.*

**WOOD WOOL.**

For some time past attention has been directed to a very interesting product consisting of extremely thin and slender shavings of wood that are comparable to paper cut for packing. It is known by name of "wood wool." This product was first introduced into France as a packing material. It weighs about 40 or 50 per cent less than the materials generally used for such a purpose. Its beautiful appearance, its fineness and its extreme cleanness at once brought it into favor with shippers. It was afterward found that the material was well adapted for the manufacture of mattresses, for bedding for cattle, for the filtration of liquids and for stuffing horse collars, &c., the most suitable species of wood being selected for each of these purposes. Its elasticity causes it to be considered as the best material for bedding after horsehair, and it is even preferable to any other substance when it is derived from resinous wood, since it does not absorb moisture. In workshops wood wool is tending to replace cotton-waste for cleaning machines, and it has likewise found an application on the rolling stock of railways for lubricating car axels. While it has the same property that cotton-waste has of absorbing oil it costs ten times less than that material. Its use is said to be rapidly growing in Austria and Germany, and also in France.

**A BIG POPLAR.**

The Cornerville (Tenn.) correspondent of the *Marshall Gazette*, writing to that paper says:—"The big poplar tree in Dogget's cove has been a noted landmark for nearly 70 years, and is more talked of, perhaps, than any tree in the State. Its size has from time to time been given all the way from 29 to 33 feet in circumference. Passing that way recently I went to the tree, viewed it and measured it carefully. The bark, which was three or four inches thick, had most of it fallen off, and I found it to be 26 feet and, perhaps, two inches in circumference, clear of any spurs. It has the appearance of being slightly hollow, and is in dying condition. The trunk is fully 50 feet to the first limb. It is a monster tree and there is a vast amount of good timber in it, but it will soon be ruined. This section has always been noted for its large trees. A beech tree standing on the old country line, about five miles north west from this place, and which was blown down some six or eight years ago, had a perfectly straight trunk of nearly 60 feet, clear of limbs, and was 5 feet 5 inches in diameter, and in consequence, difficult and hard to handle."

A TRACT of pine, comprising 24,000,000 feet, situated on the west fork of Chippewa river, Wis., has been sold to the Mississippi Logging Company for \$74,000. Another purchase of H. C. Putman was made by Fred. Weyerhaeuser, for the Mississippi Logging Company, for \$70,000. The same company is reported as buying heavily on the west fork of the Chippewa.

# Chips.

ANDREW CLANAHAN's planing mill, at Glen-coe, Ont., was burned July 23rd.

The Langford & Hall Lumber Company, Fulton, Ill., quotes sawdust on its price-list. The price is \$10 for a common car load.

The Messrs. Rathbun are raising their wharf at Picton, and will erect a freight house 100 by 28 feet and make other improvements.

The export lumber freight transactions at Quebec, for the week ending Aug. 5th, were as follows: Quebec to Southampton, 800 loads; timber, 205; remainder deals, 47s. 6d.

The oldest and largest tree in the world is said to stand near the foot of Mount Atna. It is 212 feet in circumference, and is a chestnut of course.

The H. Witbeck Company has had 10,000,000 feet of standing pine on Sturgeon river, Menominee district, scorched by recent forest fires, and it will be cut as soon as possible—probably the coming winter.

A FEW weeks ago, we learned that a leading Australian brewer had placed a large order in London for casks. We now learn that the same man wishes to buy or contract for quantities of white oak staves.

It is estimated that 40,000,000 feet of lumber will be used at Duluth in building operations, including the Manitoba elevator, the Lehigh coal dock at West Superior, the Omaha, Northern Pacific, St. Paul and Duluth and private docks.

W. J. BAXTER, of Saginaw, Mich., has completed the inspection and shipping of 250,000 feet of white pine sawed timber 7x14, and 26 feet long for Platt, Bradley & Co., and goes by rail to Quebec, and thence to Liverpool, England, which point it is expected to reach September 1st next.

The freight agent of the Canadian Pacific railway, Mr. G. M. Bosworth, states that within the past two months the lumber merchants in the districts around Georgian bay and Lake Nipissing have forwarded to Montreal no less than 3,500 car loads of square timber, representing two million square feet.

The *Boot and Shoe Recorder* says:—Hardly had it been discovered that paper could successfully take the place of leather as a substitute in many cases, before the hat makers were notified that by a new process of manipulation with wood pulp (which is the base of certain kinds of paper), hats can be produced. Thus extremes meet with wooden hats and wooden shoes, especially if there is a blockhead uniting them.

CANOE of wood pulp are now being constructed in Sweden, by a patented method, very nice-looking and handsomely shaped, and costing about 50 to 60 kronor each. The pulp is waterproof, and is put layer by layer on to a wooden model, where it dries; the model is then withdrawn, and deck, keel and rudder are added. It is furnished with water-tight bulkheads, and in the middle of the deck there is an opening in which the canoe sits and paddles.

### Drowned at Ranney Falls.

CAMPBELLFORD, Ont., July 31.—A riverman named Joel Redden, working for Gilmour & Co., was drowned at Ranney Falls, half a mile below Campbellford, this morning. After the gang had finished "tailing" the logs through, it seems that he and a companion attempted to shoot the rapids, but the boat filled, the men were precipitated into the water and Redden, being unable to swim, was drowned. His companion got ashore. The body has not yet been recovered.

### LET CANADIANS TAKE HEED.

An International Exhibition, to be held in June, 1887, is announced for Adelaide, the capital of South Australia.

This will furnish an opportunity for American manufacturers to make headway with their wares in Australia which should not be neglected. At the Melbourne exhibition in 1880 there were three hundred and sixty-six American exhibitors, and the proportion of medals and diplomas awarded to them was very large. At the Sydney exhibition in 1879 the Americans also secured a large share of the symbols of merit.

We already compete with Great Britain in the markets of her colonies for many important articles, particularly in hardware, prints and woodenware. These exhibitions should be utilized to the fullest extent for the purpose of fostering and extending our trade. If Congress can do anything to help this along it would be a good idea.

Of the Adelaide exhibition it is said the Prince of Wales will be president, Sir Samuel Davenport executive commissioner, and Mr. George Collins Levey (who represented Victoria, Australia, at the Centennial), secretary. The whole matter of exhibitions has now become so systematized that nearly all large manufacturers are able at slight expense and with little trouble to place a full line of samples en route for any city on the face of the earth. It is well-known that exhibiting anywhere pays, and Adelaide will be no exception to the rule.—*N.Y. Herald.*

### The Forestry Report.

Mr. R. W. Phipps writes as follows to the *Globe*:—"I should like, through your columns to state to the numerous correspondents who writing for this year's forestry report, ask that the two former reports be sent them, that those editions have been distributed and that copies are now hardly obtainable. Some of the present edition are still on hand, and I should be glad if those farmers who desire them would send their addresses within the next two or three weeks when copies will be sent them free. Those who obtain this number would do well to have it bound, as an account of the list of trees and other new forestry matter, it will be very valuable for reference."

The *Monetary Times* says:—The demand for all the product of our forests is dull at present, but there is good reason to suppose that the United States, before the season closes, will buy an increasing quantity of sawed lumber. The demand from England is dullness itself. The trade of the mother country—in the great staples at least—and including agriculture as a trade—has settled down into a position of hopelessness and serious reduction of profit. This is the case, notwithstanding the fact that the volume of England's production and trade goes steadily on, and represented by figures of prodigious dimensions.

Mr. BEAUMONT has sold the point adjoining the Rathbun property on the Gananoque river front; price \$1,600. This gives the Rathbun company the whole river frontage.



For "worn-out," "run-down," debilitated school teachers, milliners, seamstresses, housekeepers, and over-worked women generally, Dr. Pierce's Favorite Prescription is the best of all restorative tonics. It is not a "Cure-all," but admirably fulfills a singleness of purpose, being a most potent Specific for all those Chronic Weaknesses and Diseases peculiar to women. It is a powerful, general as well as uterine, tonic and nerve, and imparts vigor and strength to the whole system. It promptly cures weakness of stomach, indigestion, bloating, weak back, nervous prostration, debility and sleeplessness, in either sex. Favorite Prescription is sold by druggists under our positive guarantee. See wrapper around bottle. Price \$1.00, or six bottles for \$5.00. A large treatise on Diseases of Women, profusely illustrated with colored plates and numerous wood-cuts, sent for 10 cents in stamps. Address, WORLD'S DISPENSARY MEDICAL ASSOCIATION, 663 Main Street, Buffalo, N. Y. SICK HEADACHE, Bilious Headache, and Constipation, promptly cured by Dr. Pierce's Pellets. Sec. & via, by druggists.

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The NORTON SAW MILL PROPERTY and POWER, on the East Side of the Saranac River, Plattsburgh, N. Y. Saw mill has direct communication with the Forests of the Adirondacks. Apply to

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# THE CANADA LUMBERMAN

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY THE Peterborough Review Printing and Publishing Company (Limited), Peterborough, Ont.

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THE CANADA LUMBERMAN is filed at the Office of Messrs. SMITH, DRAGON & CO., 164 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., AUGUST 16, 1886.

## THE TRADE.

REPORTS from the English markets continue to be of a very leaden hue, and the silver lining is not perceptibly larger than it has been for sometime. Commenting on the London market, a writer conversant with the business deponents on the "utter stagnation of trade." That phrase looks strong and may be hyperbolic to a certain extent. Yet the evidences of sluggishness are plain. There certainly appears to be no sufficient grounds for hope, according to reports viewed, for an immediate revival of the trade in England.

When we turn to this side of the Atlantic things look somewhat brighter. Generally, business prospects are brightening up, and the general press uses the better prospects for a theme for its articles. A general revival of profitable business activity would be shared by the lumber trade and the signs of that revival will be welcome. Across the border the condition of business is much the same as in Canada. No doubt the labor troubles injured, what promised, at the outset, to be a profitable season, but a better feeling seems to exist. As yet, however, there is a disposition to wait to see which way the feline will leap before going to any lengths. That able Chicago trade paper, the *Northwestern Lumberman*, is hopeful, and in its issue of August 7th gives its views as follows:—

"From one standpoint the prospect that higher prices may soon be obtained for lumber was never brighter. Throughout the country the stocks in retail yards are very light. A few years ago the retail dealer made it a point to stock up at stated intervals very much as dealers in merchandise think that at certain seasons they must lay in a stock of goods. The retail lumber dealer, however, has changed his method of buying. He purchases from hand to mouth. For the average retailer a car load of lumber is a good purchase. He has learned to take advantage of railway facilities. If within easy reach of a distributing point an order written to-day will start a car load of lum-

ber on the way to-morrow. For this reason the amount of lumber carried in the retail yards is comparatively small, and it is doubtful if the retail dealer will ever again fall back on the custom of buying heavy bills.

"If the wholesale markets are investigated it will be found that there is no surplus stock in that direction. Of course there is lumber and lumber, but it is stated by buyers that it is by no means an easy task to find good dry stock in desirable quantities. If the hunt were for coarse stock it would be different, but a majority of the dealers in the markets west of Chicago have their eyes on eastern trade—a trade that demands well-manufactured stock from a good quality of timber. Several Chicago dealers are also reaching east with their long arms. The wonder is, not that every man can sell lumber in the eastern states does so, but that the consumption of good lumber in those states is so large. The demand for good lumber to go east is leaving a residue in many a yard that is neither desirable or readily salable.

"As if to help the lumber dealer out the clouds withhold their rain. Should the drought continue for the next three weeks a large number of mills will shut down for want of logs. It must be remembered that never in the history of the lumber business in the northwest were the logging streams driven so clean as they were last year. Not only did all the logs come down but it was often the case that the mill booms were cleaned out before the sawing season ended. As a result mills were obliged to do little or no sawing until new logs came to hand. Were heavy rains to set in now there are plenty of logs on the head waters which would not reach the saw the present season, even though it were miraculously prolonged. The most lively imagination cannot figure out how there can be any but an ordinary sized stock of lumber on hand when the mills shut down for the season. There will probably be no scarcity of lumber, but any time from now until new lumber is plentifully piled on the docks next season there can be no surplus to warrant dealers climbing over one another's heads in order to see who can sell cheapest.

"Owing to the conditions briefly stated above, certain grades of lumber in certain markets have slightly advanced. Whether the movement will extend generally is past prophesying. By special pleading the conclusion might usually be reached that the general law of trade has no control over the lumber trade. There are dealers in Toronto who sell lumber though the heavens fall; there are Mississippi river dealers who will meet Chicago men, and there are rail-mill men whose highest ambition on earth is apparently to understell everybody. With these combinations in the field the future of the lumber trade is difficult to anticipate. The manufacturers always stand ready for higher prices, it is said, but believe the east shore dealers will be fairly satisfied if the \$9 basis for dimension is sustained on the Chicago market, and without much doubt it will be. The purely jobber wants higher prices, and he wants them badly. He may meet competition and cut the insides out of his own pocket book, still, all the same, he longs for prices that will afford him more profit than he is making now. And he knows that in order to get that profit prices must go up. He has abandoned the hope even of jumping on to the necks of the manufacturers with any effect. He has learned within the last two years that typical lumber manufacturer has become like the adamant rock so far as his idea of prices goes.

"As the diagnosis has shown, there are conflicting elements. The manufacturer is doing but little complaining just now. The jobber would whoop up prices in prices in a York minute were it in his power. The retailer wants no higher prices at distributing points, claiming that from his customers he would be unable to obtain a corresponding advance. The way the cat will jump will be seen later on."

## THE REAL AGAINST THE FALSE.

The manufacturers and shippers of cherry have for a time complained that the demand throughout the east for their product was decreasing, and prices were not as firm as formerly. It is also conceded that the demand

for cherry has increased throughout the west, while buyers in this section are said to be willing to pay asking prices at the mills for good stocks. An inquiry into the situation in the east reveals a few features which are presented for consideration. It is a trait of human nature to imitate in order to gain a desired effect at a reduced price. A few years ago it was the custom to use cherry in the natural color or strained just enough to give the wood an even color, slightly darker than the original wood. This process of filling and finishing did not rob the wood of its natural beauty, and a glance revealed, even to a casual observer the true nature of a most beautiful species of timber. It was about this time that mahogany began to assume an important place in the estimation of manufacturers, especially in the furniture line, and as that wood was expensive there was an immediate and decisive disposition to imitate it. It was found that cherry, by being deeply stained, could be made to so closely resemble mahogany as to require an expert to tell the difference. The process is known as mahognizing, and it has been adapted in a general way for the finishing of house decorations and even for store work.

The next step was to imitate cherry, and for this purpose popular is used mostly when intended for house finish, and red birch furniture. The habit of staining real cherry to a blood red, or in other words totally obliterating the natural shade of the wood, has paved the way to palming off other woods, deeply stained, upon many unsuspecting purchasers. It has also resulted in a marked diminution in the demand for cherry; and while the manufacturer may be able to increase his profits by a bare pretension, the handlers of the genuine article are forced to compete with a cheap adversary.

This condition of affairs is the direct result of a demand for a grade of cherry superior to the work of nature—a quality of lumber absolutely free from defects in the nature of gum streaks, the very presence of which bears witness to the genuineness of the article. To offset these alleged defects the finisher has stained cherry to a shade so dark that other and cheaper woods could be used to equal advantage, and there are many users of household furniture who take great pride in what they suppose to be cherry sets, who are in reality idolizing a concoction of birch lumber and cherry stain, for which they paid a price nearly, if not fully, sufficient to have purchased a much handsomer article of cherry.

Cherry in its natural color, when dressed, is a pale pink, and if finished without stain, or with just sufficient to give the entire surface an even shade, can never be successfully imitated by any of the cheap woods, and it need never be feared but that it will stand on its own merits.—*Northwestern Lumberman.*

## THE OUTCOME ON AN INVENTION.

Readers of the *Lumberman* may remember that a few years there in its columns a machine for compressing sawdust, and from occasional inquiries it is evident that the invention is still of interest to people who are of the opinion that sawdust ought to be utilized.

The inventor of the machine was Mr. W. H. Smith, a gentleman of both general and special ability, and who during the war, was a government engineer of high repute. For years following the close of the war he studied on the machine of which we write. Level headed ordinarily, yet an inventor's enthusiasm took possession of him, and he could see millions in the child of his brain. There was no doubt, in his mind, but the invention would revolutionize trade. He would make sawdust into blocks of fuel, into pulleys, into fence posts, and even into railway ties. Sawdust fuel would become an article of commerce. Samples of it were burned in the *Lumberman* office with the best of results, and the engineers in the city who were furnished with a few hundred pounds to test against the same weight of coal recommended the new fuel in high terms. The use of the machine would not stop on sawdust, however. Oats, salt bran, hay, cotton—in fact any commodity that in its natural state was to bulky for profitable transportation—could be compressed. Special emphasis was laid on bran. A car load or so was put through the machine and shipped to the English market as a test,

and while the success of the process was proved, word came back that the bran was worthless; that the miller had taken too much of the food element out of it, and had left nothing but a dry shell that could only stimulate the animals which ate it by scratching their insides. The advice spoke well for the Minneapolis miller from whose mill the bran was taken, but it was a crusher on the would be bran exporter.

Mr. Smith made preparations to build a machine at a foundry on the west side of the city, and for months worked hard. During this period he associated with him Mr. James L. Houghtalling, a gentleman who had both money and leisure and who at that time was treasurer of the Mackinaw Lumber Company. The machine on trial exhibitions worked fairly satisfactorily, but less of a mechanic than its inventor was could see that its construction was faulty. Tremendous power was required, and parts of the machinery were too delicate to withstand constant use. But improvements were made until it was thought that the machine could be put on the market, and one was built for the big saw-mill concern, the Rathburn Company, Deseronto, Ont. This company ran a line of steamers, and it was its intention to use sawdust fuel in the steamer furnaces. Whether there was any temporary success in the scheme we have never learned. At present however, the compressor stands idle, for the reason, it is safe to say, that it is unable to stand the heavy work required of it.

Two compressors were built. One, as stated above, is idle in Canada; the original machine is standing under a shed on the west side; Mr. Smith, the inventor, is dead; and Mr. Houghtalling is now engaged in a business that gives him no time to fool with sawdust compressors. The machine, practically, has been a dead failure. It was conceived in a bright brain, but it consumed the years, and we know not but the life of the inventor. To say the least, he died a disappointed man. He saw the work of years of mature manhood come to naught. The sawdust compressor was not only an ambition destroyer but a money eater. Mr. Houghtalling sank \$15,000 in the enterprise, and how much it pulled from the pockets of others we have no means of knowing.

Notwithstanding the dismal record presented above the *Lumberman* is of the opinion that there would be big money in the invention were it perfected. The trouble is with the machine, and not with the process. The principle is all right; and the next man who attempts to carry it out we trust will have a less thorny road than those who have gone before him.—*Northwestern Lumberman.*

## FOREST FIRES IN MICHIGAN.

BAY CITY, Mich., Aug. 11.—Despatches to this city announce that terrible forest fires are raging along the entire line of the Michigan central railroad, from Mackinac city to Pinconning, in Montmorency and Otsego counties, standing timber has been destroyed and the fires are prevailing continually. Villages are threatened unless rain comes soon. The conductors report the scene at night both fearful and interesting.

ISHPEMING, Mich., Aug. 11.—The forest fires have done great damage in various parts of the upper peninsula. At Barraga, Chocicoy and other points along the Chicago and Northwestern railway, there have been terrible fires. Nearly a million feet of standing pine have been destroyed. Unless rain comes soon there will be no more greater devastation.

Two large fly wheels in the Port Arthur Lumbering Company's mill, at Port Arthur, Ont., recently burst and flew in all directions. The wheels are six feet in diameter, and revolving about 90 times to the minute. Though several men were working a few feet away no one was injured.

RICHARD COX, an Englishman, who works on the steamboat Walker Lilly, was loading ties at the Rockland mills, Ottawa, when a pile of lumber, beneath which he was standing, gave way, and the whole weight of the lumber fell upon him, killing him instantly. Cox had only been in the country a short time.

## LOSS OF LIFE BY FOREST FIRES.

MILWAUKEE, Aug. 11.—Though the forests in the northern tier of counties in this state are still ablaze, and are likely to remain on fire until rains quench the flames, the danger to the villages and towns is over unless heavy gales should sweep down upon them. While not over a dozen cases of human cremation are reported, it is believed that many backwoods men and families remote from settlement cannot possibly have escaped. The fatality to live stock has been terrible. Hundreds of charred bodies of cattle lie on the blackened track of the devastating cyclone of fire. It is estimated that in Calumet, Clark, Marathon and a few adjacent counties 500 families are rendered homeless and will suffer unless immediate relief is sent them. Many of these people had narrow escapes from death, having hidden in wells or submerged themselves up to their necks in streams with wet blankets covering their heads until the fire passed. In some places the fire swooped down so suddenly upon the people that they barely had time to take this method of safety. In other places the roar of the flames was heard for miles, and the error-stricken people fled madly before the flames to neighboring villages and towns. The loss cannot even be estimated. Hundreds of homes, dozens of saw mills, lumber camps and millions of feet of lumber are in ashes. Acres upon acres of ripening grain were laid waste.

To-night's advices are that the fires are abating considerably by running into clearings and because the wind has died out. However, fears are entertained of a repetition should high winds prevail again before rain appears. Along the valley division of the Chicago, Milwaukee & St. Paul railway, heavy rain to-day extinguished all the flames, saving the largest cranberry marshes in that section. To-day the suffocating clouds of smoke from the burning forests were borne by north winds as far south as Milwaukee. On the lakes near Green Bay, Sturgeon Bay, and even further south, the smoke clouds are so dense that the sun is obscured, and vessels experience extreme difficulty in navigating it being impossible to see 400 feet ahead at midday.

## CIRCULATION IN A STEAM BOILER.

The great influence which the circulation of the water in a steam boiler, when it is in operation, exercises upon its efficiency, its tendency to foul up, and its liability to various annoying defects, does not seem to be fully understood or appreciated by many to whom it is of the greatest importance. Were it not for the fact that heat applied to the under side of a body of water is communicated to it, thereby expanding it and causing it to rise through the colder water above and producing a circulation, it would be practically impossible to generate steam in the ordinary manner. The efficiency of any given area of heating surface depends almost wholly upon the perfection of the circulation of the water in contact with it. This will probably be better appreciated when it is stated that the experiment has been performed of immersing a cubical metallic box in water and heating it from the inside. The horizontal upper surface of the box generated more than twice as much steam per square foot of surface as the perpendicular sides while the bottom or lower side generated none at all. This was due to the fact that the steam bubbles or vesicles formed in contact with the upper surface, had nothing to interfere with their prompt liberation from that surface, the heated water was equally free to rise its place being immediately filled with a fresh supply of colder water thus forming a rapid circulation; in operation went on with greater difficulty in contact with the vertical surfaces, while with the lower horizontal surface, the steam as formed would have a tendency to hug the surface, and prevent the contact of water with it, thus effectually preventing any circulation. When these facts are appreciated it will be readily seen how essential it is to the proper performance of a boiler that the water spaces should be large and free from obstruction as possible, in order that the water may have opportunity to circulate freely, and the steam when formed be discharged as freely and quickly as possible. Comparatively few years ago, it was the usual practice to crowd as many tubes into a

horizontal boiler as could be gotten into it. They were set in zig zag rows, to enable the greatest number to be put into a given space, on the theory that the more heating surface the more steam the boiler would make, and the natural consequence was the spaces between tubes and shells soon became filled up with scale and sediment, the result being overheated plates and leaky seams and tubes, while the steaming capacity of the boiler was greatly reduced. Of late years however the fact is beginning to be appreciated that tube surface is not heating surface unless it has plenty of room to act as such, and consequently the number put into boilers of any given size is less, they are arranged in a more rational manner and as a natural result the boiler steams better, and is more easily kept clean, less repairs are necessary and the life of the boiler is greatly prolonged. — *Locomotive*.

## THE LUMBER TRADE.

An *Free Press* representative visited the different mills on the Chaudiere this forenoon to see how the lumber trade was progressing. After conversing with the different lumbermen and managers it was ascertained that the business was more active this year than last season, and prices were on the whole better. For the past few days there was a lull in the trade and sales were few. Little or nothing has been done in square timber, but a few sales of lumber were effected. An effort is being made to raise the export duty from \$2, which it is at present, to \$3 per thousand feet. It will be remembered that last season the duty was raised \$1 which made it \$2, and therefore equal to the duty imposed by the United States on sawn lumber entering there. Canadian lumbermen have discovered that \$2 on logs is not sufficient to meet the \$2 imposed by the United States on lumber. It is for this reason, a few thousand feet are never missed in logs, while the lumber can be exactly measured. In this way the correct number of feet is taken as regards lumber while it is the very reverse respecting sawn lumber. Our lumbermen therefore think that it will take \$3 export duty per thousand feet on logs to meet the imposition of \$2 per thousand feet import duty by the Americans on sawn lumber. On the Georgian Bay there are quite a number of American lumbermen operating there. They take their logs across to the States by paying the export duty of \$2, and in this way to do the work of sawing it away from Canada. The \$2 American import duty on sawn lumber cannot check this. The Canadian lumbermen think that the \$3 export duty on logs will meet the whole trouble. At all events representations to the Government will be made to this effect.

All the mills are working full time. Messrs. Bronson & Co. have opened up a new limit on the Desmoine, and operations will commence there this winter. Their yard was entirely cleared out this summer, and now they have nothing to dispose of save this summer's cut. Taking it all in all the lumbermen are particularly happy over the result of trade so far. — *Ottawa Free Press*.

## ONE OF THE MOST INTERESTING.

The *Builder*, a London, Eng., journal, thus refers to one of the machines in the exhibit of the Wm. Hamilton Manufacturing Company at the Colonial Exhibition:—"The Hamilton Manufacturing Company, of Peterborough, Ont., have in motion one of Covel's Patent Automatic Saw-sharpening machines for circulars and mill webs. The sharpening is done by an emery wheel in the usual way but when the saw is once fixed it requires no further attention till completed. An additional advantage in this machine is that the depth of gullet and sharpening of each tooth is absolutely the same—a result quite unattainable in machines guided by hand. Any desired depth of gullet or rake on tooth can be obtained at will. This machine can be used for sharpening large band-saw blades and taken altogether, it must be pronounced one of the most interesting machines in the exhibition."

Several gangs of men have arrived at Newwaki, Quebec, en route to the upper depots of Messrs. Hamilton Bros., and Messrs. Gilmour & Co.

## CROPS IN MANITOBA.

WINNIPEG, Aug. 9.—Hon. S. C. Wood and party have returned after travelling five or six hundred miles in the Province. They report that they found the crops in Springfield and north-east of Winnipeg pretty light in the straw and well-headed, and an average as far as the yield is concerned. In Birtlo and Shoal Lake districts and around Minnedosa they found the grain well headed, good length of straw and more than an average yield. In Portage la Prairie district they found a very large average under wheat and the crop very good. It was a little shorter in the straw than usual, but will undoubtedly yield well. The same remarks would apply to the Carberry district. In the neighborhood of Brandon, north and south of the track for about four miles, the wheat crop is very poor, the straw being very short. Passing on to Plum Creek settlement the crops are very good, the wheat crop especially. From Plum Creek to Delawara they found an average crop, the grain being well headed, and the yield will doubtless be large. The crops around Bolsoval and vicinity are good, and also at Nelson and vicinity, where they will be better than an average. Around Morden and on the Mononite reserve they are light, the straw being very short, but the head is good and the yield will be fair. They noticed wherever they went that where wheat was sown on backset land or summer fallow the crop was good and little damage had occurred from the dry season, the only injury being the shortness of the straw. Wherever wheat was sown on stubble land the straw was very short. In districts where they saw the best crops they also found a very large acreage of summer fallow being prepared for next year. They unanimously reached the conclusion that this year's crop will be the most profitable one that this Province has had for many years. They found the farmers wherever they went hopeful and cheerful. — *Mail*.

## ATTEMPTED MURDER.

BRANTFORD, Aug. 7.—Yesterday afternoon, between five and six o'clock, a man called at the residence of Mr. Geo. Massecar, Wellington street, rang the bell, which was answered by Mrs. Massecar, and enquired if Mr. Massecar was home. Mrs. Massecar replied no, but she expected him shortly, and requested the stranger to wait till he came. He said he would call again, and asked for a glass of water. Mrs. Massecar turned to get the water, but no sooner had she turned than the stranger shot her. She fell to the floor unconscious. On regaining consciousness she found the door closed and the man gone. She managed to alarm one of the neighbours, who came to her assistance and a doctor was immediately summoned. The ball struck the thick part of the left arm between the shoulder and the elbow. No serious result is anticipated. The stranger was about 35 years of age, dressed in black clothing. None of the neighbours nor children playing around the house saw the man nor heard the shot fired.

## MISCELLANEOUS NOTES.

BOSTON, Mass., Aug. 10.—P. F. Williams, Russel, Sheen, & Co., lumber dealers have failed, and the following firms have failed in consequence: Allen & Noble, hardware dealers; Gorrisch & O'Brien, furniture dealers; Thos. F. Brown & Co., furniture; L. E. Pierce, furniture, all of Boston; and the Lewiston steam mills, of Lewiston, Maine. The combined liabilities are \$500,000.

WASHINGTON, D.C., Aug. 10.—The spring wheat returns of the Department of Agriculture for Aug. 1st show an improvement in condition in Iowa, a small decline in Wisconsin and Nebraska and a heavy production in Dakota. The causes of deterioration are drought and clinch bug. The heat has been excessive in many districts that have produced a fair yield.

COBourg, Ont., Aug. 10.—A party of young men left here yesterday for a week's camping in Rice Lake, and to-day one of

them, named Joseph McCulloch, of this town, took his boat out into the lake with the intention of having a swim, and after jumping into the water was unable to reach the boat, and was drowned before help could reach him. His body was brought in by train to-night. This is the fifth drowning accident in this vicinity this season.

PALMERSTON, Ont., Aug. 10.—Licence Inspector Fisher paid an official visit to town to-night. While putting his horse up at one of the hotels a stranger came up and asked him if he was the Licence Inspector. Being answered in the affirmative, he dealt him several blows with a club, cutting him on the head and shoulders. His injuries are not serious. The stranger, whose name is at present unknown, escaped.

MONTREAL, Aug. 9.—Cure Marceal, of the parish church of Notre Dame de Graces, at the morning service yesterday advised his flock earnestly at the approaching elections to vote for the best candidate, and expressed a sincere hope that no other considerations would weigh with them than a solemn desire to do their duty to the Almighty. He took occasion to revert to the fact which he extremely regretted, that some of the parishioners had a picture of Louis Riel with a rope around his neck in juxtaposition to sacred pictures. He also stated that Louis Riel could not be a martyr, as he had persecuted both the priests and the Church.

## Wanted.

THREE HUNDRED THOUSAND feet of dry inch basswood culls.

BELDEN & McDOWELL,  
Syracuse, N. Y.

## TIMBER LIMITS.

ENDERS for timber limits on Georgian Bay, Muskoka, Black and Trent Rivers Canada; nearly 270 square miles containing about 200,000,000 feet pine, also for four saw mills on Black and Trent Rivers, will be received up to the 8th September, 1894. For details and terms apply to J. D. SMITH, Perlon Falls, Ont., or the BANK OF TORONTO, Toronto or Port Hope, Canada. 3116-6733

## For Sale at a Sacrifice.

## A SAW MILL

SITUATED in excellent locality with an attachment of 200 acres of well timbered land through which flows the Nottawasaga river. Best water privilege in Simcoe. Capacity of mill eight thousand feet daily. Enough custom work to pay running expenses. Satisfactory reasons for selling, Box 60, Alleton, Ont. 2118

## GEORGE GALL

WHOLESALE and RETAIL

## HARDWOOD LUMBER

MERCHANT

Car Lots sold on Commission, railway switch in to yard and plenty of room for storage. Yard corner of Stathan and Wellington Ave. Office, 9 Victoria St., Toronto. Telephone Connection.

## W. POLSON &amp; CO.

MANUFACTURERS OF

Steam Engines

And Boilers

Steam Yachts

And Tugs.

General Machinery Dealer

ESPLANADE EAST,

TORONTO, ONTARIO



## EVERGREEN WINDBREAKS.

The following is from the Ontario forestry report by Mr. R. W. Phipps:—

We know from long experience that the summer storms, the early frosts, and the fierce unrelenting winter blizzards do pass by fields surrounded by growing trees, uninjured and unscathed.—*Judge C. E. Whiting.*

Throughout a large extent of Ontario, considering how much is already cleared of the original forest, with the exception here and there, of some small portions, and the decaying condition of many of these, where cattle have been allowed to destroy all chance of forest perpetuation, it is plain, that unless trees be planted, the surface of the country must soon largely resemble a wind-swept plain. The resultant evils, agricultural and other, of this state of affairs cannot be too frequently impressed on our minds.

In our latitude, one of the principal of these, is necessarily, the additional cold experienced in winter. Every Canadian has observed, that in the absence of wind a low thermometer is comparatively little noticed. In the deep forest where wind was not, and four feet of snow overlaid the ground, I have passed days, time and again, working without plows, at twenty degrees below zero. "In the Arctic regions," says Dr. Kane, "I can stand a journey at forty degrees below zero, but remember, no wind."

An evil to agriculture, perhaps even greater in a treeless country, is found in the injurious dryness occasioned in the soil by an uninterrupted wind-course. When the reviving showers of summer fall on the thirsty ground, the beneficial result to vegetation is easily seen—it is well-known and undeniable, and the farmer is apt to calculate how great would be the benefit if, for a week or two, his wheat and clover would thrive as they appear to have done within the past twenty-four hours. The fact is they would continue so to thrive, had we not interfered with those operations of nature, which, in this our climate of extreme heat and cold, are needed for the growing plant. When the protection afforded by forests is altogether destroyed, in a country like Ontario, the course of the wind over the surface of the land withdraws the moisture too rapidly from the soil. The moisture given by a summer shower in conditions favorable to agriculture should remain near the surface for a length of time, until dissipated by slow descent to the water courses below, or gradual uprising to the air above. During this process of slow movement of moisture through the warm summer soil, growth proceeds with its utmost vigor, and one of the chief objects of partial shelter is to keep the ground in this favorable condition during the growing period.

When the earth is deprived of the natural shelter given by portions of forest, and the natural moisture too quickly absorbed in the following way: The soil parts with a portion of its moisture to the stratum of air passing immediately above, which passing on, is immediately succeeded by another body of air equally dry, which absorbs another portion, and this in its turn is succeeded by another. As long in fact, as the wind blows briskly across the soil, so long the process of evaporation continues, occasioning necessarily great loss of fertility, compared with that obtainable in better sheltered grounds. This cause has much to do with the often observed fact, that growth is by no means so strong, vigorous, or lucrative to-day, even on new land, in the same locality, as it used to be on similar soil, when the country had been recently settled, and sheltering forests existed in all directions.

We cannot at once expect to see a general commencement to replace those portions of woods, which, long since cut down, experience teaches us had better been allowed to stand. The work of replanting many thousands of acres would be vast. But there is a method whereby, without expense beyond a sum quite within the means of most agriculturists, much of the benefits formerly obtained by the forest shelter might be again secured, and yet the husbandman retain his acres for plough or pasture almost in undiminished extent. This method is simply the use of evergreen wind-breaks.

Whoever chooses to take a little time now

for this purpose can, in a few years have his farm protected on the north, west, or whichever are its most exposed sides, by beautiful walls of verdure, giving the property an additional value twenty times in amount that which the necessary time and labor will cost him, and giving a shelter from wind, a warmth in winter, and an increase in the return of many of his crops, far beyond what is generally imagined.

It is now that this pains should be taken, for our trees are not increasing. Many small forests, now giving shelter, are yearly being cut down, some because want of care has rendered them impossible now to preserve, some through a mistaken idea of getting more land for farming operations. Be it as it may, we have been finding year by year, the country become more and more destitute of shelter, and he who begins to protect his farm now, will certainly, in a few years, find such work the best investment he ever made, whether in view of the better crops to be obtained, the greater comfort in a farm so sheltered, or the additional price to be had if he chooses to sell.

It is not as if this was a new, untried, or a but lately tried method. Letters have been received from nearly three hundred well-informed residents in different parts of Ontario, stating that such protection is always, in their experience, beneficial, and often in the case of winter crops, increasing the yield one-half over those obtained close by, but in unsheltered parts of the same or other farms.

The planting of evergreens has not been so general as that of other trees in Ontario, as they have been considered more difficult of growth. This has arisen mainly from one fact connected with their planting, that is, the roots must not be allowed any chance of drying. These trees have a resinous sap, which, once dried, kills the life of the tree. It requires but little exposure to do this. If you bring an evergreen, in apparently good condition, to the place where you want to plant it, and leave it exposed to sun and wind while you dig the hole, even that amount of drying will sometimes destroy its chance of strong life, or of any life. These roots are often hair-like in their size, and wind or sun chokes the tubes at once with solid resin, which no watering will soften or vitalize. Yet they can be, and are, often carried with perfect safety long distances, even round the world, well packed in damp moss. If you so receive them, plant them the instant you take them out of the moss. If you dig them, cover instantly with some cloth or rug, choosing, if possible, a cloudy still day, and keep them closely covered till the time of planting. It is well to dip them in thin mud, as elsewhere advised. With this care there is absolutely no difficulty in planting evergreens. It is being done every day—done in the States. I am glad to say, by the hundred thousand plants, and failure is rare.

As for the time to plant them, the first week in June is an excellent time—so is the first week in August. Yet they have been and are planted at all seasons, when the ground is workable, and with success. But reason must be observed in planting. For instance, if you go to a deep poor sand for your plants. There they send in their long hair-like roots far down—perhaps three feet—for nourishment. It is hard to transplant this lengthy mass so as not too greatly shock its habit of growth. The moral is, if you go there, take the plants thence very young, before they can have sent out deep roots, transplant them into your garden, and in a couple of years you will have fine stocky plants fit for any purpose. But do not let this discourage you from taking them from any forest. In many localities you will find them—take those near the outskirts always—with excellent roots. I know many beautiful groves of pine in Ontario—many long stretches of wind break now fifty feet in height—the pride of the farms they beautify—which were taken when two or three feet high from the forest without one per cent. of failure. I know one instance where nearly eight hundred young pines were moved in early spring, one morning after a sharp frost, which had re-frozen the ground, previously thawed, an inch or so deep. These then cut round, brought up circular masses of earth three or four inches thick and eighteen inches wide, containing within plenty

of root fibres. This was on loam, not sand, so there was much surface root. Of the 800 scarce half a dozen failed.

A very important matter is the preparation of the ground, and when our plantation is of such narrow proportions as a windbreak this is easily done. A few furrows of the plough in fall and spring, or it being alone, harrow it properly, and the work is done. This statement is applicable to most farm soils in ordinarily good condition, but where the soil is rather intractable other means may be necessary. We must consider, that it is only one long narrow row of plants we are preparing for. If the soil be a hard, apparently poor red or white clay, it is undoubtedly difficult even with two ploughings to bring about exactly the condition of mellowness which we should desire for the reception of tender roots of young evergreens. They can be planted there, and they will grow and succeed there, but it will take time. There is a quicker method, and when we can, it is well to employ one, for life is short. This hard clay soil is not poor, it is too close and dense. If you have within reasonable distance some sand, whether it be sharp and white, apparently only fit for mortar, or whether it be red and mixed with humus, so that it be but sand. A few waggon loads of this drawn along the proposed line of windbreak, and scattered two inches thick before you plough, would change your hard clay to soil soft enough for tree roots. Two waggon loads will do a hundred yards, or if the land be poor sand, and clay be near white, red, or blue, though it be the hardest and poorest, applied in the same quantities, (break the lumps) it will do as much for the sandy soil, as the sand does for the clay one. But most soils will grow trees without.

There are different methods of rapidly planting these windbreaks. In the case of young plants, one is to run a furrow, two men then pass along, one with a bundle of plants under his arm, the other with a spade. He first places the plant in position, presses and spreads its roots against the upright side of the furrow and holds it there, while the second throws earth against it and presses it firmly and evenly with his foot. Another, still in the case of small plants, is to run no furrow, but set a line, along which, at proper intervals, one throws out a spadeful, the other sets the tree therein and holds it, while the first throws earth against it and presses it firmly. The third is in the case of larger plants. Here, three men are better employed, one in advance digs larger holes along the line, the second places a tree, spreads its roots more horizontally than in the former methods, while the third fills it up and treads it down.

It must be remarked that the time occupied depends on the side of the roots and the state of preparation of the soil. Farmers must judge whether the roots need more or less time to place them at the level they stood in their nursery or forest, and with their roots properly in contact with the soil. Some soils would need much more careful handling than others. But do the work well; it will pay.

The distance at which such evergreen trees should be planted is a matter for consideration. If you take the pines, planting even twenty feet apart would undoubtedly give, after a number of years, an efficient windbreak, for, say in twenty years, their branches would interlace. But by planting closer we may have a windbreak in a much shorter period. If we plant, say three feet apart, we can well, in a few years, take out and plant elsewhere every second tree, and this is preferable to planting them six feet apart at first, for each closely neighboring young tree helps the growth of the other. Where plants are small, it would be better to plant them yet closer, and depend on the future for proper thinning. Then you can indefinitely extend your lines of trees, as you will have a number of well grown plants five or six years old with fine large masses of fibrous roots, which, properly dug and planted, will then give you, in a very short time, as many beautiful rows of sheltering evergreens as your farm shall need, or, if you have more than you will then consider requisite, you can sell them for good prices to such of your neighbors as have been less provident. And there is too good reason to believe that by that time, con-

sidering the present process of tree denudation, the value of shelter will have so impressed pressed itself upon the minds of the surrounding farmers that you will have a remunerative market for all you can spare.

With regard to the after treatment of these windbreaks, an evergreen never should be trimmed up, that is to say, it should always be allowed to throw out its branches close to the ground at will. Its lowest branches are naturally the longest when grown in the open, and its tendency there is over to shade by its lower branches and to much the earth below them by the covering of its fallen needles.

As has been said, the planting of even a very long row of evergreen windbreak is a matter of but slight expense. The young trees can, in many instances, be procured from our forests, or the seed can be sown, the young plants the second year planted out in nursery beds and the fourth in the windbreak, or the seedling can be procured for a few dollars per thousand from nursery-men.

In planting windbreaks of cedar, the best specimens I have seen were planted much more closely than the pines or spruces, being left at two feet or even a less distance apart.

Following this will be found a list of pines, cedars and spruces best calculated for this purpose, their distinctive methods of growth, their favorite soil, and their means of propagation and culture. Where these are not fully stated in any instance, all particulars will be found in the list of trees at the end of the book:—

*Pinus Resinosa* (Red pine).—This tree delights in a dry, sandy, or gravelly soil, or in one formed from the debris of rock. It will, however, and does frequently in our forests, grow in others. I have seen large trees on clay loam.—B.

*Pinus Austriaca* (Black Austrian pine).—We have not found this tree at all particular in regard to soil, if it is not stiff and wet. The best specimens we have seen of it grow upon a sloping bank, where the soil was a light loam, and deep and porous. We have, however, seen thriving plantations of it on most kinds of land, but there were always made dry by drainage, if not so naturally. It is a tree well adapted to produce a great degree of shelter, as its massy foliage forms a great protection from winds, and its rapid growth insures this within a very short time after planting. This tree is readily known from all other pines introduced into this country by its very strong and robust habit of growth, by the stiffness and strength of the leaves, by their prickly points, and by the very decided dark appearance of the foliage over the whole tree.—B.

*Pinus Sylvestris* (Scotia pine).—Leaves in pairs, rigid. Cones conico-ovate, acute, as long as the leaves, generally in pairs. We have seen the Scots pine growing on almost every variety of land; but we are of opinion that a light, sandy, or gravelly loam, is, above all others, when perfectly dry, the most appropriate for the tree. As to situation, suffice it to say, that if the land on which the Scots pine is planted be dry, it will prosper in any site not too elevated and exposed for trees to succeed in this country.—B.

*Pinus Strobus* (White pine).—The white pine will grow rapidly on light, poor, sandy soils, and there are millions of acres of such lands that could not be put to a better purpose than planting it with white pines.—F. The branches are in regular whorls; and in young trees, and where openly exposed, they form a beautiful pyramid; the foliage is pliant, leaves slender, from three to four inches long, of a light bluish green.—W.

*Pinus Ponderosa* (Heavy wooded pin).—This tree has leaves from nine inches to a foot long. Branches are regularly whorled, horizontal, and inclined to droop. This tree has a noble appearance, even when young. It is from the northwest coast of America. Hard, and grows rapidly.—W. The soil of this species, as for most others of the pine tribe, should not be of a rich nature, as under such circumstances the pines generally grow too luxuriantly, and consequently do not ripen the points of their shoots sufficiently to resist the frosts of our winter.—B.

*Pinus Pinaster* (Cluster pine).—Leaves twin, roughly at edge. Cones oblong, conical,

shorter than leaf, narrow at base; scales echinate.—B. It thrives in deep, sandy land, and is said to perish in calcareous soils. Immense tracts of barren, drifting sand have been covered with this tree in France, which now yield abundant crops of inferior lumber, fuel, and pitch.—W. Propagation from seed; sow at the end of April; transplant in one and two years.

*Pinus Benthamiana* (Bentham's Pine).—Leaves three in a sheath, thickly set on the branches, dark green; generally from eight to eleven inches, stout, somewhat flat, with a slightly elevated rib running along their inner side. One of the hardiest, and most ornamental pines. Propagation same as the Scotch pine. Deep, free soil.

*Pinus Laricio* (Corsican pine).—Leaves two in a sheath, lax, from five to seven inches long, dark green, often twisted, sheaths short. A beautiful tree of a pyramidal and open-branched form. Will grow on moist soils. Hardy, but unsuited to high winds. A very rapid grower, making two or three feet a year. Propagation from seed.

*Abies excelsa* (Norway spruce fir).—Leaves scattered, quadrangular. Cones cylindrical, terminal, pendant, scales naked, truncate at the summit, flat. It flowers in May; its cones are ripened in the spring of the following year, soon after which they commence shedding their seeds. One of the best trees for shelter belts, on account of its tendency to spread out its lower branches, assuming naturally the pyramidal form; and it is also found that this plant bears clipping very well. Nothing can be more beautiful or more effective as a shelter than the Norway spruce. The seed is propagated in the same manner as that of the *P. Sylvestris*, the seedling plants remain two years in the seed bed, but they they generally require three years in the nursery rows before they are fit to be put in their final situations. They grow best in a moist, and moderately rich, but not wet soil.

*Abies Canadensis* (Hemlock spruce fir).—Grows well, and makes a fine spreading shelter tree on tolerably good soil, but will not succeed as well in the open, on poor hard clay, as it did in the original forest.

*Abies Nigra* (Black spruce fir).—Will form a rather tall, slender tree, with branches spreading horizontally, and frequently drooping at the ends, in the case of old trees. The stem is generally smooth, with a blackish bark, very straight, and diminishing regularly from the bottom to the top. The whole tree has an open and airy appearance, from light being admitted between the whorls of branches, which are never of a massy or heavy character, like those of the common spruce fir, but light and pointed each for showing the outline distinctly.—B. Both this tree and the one preceding stand the shears well; but so far as I have seen, they must not be cut down to small hedges of six or eight feet high. They are trees for shelter belts, and the effort to treat them as hedges plants I have known to kill them.

*Abies Alba* (White spruce fir).—This species is easily distinguished from all the other species of the family by the lighter color of its leaves, which are of a somewhat hoary-grey color; form a beautiful small tree. The proprietor who wishes to produce a rich coloring of foliage in any particular part of his grounds, has only to plant some dark-leaved pine in the background, the sugar-maple in the front of it, and the white spruce in front of the maple; and when these trees have attained some size he will find the autumn colorings admirable—the yellow, red, and crimson of the maple, the very dark green of the pine, and the hoary grey of the white spruce blending so as to produce an effect indistinguishable, and beyond the art of the painter.—B.

*Thuja Occidentalis* (White cedar).—The trunk tapers gradually from the ground, and the branches are so arranged as to form a pyramidal tree with a broad base; the twigs are drooping, and all the branches have a flattened character. This is justly considered one of the best American evergreens for general planting, on account of its adaptability to general situations. Since its native habitats are peaty swamps, and rocky cliffs, it will thrive in almost any situation; and its conical figure and rather free growth make a

good effect. One of the characters that recommend this tree is, that it bears clipping, and hence it is well suited for ornamental hedges, and wind-screens, for which purpose it is generally used.—W.

*Juniperus Virginiana* (Red cedar).—Red cedar is one of our own most valuable evergreen trees; nothing can exceed its value for purpose of shelter. As an ornamental tree or large shrub it is of great value for grouping. This plant is highly esteemed in Europe, but quite too much neglected in our own country; perhaps because it is so common; its growth is rapid, and it is very hardy. The shelter and food which this cedar affords to the feathered friends of man, are a great recommendation to it, and should induce every planter to plant the tree.—W.

The initials mark quotations from Messrs. Brown, Warder, and Fuller.

**A NEW LUMBER MARKET.**

The brigantine Georgia, now anchored in the Delaware river, has been chartered to load a cargo of hardware and lumber for Port Madryn, Patagonia, a place heretofore unknown to American custom officials. It is believed that the Georgia will be the first vessel to sail from this country to Port Madryn, as the existence of the place is practically unknown in maritime circles. Capt. Morris, of the Georgia, says that his vessel will sail to-morrow for her destination via Wilmington, N. C., where the greater part of her cargo will be loaded, after which he expects to be not more than seventy-five days in reaching his destination. The offer to carry the cargo was made to several ship owners, who refused even to consider the charter, not being willing to risk their lives and property in an unknown country.

The settlement of Port Madryn has been comparatively recent. Several years ago a colony of farmers from the vicinity of Cardiff, Wales, decided to leave their native land for the river Platte, expecting to settle along that river, but, finding the Spanish language an insurmountable obstacle to them, the people left for Patagonia. This little colony now numbers over seven hundred souls, and their farms stretch inland for a distance of over 23 miles. The settlers are in constant intercourse with the Indians, with whom they barter tobacco and flour for ostrich feathers and guanaco skins. No American vessel of any kind has ever visited there, and but very few ships from other nationalities have made the port. Lieut. C. B. Brent, of the English war ship Volca, which visited the place in 1876, describes the country as healthy, without fog, and very little rain, water being carried from the interior, a distance of twenty miles, on mules. If the settlement continues to flourish, and its existence becomes generally known, it will be a convenient port of call for vessels bound around the Horn.—*Philadelphia Record*.

**WHY SUFFER** from that annoying cough when it can be perfectly cured with West's Cough Syrup. Do not hesitate, as it is exceedingly dangerous, as it may prove the forerunner of a severe lung complaint. It will cure asthma, bronchitis and all throat and lung complaints. Price 25c, 50c. and \$1.00 per bottle. Sold by J. D. TULLY, druggist.

Perhaps the most extraordinary that success has been achieved in modern science has been attained by the Dixon treatment for Catarrh. Out of 2,000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady. This is none the less startling when it is remembered that not five per cent. of the patients presenting themselves to the regular practitioner are benefited, while the patent medicines and other advertised cures never record a cure at all. Starting with the claim now generally believed by the most scientific men that the disease is due to the presence of living parasites in the tissues, Mr. Dixon at once adapted his cure to their extermination; this accomplished the Catarrh is practically cured, and the permanency is unquestioned, as cures effected by him four years ago are cures still. No one else has ever attempted to cure Catarrh in this manner, and no other treatment has ever cured Catarrh. The application of the remedy is simple and can be done at home, and the present season of the year is the most favorable for a speedy and permanent cure, the majority of cases being cured at one treatment. Sufferers should correspond with Messrs. A. H. DIXON & SON, 306 King street west, Toronto, Canada, and enclose a stamp for their treatise on Catarrh.—*Montreal Star* 17th.

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ST. JOHN, N. B.

Market Reports.

TORONTO.

From Our Own Correspondent.

AUG. 9.—The new cut of lumber is now coming in by rail freely, so much so indeed that the railroad companies are taxed to their utmost to supply cars to meet the demand, box cars are therefore loaded as freely as flats. The north shore of Georgian Bay is supplying a large portion of that now arriving here. This has not been the case hitherto, most of that cut having found its way to Chicago and other American ports. The Pacific Junction branch railway is also contributing its quota now that the entire line is opened for traffic. The lumber most difficult to procure at present is long bill stuff cut to order, and work on hand is frequently brought to a full stop pending the arrival of long joisting. The new tariff of freights is now in full swing, and although lumber brought in under that tariff costs more to the middlemen than under the old rates prices cannot be said to have advanced as yet, but it is quite clear it must do so or some one will come out behind.

The yards are doing a thriving trade so far as the quantity sold is concerned; prices are sadly cut however, and fault rests entirely with themselves. The same men pay their butcher and baker a uniform price for all they purchase from them, simply because said butchers and bakers have determined among themselves that such shall be the case, but the retail lumbermen are cutting each others throats, metaphorically speaking, year after year, thereby only making the same profits on 2,000 feet of lumber that should be made on 1,000 feet—I can only add, serves them right.

Shipping from our docks moves slowly the only firm doing anything worth mentioning over the docks is Christie Kerr & Co, who control much the larger portion of the lumber north of this city.

I anticipated being able to give you a change for the better on yard quotations, but after diligent inquiries I fail to find as yet any material change although all are free to admit that prices should go up in view of the figures asked by the wholesale men. I am sanguine that by the time my next letter is due yard men will have seen their way clear to making a general advance in prices all along the line.

Table with 2 columns: Item description and Price. Includes Mill cull boards and scantling, Shipping cull boards, Scantling and joist, etc.

Table with 2 columns: Item description and Price. Includes Cutting up planks to dry, Round dressing stocks, Picks Am. Inspection, etc.

Table with 2 columns: Item description and Price. Includes 1 1/2 inch flooring, dressed, 1 1/2 inch rough, etc.

MONTREAL.

From Our Own Correspondent.

AUG. 10.—Since our last report the lumber trade in Montreal has continued in a very satisfactory condition. Favorable weather, and an increased activity in building operations in the city has given a still further impetus to trade. The retail demand at the yard has been very good, and country orders, which have been coming in freely, have resulted in an increased distribution from the yards. Everything points to a continuance of the present activity for some time, as the outlook in the building line is still bright. A large increase can be noted

in the July sales, over those of June, and also over those of the corresponding month of last year. A fair amount of stock of all kinds is held at present. Freight rates on lumber are quoted as follows.—To the United Kingdom 47s 6d. to 50s. per standard, and to South America \$11 00 to \$12 per M. The export trade is brisk, and to date includes 1,294,896 pieces of deals, ends, boards and battens, and 276,087 feet of other lumber to Europe, and 293,793 pieces, containing 4,961,321 feet to South America.

Prices remain steady. The following are the quotations at the yards:—

Table with 2 columns: Item description and Price. Includes Pine, 1st quality, Pine 2nd, Pine, shipping culls, etc.

CORDWOOD.

Prices are steady. The following are the quotations at the yards:—

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

CHICAGO.

The Northwestern Lumberman of Aug. 7th says:—

BY THE CARGO.

Of the more than 200 cargoes that have entered port, but a few have stopped at the market docks. The meagerness of offerings has caused cargoes as were for sale to be sold without delay. Buyers have hung about the market to obtain cargoes that did not put in an appearance. Perhaps the commission men are withholding bait until the fish get hungry. The trouble seems to be, however, that most of the lumber now going into yard stocks has been bought at the mills. It is coming forward in large volume, as the port list daily shows, and no thanks to the cargo market. It is a common remark about the foot of Franklyn street that "this market is about played out." But the Lumberman regards this judgment as premature. One reason why lumber is not coming to market as in former seasons is because the yard men have been forced to go to the mills in order to pick up bargains. They say that in this way only can they lay in stocks that will secure them a margin in selling. The cargo market is not sufficiently well supplied with the different classes of lumber. This may change in future seasons. Conditions may be reversed. Over-production or a falling off in the eastern demand may cause a pressure of lumber on the western trade. Then the commission men will again be in clover. But this season they are having plenty of time to reflect on the past and prognosticate about the future.

There has hardly been sufficient movement this week to make a clearly defined market. Prices are held firmly because there is no pressure of lumber for sale. It is claimed that short piece stuff can be sold readily at \$9.25, but it cannot be learned that more than one cargo has this week been disposed of at this figure, though the cargo referred to was all Norway. It is claimed that more of the same sort would sell at the same figure. The range at \$9 to \$9.25 for short green piece stuff need not be modified.

The market for inch lumber is unchanged. There is little being offered. Medium boards and strips have been sold within a few days at \$13 and \$13.70. No. 2 stock goes on prices within our quoted range.

Shingles are still to be had in excess of yard requirements, though the standard brands are said to be doing a little better than earlier in the season, and firm at the slight advance recently recorded.

The following are current quotations of cargo prices:—

Table with 2 columns: Item description and Price. Includes Dimension, short green, Boards and strips, No. 2, Boards and strips, medium.

Table with 2 columns: Item description and Price. Includes Selected, Boards and strips, No. 1, Shingles, standard, Shingles, extra, etc.

LAKE FREIGHTS.

Table with 2 columns: Item description and Price. Includes From Muskegon, dry, From Muskegon, green, From Whitehall, etc.

AT THE YARDS.

There has been a plainly noticeable increase of activity during the week. More lumber than usually is going into cars. The wagon trade is greater than it was a week ago. Inquiries from the country are more frequent than they were a short time ago. This last-named feature has become pronounced, and marks the initiation of August trade. Inquiry from outside yard dealers comes every year about August 1st, as regularly as the seasons pass. In every instance in which a lively demand succeeds a dull period, the actual revival of trade is preceded by general inquiry as to stocks and prices. This season the inquiry will be more urgent than it sometimes is, on account of the late rise of price for piece stuff on the cargo market, and low stage of the log driving streams,—circumstances that go to show that there may be a sharp advance in the price of yard stocks in the near future.

EASTERN FREIGHT RATES.

Table with 2 columns: Item description and Price. Includes FROM CHICAGO AND COMMON POINTS ON CAR LOAD LOTS OF HARD AND SOFT LUMBER, To New York, Boston, Philadelphia, etc.

ALBANY.

Table with 2 columns: Item description and Price. Includes Quotations at the yards are as follows: Pine, clear, Pine, fourths, Pine, selects, etc.

BUFFALO.

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

OSWEGO, N.Y.

From Our Own Correspondent.

No change in quotations:—

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

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

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

TYNE.

The Timber Trades Journal of July 31st says.—There is a fairly good list of arrivals to report this week; large lines of them are pit-props and mining timber a few cargoes of staves and headings, one cargo of prepared boards from Drammen, one cargo of pitch pine timber and deals from Pensacola, and remainder are made up principally from the Baltic ports. The weather has been fine, and more suitable for outdoor operations; but in spite of all the favorable circumstances business does not improve. The demand is as feeble as ever, and no prospect of it improving in the immediate future. Saw mills are only partially employed; in the building trade it is only in the suburbs of Newcastle that any building is going forward and that to a very small extent. Of contracting there never was less being done than at the present moment, no large jobs being in progress. Freights still remain low but the bulk of the ships wanted appear now to be fixed.

GLASGOW.

The Timber Trades Journal of July 31st says:—Business here has been quite during the past week. On Monday the shipyards, &c., opened for the first time after the holidays, but it was not till the middle of the week that the yard resumed its ordinary working condition, and meantime transaction in the wood trade have been small.

No auction sales of timber or deals have been held at Clyde ports since last writing. There is one to take place at Greenock this week, the result of which will be given next issue.

The arrivals at Greenock for the past week include four cargoes of Quebec timber and a cargo of pitch pine; and the principal imports at Glasgow to note are a cargo of mahogany, parcels of Quebec deals per steamer liners, and a cargo of Bathurst, N. B., pine deals now discharging at Yorkhill Wharf, and which is going into consumers' hands direct.

The Canadian deals landed at Glasgow ex steamer since the season began amount now to 90,000 pieces, as against 111,000 for the corresponding period last year; but taking into account the Quebec deals landed at Greenock ex sailing vessels, they make altogether about the same total imported this year as last up to date say 143,000 pieces this year, as against 135,000 pieces in 1885, same period. The sailing ships from Quebec to Greenock commenced to arrive earlier this year, the date of the first being 23rd June, or fully a fortnight sooner than last year and since the arrivals began the carrying tonnage amounts to 12,500 tons; last year at this date the total was 6,600 tons. The timber in log imported from Quebec to Clyde since season began amounts to 1,571 logs oak, 112 logs elm, 83 logs ash, 10,300 logs pine timber.

The stock of red pine timber is unusually low, but there is little demand; except first-class of large average, which is in fair request.

CARDIFF.

The Timber Trades Journal of July 31st says:—During the week we have had in one cargo of boards from Drammen, two of timber

from Quebec, one of deals from Miramichi, a small steamer cargo of wood pulp from Drammcn, and a cargo of deals from Archangel.

As regards the state of the market, we may quote a remark made by one of our leading merchants, that "it's better to do nothing than work for nothing," implying that whatever is done is without remuneration, and the question now is, whether it is best to continue the business for the sake of the connections or to stand off until things improve.

We have heard figures mentioned for Midland delivery of pine deals which we fear to quote, as they are so low that it is a mystery how any one can do them and make both ends meet. Importers are all holding off in expectation of consignment cargoes being thrown on the market later on, which would be sure to go below the present prices.

With regard to mining timber, there is not by a long way the usual quantity of offering in the market, still there is no prospect of improvement.

**LIVERPOOL.**

The *Timber Trades Journal* of July 31st says:—The first vessels with cargoes of timber from Quebec are now getting well on with their discharge; but we regret to see very little of either waney board pine or oak going into consumption. This is widely different from what was the usual case in former years, when considerable lines of both these descriptions of wood were generally forwarded up the country to the large railway companies, machinists, or wagon-builders. At present, however, none of this class of consumers appear to be in the market; the great machinists probably from want of work in their department, owing to the depressed condition of the cotton industry, and the great railway companies because they are desirous to limit their expenditure upon rolling stock as far as is prudent.

The financial collapse of the Manchester Ship Canal project will, no doubt, have a depressing effect on business in this district, as a great number of people were looking forward to the commencement of the works with considerable interest, and the grievous disappointment which has so rapidly followed the bright hopes which were held out by the promoters of the scheme, whereby the resuscitation of trade in the neighborhood was to be effected, will cast a damp on all those immediately concerned, as well as upon others indirectly interested.

Our market is still in the same depressed condition as ever, nor do we see any immediate prospect of improvement, prices, if there be any change, are still in favor of the buyer in nearly every instance, and the general feeling here is that those who are doing the least business are perhaps to best off in the end.

No public sales of whitewoods are announced nor can we learn of any in contemplation, the unsatisfactory results of the last auctions having driven the brokers to dispose of their consignment cargoes by private treaty in preference to selling them in public.

This will not matter much to the consumer in the long run, for he will be well looked after by the merchants' travellers, and the competition is so keen that an order will not be refused if there is anything in it, however small it may be, so that he will probably do as well without leaving home as he would do here by attending personally, and will save travelling expenses at any rate.

**LONDON.**

The *Timber Trades Journal* of July 31st says:—At present, from what we gather, £10 to £10 5s. is the current quotation for 3rd Quebec regulars ex ship, and that the price has not been an obstacle to sales seems evident by their being so few deals remaining in first hands. A leading Quebec house recently told us that they had fewer pine deals of any kind in the docks at the present time than at any time previously.

We had some slight expectations that the improvement noticeable in last week's reported London dock deliveries over those of 1885 would have been maintained for the remaining portion of the season, but it appears that the depressed condition of things then apparent is to reappear in an aggravated form the present

year. We are already short of the consumption of last year some 12,000 standards on deals and battens, and 2,000 standards on flooring. The cause of this was principally laid at the door of the stimulus imparted a twelvemonth ago by what was known as the Russian war scare, but this has been insupportable by subsequent records, and we must set down the lessened consumption to the true cause, viz., an utter stagnation in trade, and though last year was essentially a bad one the present is a great deal worse. That free-on board prices have kept their tone is probably due to the discretion of those who had the controlling power avoiding sending cargoes on the market.

The arrivals recorded this week to the Thames are 56, against 63 that had come forward in the corresponding interval twelvemonths ago. Last year the week's list to the Surrey Docks did not include a single pine cargo, this time they are credited with a pine and a spruce cargo, both for Messrs. Price & Pierce. The Millwall docks have 14 cargoes this week, against seven at a corresponding date 1885. Of these two are pine, viz., the *Victory*, from Quebec, with 320 standards of 3rd and 4th pine, for Messrs. Browning & Co., and the *Fernholme*, from Montreal, with about 700 standards, for Messrs. Bryant, Powis & Bryant, Limited. We notice that the Regent's Canal dock is the recipient of a cargo of pine deals per the *Oscar*.

Freights continue depressed, and we note Quebec and London has just been done at 42s. 6d., the lowest charter we have heard of from this port for a sailing ship; but we understand it cannot be repeated. Tonnage is offering on this side to go out with the hope of finding charterers. In respect to the lower ports we learn that tonnage from New Brunswick and Nova Scotia is only placeable with difficulty, most of the charters being filled up. We understand some of the Pensacola charters are holding off, and are not tempted to fix even at 87s. 6d. and 85s. for sawn stuff. Tonnage, generally, is declining with very little prospect of improvement, and the action of shipowners in withdrawing their vessels has not had the result we hoped it would, and though ships continue to be taken out of the market, there are, unfortunately for owners plenty of others to take their place. We furthermore learn that one of the large Pensacola shippers contemplates opening his mills much earlier than usual prices being so unprofitable; this certainly won't help freights.

There was a capital muster of the trade at Messrs Churchill & Sims sale on Wednesday, the back benches being well occupied.

There was some spirit in the bidding for the whitewood. The St. John spruce planks ex Avoca, however, went remarkably cheap, at an almost uniform price of £6 5s., buyers making no distinction between the 11 and 9 in., though a few of the lots of the latter fell at £6 The 3rds Quebec, per the *Craigallion*, also planks, went at similar values; here again the 9 inch were valued as the planks. The Riga crown white 3x11 seemed stationary at £6 15s., and it was a most feature of this sale how prices held such uniformity, which may be accepted as pretty plain evidence of the close competition maintained by merchants when re-selling. The parcel per *Mathilde Joux*, with no exception, went at precisely similar prices to the other Riga goods. The exception we refer to was lot 282, which was carried by the competition another 10s., the buyer, a leading merchant, getting this solitary lot for £7 5s., against the £6 15s. at which his neighbors secured their portions. This was the only lot of crown having 22 ft., and that may be the solution of the mystery.

The ash planks and boards per the *Durham City* seemed to be at a discount. A leading pine buyer came to the rescue, and appropriated them at 1s. 3d. a foot cube, otherwise it is doubtful what would have been their fate.

There was only a few odd parcels of Quebec pine offered, and prices would not be a sufficient index to the market if we particularized them.

SHERIFF McQUARRIE, of Rat Portage, reports that things are looking up in that district; the Rainy River Lumber Co.'s mill has started and the saw mill is being got ready for work.

**LATH MANUFACTURE.**

We learn from a Saginaw paper that there are about forty saw mills on the Saginaw river, Michigan, in which lath mills are operated the production running from 300,000 to 4,000,000 lath each, and that the manufacture of lath is almost as unsatisfactory as that of shingles, as regards prices. "It is true there has been a fair demand, and shipments exceed those of last year up to this time, but there are not going to be any fortunes made this year at \$1 15, and sales have been made at that figure, though the quotations run all the way up to \$1.40, though \$1.25 is about the average asking price. The lath product of the Saginaw river mill during a series of years shows:—

Year	Product
1876.....	72,702,660 pcs.
1877.....	72,614,999 "
1878.....	53,236,075 "
1879.....	65,969,000 "
1880.....	65,663,883 "
1881.....	65,983,750 "
1882.....	94,703,800 "
1883.....	106,132,490 "
1884.....	127,346,000 "
1885.....	80,931,400 "

The aggregate capacity of the mills has been reduced about 10,000,000 pieces by the destruction of mills. So that the out-turn for the year 1885 is scarcely over the average of the past ten years. The largest output of any one concern was that of a Bay City firm, Birdsell & Barker, who manufactured four millions and a quarter of pieces.

**WOOD-WORKING PATENTS.**

The following list of patents relating to the wood-working interests, granted by the U. S. patent office, July 27, 1886, is specially reported by Franklin H. Hough, solicitor of American and foreign patents, 925 F street, N. W. Washington, D. C., who will furnish copies of patents for 25 cents each.

- 346,133—Chuck, lath—C. A. Singer, New York, N. Y.
- 346,164—Lath—J. Judson, Rochester, N. Y.
- 346,324—Lath, steady rest for—J. Seibert, St. Louis, Mo.
- 346,179—Saw, drag—A. S. Topping, Metamora, Ohio.
- 346,383—Saw mill—L. O. Orton, Philadelphia, Pa.
- 346,241—Saw table—H. J. Thompson, Ogema, Wis.
- 346,097—Sawing machine—W. H. Finn, Oswego, N. Y.
- 346,369—Shingle sawing machine—I. M. House, Gravenhurst, Canada.

**PATENTS ISSUED AUG. 3.**

- 346,656—Saw, band—D. Simonds, Fitchburg, Mass.
- 346,541—Saw filing machine—J. W. Gibson and C. C. Harris, Denver, Col.
- 346,844—Saw swaging machine—E. Dunning, Bluffton, assignor of one-half to S. Davies, Muskegon, Mich.

**SUPERVISOR OF CULLERS' OFFICE**

Comparative statement of timber, masts, b w sprits, spars, staves, etc., measured and culled to date, at Quebec:—

	1884.	1885.	1886.
Waney White Pine	1,104,142	1,093,921	1,144,224
White Pine.....	1,113,623	1,004,803	744,301
Red Pine.....	189,931	43,313	157,564
Oak .....	480,478	893,529	450,015
Elm .....	599,341	436,157	332,441
Ash .....	355,370	178,538	92,414
Basewood .....	4,415	47	218
Butternut .....	1,068	3,018	192
Tamarac .....	77,063	1,983	3,785
Birch and Maple ..	185,111	305,502	154,129
Masts and Bowsprits	— pcs	— pcs	— pcs
Spars.....	32 pcs	17 pcs	— pcs
Std Staves .....	16,627.22	36,833.21	36,133.1
W. I. Staves .....	69,821.23	67,720.4	8,126.6
Brl Staves .....	0.6213	48.5307	.....

JAMES PATTON,  
Supervisor of Cullers.

Quebec, 16th July, 1886.

The forest fires in Marathon and Clar counties, Wisconsin, communicated to the towns of Spencer and Colby, laying the former in ashes and considerably destroying the latter.

**MECHANICAL EXPANSION.**

Every way has been studied out, and carefully tested, to make an arbor or a mandrel a little larger in diameter, and the screw tap and expansion reamer have been very successful in this respect, and if the same features could be applied to the driving pulley of a machine it would make one of the best means for making a variation in speed. It has been applied to the cross-head pin made to expand by internal wedge-key work, that will take up for wear at this end of the connecting rod, but the cross head pin only needs a small portion of an arc on opposite sides to be provided for. Something of this kind may yet be applied to the crank pin, as it is said that this portion of an over-hang crank is likely to get out of round and pinch in the boxes if keyed up to take out all the thump and pound. When a plug tap and a fluted reamer is made so as to be expanded, they must be handled with care, as the most of them, when in one solid piece, are none too strong for the average workman, yet they are handy tools, and the reamer needs grinding on centres to keep it anywhere near accuracy. If the expanding mandrel was not subject to such a heavy duty it would be just the thing around a repair shop to handle the different gear wheels that must be provided for; then a wheel blank could be bored out at once just the exact size and held on centres without turning down an arbor for the occasion. A slight degree of enlargement is all that is required to meet the demand of a number of sizes that are used. One trouble has been to make one size do all the work, making a very compact device for a small bore, and a very inaccurate machine for heavy work. It is much better in providing for the enlargement of every appliance to expand a little, and do it well, than to be spreading all out of semblance with no dependence to be placed on anything. If an expansion shaft pulley were to receive some such attention it would be received with welcome, as it would put an end to soft-wood lagging, and the demand for old belting to test some of the recipes for cementing leather to cast-iron pulleys, or the paper mache arrangement for winding on a lagging in a moment.—*Boston Journal of Commerce.*

**FOREST FIRES.**

Science has recouidite theories to account for very common things. Some of these theories seem to the unscientific to be absurd, but others cannot be disregarded. Here is something from a druggist in Maine, with regard to forest fires: "It is reasonable to assume that many fires originating in the woods are not caused intentionally by boys, gunners, &c., but by natural causes and the sun. It is a fact that most of our forest fires occur when the resin or gum is exuding in the warm season and in forests composed chiefly of soft woods of resinous trees—the pine spruce, hemlock and hemlock. It is often observed that these species of trees exude a resin that in losing its volatile element, hardens and for a short time before becoming opaque makes a very good magnifying lens, and powerful enough to set fire to very dry punky materials. Admitting these conditions, then to start a forest fire in the dry season among resinous woods, we require the sun shining on one of those natural sun glasses, and back of it in the focus some suitable material, as dead bark, wood, or best of all, that dead, dry, mealy condition of soft woods caused by insects." One can hardly deny Dr. Roche's statement of these conditions; the resinous forest, the dead bark, the "punky" and susceptible wood. But the lens made of resin is something new to the non-scientific woodman and indeed to the non-scientific reader. However, when one reads in the *Chronicle* the doctor's account of the fire set in his window by the rays of the sun passing through a show bottle filled with colored alcohol, he is impressed with the notion that there are a good many agencies contributing to the annual fire-waste. There is this to be said, however, that if this theory of the origin of forest fires be correct, "what we are going to do about it" is not easily seen. It seems as if the forces of nature with her myriads of burning glasses in the depth of the forest, were too much for any efforts of man.—*Monetary Times.*

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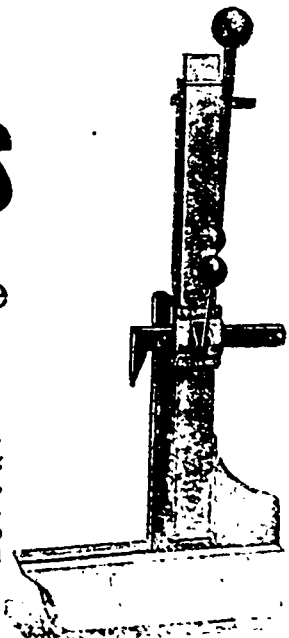
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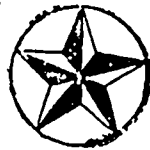
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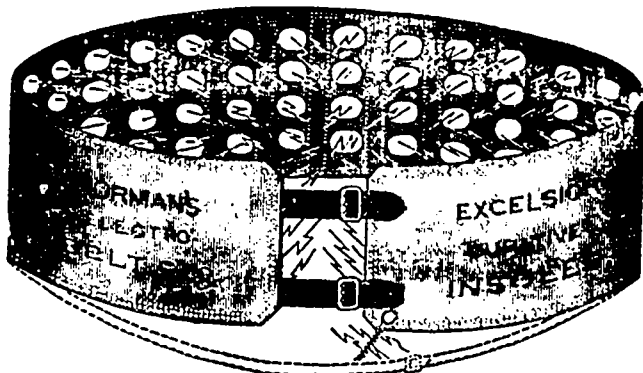
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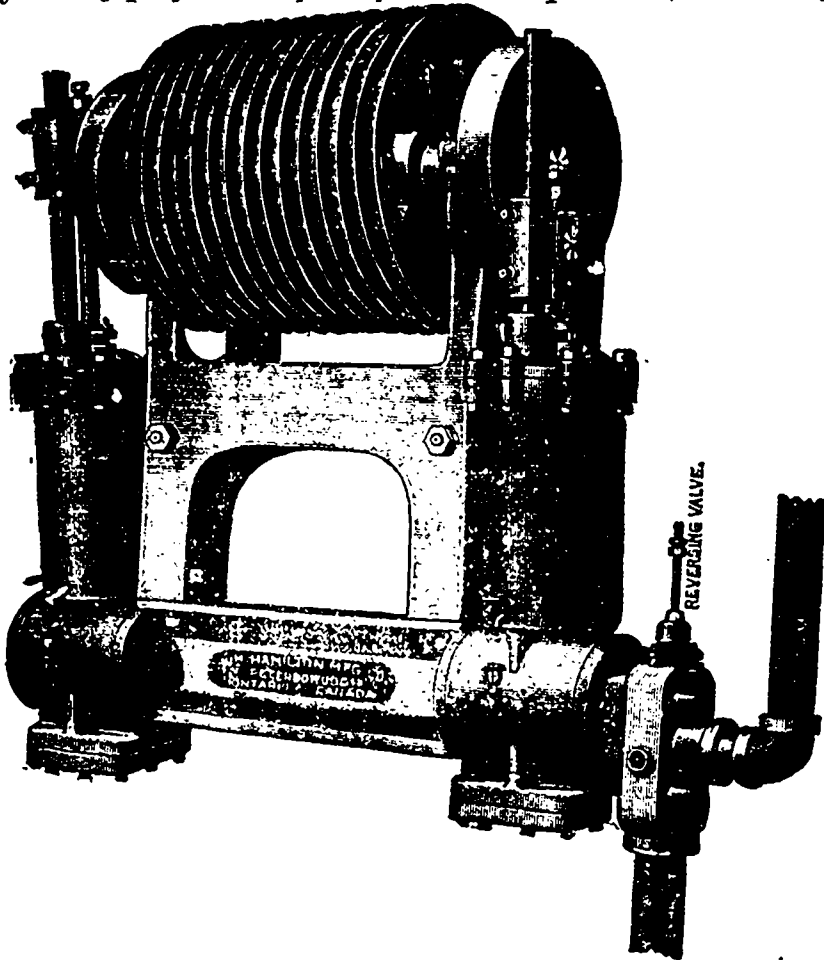
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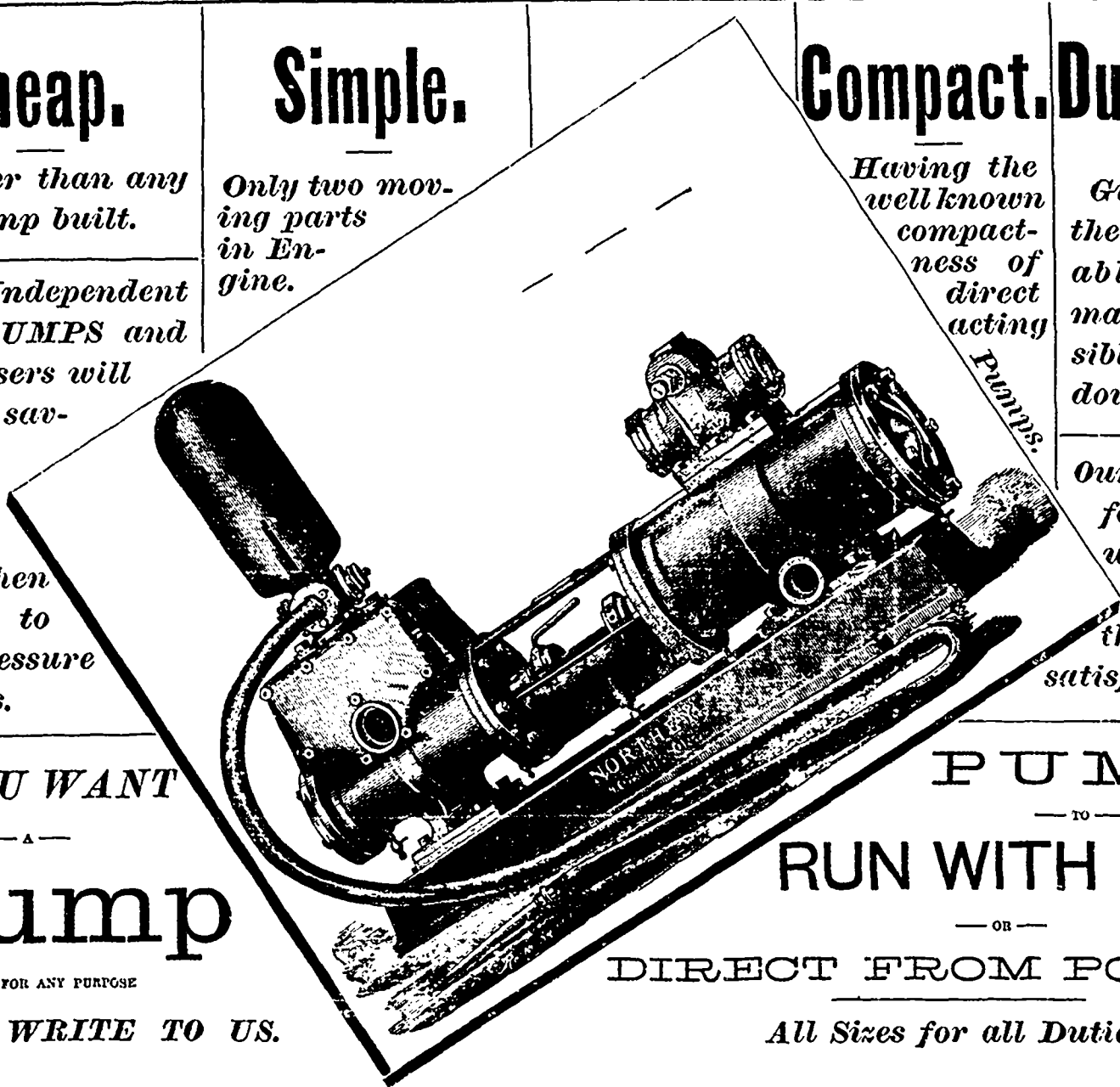
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