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VOL. 2.

PETERBOROUGH, ONT., AUGUST 1, 1882.

NO. 15.

RESERVING THE STREAMS.

A letter by Mr. T. B. Pardee, the Ontario Commissioner of Crown Lands, has been published, in which appears the following paragraph:—

"As to the reservation contained in the patents giving the right to float timber, &c., down streams, I send you one of the patents in order that you may see for yourself what this reservation it. It gives all parties the right to use streams for the purpose of floating down all kinds of timber, and it will be seen that this provision is as much in the interest of the settler as that of the lumberman, because many settlers now (and the time will come when this will be much more the case) require to use these streams for the purpose of getting to market ties, poles, and other timber of a like kind, growing upon their lands. The reason that this clause has been inserted in the patents was on account of the disallowance by the Dominion Government of the Bill which provided for such passage of streams. Had it not been for this disallowance it would have been the statute law, and there would have been no necessity for inserting such a reservation in the patents. In fact, the Court of Appeal has held that this is the law of the land now, by virtue of an Act passed over 30 years ago. I have heard it stated since the election that our opponents have alleged that this reservation gives parties the right to enter upon the land and take timber for the purpose of making improvements upon streams. This you will see is not the case, and there is not the slightest foundation for the statement. Instead of this provision being against the interests of the settler it is entirely in his favour, because there are very few streams in the whole of Muskoka which some one individual could not absolutely control by making some trifling improvements upon them and prevent anybody using them but himself. If there is one thing more than another that is on the side of the people and against what might be called monopoly, it is this reservation. Of course if the law, which we re-enacted last session, is not again disallowed, then this provision will disappear from the patents."

The following is a clause in the patents referred to above:—

"To have and to hold the said parcel or tract of land, hereby granted, conveyed and assured unto the said Heirs and Assigns forever, saving, excepting, and reserving, nevertheless, unto Us, Our Heirs and Successors the free uses, passage and enjoyment of, in, over and upon all navigable waters that shall or may be hereafter found on or under, or be flowing through or upon any part of the said parcel, or tract of Land hereby granted as aforesaid, and also excepting and reserving unto Us, our Heirs and Successors, for the benefit and use of all persons requiring

to use the same the free use and navigation of all creeks and streams running through or upon any part of the said parcel or tract of land hereby granted and not embraced in the reservation hereinbefore contained, for the purpose of running and floating down saw logs and other timber, lumber, rafts, and crafts, at all times and seasons, and excepting and reserving also for the use and benefit of all persons requiring to use the same, for the purpose of running and floating down or upon any creek, stream or navigable water upon the said parcel or tract of land, the right to enter in and upon the same parcel or tract of land, and to occupy and use so much of the banks of the said creeks or streams and of the said navigable waters as may be necessary for the purpose of such running and floating, and for the further purpose of erecting, constructing and repairing such dams, slides, and works as may be required for the purposes aforesaid, doing no unnecessary damage thereby.

"And it is hereby declared that the grant aforesaid is made on the express condition that the said Grantee, for himself, his Heirs and Assigns, consents and agrees that all persons desiring to use the same shall have the right to enjoy the easements hereinbefore reserved."

FOSSIL TREES.

The Smithsonian Institution has received from Fort Wingate, New Mexico, a car load of curiosities, including portions of two stone trees, one from the neighborhood of the Fort, the other from the banks of the Lithodendron, 20 miles from Navajoe Springs, Arizona.

For these massive specimens the museum is indebted to the thoughtfulness of General Sherman, who, while crossing the continent in 1878, suggested to Colonel Swan, then in command at Fort Wingate, the expediency of securing them.

Acting upon his suggestion, an expedition was organized early in the spring of 1879 to proceed to the Lithodendron (stone trees) in Arizona. Thomas V. Kearns, a gentleman of long residence in that part of the country, and familiar with the locality to be explored, kindly volunteered his services, and success was, in a great measure, due to his efforts in carrying out the wishes of the General. The military detail consisted of Second Lieut. J. T. C. Hegewald, one sergeant, and twelve soldiers, all of the Fifteenth United States Infantry, and the party was well supplied with army waggon running gears specially arranged for hauling stone, and with tools and appliances complete.

In his report of the expedition Lieutenant Hegewald says that the Navajoes, who were pasturing their sheep about the head waters of the Lithodendron, thought it was very strange that the "Great Father" in Washington should want some of the bones of the

"Great Giant" their forefathers had killed years ago when taking possession of the country, the lava beds being the remains of the blood that ran from his wounds. Specimens by thousands were found on each side of the valley of the Lithodendron, there about half a mile wide. Along the slopes, which were perhaps 50 feet high, no vegetation whatever was to be seen; wood being very scarce, the soil was composed of clay and sand mostly, and the petrifications, broken into millions of pieces, lay scattered about the slopes. Some of the large fossil trees were well preserved, though the action of the heat and cold had broken many of them in sections from 2 to 10 feet long. Many of them must have been immense trees, several which Lieutenant Hegewald measured were from 150 to 200 feet in length, and from 2 to 4 feet in diameter, the centers often containing beautiful quartz crystals.

Only one of the two specimens obtained from the Lithodendron by Mr. Kearns and Lieutenant Hegewald was forwarded to Washington. In the place of the second one brought in from the locality of the Lithodendron, a better specimen was found on the Mesa, to the north of and adjacent to Fort Wingate. The specimens had to be hauled to Santa Fe, New Mexico, to be shipped by rail.

FOREST FIRES.

During the next few months we may expect to see the usual accounts of forest fires having spread over large areas, destroyed much valuable property and imperiled many lives, with these will be complaints of criminal carelessness on the part of exploring parties, trappers and fishermen, and we shall be told of the lamentable destruction of valuable timber with the consequent losses to the lumbermen and the government, and the poor innocent lumbermen will call upon the government for protection against the criminal carelessness of the people who visit the backwoods in the summer time, as these are the stereotyped accounts of proceedings of which we read from year to year, and which will continue to occur so long as lumbering continues and valuable timber remains to be destroyed. Already forest fires in the interior of Wisconsin have destroyed several logging camps with all the cut of logs and an immense amount of standing timber. It is reported several lives have been lost and many cattle burned to death. It is stated that at least 30,000,000 feet of standing pine has been destroyed in Pike river pinery.

It does not seem to have occurred to the minds of the average journalist or legislator that the lumbermen themselves, by their own deliberate criminal carelessness are responsible for nearly every one of these fires, and that few, if any, of them proceed from causes other than those deliberately prepared by the lumbermen,

but, if any one will take the trouble to think for a few minutes of the processes of taking out saw logs or squared timber, he will at once perceive how assuredly the occurrence of these fires is provided for year after year by those who most complain of loss by them. During the whole of the winter months choppers are cutting down pine trees, trimming off tops and branches, and if for saw logs, cutting them in lengths, or if for squared timber, cutting off the sides of the trees; by these means the ground is covered with chips, branches, limbs and blocks all full of and covered with resin; but in addition to these, the lumbermen leave behind them the light brushwood which they have cut from lines of roads which they have made as avenues from the trees to the sideways and the water; so that a mass of inflammable matter with trains and avenues of communication is left covering an immense area, to be kindled into an appalling conflagration by the spark from a shantyman's pipe, the rubbing of two trees or a stroke of lightning. The hollow, dead, worm-eaten, or decayed trees are left standing, some times one tree is left lodged in the branch of another, so that every breath of wind causes a rubbing which finally causes ignition, a process which taught the Indians their mode of procuring fire; the old dry pines left standing alone are often struck by lightning which sets them on fire, and so quite natural causes communicate fire to the resinous masses left by the lumbermen, in which it spreads with fearful rapidity, and sweeps with resistless force over immense areas, as the heated atmosphere prepares its way and the wind drives it forward.

What remedy, then, remains for this annual impartment and destruction of property? Only one, and that is the proper clearing of the lands which have been cut over by the lumbermen every season. To this we hear the objection that it must cause such an increase of the cost of procuring timber as to preclude profit from the business, but we think we heard the same objection when it was proposed that these same lumbermen should no longer be allowed to dump their sawdust and slabs into the rivers and streams, to the destruction of fisheries and interference with navigation. As to this it would appear from the general reports that the preservation of our forests is one of our most important duties, and that no outlay we can make is so likely to be remunerative as that which will prevent the destruction of our timber; therefore we hope to see the question properly considered, and put a stop to the lumbermen's cry of "Wolf!"—*Montreal Journal of Commerce.*

A YORON MAN writes: "I have used Mack's Magnetic Medicine and am much pleased with the result. It has cured me after doctors and other medicines had failed. See advertisement in another column."

OUR FORESTS.

The N. Y. Shipping List truly remarks that "the question of timber preservation and timber culture, not only on the public, but on the private lands of the United States, is one of the most difficult, and also one of the most interesting problems that are attracting attention." If, says the *Globe*, it is this to the States, it is all that and a good deal more to Canada, from the fact that timber is our great staple export, whereby we pay for the most of our imports, and that a great part of the land off which it has in time past been raised is not likely ever to yield a better crop. Yet we probably find destruction going on here quite as fast as there, though to us it is doubly pernicious. Everything that our contemporary says in regard to the States applies much more strongly to Canada, and in the hope that the troubles already experienced across the line may operate as a warning on this side of it, we go on to copy its article as follows:—

"The evils of past destruction have been a great increase in the cost of fuel, in the price of lumber and timber, hindering the erection of dwellings, and rendering furniture very expensive, and the high rates of fares and freight charges on our lines of travel and transportation from the increased cost of building and equipping steamboats and railroads. Cheap bread, cheap houses, cheap fuel, and cheap transportation of passengers and freight are fundamental to the material growth and prosperity of a nation. All these are hindered by the havoc now making in our forests. The consumption by building railroads, for railroad fuel, the general consumption of wood for fuel in the country, the consumption by mechanical industry, the destruction by war, by improvident waste, and the destruction by farmers, who, when wood commands a high price, cut down the choicest trees, are among the causes which threaten the noble forest growth of America with extinction. Woodland brings in, without ploughing or sowing or fertilizing, that of which the average owner never has too much—ready money. The tree economists, therefore, have a powerful and wide-spread influence to contend against, and can hardly hope to arrest the tree slaughter on private lands. If they can awaken any enthusiasm for tree culture among the agricultural classes it will be about as much as we can expect them to accomplish. No private efforts can meet the emergency. Congress and the State Legislatures should afford every facility for the proper understanding of the subject, and for the adoption of the most thorough means to prevent what threatens to become eventually a national calamity.

The present commissioner of the general land office, who appears to have a just appreciation of the subject, has taken such measures as he has authority to take to more fully preserve our public timber lands in the North-west, which have been so ruthlessly destroyed in the past. The commissioner has acted upon the assumption that most of the timber depredations have been committed by ignorant and illiterate settlers, who not unnaturally imagined that settlement under homestead or pre-emption laws gave them the right to cut and sell timber at pleasure, and in many instances they have been induced by speculators to enter land for the very purpose of selling the timber from it. The blanks furnished to settlers to be filled up hitherto have had no warning covering this point, but the commissioner has now supplied the omission in these emphatic terms:—"Timber land embraced in a homestead or other entry—not consummated—may be cleared in order to cultivate the land and improve the premises, but for no other purposes." It is thought that this precaution will lessen timber depredations on the public lands about one-third, which, if not an over-estimate, will be a marked and gratifying reduction of the evil, while at the same time it will give the prosecutions that may take place, the prestige of better understood law than they have before enjoyed. But something more than this is needed.

Europe, in its forest laws, is far ahead of the United States, and is in less danger, at this moment, of becoming a desert than is the United States, unless something prompt and effective shall be done to arrest the wholesale destruction

of timber which is still going on in all parts of the country. It has been truly said that growth is slow and restorations tedious, while destruction is rapid and injury instantaneous. Palestine and Syria, Egypt and Italy, France and Spain have seen some of their most fertile lands turned into deserts by the destruction of the forests. There are parts of Asia Minor, of Northern Africa, of Greece, and even of Alpine Europe, once covered with luxuriant woods, verdant pastures and fertile meadows, which have now become so completely desolate as to be rendered an unfit abode for man. We are really in danger here of such a result in some sections of the country, unless intelligent and immediate measures of remedy are adopted.

FROM QUEBEC TO LONDON.

The *Timber Trades Journal*, of July 8th, says:—The *Ocean King*, though not reported in the river as soon as the *Howling*, mentioned in our last, was actually docked first, and may hence claim to have brought the first pine cargo of the season. The first named, a large steamer, left Quebec two days later than the *Howling*, and, in addition, had to coal some way down the St. Lawrence, which caused a further delay; otherwise she would have made the passage much quicker, and no doubt passed the sailing vessel before making the land. On her part, the *Howling*, always a fast vessel, made on this occasion one of the quickest runs on record, viz., 21 days, being an average of 150 miles a day from port to port, a rate of speed that we think has seldom been exceeded by a sailing ship with a wood cargo.

The *Ocean King* has discharged her cargo, amounting to over 650 standards, and is by this time probably clear of the Channel on her way to fetch another from the same port. The *Howling* does not appear to need such despatch as the steamer, and is still in the process of discharging. The cargoes brought by these vessels consisted almost entirely of bright pine deals, except in respect to the steamer, from which we observed a number of cases were being delivered into lighters alongside.

These cargoes are both imported by Messrs. Bryant, Powis & Bryant, and appear to be in a very fine condition. This firm may claim to be the recipients of the first three spring arrivals, for since the two mentioned were docked the *Earl King*, another steamer from Quebec, loaded by them, arrived in the Surrey Commercial Docks on the third, having made a quick passage from Quebec to London, being reported in the river as soon as she was due. We may look now for more activity in the vicinity of Albion Yard, as the bulk of the pine vessels discharge in the dock of that name, and, though the recently-landed cargoes will speedily be stowed away, others of the Quebec fleet may be expected to be shortly dropping in to keep the dock officials busy at this spot for some time to come; pine deals are not stacked so easily as other descriptions, from the peculiar style they are piled; thus, if many steamers compose the Quebec fleet, it will be difficult, we expect, to keep a clear space on the quays there.

SHORT SIGHTED ECONOMY.

The *Moniteur du Commerce*, the admirable commercial journal published in French at Montreal, has an article on the neglect of the means of protection against fire, and as it will be both interesting and instructive to our readers, we translate it as follows:—

"The numerous disasters caused by fires in the country, and of which every day the journals record some new examples, call attention to the means of protection which in this country would be at the disposal of each municipality, but of which the carelessness and apathy of the municipal councils makes no use.

If there is any country in which water courses are numerous and in proximity to every village, it is Canada, nevertheless how few municipalities, outside the larger towns, utilize the neighbouring water-courses, so as to make of them reservoirs, where in cases of fire they would immediately find a valuable resource, sufficient to avert all danger.

"Have we not had a new example of this carelessness in the last few days? A village close to Montreal and actually situated on the river,

being invaded by fire, asked aid from Longueville in default of having the apparatus necessary for arresting a fire at its commencement. Other villages would only have to make a trench to construct an aqueduct for some acres and all danger from fire would disappear for ever; the harvest, the cattle, and the granaries, would thus become an assured fortune that the destructive element could not annihilate, and nevertheless they do nothing; they forget, in the absence of a disastrous precedent, that the danger is so much the greater because so far they have escaped it.

"One can understand, to a certain point, how in the scattered villages, of which agriculture is the only industry, they slumber in the monotony of their labours and do not always keep in mind the importance of the means of protection against fire. But what can we say of a town that already possesses one of the most important cotton factories in the country, which has a trade great enough for 70 merchants to have establishments there, which comprises 688 dwelling houses, at least 600 of which are wood, which has property in real estate and stocks amounting to more than \$1,500,000, and which hesitates about the construction of an aqueduct bringing to its centre the most complete security against all danger from fire? It is thus that the municipality of Valleyfield understands the interest of the town; it is thus that house property, the cotton industry and trade of every kind, remains exposed to the risk of a conflagration which would sweep away in an instant the fortunes of the whole population, because the apathy of some of the municipal councillors is sufficient to paralyse the intelligent and enlightened opinion of the other members of the council. Already industries in search of a suitable locality, which they hoped to find at Valleyfield, have recoiled from the danger which they would have run there, and we cannot blame them. An industry which lives by progress and activity cannot live in contact with torpid apathy which repulses all improvement."

SWEDISH EXPORTS OF WOOD.

The *Timber Trades Journal* says:—The exports of wood goods from Sweden in each of the last five years, during the period from January to May, have been, according to statistical returns, as follows:—

	Sawn & planed. Pt. stds.	Heum. Cub. ft.
1882.....	147,601	1,878,811
1881.....	35,497	881,841
1880.....	141,265	2,325,577
1879.....	43,878	674,535
1878.....	126,925	2,363,425

The figures are stated in cubic metres, which are reduced into Petersburg standards for the sawn and planed by taking every standard at 4.67204 cubic metres, and with regard to hewn into English cubic feet, of which the number of 35.316 corresponds to every cubic metre. These are, no doubt, the best descriptions of measures comprehensible to the trade in this country. Deducting the figures lately quoted by the Swedish correspondent for the exports in January to April during the last two years, it will then be seen they are in May this and last year as follows:—

	Sawn & planed. Pt. stds.	Heum. Cub. ft.
1882.....	103,466	1,115,345
1881.....	24,936	574,534

showing the enormous quantities exported this May, in spite of the diminution of the import to London.

The exports of wood pulp and matches are during the last five years:—

	Wood Pulp. Tons.	Matches. Tons.
1882.....	2,905	3,860
1881.....	1,457	3,405
1880.....	3,340	3,602
1879.....	2,608	2,520
1878.....	1,190	2,687

the figures being stated in kilogrammes, reduced to 1.016 per each ton.

THE ENGLISH MARKET.

Messrs. Robert Coltart & Co.'s wood circular of July 4th says:—"There was a very dull feeling in the wood market during the early part of the past month, the shipments of pitch pine and spruce deals by steamers, which were sold on arrival at the best prices obtainable, having somewhat depressed the market, but as steamers are not now offering for wood freights, the tone has latterly improved, and prices are firmer

than they were during the early part of the month. The consumption has continued on a very fair scale, and stocks, with the exception of pitch pine, are still very light.

COLONIAL WOODS.—The stock of Quebec square and waney pine is very light, consisting of only 168,000 feet, against 664,000 feet at the same time last year; sales have been by retail only, with the exception of a small parcel of square pine (wrecked wood) brought coastwise, which realized an average of about 20½d per foot. The demand for Red Pine is dull, the consumption during the month amounting to only 5,000 feet. Oak is in fair demand, and the stock of prime wood is small. Of elm and ash there are no sales to report. Birch is in better demand, the consumption during the month consisting of 42,000 feet, against 23,000 at the same time last year; by auction, 830 logs, ex *Arklow*, from St. John, were sold at prices ranging from 14d to 22½d, averaging 17½d per foot, and 944 logs, ex *Endymion*, from Halifax, at 14½ to 22½d, averaging 16½d per foot; the present stock consists of 22,000 feet. The import of N. B. and N.S. spruce deals has been rather heavy during the month, several cargoes having arrived by steamers, which has caused prices to decline; by auction St. John averaged £7 7s 4d per standard, Bridgewater £7 7s 6d per standard, and St. Margaret's Bay £7 2s 3d per standard, and by private St. John has been sold at £7 to £7 5s per standard, and Bay Verte at £6 15s 6d per standard, c.i.f. Quebec pine deals have come forward to the extent of 2,627 standards, against 1,042 standards during the corresponding period last year, the bulk of which has been yarded, but sales are reported at £14 10s to £15 per standard for 2nd quality, and £8 17s 6d to £9 5s per standard for 3rd quality. Of merchantable pipe and puncheon staves there are no sales to report.

The arrivals since our last have been 53 vessels, 40,811 tons, against 45 vessels, 33,840 tons in corresponding period last year, and 46 vessels, 33,521 tons in 1880.

From 26th January to 30th June, 1882:—

	Vessels.	Tons.
Quebec.....	7	5,050
St. John, N.B., &c.....	31	33,058
United States.....	63	54,206
Baltic.....	75	32,698
Total.....	184	125,040

From 26th January to 30th June, 1881:—

	Vessels.	Tons.
Quebec.....	4	4,027
St. John, N.B., &c.....	24	25,250
United States.....	57	42,100
Baltic.....	62	24,617
Total.....	148	96,302

From 26th January to 30th June, 1880:—

	Vessels.	Tons.
Quebec.....	2	2,517
St. John, N.B., &c.....	42	41,661
United States.....	42	34,114
Baltic.....	58	33,241
Total.....	174	111,533

SUPPLYING MANITOBA.

The *Northwestern Lumberman* says:—A noteworthy feature of Chicago trade latterly is the shipment of 75 cars—perhaps more—of lumber to Manitoba. Mr. Getchell, of Getchell, Armour & Co., is entitled to the credit of working up this little Manitoba boom, having visited the new Canadian province and put in some personal endeavor to effect the result. The lumber forwarded was all dry stuff, and the resources of the yards all over the district were vigorously drawn upon to make up a shipment of 60 cars, which is evidence that dry stock is not very plenty here. Round prices were paid for the lumber picked up to fill this order, and yet it is said the venture was a profitable one. This spurt of Manitoba business should not be taken as a premonitor for anything extensive in that direction, for coals cannot always be carried to Newcastle, neither can lumber be shipped through the producing regions of the upper Mississippi to Manitoba at a profit, unless it be to satisfy some special demand. In this instance Minneapolis did not have the dry lumber that Manitoba wanted, but Chicago did have it.

The Rev. Charles E. Piper, formerly of Pitt field, N. H., but now of Wakefield, R. I., writes:—"I have used Baxter's Mandrake Bitters in my family for over two years, and as a result have not called a physician in the whole time. My wife had been an invalid for two years, but these bitters have cured her."

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 First Prize, Provincial Exhibition..... London, 1877
 First Prize, Industrial Exhibition..... Toronto, 1879
 First Prize, Industrial Exhibition..... Toronto, 1880
 International Medal, Centennial Ex..... Philadelphia, 1876



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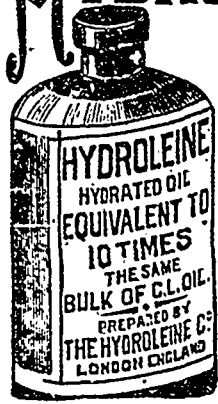
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PINE BARK MEDICINAL.

We are of opinion that there is a greater malarial influence in green pine, within a short time after it has been fallen, than in the slabs and saw mill refuse which go to make land in the vicinity of a saw mill, or to fill up a stream into which it may have fallen. The writer has for many years found it impossible to chew the soft inside strata of pine bark without being afflicted with difficulties akin to chills and fever and fever and ague. Lumbermen are familiar with and fond of chewing the inside growth or skin next to the sap of a green pine, but in the case we allude to the practice had to be wholly given up for the reasons given. At no other time than when occasionally indulging in the habit referred to were the symptoms manifest, and the only conclusion that could legitimately be reached attributed the disease to that cause. We have never heard of the bark being utilized for medicinal purposes, but if the doctrines of the Homeopathic school of medicine are universal in their application, there can be no doubt that in this inner bark may be found medicinal properties; but that its dec. in the water or under the usual conditions surrounding its waste in a stream, or as a filling for low ground, is sufficiently miasmatic in its influence to give rise to a charge of unhealthfulness, we cannot for a moment believe after thirty years of careful observation.—*Northwestern Lumberman.*

The Canadian Manufacturer says:—Among the industries that are "booming" just now may be mentioned the construction of ready-made houses for the North-West. Such houses are being got up at Quebec, Ottawa, Belleville, Hamilton, and other points, and competition for the best and most convenient plan is lively. Tents are also in great demand, and it is said that in and about Winnipeg there are to-day more than three thousand people living in tents.

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A WONDERFUL FACT. HYDROLEINE mixes perfectly with water, showing a complete artificial digestion of the oil, as just as the Hydroleine mixes with the liquid contents of the stomach, and enters immediately into the system to nourish and build it up. The efficacy of HYDROLEINE is not confined to cases of Consumption, as from its valuable tonic effect on the nervous system in addition to its special stimulating action on the organs concerned in the production of Fat in the body, it causes marked increase in weight in persons of naturally thin habit, who do not present any evidence of disease.

Unlike ordinary preparations of Cod Liver Oil, it produces no unpleasant oration or sense of nausea, and should be taken in such very much smaller doses, according to the directions, as will ensure its complete assimilation; this, at the same time, renders its use economical in the highest degree.

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TRENT NAVIGATION

NOTICE TO CONTRACTORS.

THE letting of the works for the FENELON FALLS, BUCKHORN and BURLEIGH CANALS, advertised to take place on the second day of August next, is unavoidably further postponed to the following dates:—

Tenders will be received until Thursday, the Twenty-fourth day of August next.

Plans, Specifications, &c., will be ready for examination, (at the places previously mentioned) on Thursday the Tenth day of August next.

By order,

A. P. BRADLEY,

Secretary.

Dept. of Railways and Canals,
 Ottawa, 15th July, 1882.

G417 2L15



Welland Canal Enlargement.

NOTICE TO CONTRACTORS.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for the Welland Canal," will be received at this Office until the arrival of the Eastern and Western Mails on FRIDAY, the 1st day of SEPTEMBER next, for the deepening and completion of that part of the Welland Canal, between Ramey's Bend and Port Colborne, known as Section 34, embracing the greater part of what is called "Rock Cut."

Plans showing the position of the work, and specifications for what remains to be done, can be seen at this Office, and at the Resident Engineer's Office, Welland, on and after FRIDAY, the 3rd day of AUGUST next, where printed forms of tender can be obtained.

Contractors 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, the nature of the occupation and place of residence of each member of the same; and further, an accepted bank cheque for the sum of four thousand dollars must accompany the respective tenders, which sum shall be forfeited if the party tendering declines entering into contract for the works, at the rates stated in the offer submitted.

The cheque or money thus sent in will be returned to the respective contractors 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, 15th July, 1882.

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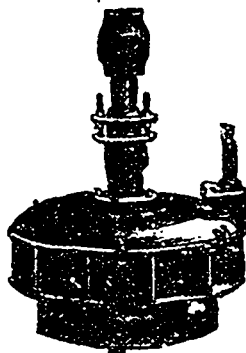
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THE CATALPA SPECIOSA.

We have before us an interesting monograph on the Western Catalpa, by Dr. John A. Warder, of Ohio, Vice-President of the American Forestry Association, and an enthusiastic forester. He clearly proves that the hardy Western Catalpa *Speciosa* a different species from the tender Southern Catalpa *Bignonioides*, and points out the greater merits of his favorite tree.

We extract from his pamphlet the following particulars:—

The wood of the Catalpa is light, and yet it is sufficiently strong, and it is hard enough for most purposes of construction. It has been highly approved for bridge timbers where it is exposed to the weather; it has been the favorite material for fence posts in a large tract of country; it works easily in making shingles, which have been found to last longer than the houses they covered, and in one case we are told that they were really taken off and used in another building.

On the St. Louis and Iron Mountain Railway, near Charlestown, Missouri, there is a portion of the track laid eleven years ago on Catalpa sleepers, which are yet sound, while many of the oak fence posts inclosing the road, though planted since it was built, have had to be replaced. The oak ties last scarcely five years on the same soil and exposure. Mr. David Axtel, the intelligent engineer in charge of this part of the road, reports that Catalpa holds the spikes well enough, and that when the ties become washed they are no longer rejected, but simply turned over, so as to present a new bearing. Some that had been thrown out by the track-men have been used as fence posts, and bid fair to last for many years.

In his letter to Mr. Barney the same gentleman writes: "There is nothing to indicate that the Catalpa ties in our track do not hold spikes sufficiently well. Nearly all the spikes are in the same holes originally made when driving them. There has been no spreading of the track. I have examined the few ties the rails have settled into, and find none that will not last a number of years by turning them over. These ties are six and eight inches face; if they were wider, as you suggest, there would be more resistance to crushing."

Before passing from this branch of the subject, the peculiar lignous structure of this tree should be more particularly noted. The alburnum or sapwood is very limited, and consists of but one or two of the concentric layers, generally, indeed, that of the last year's growth only; so that, in the preparation of cross-ties, a stick, twelve inches or more in diameter, needs only to be split, or sawed, so as to make two sleepers, instead of the more expensive hewing required to make but one from the same material. The timber, in this shape, with the maximum extent of bearing for the rail, and having only the bark and a thin layer subject to decay, may be laid with its convex side next the road bed, in the best position for tamping the tie when placed in the track.

Little need be added to the mass of facts collected by Mr. Barney, going to show that the wood of the Catalpa is strong and hard enough for most economic purposes; that it works smoothly and takes a beautiful surface, and is sufficiently varied in its tints to make it highly ornamental for inside finish. At the same time, though light, it is perdurable for all purposes where it is exposed to the elements.

Dr. Schneck, of Mt. Carmel, Illinois, states that the lumber, on account of these qualities, has been in great repute near the mouth of the Wabash, "for the building of skiffs, and that it is being rapidly exhausted in other localities by the constant demand upon the trees for fence-posts; these are taken to a great distance, and the trees are often cut at night and stolen." Similar testimony is borne by James Bell, an extensive dealer and manufacturer of lumber at Ullin, Illinois. J. T. Mills, Esq., of the Evansville & Terre Haute Railroad, is purchasing many thousands of these posts to fence the road; and has also planted largely on the White River for future use.

In all the Delta region of four or five States surrounding Cairo, Illinois, particularly on the west bank of the great River, Catalpa has been in such demand for fence posts and foundation

logs, that the accessible stock of standing trees is well nigh exhausted. In that low tract of humid soil, sections of Catalpa logs are used to support the corners of the buildings erected there, and they make the most permanent foundations—"corner stones."

Near New Madrid, there are many fence-posts which have stood and remained perfectly sound for long periods, 20, 30, and even 40 years. The story of the standing Catalpa trees that were killed by the disturbances and submergence of land, caused by the earthquake of 1811, which we have all been disposed to doubt, is to this day fully confirmed by ocular demonstration. In the lagoons there stand the broken shafts of noble trees; all other species, submerged by the same catastrophe, have crumbled and fallen into the water long ago, but these silent monuments of that convulsion still remain, not as living witnesses, but as dead memorials of the disturbance of level, which caused their death, and their now approaching dissolution; but there they have stood for seventy years, under conditions most favorable to decay, and thence are they brought, when cut, and are used for fencing.

ADAPTION TO SOIL AND CLIMATE.

With wonderful powers of accommodation, however, this tree has been found to adapt itself to almost every kind of soil. It thrives, and even becomes naturalized, reproducing itself in situations very different from those of its native homes. This it has done upon the hungry gravels about Baltimore and Washington, and upon the mica-schists of Eastern Pennsylvania, as well as in the lime-stone valleys of that state. It thrives on the tertiary sands and gravels of New Jersey, near the Atlantic coast, and on the red sandstones of that state. It is found on the clay and gravel drifts of Southern New York, as well as on the Hudson, where Downing used it to retain the river banks. It may be seen on the hard conglomerate of the drift-scored rocks of Dorchester heights, and it thrives on the sands of Cape Cod.

So, also, in its Western migrations, it seems to thrive everywhere; at Cincinnati upon the tenacious clays, the resultant debris of the old silurian limestone, on the modified drift of the river terraces, and on the rich alluvium of the bottom lands, it seems equally at home. About Dayton it thrives on the terraces and bottom lands of the Miami, and at Columbus upon the rich walnut lands that rest upon the boulder drift which has ploughed through the Devonian shales and the upper silurian limestones. At Chillicothe on the Scioto it appears to be satisfied with the hills of the Waverly sandstone, and at Marietta, where it was planted at an early day, it has become naturalized upon the debris of the coal measures there cut through by the Muskingum.

And in the States west of Ohio to which this tree has been taken, it thrives upon all soils and everywhere, if not too cold. Among the stumps of the heavily timbered lands of Indiana, and out in the open prairies of Illinois, it does equally well, but it is especially thrifty upon the great deposits of the Loess or Bluff formation of Missouri, Iowa and Nebraska, and parts of Kansas.

In this respect the Catalpa seems to have the advantage over some other trees in its wonderful power of adaptation, and hence its great promise as an element of success in the up-building of American forestry.

Mr. Robert Douglas, of Illinois, who has propagated the *Speciosa* Catalpa more largely than anyone else, and who has planted some hundreds of thousands of them on the plains of Kansas, pronounces this Western species, which he has thoroughly studied in its native forest and artificial plantation, "one of the best, if not the very best tree, that has yet been introduced for timber plantations in the Middle States."

PROPAGATION.

The propagation of the Catalpa is very simple and easy. The plants may be multiplied by cuttings where that method is desired, it has been practised to a limited extent. In the Western forests limbs of fallen trees take root in the humid soil, and produce new ones, natural layers, giving us a hint that is put in practice when we desire to increase our stock of the dwarf kind that never blossomed. This

form and some sports, with colored foliage, may also be multiplied by grafting and budding.

But it is always best to increase our stock of these trees by sowing the seeds, which is, indeed, the only practicable method of producing the millions of plants that will be needed, so soon as the merits of this tree are appreciated. The seeds germinate readily, the plants grow rapidly and are ready to set out after one summer's growth. The seed should be kept dry during the winter, safe from the mice, and need not be planted until the soil is warmed. The soil being well prepared, a shallow drill is made. This can be done with a small plough. In this the seed is sown rather thickly, so as to lie one or two inches apart and four or five inches wide. They should be at once covered with fine soil, from one quarter to half an inch deep, according to the condition of the ground as to humidity, and the prospects for showers. If the conditions be favorable they soon vegetate, when the young plants should be well cultivated and kept clear of weeds, especially during the first part of the season.

The leaves fall with the first frost, and, after standing a few days to harden up their tissues, the young plants may be taken up with the spade, or by using the small tree-digger plow, or even a common one-horse plow, when they should be assorted for size, and put into cellars or holed-in deeply out of doors, unless indeed they be at once planted in their permanent stations.

PLANTATIONS.

With a proper selection of the kind—that is, of course, the favorite *Catalpa Speciosa*—no one need hesitate to undertake a plantation. The trees are sure to grow, are easily cultivated, and speedily yield satisfactory returns for the most valuable material.

If in the prairie regions, where the railroads are most in need of cultivated forests, to furnish the future supplies of ties, posts and other lumber, land should be selected that has already been in cultivation for one or more years. This should be well ploughed in the fall, and may then at once be planted, or left to lie fallow over winter.

The planting is a very simple affair when once a gang of hands has been organized; and each man will set from one thousand to fifteen hundred in a day. After the surface has been marked out, with furrows four feet apart, the little trees are dropped at about the same distance, and at once planted with the spade, and the soil is closely tramped by the feet. As the rows are set, or soon after, a one-horse plow follows, to bank them up slightly. In fall planting this furrow may be made rather heavy, to protect the little plants and lead the surface water from them. This ridge will have to be worked down with harrow or cultivator in the spring, before the buds have started, and such cultivation will destroy the first crop of weeds. Cultivation should be continued at intervals during the summer, so as to keep the ground clear of weeds, and to encourage the growth of the young trees, which will have made sturdy shoots of from one to four feet high, and will be well established in the soil.

If some of the little trees be crooked or branched, no matter, for during the winter or in early spring they may all be cut off near the surface of the ground, to secure a strong, thrifty and even growth the next summer, when, if sufficiently cultivated up to July, the result will be most satisfactory and encouraging, in an even stand of sturdy trees, averaging not more than four feet apart, and reaching a height of five, six, or more feet, and so completely shading the ground that no further cultivation will be needed beyond cutting out a weed here and there during the next season.

If the growth have not been very strong the first season, it may be advisable to defer the cutting back for another year, by which time the roots will have become so much more fully established that the shoots will be proportionately robust; so that, with proper cultivation and removing superfluous shoots, leaving only one to each plant, the result will be a stronger growth of taller trees, and at the end of the third summer from planting they will average six feet in height.

This treatment is especially recommended because of the peculiar leaf arrangement, or

phyllotaxy, in the Catalpa, which is in whorls of three, hence the tendency to throw out from the group of terminal buds as many shoots, that cause the tree to be low branched, and to require some attention in pruning; the higher the stocks, therefore, the better. The close planting here advised is also recommended with a view to obviating this difficulty, as the surplus shoots will be smothered and die where thus crowded, and little or no pruning will be required to remove them.

Thinning may become necessary after a few years, but an experience of seven or eight years in my own limited plantations induces the belief that natural causes will very near suffice to thin out the surplus trees with very little interference by human agency. Further on it may become necessary to use the axe in thinning out the trees to enable them to develop themselves; but we should not count too confidently upon the profits to be derived from this source. Some poles may be had for fencing and other economical purposes, for garden and vineyard stakes, and even for hop-poles, to all which uses the lightness and durability of the material well adapts it. Time and experience will give us further insight into the details of trimming and of thinning the plantations.

CONCLUSION.

In drawing this monograph to a conclusion, it may be well to impress upon the reader the exceedingly important fact that we have in the United States two very distinct species of Catalpa, one of which is especially western in its native habitat. This species is in every way a superior tree for our uses, and promises to be a most important factor in our future forest plantations. It is superior in its habit and in its hardiness. What has been said of the value of Catalpa lumber may be equally true of either kind, except that our tree alone will be able to produce dimension timbers, hence, so far as at present advised and informed, you are begged to plant no other than the *Catalpa Speciosa* as an economical tree. The others may do on a lawn or in the park, but this alone should constitute our groves and plantations planted for utility.

Think not, however, that we who have manifested so great an interest in this tree which we have so highly recommended to you, think not that we would have you restrict yourselves to any one tree. We have indeed a noble sylvia, a rich inheritance of trees, from which to make our selections. These have various excellencies and are severally adapted to diverse uses, and to different situations as to soil, aspect and elevation above the sea-level. Some are peculiarly adapted to almost every portion of our extended country, where others would not succeed. Let each planter use his own good judgment in the selection of the various kinds best adapted to his own particular local conditions.

To the great railroad corporations, who should be the first to improve their vast estates on our Western plains by timber planting, the *Catalpa Speciosa* is confidently presented as invaluable

JOHN A. WARDER.

A WORD OF CAUTION.

The season for forest fires is approaching. The rainy period that lasted through May and June may be succeeded by six months' drouth. The possibilities of devastating conflagrations over wide areas are before the residents in timbered regions; they are before lumbermen, whose operations last winter added a vast amount of hell-fuel to the accumulation of other years. We wonder if either residents or lumbermen have once this year thought of these possibilities. Sometime between now and October there is almost sure to be sweeping fires in the lumber districts of Michigan and Wisconsin that may rival in horror and destruction Peshtigo and "Thumb." What measures have been taken to avert such disaster? Actually nothing. Experience is said to be a good schoolmaster, though his wages are enormously high. There is one class, though this paper is loth to name it, that seems to learn nothing of a prudential character by experience, and it includes pine land owners and loggers. They go on year after year and allow brush piles to accumulate on their lands—timber for devouring flames to feed upon—and complain of the hazardous character of standing pine as property. Not the slightest attempt is made to obviate the danger.

Since stumpage has reached its present figure, it would seem that common prudence would cause pine land owners to require jobbers to pile their brush and take care of their tree-tops. Early in the spring, before the ground is dry enough to make a running fire possible, the stuff could be burned, and thus put out of all danger of sometime feeding a mid-summer conflagration. Northern lumbermen could learn something of their southern contemporaries in regard to treatment of timber lands. It is stated by one who has recently been in Mississippi that the pine forest here are, in many instances, kept clean of underbrush, and debris is not allowed to accumulate to any great extent. Fires are thus avoided, and movement among the trees is easier and pleasanter. We know that there is great labor and considerable expense involved in cleaning up the down stuff on timber lands, and that is the reason why it is not done. But the cost would be no more, relatively, than men pay for insurance on other property. It is time that a movement to effect this desirable object of safety to property and life were inaugurated. Who among the lumbermen will put the ball in motion by setting a good example?—*North western Lumberman.*

ENCOURAGING TREE PLANTING.

The Province of Quebec has taken the initiative in the encouragement of the planting and cultivating of trees by an act which was passed last May, and of which the following is a short resume:—Any one, being the proprietor or in possession as the usufructuary of any land, who shall plant any part of such land, not less than an acre in extent, with forest trees, shall be entitled to a land order authorizing him to purchase to an amount not exceeding £12, any public lands within the Crown Land Agency in which trees have been planted. Those land orders are null and void if not used within two years from the date of their issue, and the lieutenant-governor, in council, may from time to time make regulations respecting the number and description of trees to be planted in each acre, the number of years during which the trees so planted shall be preserved and not cut down, and other terms and conditions to be fulfilled by persons claiming a land order. But no one can acquire less than 50 or more than 200 acres in this manner, and the order will be accepted as cash in part payment for any land bought from the crown. The planting of seeds, nuts or cuttings is considered compliance with this act, which, however, only comes in force by a proclamation of the Lieutenant-Governor, in council, in such parts of the province as specified in such proclamations.

CUTTING A BOOM.

The Ottawa Gazette, of July 14th, says:—Maurice Quesnel and Napoleon Palmer, two first the foreman and the second one of the crew of a raft belonging to Mr. J. B. Dickson were to-day brought up under arrest at Aylmer, before Mr. C. B. Rouleau, district magistrate for the district of Ottawa, on a charge of having wilfully and maliciously cut the Alumette boom, the property of the Upper Ottawa Improvement Company. After the evidence of the witnesses establishing the fact of the boom having been cut by Palmer, under the orders of Quesnel, had been taken, Mr. Foran, on behalf of the defendants, contended that they should be discharged inasmuch as they had not cut the boom for the purpose of injuring the property of the company, but merely to get the raft out of the boom, and that consequently there was no malice.

Mr. Fleming, for the prosecution, said in reply that it was not established that it was absolutely impossible to take the raft out of the boom without cutting it; and the mere fact of its being inconvenient and expensive to do so after the raft had been, from want of proper caution, taken below the gap in the boom, did not justify the cutting. The court held that the prisoners were not on their trial, that all that was required was a prima facie case against them, and that, moreover, the court did not consider the defendants, under the circumstances, justified in cutting the boom; and as they did so wittingly and must have known it was injuring the boom and doing the company

damage, it was in law a malicious act, the court would therefore commit the defendants for trial at the next term of the Court of Queen's Bench, but would accept bail for their appearance.

SWEDISH FOREST FIRES.

The *Timber Trades Journal's* Stockholm correspondent says:—The warm weather prevalent lately in Norrland has occasioned a considerable number of forest fires, both in the Medelpad and East Jemtland districts. The most serious of these seem to be that in the neighbourhood of Oratfordalen village, in the Sundswall district, in a forest belonging to Skonviks Bolag, Sundswall, and one in a forest owned by James Dickson & Co., between Ange station and Dyejon, on the railway to Ostersund. Some of these fires in the neighbourhood of railways are no doubt caused by locomotives, others again by the carelessness of people lighting fires in the woods. A stock of between 500 and 600 standards of deals lying ready for shipment to the Cape and Australia at Petersvik loading quay, Sundswall, and belonging to Mons Angsage, Aktiebolag, was, along with the now quay and several lighters loaded with deals, also burnt a week ago. Ships had already been chartered to convey the goods, which the owners will have a difficulty in replacing with seasoned deals.

Two Departments well Represented.

In lately walking through the Government Buildings at Ottawa, a representative of one of Ottawa's ablest journals, in the course of conversation gleaned some items of interest. Speaking with Mr. A. J. Cambie, Chief Clerk of the Agricultural Department, that gentleman replied to a certain question: "I have used St. Jacobs Oil in my family, and found it to be an excellent article indeed. It is the remedy to banish pain and has a pleasant and soothing way of doing so, that makes it valuable. I consider it a great medicine." Calling upon Mr. Sherwood of the Militia Department, that gentleman thus answered the usual query: "I have found St. Jacobs Oil a great medicine, a splendid remedy, indeed, for rheumatism. I have recommended it to many. When I commenced its use I had not much faith, but now my faith could not be easily shaken. I consider it by all odds the best medicine I ever tried."

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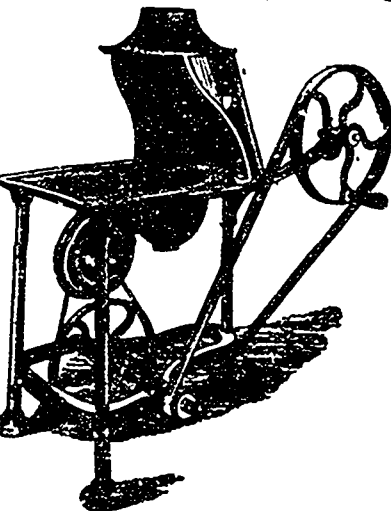
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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.

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

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

PETERBOROUGH, Ont. AUGUST 1, 1882.

MANISTEE has shipped this season 2,970,000 feet of lumber, 303,684,000 shingles, besides 6,595,000 lath, 1,242,000 feet of timber and other products.

The Belleville Ontario says.—The last of the square timber from Crookston, for Mr Buck, has arrived here. It is his intention to bring down yet this season 30,000 cubic feet from Hastings.

The Lindsay Post of July 21st says.—The camp of the river hands engaged in loading the timber at the wharf has broken up. Another large lot of timber, the property of one of the banks, is expected at the mouth of the river shortly, and will be shipped by rail from Lindsay.

The Timber Trades Journal says.—The introduction of steam-going vessels into the wood-carrying trade has this season been more marked than any preceding year. At one of the leading east coast ports there were a fortnight ago seven full steamer loads of sawn wood in the docks being discharged at the same time.

At Tobyhanna Mills, Pa., over 200 men and boys are kept active in the woods getting out the logs and peeling off the bark from the hemlock. This, by the way, is an important article in commerce. Over 4,000 tons were taken last year from the hemlock logs. Eight thousand tons went to market from this vicinity, and it is estimated that no less than 9,000 tons will be supplied this year.

The Northwestern Lumberman says:—"The woman who took in stairs to wash finds her a typo in the man who goes around the country with a saw mill cutting up logs by the job, the same as farmers thrash grain. The indications are that sometime this will be an important industry. There has been so much advance already that saw-mills are towed on rafts from one town to another. A few days ago the tug Badger came into Winneconne, Wis., with a saw-mill from Omro, and the occasion was celebrated like the Declaration of Independence, with brass bands and booming cannon."

The Emerson International of July 13th says:—Carney & Watson have sold an immense quantity of lumber during the past two weeks to Mononites, who have recently come from near Fargo, Dakota, and settled in the reserve west of Emerson. They are putting up good houses, and paying for their lumber in gold, of which they seem to have a good supply.

The Parry Sound North Star of July 21st says:—The machinery for the manufacture of shingles is now in running order in the Parry Sound Lumber Company's steam mill, and shingles are being turned out at a rapid rate. We understand that the shingle and planing mill of the Midland North Shore Lumber Company is being fitted up and will soon be running.

The Northwestern Lumberman says They do things on the jump in northern towns. At Duluth, Minn., the Ohio Central Barge and Coal Company is building a huge dock, and in order to have the work go through on the rush, the orders for timber have been divided among several mills. It is proposed to finish the first section of 300 feet in 60 days, if the thing is possible. The total water-front length of the dock is 2,000 feet.

The Lindsay Post says.—The \$5,000 cut to shorten the water route between here and Sturgeon Lake is getting along speedily. The advantage to the boats towing timber will be very great. As it now is the water stretch around the bend is the worst on the river and during a breeze of any strength both vessel and timber generally go aground. Then when the winds go down much work with rising barometer and bad language over that region.

The Glasgow report of the Timber Trades Journal says:—With regard to Quebec deals, taking into account the importation since the stocktaking of 31st March, the consumption during the last three months is shown to be about 2,300 St. Petersburg standards, and Lower Port deals, 3,200 standards. The quarter's consumption of pitch pine appears to be over 8,000 logs, showing a considerable falling off compared with the previous quarter. The stock, it will be observed, is ample.

The Timber Trades Journal of July 8 says:—The arrivals of cargoes of wood goods to the port of Bordeaux the last fortnight have been: one steamer from Miramichi, one sailing vessel from Bathurst, one do. from Bridgewater, N.S., two do. from Dantzic, one do. from Skein, one steamer from do., one do. from Soderhamn (Bergvik), one do. from do. (Ljusne), one do. from Sundswall (Ahlafors and Tunadal), one sailing vessel from Dramman, one do. from Skutskar, one steamer from Christiana.

The Muskogon News says:—"The operations of the White River Log and Booming company have been progressing nicely thus far this year. The total amount of logs sorted, rafted and delivered from time of commencing work, March 20, including last week, was 75,000,000. To do this work the company employs about seventy men and thirty boys and one tug, the Peter Dalton. Recently it has required the assistance of another tug to do the delivering. One day the boom rafted 131 rafts of logs, in all making 13,100. This is the largest days work ever performed, 101 being the maximum heretofore."

The Timber Trades Journal says:—Will Manchester ever develop into a timber port? Such an occurrence need not be regarded as being at all an unlikely one. The Manchester Ship Canal scheme has now assumed a definite shape. A provisional promotion committee has been formed, and a sum of money has already been subscribed for preliminary expenses. It is estimated that within a few years of the opening of the navigation 5,000,000 tons of goods will pass through the canal. It is said that of the £34,000,000 estimated value of the Liverpool exports, £43,000,000 are represented by Manchester cotton goods. The effect which the canal is likely to have upon the timber trade of Liverpool is of a serious character.

FORESTRY CONGRESS.

We beg to call the especial attention of our readers to the invitations issued for a meeting of the American Forestry Congress, to be held in Montreal on August 21st and 22nd. It will be remembered that a meeting of the National Forestry Congress was held this year in Cincinnati, but a number of gentlemen from Canada who are interested in forestry having attended, the title of the association was changed to the "American Forestry Association," so as to include the whole continent, and steps were taken to elect officers to represent the various provinces of the Dominion. Mr. William Little, of Montreal, was appointed Vice-President for the Province of Quebec, and it is by him that the invitations for the present meeting are being issued, it having been determined to hold it in Montreal.

To show the standing of the society we may mention that the Hon. Geo. B. Loring, Commissioner of Agriculture, Washington, is the President, the other officers are gentlemen of high position and repute, and the present meeting is under the patronage of his Honor Lieutenant Governor Robitaille.

It is expected that interesting and instructive papers will be read, and that there will be discussion of subjects connected with the objects of the Congress, which are chiefly the conservation and perpetuation of existing forests, the replanting by new plantations those that have been and are being destroyed, and the clothing of our prairie regions with a due proportion of trees.

Though the lumbermen from the very nature of their business are great destroyers of our forests, there is perhaps no class that is more impressed with the necessity for steps being taken to remedy the rapid destruction that is now taking place, or is more anxious to see improvements made in our present regulations in regard to our wild lands. The general public too is being aroused to the necessity of a change in this respect, as is evidenced by the greater attention paid to it by the press of both countries.

We hope that the Congress at Montreal will be well attended, and that its deliberations will be productive of much good.

TREE PLANTING.

The Ottawa Citizen says:—The comfort and beauty of trees in the streets of a city will be fully appreciated by our citizens at the present time, as they go up Daly street and other public thoroughfares, where there is a wealth of foliage to screen one from the hot sun of summer days. No feature of a city is more attractive than a sufficiency of trees, and we hope to see the taste encouraged far and wide in Canada until we can compare favourably in this respect with our American neighbours. Anyone who has visited any charming American city must have come back with pleasant reminiscences of their embowered streets. The subject is deserving of attention, and we are therefore glad to notice that Mr. J. G. Bourinet will contribute a paper on "Tree Planting in Canadian Cities and Towns," to the meeting of the American Forestry Congress, which is to be held at Montreal during the latter part of August. The President is the Hon. G. B. Loring, Commissioner of Agriculture at Washington; the Canadian Vice-President is Mr. Jas. Little, of Montreal. At the spring session held at Cincinnati, valuable papers were read by many prominent public men and scientists, among others by the Hon. Horatio Seymour, of the State of New York. The approaching meeting promises to be equally interesting and profitable. The objects of the Congress are deserving of every encouragement. The rapid destruction of the forests in America by commercial enterprise, but more especially by the agency of fire, renders it necessary to look to the future and take material measures to keep up the supply. Anyone who has visited the timber districts of the Ottawa and its tributary rivers will remember the dreary and pitiable spectacle which constantly presents itself of blackened stumps and tall gaunt remains of what once comprised a noble pine forest. It is not the lumberman after all that is playing and havoc with the timber of America, it is his interest to preserve the young trees and keep the

fire bond away from his limit. It is the careless settler, or the fisherman, or the sportsman, who is the dangerous enemy of the woods of this continent. Another subject well worthy of the consideration of the Congress is the necessity of planting forests in our North-West. Already in the prairie lands of the Western States and Territories large plantations have been successfully set out, and the authorities offer valuable inducements to settlers to encourage them in the prosecution of so useful a branch of industry. Tree planting in Manitoba must sooner or later be taken up seriously by the settler. Many of our hardiest and most valuable trees will no doubt succeed on the rich prairie lands of the province.

A BIG CUT.

The Northwestern Lumberman says:—There are no indications that the lumber trade that is assuming such proportions in northern Wisconsin and Minnesota will become less right away. The new Northwest promises to keep right along and induce settlers without number into its territory, and so long as that continues, so long the demand for lumber will keep up. The argument was used by many lumbermen in the fore part of the season, that so much lumber would go to the new country that the markets of the Mississippi valley would remain firm throughout the season. They said, "How can it be otherwise? There will be less lumber to distribute over the country adjacent to those markets." The result has proved that before a man bets his money he should look over the ground thoroughly. Last winter and spring a representative of the Lumberman travelled over great portions of the three great pine-producing states, and he announced that the mills everywhere were being put in a first-class shape—in short, in better shape than they were ever before—and to look out for an immense production of lumber the present season. It was no prediction but a plain statement of facts, and a statement that some have profited by. The stock on hand in the spring was unusually small, yet to-day there is more lumber on hand than was ever known at this time of year before. The mills, with their increased capacity, have been driven for all they were worth, and have turned out lumber almost without end. Should they keep up this gait until the close of the season, with no material increase in the demand for lumber, the country will be well prepared to stand a poor logging season for 1882-83.

The Soft Maple.

In a recent number of your paper is a notice of seed of this species, *Acer dary carpana*, being sent from Hamilton, Ont., to Manitoba, and calculations are based thereon as to a future grove in that far-off land. Well, the tree is hardly enough, but the seed is one of the most impatient; it must not become dry or it will not vegetate, hence the difficulty in transportation. The seeds of this species, like those of the Red Maple, are almost sprouting plants when they part from the mother tree, and need to be planted at once. The close relationship or analogy between the seed and the bud, pointed out by Dr. Harvey, is no where better shown, and it is worthy of observation.—J. A. Warder.

Saw-Dust.

This material is used for bedding in the stables of all our cities, and has quite taken the place of straw, which is reserved for feeding and other purposes in the arts. The refuse from our mills, planing machines and turning shops is eagerly sought and purchased for stable use, nor does there seem to be any prejudice against these materials. The waste of such matter in the streams is very injurious to the fish, and should be forbidden by statute.—J. A. Warder.

Mind to the Trees.

Before the removal of the old town of Cullen, a good many trees were planted in the peoples gardens. This was sometimes resented, but not openly. One day the forester called around to see how they were all thriving. The trees all looked well except the one man's garden. He was asked how his trees were not thriving like the rest. He replied: "I cannot understand it, for I have been very kind to them, and taken them in every night."

Trade with Australia.

The Montreal correspondent of the *Mail* writing on July 24th says:—Mr. G. W. Sharp, of Sharp & Sons, Lumber Merchants, Melbourne, Australia, is in town. Hithert they have imported from the United States and from Canada indirectly, inasmuch as New England lumber merchants purchase Canadian lumber to resell in the Australian markets. They were not satisfied, and the object of Mr. Sharp's visit is to establish a direct trade if possible. The Hon. Mr. Skead has shown all that is to be seen in his locality, and Messrs Gilmour, Eddy, and other lumber kings of the Ottawa have done likewise. Mr. Sharp states he was greatly pleased with all he saw, and he was most unfavourably impressed with what he saw of the United States trade. He has already made arrangements for direct business being done in lumber, as also in other staples, particularly in dried fish and petroleum, which are now almost entirely supplied by the United States in very large quantities. Petroleum could be very profitably shipped to a very large extent.

A Year's Tree Planting.

Those who regard with dismay the cutting down of trees, and believe that the arca of woodland in Britain is gradually disappearing, may take comfort from some of the figures stated in the return as to the prices for British timber realized during the season 1891-92. From those figures it will be seen that throughout England, Scotland, Ireland, and Wales, there were planted on various estates, during the period under review, no less than 3,136,826 trees: Of these, 2,173,826 were planted in Scotland, 646,200 in England, 294,800 in Ireland, and 40,000 in Wales. It is, of course, not easy to get absolutely complete returns, but those we give are well within the mark, and prove that there is at least some set off against tree felling and the gradual increase of bricks and mortar in these islands.

ABOUT A STUMP.—Alex Bulley and Joseph Gamanches own land near Anoka, Minn., which lies along the Mississippi river. On this land, at the water's edge, is a stump. The Rum River Boom Company tied to this stump a raft, containing 300,000 feet of logs. Prompted by some meanness, the owner of the land cut the raft loose, and let it go wild down stream. The company sued for damages, and the plaintiff's attorney held that, inasmuch as the stump belonged to the defendant, they had a right to cut the raft loose, and moved the dismissal of the case. The court failed to see the matter in that light, and the defendants were held to the court above in their own recognizances. *Northwestern Lumberman.*

C. BRITTON, Lindsay, Ont., writes:—"I have much pleasure in recommending Baxter's Mandrake Bitters in all cases of Jaundice, Biliousness, Sick Headache and Liver Complaint, for they have given universal satisfaction, and I have sold more of them the past season than any other one patent medicine."

AMERICAN FORESTRY CONGRESS,
MONTREAL MEETINGS,
AUGUST 21st and 22nd, 1882.

PATRON:
HIS HONOR LT. GOV. ROBITAILLE.

All interested in the subject of Forestry are invited to attend the Meetings and participate in the proceedings.

THE RAILWAYS THROUGHOUT CANADA GRANT ROUND TRIP TICKETS TO THOSE HAVING INVITATIONS FOR SINGLE FARE.

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CEDAR PAVEMENTS.

Says the *Northwestern Lumberman*—Cedar pavements seem to grow in popularity, an being adopted in many cities where they have been heretofore unused, and yet they are not altogether in favor. The following remarks are made concerning wood pavements in London:

"The character of the wooden pavements may be known by the occupants of carriages in driving over them. Where the blocks are laid upon sand and boards, the vibrating and drumming effects on nerves and ears are most distressing. When laid with open joints the surface becomes rapidly worn and uneven; and when laid upon an imperfectly formed or weak foundation, the surface also becomes uneven, alternating hills and holes, retaining dirt and wet, and so tending more and more to the destruction of the road. Blocks of wood unexceptional in character, form and dimensions of material, laid hard on an exceptionally good cement concrete foundation, close-jointed, but without the felt bedding and jointing, have a disagreeable jarring effect, though in a less degree than the examples previously described. Some of the wood-paving companies must have been very stupid, and also very difficult to teach, or they would have learned, by their failures, sooner than they appear to have done, and we should not then have seen most important main thoroughfares blocked for weeks at a time by the pulling up of the entire wood construction to begin again as from the beginning, and this process more than once over."

In response to a question raised at Toronto, as to the relative value of old and young cedar, for street paving blocks, a lumberman addressed the following to the *Globe*:

"If you will kindly grant me a little more latitude I would like to make a few observations with respect to your views expressed as to the merits of old cedar vs. young cedar for roadways. If I am right, I take it that you assume that the young cedar is closer grained than the older wood, and therefore calculated to wear longer, and may therefore make the best roadway. If your theory is correct, then those whose duty it was to decide as to the most suitable blocks for our roadway are still wrong, inasmuch as the older cedar would not wear evenly with the saplings, and therefore the pavement would soon present the same aspect as that on King street; namely, full of holes and ruts; and if my theory is correct—that the saplings will decay before the older wood—then they are equally at fault, as the decay will undoubtedly commence at the point where the block comes into contact with the sand used in the construction of the road bed. Any one having had experience with cedar posts knows quite well how quickly destructive sand is to cedar, and it requires but little time to determine that where small cedar, composed of fully one third sap-wood, is firmly pressed down into sharp sand, and assisted by moisture, the process of decay will soon commence, and then the surface of the roadway, under heavy traffic, will be come uneven. I am willing to stake more than my reputation that the larger the block the longer the life of the roadway, and it will amply repay our citizens to look well into this matter before committing themselves to large undertakings in this direction, and at all events, as you remark, experiments can be made which will be ultimately productive of good."

OUR FORESTS.

It is a pleasure to see that the long-continued and persistent efforts of our townsman, Mr. James Little, in the advocacy of using all possible means to preserve from waste, and use with economy the commercial woods of the country are at last bearing fruit. To his publications through the press, with regard to the timber resources both of Canada and the United States, and his forecasts of the time of its total exhaustion, under the reckless and wasteful process going on, is to be attributed the widespread interest now manifesting itself in both countries. We find a National Forestry Association, as the outcome of his oft-repeated warnings, has been inaugurated by our neighbours across the line, for the preservation of the forests and, as far as possible, keeping up the supply by tree planting. The first meeting of the association was recently held at Cincinnati, Ohio,

when its name was changed to the American Forestry Congress so as to include Canada in its organization, and deliberations, and its next meeting was ordered to be held on the 21st and 22nd of August next, in this city. Several of the States have also founded separate organizations with the same object in view, and in addition to his having thus aroused general attention to the subject, it must be gratifying to Mr. Little to find that the lumber papers of the West, which all along ridiculed both editorially and in contributions his pretensions as a timber statistician, have at last been forced by the current of events to acknowledge the correctness of his warnings on the subject. In an editorial of last week's issue of the Bay City, Michigan, *Lumberman's Gazette*, one of the leading lumber papers of the Union, we notice the following highly complimentary remarks, admitting the superior judgment and the acknowledged leadership of Mr. Little in the present forestry movement. The editor says:—

"Probably no name in the country is more familiar to those who are at all conversant or interested in the subject of forestry than is that of Mr. James Little, of Montreal, who has made the timber resources of this country almost a life study. For years his fluent pen has been sending forth constant warning against the wanton and unnecessary destruction of the timber resources of the country. As a timber statistician he probably stands to-day without a peer. At the opening of his crusade against the "wood butchering," which his sound judgment and discernment discovered was becoming alarmingly prevalent, his cautionary signals, sown broadcast, were viewed as wildly fallacious and were looked upon by many who had imbibed the impression that the timber supply was inexhaustible, as the effusions of a crank whose idiosyncrasies had made him a monomaniac on the subject. But the future revealed the fact that his judgment was far in advance of public sentiment, and we are now brought face to face with the fact that the progressive steps of this same public sentiment have just at present advanced sufficiently to obtain faint glimpses in the book which had been continually open to his more advanced and mature judgment, and he is recognized to-day as an acknowledged leader in a movement which is destined to be come one of the most important to the country's interests."

The foregoing flattering testimonials of our townsman's discernment, ability and exertions in forestry matters by our Bay City contemporary is fully endorsed by us, and the editor of that valuable lumber periodical—his hitherto opponent in lumber statistics—does himself credit in thus openly giving currency to his own admission of error, a change of view on the subject in question, and honor to whom honor is due.

We have written on this subject frequently, and shall continue to do so until the public mind is fully awakened to its importance. The depletion of our forests by reckless lumbering and ruthless fires is one of the worst evils the country has been cursed with. Chopping and burning have destroyed millions of our national wealth, with no return to anybody. For every tree that has been felled and utilized there have been half a dozen wasted. Let anyone go over a timber limit and he will see that we do not exaggerate.—*Montreal Herald*.

WEALTH IN WALNUT TREES.

Mr. C. B. Wilson, of Jacksonville, Ill., drove me out to his farm some time ago to see some black walnut trees. "These trees," he said, "were planted from the seed twenty years ago. I saw them planted." I measured these trees and they were sixteen inches through. They would saw into a timber a foot of clear black walnut boards, and then have the top, limbs and stump left. The stump itself would sell to-day for five dollars to be sawed into veneers. The boards would be worth \$30. "What could you sell those trees for to timber men as they stand?" I asked. "I could sell them for twenty-five dollars per tree, and ten years from now they will be worth \$50." From those facts I came to this conclusion:—A black walnut tree will pay \$1.25 per year for 20 years. A thousand of them will pay \$1,200 per year.

Now every Illinois farmer has had it in his power to make more money off a row of black walnut trees around his farm than he can make off his farm if sowed in wheat. How can he do it? This way: A farm of 160 acres would be 10,500 feet in circumference. Now plant walnut trees four feet apart all around it and you will have 2,625 trees, which will be worth \$25 apiece in 20 years. Again, a farmer can set all his sloughs, low places and all hog pastures into black walnuts. Two thousand handsome walnut trees growing on a farm would be worth \$50,000 in 20 years, and would not interfere with the farm at all.

Orange raising in Florida will not pay half so well as as black walnut raising in Illinois. "How should black walnut be planted?" I asked Mr. Bates, a nurseryman at Whitehall, Ill. "The easiest way," he said, "is to strike the ground with a common hammer in the fall, make a round hole two inches deep and drop the walnut in. It will cover itself with leaves and dirt. The debris over the kernel will be so light that the sprout will have no trouble in finding its way out." "What would you do after they come up in the spring?" "I'd go around and put a shovelful of saw dust, tan-bark, grain chaff, or straw around each sprout. This will keep the roots damp and kill the grass or weeds around the roots. A boy could plant 1,000 trees in a day in this manner. I'd plant them twice as thick as I need them and thin them out.—*Chicago Tribune*.

Canadian and U. S. Duties.

The *Northwestern Lumberman* says—"American lumbermen who are seeking investments in Canadian timber limits, located with special reference to bringing the logs to this country to be sawed, will do well to bear in mind the fact that the Canadian Government imposes an export duty of \$1 per thousand put upon all pine and spruce logs taken out of its domain, which is equivalent, of course, to an addition of that figure to the cost of stumpage. This fact does not seem to be very well or generally understood on this side of the line. As matters now stand, Canadian pine must pay a duty anyhow before it can be used on American soil. If sawed in Canada, our protective tariff imposes a fine of \$2 per thousand upon the importer; or if brought in the log the other government gets \$1; the speculator taking either horn of the dilemma he may choose. There is no Canadian export duty on sawed lumber, and no American import duty on the logs.

The *Northwestern Lumberman* says:—The "Lumber Line" of the Chicago, St. Paul, Minneapolis & Omaha railway is assuming vast proportions. The efficient manager of the line, Mr. R. T. Flournoy, of St. Paul, forwards to the *Lumberman* a detailed statement of the lumber that will be shipped the present season, and it foots up in the aggregate 397,500,000 feet. Last year the Chicago, Burlington & Quincy road hauled 358,500,000 feet out of Chicago, and it is generally supposed that no other road carried as much, but evidently it will be obliged to hand over the biscuit to its contemporary.

LIVERPOOL STOCKS.

We take from the *Timber Trade's Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on June 30th, 1881 and 1882, and also the Consumption for the month of June, 1881 and 1882:—

	Stock, June 30th, 1882.	Stock, June 30th, 1881.	Consumption for the month of June 1882.	Consumption for the month of June, 1881.
Quebec Square Pine.....	40,000 ft.	421,000 ft.	50,000 ft.	153,000 ft.
Waney Board.....	112,000 "	170,000 "		
St. John Pine.....	3,000 "	3,000 "		2,000 "
Other Ports Pine.....	22,000 "	39,000 "	3,000 "	9,000 "
Pitch Pine, hewn.....	976,000 "	767,000 "	190,000 "	96,000 "
" sawn.....	617,000 "	471,000 "	169,000 "	105,000 "
" planks.....	100,000 "	85,000 "	23,000 "	43,000 "
Red Pine.....	9,000 "	39,000 "	5,000 "	2,000 "
Dantzig, &c., Fir.....	71,000 "	124,000 "	42,000 "	72,000 "
Sweden and Norway Fir.....	4,000 "	9,000 "		
Oak, Canadian.....	102,000 "	331,000 "	62,000 "	44,000 "
" Planks.....	76,000 "	142,000 "	58,000 "	80,000 "
" Baltic.....	49,000 "	90,000 "	4,000 "	6,000 "
Elm.....	30,000 "	27,000 "	3,000 "	
Ash.....	5,000 "	8,000 "	4,000 "	2,000 "
Birch.....	22,000 "	100,000 "	42,000 "	23,000 "
Greenheart.....	64,000 "	48,000 "	20,000 "	8,000 "
East India Teak.....	83,000 "	8,000 "	13,000 "	
Quebec Pine Deals.....	4,777 stds.	6,980 stds.	1,801 stds.	1,423 stds.
" Spruce.....				
N. B. & N. S. Spruce Deals.....	7,323 "	13,658 "	6,910 "	7,143 "
" Pine.....	260 "	679 "	51 "	100 "
Baltic Deals.....	1,601 "	4,341 "	719 "	689 "
" Boards.....	73 "	800 "	51 "	100 "
" Flooring Boards.....	2,720 "	3,652 "	645 "	1,031 "

THE TANITE CO.

The *Jeffersonian*, of Stroudsburg, Pa., says Some months ago the Tanite Company received an order from one of the foreign governments for a solid emery wheel 30 inches in diameter and 8 inches in thickness. A wheel of this size weighs about 800 lbs., and its price is \$500. A few weeks since the company received a cable order from their Liverpool House for a special machine on which to run this immense wheel. They are now constructing this machine, which is the largest they have yet built. It is from an entirely new design and will weigh when complete 2,200 pounds. When finished, illustrations of this machine will appear in some of the scientific papers.

The Company received last week an additional order from the same government for nearly \$3,000 worth of solid emery wheels. Notwithstanding the recent enlargement of their works and increase of hands, they are kept busier than ever.

RAFTS AT QUEBEC.

The *Quebec Chronicle* has the following list of rafts arrived:—

- July 10—Lattimer & MacNamara, staves, Woodfield.
- Flatt & Bradley, staves, Point-au-Pizouau.
- A. McLean, white and red pine, Dobell's (Sillery) cove.
- Ross Bros., deals, New Liverpool cove.
- Gordon & Co., board pine, New Liverpool cove.
- Flatt & Bradley, oak, elm, ash, etc., St. Michael's cove.
- McLachlin Bros., white and red pine, Cap Rouge.
- July 11—Ferd. Fortier, deals, St. Appolinaire.
- D. & J. Maguire, deals and boards, Cap Rouge.
- Collins Bay Rafting Co., pine, etc., New Liverpool.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c., measured and culled to July 14:

	1880.	1881.	1882.
Waney White Pine.....	770,081	512,633	503,101
White Pine.....	1,145,993	1,626,058	1,444,343
Red Pine.....	289,446	391,542	178,784
Oak.....	749,334	1,142,641	551,356
Elm.....	682,997	642,200	334,833
Ash.....	153,330	231,251	143,685
Basswood.....	00	3,000	256
Butternut.....	285	330	1,725
Tamarac.....	15,065	4,435	1,332
Birch and Maple.....	625,225	121,101	283,896
Masts.....			33 pcs
Spars.....			
Std. Staves.....	673.20	125.035	202.3216
W. I. Staves.....	204.1.0.12	178.1.3.21	518.5.2.11
Br. Staves.....			67.1.0

ALEXANDER FRASER,
Deputy Supervisor.

Quebec, 14th July, 1882.

A CORRESPONDENT of the *Northwestern Lumberman*, writing from St. Paul, Minn., says:—I see plenty of Chicago lumber passing here going in the direction of the great Northwest. Getchell, Armour & Co., of Chicago, are shipping heavily this way.

Chips.

The mills of Nashville, Tenn., will run during the night, while the hot weather lasts.

OWENSBORO, Ky., has a curious freak of nature in the shape of a catalpa branch growing out of the side of a locust tree.

A SALE of 700,000 feet of black ash lumber was made at Rochester, N. Y., recently, at \$16 a thousand. Another sale was reported of 200,000, at \$15.

THE Duluth Lake Superior News of July 13th says:—There are one hundred cars of lumber on the docks here awaiting shipment to Winnipeg, owing to the scarcity of cars.

An exchange says that forty thousand acres of timber land in the Duluth district, worth \$40 an acre, have been stolen from the Government by speculators at \$1.25 an acre.

THE Michigan Iron Works, at Cadillac, Mich., is to construct one of its new style engines and 50 logging cars for Nicholas, Church & Co., of Groenville, Mich. The contract amounts to \$7,000.

A SHIPMENT of lumber from Shreveport, La., was made lately to the state of Chihuahua, Mexico, 170 miles south of El Paso. The cars were loaded at the mill grounds, and were run directly to their destination—a fact worthy of notice in latter day American-Mexican progress.

THE Chicago Northwestern Lumberman says: Charles Merrill, of Bay City, Mich., has been to the Spanish River district, Ont., for the purpose of locating a mill, which Folsom & Arnold, of Bay City, will build for him the coming fall. Mr. Merrill has recently purchased pine land on Spanish River.

AT Oswego, N. Y., E. H. Barnes, who manufactures box shooks, cuts up 13,000,000 or 14,000,000 feet every year in that line of manufacture. A. W. Wright, a manufacturer of sashes, doors and blinds, uses up from 2,000,000 to 3,000,000 feet of lumber in his business, keeping 75 hands busy all the time.

THE Midland Republican says:—David Ross is superintending a run of 1,500,000 feet of logs for W. W. Sutherland, of East Saganaw. They are now passing Midland and make a continuous string in the river over 20 miles long. Mr. Ross also has charge of a run from the Chippewa and Pine river which started out last Friday.

THE ship Syren, which recently loaded deck plank and spars at Seattle, W. T., for Bath, Me., consigned to Goss & Sawyer, had 130 sticks on board. The ship could not stow as many spars as was expected, so the deck plank, some of which were of great length, were taken as small stowage. The Syren received 315,000 for the voyage.

THE jam in the St. Croix, Minn., is assuming formidable proportions, extending now to or above Marine. The logs are seemingly inextricably mixed and piled seven or eight feet high. Communication is kept up, however, with the up-river towns, the freight and passengers being conveyed around the jam in wagons and carriages. It will probably be several weeks before the river is clear of logs.

THE Ottawa Citizen, of July 11th, says:—It will be upwards of four weeks before Hurdman's drive on the Petowawa will be out of the river. Last Thursday evening the drives of Messrs. Perley & Patten and Captain Young were at the last slide, Petowawa, and are out now. The last of Messrs. Perley & Patten's will be out this week. The rafts of Messrs. Perley & Patten and Young were ready for Quebec yesterday.

THE Quebec Chronicle, in an article on "The Future of Quebec," says:—The timber trade is no longer a staple industry of Quebec, nor are we building wooden vessels to sell in the British and other markets. The fact is, times have changed. The steamer and the ironclad have succeeded the old-fashioned square-rigged wooden-wall. With regard to timber, the trade has also changed materially. Dressed lumber is still sold, and there are shipments of it from this port, but the competition is so brisk, and the number of markets so many, that the profits have declined materially. Still, it is by no means yet a lost industry entirely.

WHEN the Sturgeon Bay, Wis., canal was dug, the greatest depth excavated was 45 feet. Down there a red cedar was found and hoisted out, and the stump of it now lies on the bank.

THE Liverpool correspondent of the Timber Trades Journal says the idea that the importation of Quebec yellow pine will be comparatively small for this year, gains strength daily, looking at the high prices demanded there, and the improved quality of much of the pitch pine now imported, will tend greatly to divert attention from the former wood to the latter, especially as there is so great a difference in the market value.

THE Timber Trades Journal, of July 8th, says:—We notice that last year the Howling was a day later from Quebec than she was this season, but it is nevertheless a somewhat singular coincidence that her arrival should be so near to time two years in succession, and seems to imply that the spring fleet will not be so late as was expected. It is true last year the Progress had previously arrived, but she anticipated the first-named ship by only a few hours.

THE business of building tenement houses in sections, ready for transportation and erection at the point of destination is on the increase, and proving eminently successful. A firm in Quebec has recently shipped in sections five hundred wooden houses to Panama, where they are to be erected and used by the contractors of the canal being constructed. The same firm has also manufactured a number of houses for shipment to various points along the line of the Canada Pacific railroad.

A CORRESPONDENT of the Parry Sound North Star says:—I was surprised to find that the "sills" or "stringers" being supplied for the new sidewalk on Seguin street were mostly hemlock timber. Now anyone who has had even a small experience with hemlock knows that it will not last in that position more than two or three years. Why not put in cedar and make a good job while they are about it? I am sure there is plenty of good cedar to be got. White pine itself would be far preferable to hemlock.

THE Emerson International says:—Fifteen miles east of the Red River at Emerson, the line of continuous forest is reached—woods of almost impenetrable thickness, comprising all the varieties of the Lake Superior region. West of the Red River to the Pembina Mountain the various streams which drain this region sustain a fine growth of oak, poplar, elm, cottonwood and the ash-leaved maple, Southern Manitoba being much more heavily timbered than the central or northern portion. Timber culture on the prairie is already carried on to a considerable extent, and in a few years quite a large quantity will be raised on "Tree Claims."

A DESPATCH from Halifax, N. S., dated July 12, says that D. C. Connor, who for two years has been doing rather an extensive business at Kingston station, Kings County, as general merchant, hotel keeper and lumberman, has failed with estimated liabilities of about \$40,000. Connor has been for some years employed by a large Halifax firm in getting out logs for their mill at Bridgewater. About a week ago he received a cheque from the above firm for ten or twelve thousand dollars, with which to pay the men employed by him during the winter. He drew the money from the bank at Bridgewater, and instead of paying the men, drove to Annapolis, and, it is thought, left in the steamer for the United States. Several local men lose heavily.

THE Montreal correspondent of the Canadian Manufacturer, under date of July 5th, says:—Within the past ten days or so, three sailing vessels have left port with deals for West Hartlepool, England, one for London, and one for Cardiff. Two vessels have also left with cargoes of lumber for South America. Shipping culls are scarce, and sales are reported at \$14 in large lots, and at \$15 to \$16 for jobbing lots from yards. The sale of a lot of ash for the American market is reported at \$20, and sales of red and white pine have taken place at \$20 to \$25, a lot of very choice bringing as high as \$30 per M. feet. There is still a good demand for white pine for Winnipeg, several car loads having been shipped to that city during the week. The yards are being filled up with new season's hard and soft lumber, and prices remain generally firm.

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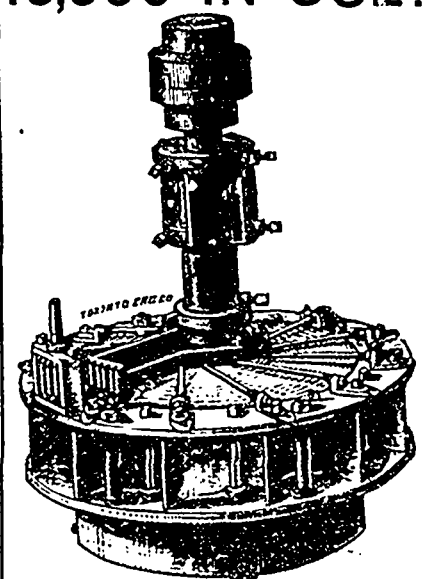
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Agricultural Implements.

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Tin, Sheet Iron and Copper Ware for SHIP and HOUSE use.

Market Reports.

TORONTO.

From our own Correspondent.

JULY 24.—The building trade here still continues excessively dull, and as a consequence the local sale for all kinds of building material is dull also, in fact one well stocked retail yard would easily meet all the demands of the retail trade at present.

There are a few points which it would be well for our manufacturers to note if they wish to cultivate trade with the American markets, and that is to manufacture their lumber as carefully as the American mill men.

Table with columns for item description and price. Includes 'Mill cull boards and scantling', 'Shipping cull boards', 'Scantling and joist', 'Cutting up planks to dry', 'Sound dressing stocks', 'Picks Am. inspection', 'Three uppers, Am. inspection'.

Table with columns for item description and price. Includes '11-inch flooring, dressed', '11-inch rough', '11-inch dressed', '11-inch undressed', 'Beaded Sheeting, dressed', 'Clayboarding, dressed', 'XXX sawn shingles', 'XX sawn shingles', 'Sawn Lath'.

MONTREAL.

From our own Correspondent.

JULY 24.—Trade has been fair since last report although not quite so rushing as in May and June, purchasers are only buying for immediate wants, which on the whole are pretty heavy as there are a large number of buildings going up both in the city and in the neighborhood.

which is selling very fast and stocks do not accumulate much. In Quebec the square timber trade is rather slack, as they have no vessels to take the timber away.

The barque "Cupid" which sailed from this port on the 23rd of June with 541,213 feet of lumber for Monto Video, went ashore on the Manicoggan shoals, but after throwing her deck load overboard was got off, and has returned to Quebec to discharge and repair, after which she will again proceed on her voyage.

Business is quiet and prices have favoured buyers; 1st quality Quebec deals, (Pine) are quoted £19 @ £20 10s. per standard; 2nd quality do, £13 10s. @ £14 10s.; 3rd quality do, £9 10s. @ £9 15s.

CORDWOOD.

The market continues to be well supplied both by river and road, but the demand continues to be very slack, and at the present high prices it will likely be soon superceded by coal.

OTTAWA.

From our own Correspondent.

JULY 25.—The large trading in pine lumber now going on in the American markets will soon decrease the stocks on hand, and consequently our yards will have to be resorted to for a replenishment.

Mr. John Macdonald the superintendent of the slides at the Chaudiere, who is so well known by the lumbermen of this district and elsewhere, has been superannuated by the Government.

Mr. John Macdonald the superintendent of the slides at the Chaudiere, who is so well known by the lumbermen of this district and elsewhere, has been superannuated by the Government.

orage 60 cubic feet per piece, a great falling off. It is more difficult, lumbermen say, to get a raft of timber 60 feet average to-day than it was a few years ago to get one of seventy or seventy-five.

Messrs Grant & Miller have a splendid raft running the slides at present; as have also Messrs. Perley & Partee, and Young & Bronson.

The following rafts passed through the works mentioned during the week ending 22nd July:

Table with columns: Rafts, Owners, Criba, Pieces. Includes J. O. B. Latour, D. Moore, J. & B. Grier.

Table with columns: Rafts, Owners, Criba. Includes Young & Bronson, Perley & Partee, Richard White.

LEFT OTTAWA SINCE 18TH JULY.

Table with columns: Rafts, Owners, Criba, W. P. R. T. Includes Wm. Mackey, H. Caldwell & Son, Oliver Latour, David Moore.

THROUGH GATINEAU BOOM SINCE 18TH JULY

Table with columns: Owners, Sags, Sq., Ft., Pine, R. R. Ties. Includes G. B. Hall & Co., W. C. Edwards & Co, Rathburn & Son.

ST. JOHN, N. B.

From our own Correspondent.

JULY 22.—Owing to the low prices still ruling in Great Britain, our lumber market still remains dull, and deals that are arriving (that are not already contracted for) are selling slowly at about \$9.50 per M, being about \$1.00 less than they were one month ago.

Freights still remain firm at higher rates, but very few vessels have been chartered, owing to the great advance in grain freight in New York, which is drawing most of the available tonnage there.

In the present position of the market it is difficult to give reliable quotations of freight, but the rates talked of are as follows:—

Table with columns: Liverpool, Bristol Channel, Ireland. Includes 60s. 3d. c. d., 60s. 6d. c. d., 60s. 9d. c. d.

VESSELS IN PORT THIS DATE.

Table with columns: Vessel name, origin, date. Includes Belle O'Brien, Arizona, Clarence, Belle, Assyria, Argus, Adria, Harold, Quaco, Lord Derby, G. B. Doane, Gloire, New York, Lottie Stewart, Lepreaux, Callope.

Table with columns: Deals, Pine, Birch, M. S. ft. Tons. Includes 95,703, 763, 2,306, 165,279, 350, 3,500.

Table with columns: Ships, Tons. Includes 39, 23,600, 21, 14,131.

CHICAGO.

JULY 22.—The Northwestern Lumberman says:—Notwithstanding the large amount of lumber reported, the cargo market at Franklin street has had one of the slimmest weeks of the season.

be interpreted as giving an index of the feeling on the part of the buyers, indicating, as it does, a readiness to take all desirable offerings at full quotations, and even a slight advance.

CARGO QUOTATIONS.

Table with columns: Short dimension, green, Dry, Long dimension, Boards and strips, No. 2 stock, No. 1 stock, No. 1 log run, culls out, Standard shingles, *A, Clear, Lath.

Receipts and stock on hand of lumber and shingles, for the week ending July 20, as reported by the Lumberman's Exchange:—

Table with columns: Receipts, Lumber, Shingles. Includes 1882, 1881.

Table with columns: Receipts, Lumber, Shingles. Includes 1882, 1881.

Table with columns: Increase, Lumber, Shingles. Includes 121,157,000, 95,061,000.

Table with columns: Increase, Lumber, Shingles. Includes 121,157,000, 95,061,000.

Table with columns: Lumber, Shingles. Includes 443,039,546, 352,391,329, 347,346,419.

BOSTON.

JULY 22.—The Journal of Commerce says:—The demand is of a steady character, but at the moment the tendency of general prices is to easiness.

CANADA PINE.

Table with columns: Selects, Dressed, Shelving, Dressed, 1sts, 2nds, Dressed Shoppers, Dressed Box, Sheathing, 1st quality, 2nd.

ALBANY.

Table with columns: Quotations at the yards are as follows:— Pine, clear, Pine, fourths, Pine, selects, Pine, good box, Pine, 10-in. plank, each, Pine, 10-in. plank, culls, each, Pine boards, 10-in., Pine, 10-in. boards, culls, Pine, 10-in. boards, 16 ft., Pine, 12-in. boards, 10 ft., Pine, 12-in. boards, 13 ft., Pine, 11-in. siding, select, Pine, 11-in. siding, common, Pine, 1-in. siding, select, Pine, inch siding, common, Spruce, boards, each, Spruce, plank, 1 1/2-in., each, Spruce, plank, 2-in., each, Spruce, wall strips, each, Hemlock, boards, each, Hemlock, joist, 4x6, each, Hemlock, joist, 2x4, each, Hemlock, wall strips, 2x4, each, Ash, good, Pine, second quality, Cherry, good, Cherry, common, Oak, good, Oak, second quality, Basswood, Hickory, Maple, Canada, Maple, American, per M., Chestnut, Shingles, shaved, pine, extra, sawed, clear, cedar, mixed, cedar, XXX, hemlock, Lath, hemlock, Lath, spruce, Lath, pine.

TONAWANDA.

Table with columns: CARGO LOGS—SAGINAW INSPECTION. Includes Three uppers, Common, Culls.

BUFFALO.

Table with columns: We quote cargo lots:— Uppers, Common, Culls.

OSWEGO, N.Y.

Three uppers.....	\$40 00	349 00
Pickings.....	30 00	33 00
Fine, common.....	20 00	25 00
Common.....	14 00	17 00
Culls.....	12 00	16 00
Mill run lots.....	18 00	26 00
Sidings, selected, 1 inch.....	33 00	33 00
2 1/2 inch.....	35 00	40 00
Mill run, 1x10, 13 to 18 feet.....	17 00	25 00
selected.....	25 00	35 00
Strips, 1 and 1 1/2 inch mill run.....	14 00	20 00
culls.....	11 00	14 00
1x6 selected for clapboards.....	25 00	35 00
Shingles, XXX, 18 inch, pine.....	3 75	3 00
XXX, 18 inch, cedar.....	3 00	3 50
Lath.....	60	2 25

LIVERPOOL.

The *Timber Trades Journal* says:—"The importations of spruce deals continue to come forward freely, but the market is not affected thereby, for there is evidently a disposition to store cargoes rather than submit to any further decline in prices, and, in point of fact, several cargoes are being stored on account of the shippers, those which are being sold as they arrive being principally cargoes brought by steamers under charter with a few days to unload and heavy demurrage.

LONDON.

The *Timber Trades Journal* says:—"Yellow pine is still moderately represented, though the expected arrivals from Quebec will probably add considerably to the stocks here. There is no telling, however, so much now goes overside that the mere fact of recording the arrival in dock of a cargo does not necessarily imply that it will add to the stocks, though it is not an unfair inference to draw. Of the Ocean King's cargo, we understand a very large proportion was delivered to lighters, and would not come into the dock stocks at all."

GLASGOW.

The *Timber Trades Journal* says:—"A public sale of deals was held here on the 29th June, by Messrs. Allison, Cousland & Hamilton. The attendance was fair, and a good portion of a fresh-imported cargo was disposed of.

At the close of the half-year stock-taking, chiefly by the largest consumers, is general, and on that account probable sales are not so heavy."

CARDIFF.

The *London Trades Journal* says:—"There is still a moderately good demand for the Bristol Channel, and local merchants are seeking tonnage in average quantities from the Baltic and White Seas. Several cargoes are also on the way from Canada, and some of them are overdue. Notwithstanding this, the trade for the heavy classes of timber remains not so bright as could be wished, and local traders are not benefited to the extent which a more active enquiry would ensure.

STOCKS ON THE CLYDE.

The following is a comparative statement of the leading wood goods on hand at Clyde Ports, 31st March and 30th June, 1882:—

	30th June.	31st March.
Quebec Waney boardwood.....	7,007	11,844
yellow pine timber.....	7,082	15,081
red.....	3,682	5,311
elm.....	2,398	3,409
oak.....	2,772	4,330
ash.....	250	502
Birch, all sorts.....	114	364
Penascola pitch pine hemn.....	11,020	9,382
sawn.....	16,968	10,157
planks.....	1,102	1,659
Demerara greenheart.....	2,021	440
(St. Petersburg standards, 165 cub. ft.)		
Quebec yellow pine deals.....	1,796	2,400
red.....	149	191
spruce.....	349	167
Lower Port Spruce.....	910	477
pine.....	234	475

EXPORTS FROM NEW YORK.

Statistics of exports of lumber from New York show that the quantity during the first six months of 1882, is less by 8,421,237 feet than during the same period of 1881. Exports during June were as follows:—

	FEET.
To West Indies.....	2,572,731
South America.....	2,682,024
East Indies.....	613,771
Europe.....	20,500
Total.....	6,070,226
Months of 1882, previous.....	20,756,669
Total since January 1, 1882.....	33,553,593
Same time in 1881.....	41,977,832

TIMBER MOVEMENTS.

The *Ottawa Citizen* says:—"During the week ending the 15th July the undermentioned timber passed through the works stated:—

THROUGH CALUMET SLIDES.

Rafts.	Owners.	Cribs.	Pieces
1	David Moore.....	78	1,020
1	Grant & Miller.....	66	1,616
1	Perley & Pattie.....	142	3,250
1	T. & W. Murray.....	69	1,730
1	Young & Bronson.....	64	1,738
1	Richard White.....	120	3,000
0		530	13,460

LEFT MADAWASKA SLIDES ON 16TH JULY

Owners.	Sawlogs.
Gilmour & Co.....	250
J. R. Booth.....	24,000
E. B. Eddy.....	1,200
	25,450

THROUGH THE CHATS SLIDE SINCE 15TH JULY

Rafts.	Owners.	Cribs.
1	Wm. Mackey.....	110
1	B. Caldwell.....	116
2		226

LEFT OTTAWA SINCE 16TH JULY.

Owners.	Cribs.	Pieces	W' P. R. P.	M'rd
J. B. Dickinson.....	138	1,709	930	
A. & P. White.....	80	1,700	221	
do.....	160	3,724	80	
Soreny & Fraser.....	81	1,480	930	
McCoshen & Fraser.....	127	3,103	59	1,227
R. Campbell & Son.....	110	80	1,577	1,694
Costello Bros.....	85	1,579		11
R. Campbell & Son.....	127	2,324	1,112	
R. & W. Conroy.....	703	2,227	122	
C. & W. Mohr.....	89	1,412		808
R. & W. Conroy.....	87	1,779	317	
Fraser & Curry.....	103	4,128	33	78
B. Caldwell & Son.....	110	2,680	112	
Oliver Latour.....	94	1,181	614	
	1,679	30,313	6,119	3,815

THROUGH GATINEAU BOOM SINCE 10TH JULY.

Owners.	Sawlogs.	R. R. Ties.
G. B. Hall & Co.....	14,530	
W. McClymont & Co.....	4,343	
Hamilton Bros.....	6,633	
J. McLaren & Co.....	12,935	
W. C. Edwards & Co.....	1,071	
Gilmour & Co.....	2,374	
H. D. Rathburn & Son.....		10,904
Hebron Harris.....		3,059
	40,942	19,063

THROUGH CARILLON DAM WEEK ENDING 15TH JULY.

Rafts.	Owners.	Cribs.
1	A. McLean.....	267
1	Barnett & McKay.....	134
1	H. Franklin & Son.....	142
1	Wm. Craig.....	26
1	John Winsor.....	40
1	Alex. Fraser.....	50
1	McLean & Co.....	84
1	Wm. Mason.....	59
1	Bell & Hickey.....	59
9		891

RAFTS ARRIVED.

The *Quebec Chronicle* of July 21st gives the following lists of rafts &c., arrived:—

July 15.—Collins' Bay Co., oak, etc., sundry coves.

D. D. Calvin & Co., oak, pine, etc., Gilmour's cove.

Barnet & Mackay, red and white pine, Cape Rouge.

Fraser & McCoshen, red and white pine, St. Lawrence Docks.

D. D. Calvin & Co., oak, pine, &c., sundry coves.

July 17.—A. McLean, pine, etc., Gilmour's Indian cove.

July 20.—A. McLean, white pine, etc., In-Cove West.

A. Fraser, white and red pine, St. Lawrence Docks.

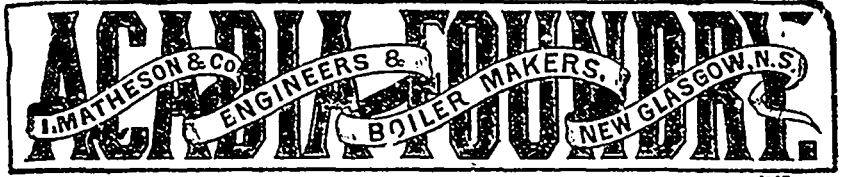
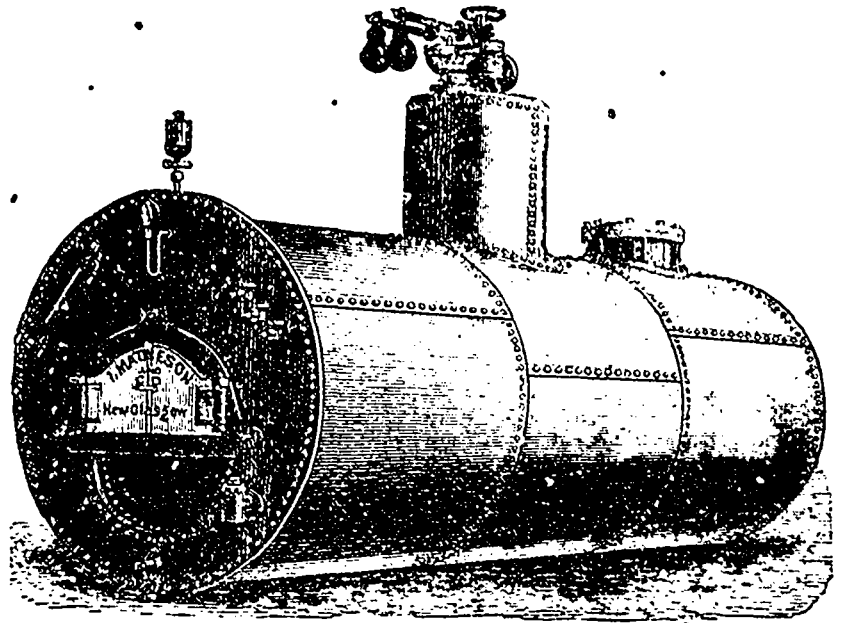
Wm. Simpson, lathwood, Q. Warehouse Co.

R. White, white pine, etc., Dalhousie cove.

Cook Bros., wanoy white pine, elm, etc., St. Michael's cove.

Brush Fires.

The *Campbellford Herald* says every municipality ought to adopt the action of the Brock township council, the members of which recently passed a by-law for regulating the burning of brush, stumps, etc. The enactment provides that no stump, wood, logs, brush, straw, shavings, or refuse, shall be set on fire by any person or persons in the open air within the municipality in or during the months of July and August in any year; nor at any other time or times during the year until after eight days' notice has been given to the owner or occupant of the adjoining property. Any person contravening the provisions of this by-law shall, in addition to any damage which may occur, be liable to a fine of not less than \$2 or more than \$50 upon conviction before a Justice of the Peace.



JONES & SON,
Wholesale Lumber & Timber Dealers
39 Broadway, NEW YORK.

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

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

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

Rapid Building.

The rapid increase of population in Manitoba has stimulated the inventive geniuses of the Dominion to contrive houses that may be portable and quickly put up. L. Forest, of Belleville, Ont., has planned one that is in three foot sections, and dovetails together. A house, for a hotel or boarding establishment, has been put up at Winnipeg, over 100 feet long, two stories high, and divided into apartments sufficient to accommodate 250 guests. The foundation was laid on Tuesday and the house was completed Thursday afternoon following. A modern Rome could thus be built in a day, with lumber and hands enough. A company has been formed at Belleville to manufacture the sections for these ready-made houses.

The *Emerson International* of July 20th says: There are now twenty-three million feet of logs in Red River floating down to Winnipeg. Eight million feet of these logs are from the Otter Tail River (the source of Red River) and the balance from Red Lake River. The rear of the Otter Tail drive passed Fargo some days ago, and the other drive, in charge of 120 men, is between Emerson and Grand Forks. Logs commenced passing here on Tuesday of last week, and men with pike poles are constantly employed at the bridge, guiding the logs between the piles of the temporary structure, so as to prevent a jam. The logs belong to Winnipeg mill

owners, who purchased them at \$17 per M feet. Carney & Watson, proprietors of the Emerson saw mill, endeavoured to secure some of them, but were unsuccessful.

LEATHER BELTING.

Chipman, Renaud & Co.

MANUFACTURERS OF

LEATHER BELTING,

FIRE ENGINE HOSE

LACE LEATHER, &c.

174 & 126 Queen St.

MONTREAL

PAPER FROM WOOD.

The *British and Colonial Printer and Stationer* gave, in a recent issue, a description of a new process for treating wood to obtain fibre suitable for papermaking, invented by Mr. Karl Daniel Ekman, of Sweden. The invention consists in boiling wood under a pressure with a solution containing sulphurous acid and magnesia in certain proportions, and under certain conditions, also in blowing off gas and steam during the process of boiling.

The writer describes the process as applied to Swedish white fir of good quality and fine grain previously freed from bark and knots, and cut into pieces of suitable form and size, and subsequently crushed between rollers so as to render the wood easily permeable by the liquid solution in order to produce fibre of the best quality for papermaking; but the mode of preparation may be varied. White fir and trees of the same order are especially suitable, as they give long and strong fibre, very clean, and similar in its properties for papermaking to that of flax; and this kind of wood is comparatively cheap and abundant in many countries.

The raw material of wood is selected with more or less care, according to the purpose for which it is required, but when a superior quality of pulp has to be produced, all exceptionally resinous and hard pieces of wood, as well as those damaged by rot, are thrown out. The fibre resulting from the treatment of the wood is suitable for good ordinary printing paper, and may be made suitable for superior papers by means of treatment with bleaching powder. The resulting fibre may be suitable for coarser kinds of paper, such as millboards, papier mache, and similar materials. The invention can be easily applied to other kinds of wood besides the white fir.

GUMPTION.

Mr. Edward Atkinson, of Boston, recently addressed the members of the Golden Branch Society, of Phillips Exeter Academy, upon "What Advantage Does an American Boy Possess?" Mr. Atkinson urged that the young who are soon to become the workers and controllers in the business of life should be careful not to become one-sided, and not to lose the "gumption" which every Yankee boy ought to possess, and which does not form a part of the curriculum of the school or college, but is developed or lost in that part of the process of education which is outside the books and independent of the teacher. Gumption is that power of applying the work of the hand and the brain together under the quick application of the will, which makes a boy or man ready for any emergency, and enables him to decide at a glance, or with a single thought, the right way of doing something. In the old time, although the organization of the schools was not as perfect as it is to-day, and although the teachers were perhaps not as competent as those of modern time, while the variety of instruction was far less, there was a far less number of idle and capable men among the graduates of schools and colleges in proportion to the whole number of pupils than there is to-day. The necessity which was imposed on the rich and poor alike to do some part of the work of life with their own hands, while they were attempting to develop their mental powers, worked in the direction of that readiness and versatility which we call gumption. It is obvious to men who have been engaged from very early years in the active work of life, and have been charged with the duty of selecting men to fill important places, that the number of school or college graduates who have been adequately prepared to apply their instruction to immediate use constitutes a painfully small proportion of the whole number. It may be admitted that the only true result of school and college training is to enable a young man to know when and how to begin the real education which must form part of his life and which will not end except with life, but it ought not to happen that the method of preparation is so ill-advised that it disqualifies the graduate in a measure for the work he must do. Mr. Atkinson advocated for boys and young men in school and college an organized system of sports as a means of developing manual dexterity, urging the development of hand and brain together. His address throughout was an argument in

favor of students endeavoring to acquire not only that knowledge that will enable them to design, but the gumption that facilitates the ready application of knowledge to the execution of design in whatever work may demand their attention and effort.

TREE BURIAL IN NEW ZEALAND.

The recent fall of an enormous puketea tree near Opotiki, New Zealand, disclosed the fact that the hollow interior from the roots to the ground, had been filled with human bodies. A confused heap of human skeletons burst out of the butt of the tree when it fell. A local paper says: "A more extraordinary sight than this monarch of the forest lying prone and discharging a perfect hecatomb of human skeletons can scarcely be conceived. Some are nearly perfect, while others are mixed up in a chaotic mass of heads, hands, feet and arms, indiscriminately. All the Maoris here seem to have been quite unaware of this natural charnel house, and declare that it must have happened long before their or their father's time. Indeed, the appearance of the tree fully justified the supposition that it must have been some hundreds of years since this novel family vault was filled with its ghastly occupants."

LUMBER FOR EMIGRANTS.

The *Mississippi Valley Lumberman*, of Minneapolis, says of the immense influx of emigrants now in progress:—"The tide of European emigration which is pouring into this country this spring far exceeds anything which has ever occurred in our history. Northern Europe furnishes the bulk of these new comers, and as emigration preserves its latitude, the northwest is receiving the lion's share of these people who are to help to develop the resources of this new world. Minnesota, Dakota and Manitoba will catch more than any other three states. This is especially important to the lumbermen of this country. Every family of emigrants coming in means more lumber to build houses, barns, fences, etc., to be sawed. This marvelous growth in population must be met by an equal enlargement of the lumber manufacturing. The chief difficulty now seems to be in finding means to get the lumber carried to these people.

A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of Zoposa, from Brazil, the new and remarkable compound for cleansing and toning the system, for assisting the digestive apparatus and the liver to properly perform their duties in assimilating the food. Get a ten cent sample of Zoposa, the new remedy, of your druggist. A few doses will surprise you.

EARS FOR THE MILLION

Foo Choo's Balsam of Shark's Oil

Positively Restores the Hearing, and is the only Absolute Cure for Deafness Known. This Oil is abstracted from peculiar species of small White Shark, caught in the Yellow Sea, known as *Carcharodon Rexiplexus*. Every Chinese fisherman knows it. Its virtues as a restorative of hearing were discovered by a Buddhist Priest about the year 1410. Its cures were so numerous and many so seemingly miraculous, that the remedy was officially proclaimed over the entire Empire. Its use became so universal that for over 300 years no Deafness has existed among the Chinese People. Sent, charges prepaid, to any address at \$1.00 a bottle.

Hear What the Deaf say!

It has performed a miracle in my case. I have no unearthly noises in my head and hear much better. I have been greatly benefited. My deafness helped a great deal think another bottle will cure me.

"Its virtues are UNQUESTIONABLE and its CURATIVE CHARACTER ABSOLUTE, AS THE WRITER CAN PERSONALLY TESTIFY, BOTH FROM EXPERIENCE AND OBSERVATION. Write at once to HAYLOCK & JENNEY, 7 Dey Street, New York, enclosing \$1.00, and you will receive by return a remedy that will enable you to hear like anybody else, and whose curative effects will be permanent. You will never regret doing so."—*Editor of Mercantile Review.*

To avoid loss in the Mails, please send money by REGISTERED LETTER. Only imported by HAYLOCK & JENNEY, (Late HAYLOCK & Co.) SOLE AGENTS FOR AMERICA. 7 Dey St., New York. 111-w23-ly



Has Facilities
—FOR—
DOING as GOOD WORK
—AND AS—
PROMPTLY
As any Engraver in Canada
—
ESTIMATES FURNISHED.

MILL SUPPLIES.

Extra Stretched and Patent Smooth Surface
RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.
HOYT'S CELEBRATED LEATHER BELTING.
COTTON BELTING, for Flour Mills, &c., Superior Quality.
DISSTON'S CELEBRATED MILL SAWS.
Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Page's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. Quotations furnished for any part of Canada. 1121
ESTEY, ALLWOOD & CO., SAINT JOHN, NEW BRUNSWICK.

MACHINE OILS, ETC.

MCCOLL BROS. & Co.
TORONTO,
MANUFACTURERS and WHOLESALE DEALERS IN
Machine and Illuminating Oils

Four (4) Medals and Three (3) Diplomas awarded to them
in 1881, by the Leading Exhibitions of the Dominion.
SEND FOR PRICES, ETC. 512

Represents
No. 5 20-Horse Power
FIRE-PROOF
CHAMPION
SAWMILL
ENGINE
WITH
SECTIONAL
SAFETY
BOILER.

Build 4 Sizes Fire-Proof Champion Engines
6 H.P.
12 H.P.
16 H.P.
20 H.P.
WITH PLAIN OR SECTIONAL BOILER
If so ordered. We are testing an Engine every day. Intending purchasers are invited to call at our Works and thoroughly examine the Champion. We use KRUPP'S CELEBRATED BOILER PLATE, Every plate tested. Every boiler tested to 160 pounds, cold water pressure.
OVER 600 SOLD
in 5 seasons. The favorite everywhere. It has no equal.

The sectional safety boiler is manufactured expressly for the "North West" trade. This boiler is so arranged that it is readily taken apart in sections enabling purchasers to clean thoroughly every part of it and prevent burning out. We know from experience hence this is absolutely necessary with the alkaline waters of the great Western prairies. Largely used by the Pacific Railway Company and all the large Colonization and Rancho Companies.
ADDRESS WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.
Send for New Circular.

D. McLACHLAN & SONS,
 Manufacturers of all Descriptions of
STEAM BOILERS.
 SHIPS' WATER-TANKS. Repairing Punctually Attended to.
 1115 NORTH SLIP, ST. JOHN, NEW BRUNSWICK.

ROBERT W. LOWE,
 AUCTIONEER AND COMMISSION MERCHANT
 81 SANDS BUILDING, PRINCE WILLIAM STREET.

Cash advanced on Goods put in for sale. No Storage charged. All kinds of Merchandise Bought and Sold. New and Second-hand Furniture always on hand. Agent for Hazelhurst & Co's WINTHROP COOKING RANGES, WATERLOO WOOD STOVES, FRANKLIN, &c., &c.
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ADAM MCKAY,
 MANUFACTURER OF
Steam Engines and Boilers,
 AND ALL KINDS OF MACHINERY.
 Locomotives, Stationery and Marine Engines and Boilers, Girders, Heaters, Radiators, and all kinds of Steam and Brass Fittings and Sheet Iron Work, and dealer in all classes of Railway, Steamboat and MILL SUPPLIES.
 1119 144 Upper Water Street, HALIFAX N.S.

ROBERTSON'S
LIGHTNING CANT-DOG
 STEEL RING,
The Lightest, Cheapest and Most Durable Cant-Dog in the World.

PETER ROBERTSON,
 Chaudiere - - - Ottawa.



Farmers and Mechanics.

Provide yourselves with a bottle of *PAIN-KILLER* at this season of the year, when summer complaints are so prevalent; it is a prompt, safe, and sure cure. It may save you days of sickness, and you will find it is more valuable than gold. Be sure you buy the genuine *PERRY DAVIS' PAIN-KILLER*, and take no other mixture.

Concord, Ont., March 3, 1880.

I have been selling Perry Davis' Pain-Killer for the past six years, and have much pleasure in stating that its sale in that time has been larger than any other patent medicine that I have on my shelves, and in those years I have never heard a customer say aught but words of the highest praise in its favor. It is an article that seems to have combined in it all that goes to make a *first-class family medicine*, and as long as I have a house and store, Perry Davis Pain-Killer will be found in both.

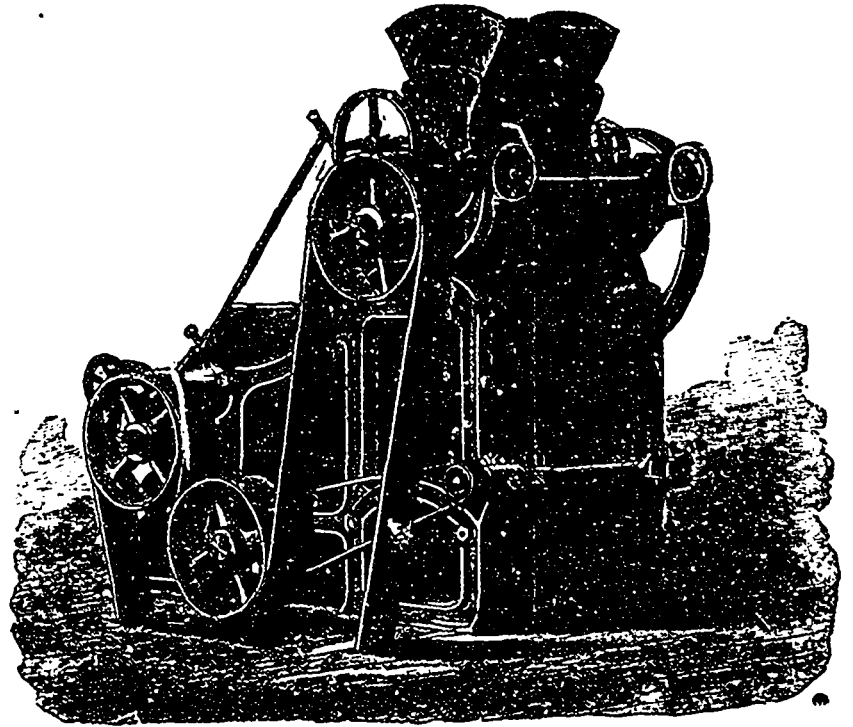
Yours, &c., J. E. KENNEDY

Beware of Counterfeits and Imitations.

Price 20c., 25c., and 50c. per bottle.

THE LATEST
For Flour Mills of 50 to 125 Barrels Capacity.

GRAY'S PATENT
Gradual Reduction Machine



The above engraving shows the driving side of Machine.

This Machine is by far the Best and Simplest Combined **ROLLER** and **SEPARATING** Machine made. It has two pairs of Corrugated Rolls and two Reciprocating Sieves.

The Grain passing down from the hopper and over the feed roll, passes through the first or upper pair of rolls and on to the first or upper sieve, where a complete separation of the product is made, the flour and middlings passing through the sieve and out from the Machine, and the large unreduced portion passing over the tail of the sieve and through the second or lower pair of rolls, when a second separation is made. Each Machine makes two reductions and two separations.

The Machine is perfectly adjustable, the same devices being used as on the simple roller machines. The same feed gate and roll is used, and the same adjustable and self-oiling boxes. The Machine is driven by a single belt. Both pairs of rolls can be spread simultaneously when feed is stopped. The Machine is **NOISELESS** and **DUSTLESS**.

These Machines are designed for use where economy in space is desirable, as they save the room required by two scalping reels and an elevator, thus affording to smaller mills the great advantages of the roller system at a comparatively slight cost. Send for particulars.

MANUFACTURED EXCLUSIVELY BY

MILLER BROS. & MITCHELL,

Nos. 110, 112, 114 and 116 KING STREET

MONTREAL.

Sole Licensees for Dominion for Gray's Patent Noiseless Roller Mills and Gradual Reduction Machines.

LOGGING IN THE NEVEDAS.

A correspondent of the *North-western Lumberman* says:—"A chute is laid from the river's brink up the steep mountain to the railroad, and while we are telling it, the monster logs are rushing, thundering, flying, leaping down the declivity. They come with the speed of a thun- derbolt and something of its roar. A track of fire and smoke follows them—fire struck by their friction with the chutologs. They descend the 1,700 feet of the chute in 14 seconds. In doing so they drop 700 feet perpendicularly. They strike the deep water with a report that can be heard a mile distant. Logs fired from a cannon could scarcely have greater velocity than they have at the foot of the chute. The average velocity is over 100 feet in a second throughout the entire distance, and at the instant they leap from the mouth their speed must be fully 200 feet per second. A sugar-pine log sometimes weighs 10 tons. What a missile! How the water is dashed into the air! Like a grand plume of diamonds and rainbows the feathery spray is hurled to the height of a hundred feet. It forms the grandest fountain ever beheld. How the waters foam and seethe and lash against the shore! One log, having spent its force by its mad plunge into the deep waters, has floated so as to be at right angles with the path of the descending monsters. The mouth of the chute is perhaps fifteen feet above the surface of the water. A huge log, hurled from the chute, cleaves the air and alights on a floating log. You know how a bullet glances, but can you imagine how a saw-log glances? The end strikes with a heavy shock, but glides quickly past for a short instant; then a crash like the reverberation of artillery, the falling log springs vertically into the air, and with a curve like a rocket falls into the water, a long distance from the log it struck."

A KEEL, piece 156 feet in length, and 30 inches in diameter at the top end was recently got out at Seattle, W. T. Eighteen oxen hauled it on a skidded road.

TREE PLANTATIONS.

Mr. F. P. Beck, Bethany, N. Y., afforded an example of what can be done in forest culture. He began a plantation of trees on rather poor soil, which consists of a clay loam resting on shelf-rock near the surface. He grew European larches and Scotch pines. At two years from the seed, these young larch and pine trees were transplanted to places where they are to remain four feet apart each way, an acre thus containing 2,640. Those that have been set six years are now ten or twelve feet high, vigorous in growth and branching so extensively as to make it difficult for one to pass through the woods. These are from two to three inches in diameter at the ground. Those set eight years ago are from eighteen to twenty-four feet high and from four to six inches through. The pines are planted out sixteen feet each way. In a year or two Mr. Beck will begin to thin out the larches, using them for poles and small fence posts. The land is thought to pay as well in these trees as if planted to ordinary farm crops, while the advantages they afford in protection to other crops and to the farm buildings is incalculable. Mr. Beck believes if 20 per cent. of our older and rough cleared land was planted to forest trees, it would render the remaining 80 per cent. more productive and valuable than the whole now is.

A FIVE-FOOT saw, running 700 revolutions a minute, burst in Salling, Hanson & Co's mill at Grayling, recently, with terrific force. One piece went directly upward through the roof, cutting a rafter completely off, and another went through the end of the mill about 40 feet distant.

This *Evart Review* says:—Mr. Snyder tells us that a company of men in Grocville have organized to build a narrow gauge railroad from Muskegon river, between Crapo and Paris, to the pineries in Mecosta, Church, Moon, Crosby, Nichols and Palmor are in the scheme, and 70,000,000 feet of pine to cut, besides large quantities of hemlock, etc.

PARKER & EVANS
SOLE PROPRIETORS OF THE
FAMOUS INTERNATIONAL
BOILER FLUID COMPOUND.

Patented 5th March, 1877.

This Compound will save its Cost many times in one year by saving fuel. It eradicates scale, and when the Boiler is once Clean a very small quantity keeps it Clean and Free from all Incrustation. It is perfectly harmless to Iron, and emits a clear pure Steam. In ordering, mention the CANADA LUMBERMAN.

504 St. Paul Street, MONTREAL.

AMERICAN HEAVY

Oak Tanned Leather Belting

Rubber Belting, Rubber Packing,
Rubber Hose, Linen Hose,
And Cotton Hose.

A Full and Complete Stock always on hand.
Write for Prices and Discounts.

T. McILROY, JR.

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TORONTO

MILL REFUSE TURNED INTO MONEY

BY THE USE OF

Brown's Patent Shaft and Shingle Mill,

for making Shingles, Barrel Heading, Box Stuff, &c., from spalls, board trimmings, slabs, and mill waste generally, turning material otherwise worthless into valuable products. I have made arrangements with the patentee to manufacture and sell for the Dominion; have made and sold a good number of these machines which are giving excellent satisfaction and can give the best of references.

Our Steam Feed for Circular Mills,

is now the Best Feed where Steam is the motive power. It is easily operated, is simple, rapid, and seems never likely to wear out. Sixteen 16 ft. boards, or eighteen 12 ft. boards, have been cut by it in one minute. It is the established feed for steam mills; I make a speciality of its manufacture; will guarantee satisfaction.

Our Patent Twin or Span Circular,

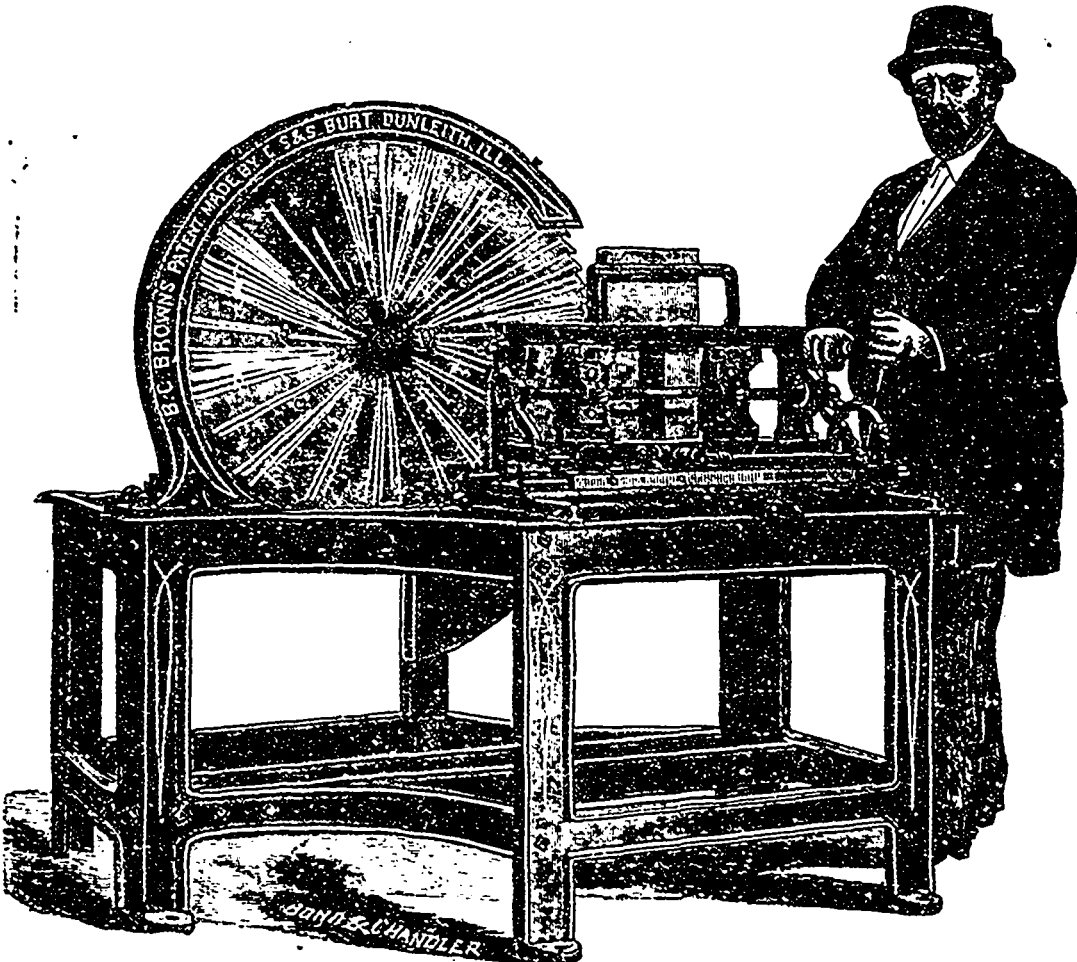
with Steam Feed for Steam Mills, and Rope or Rack Feed for Water Mills is fast coming into general estimation and is used in place of Gang Slabber in our best Canadian Mills. One of our Span Circulars which will slab logs 25 inches in diameter down to 7 and 8 inch stocks, will do the work of three slabbers, with an immense reduction in first cost, running expenses and labour. Two of these machines can be seen at work in Messrs. Gilmour & Co's Mill, Trenton, and Georgian Bay Lumber Co's Mill, Waubesa and Port Severn. I am also introducing a new style of Mill Engine, neat, substantial and simple, with Corlies Frame and Balanced Valve, all carefully designed and honestly made.

Covel's Automatic Saw Sharpener,

is now well-known and highly appreciated, when placed at work in the mill it slugs out its own praise; I keep it constantly on hand, ready for immediate shipment.

Our Standard Circular & Gang Mills & Machinery,

are too well known to need any reference, any further than to say that I spare no pains or expense to have my work all first-class and give satisfaction, and as I make Heavy Saw Mill Machinery a speciality, any party wanting a First-class Mill will find it to their advantage to give me a call.



WILLIAM HAMILTON, Peterborough Foundry and Machine Works, PETERBOROUGH, Ont.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit,
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JAMES T. BARNARD, Hamilton,
Secretary-Treasurer.

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MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are

Wire Strengthened



And Specially Adapted

For Saw Gumming

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

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH,
GALT.

Messrs. R. H. SMITH & CO.,
ST. CATHERINES.

JAMES ROBERTSON, ESQ.,
MONTREAL.

Messrs. JAMES ROBERTSON & CO.,
TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ.,
PETERBOROUGH,
Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON,
DESERONTO,
Lumber Merchants.

EMERY WHEELS FOR SAW GUMMING!



Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing \$3 to \$4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fierce, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of \$500 to \$750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eighths of all in use are beveled.

The principal sizes are:

8x $\frac{1}{2}$	} 2 in. hole.	10x $\frac{1}{2}$	} 2 in. hole.	12x $\frac{1}{2}$	} Holes, 2, $\frac{3}{4}$ and 1 inch.
8x $\frac{3}{4}$		10x $\frac{3}{4}$		12x $\frac{3}{4}$	
8x1		10x1		12x1	
		12x $\frac{1}{4}$			
		12x $\frac{1}{2}$			
		12x $\frac{3}{4}$			

Probably more wheels 12x $\frac{1}{2}$, 12x1 and 12x $\frac{3}{4}$ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x $\frac{1}{2}$. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth case hardened, in which condition the saw will cut about 33 per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw lightly a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities to match any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you a Tanite Wheel of similar quality. Our regular classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM-HARD.—This Wheel is the STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM-SOFT.—The same as to coarseness and fineness as "Class 2," but a softer, and therefore freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both finer in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

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