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NO. 11.

OTTAWA NOTES.

The *Pembroke Observer* says:—Mr. John Sullivan of Westnoath, brought down from Chalk river a small raft of square timber which he manufactured this past winter. He sold to Mr. Richard White.

Mr. W. B. McAllister has sold his two years' cut of logs, dimension and waney timber, to Messrs. Perley & Pattee and Mr. James McLaren, of Ottawa. This sale foots up the handsome sum of \$76,000. Mr. McAllister retains sufficient logs to fulfil all sawn lumber contracts he has made. Mr. McAllister has a quantity of dimension timber coming over the slide at Pembroke. Men are actively engaged in rafting it up, preparatory to taking it down to market. It is sold to McLaren of Ottawa, and is to be used for railway purposes.

The season of towing has now fairly set in, the tugs Robinson and Bronson, being actively engaged in bringing down the logs from Des Joachim to the Fort William boom.

Trains of sixteen cars and upwards are now passing daily laden with timber got out on Mr. James Worthington's limit near Sudbury. The timber is clean and of an average good size. It is en route for the Quebec market.

A raft containing one hundred and sixteen cribs, and belonging to Messrs. Thistle, Francis & Co., is coming down the Ottawa. The timber, which is said to be of a superior quality, was got out near Cedar Lake, Petowawa.

A small craft belonging to Klock Bros., Aylmer, was running over the Des Joachims a few days ago. Much dissatisfaction is expressed by lumbermen on account of the new international bridge in many cases breaking the crib completely up. In all cases when the men on crib see that the crib is going to strike, they unhesitatingly jump off rather than risking their chance of being drowned than staying on the crib and being killed. Two Iroquois Indians, while running Thistle, Francis & Co.'s timber there last week, narrowly escaped drowning. They sprang into the foaming water just as the crib struck the pier, and lucky for them that they jumped in time, for in an instant after the crib, with a terrible crash, was knocked into shingle sticks. The Indians reached the shore much exhausted.

THE ORIGIN OF LOG RULES.

Mr. Henry Baxter, writing to the *Northwestern Lumberman* of May 10, says:—In the *Lumberman* of April 10, Mr. Peter L. Trout asks a question: "Why is it thus?" calling attention to the fact that Mr. Doyle's tables for the measurement of lumber in the log were not a true series; and why not? He has discovered a rate of progression that coincides with nearly all the terms of the 16-foot column, but not quite all.

At the time of my earliest recollection, boards were not measured, or bought and sold,

by the superficial foot, or thousand feet as now. They were counted by the number of pieces. A board 14 feet long and ten inches wide, was one board; 15 inches wide was a board and a half; but the logs were uniformly cut 14 feet long, with an axe, butted in the mill with a butting saw, (now called a drag saw), and sawed almost always 10 inches wide. Sometimes a log would make "double stuff," that is, two 10-inch stocks. But with improved mills there became an apparent need of improved methods of handling as well as measuring. The lumbermen on the Hudson and Mohawk rivers began to run two saws in a gate and to count lumber by the superficial foot or hundred feet. All lumber was not made into Albany piece, or sold by the piece, as it had been when every log was hewed down to 10 inches in thickness and put upon the carriage of a curious gang mill and made into boards. Previous to using gangs, I learned that the whip-saw had been used to make Albany piece boards of the hewed stick.

The gang had a wooden crank, a wooden saw-gate without other metal than that about the saw hangings, and not much of that. It was a good many years after lumber began to be counted by the superficial foot, before there was any thought of taking the board measure of logs. Among men who manufactured or dealt in lumber, none could be found that knew anything about series, or the different rates of progression.

The first idea of making a log scale that I heard of was by means of diagrams. A circle was drawn of a given diameter, and the amount of timber it took to ordinarily make a slab was laid off, a board was then laid off and properly edged, and the stock, after being sided down, was turned down and laid off into board thicknesses, and all was then carefully measured, and the "contents noted." This process was repeated until all diameters of saw logs had been treated in the same way. Then on the basis of 10, the log being 14 feet, other lengths were increased or diminished in proportion as to quantity. Then the diameter of a log was measured, and it was made carefully into boards, which were carefully measured. The actual production was found to disagree with the amount given in the log table. More logs were tried in the same way, when it was found that scarcely any agreed with the log table, or with each other when of the same diameter. Longer logs were tried, when it was found that to add one-seventh to the amount made by a 14-foot log, would give a sum somewhat greater than could be got out of a sixteen foot log; that to deduct one-seventh from the amount produced by a 14-foot log, the amount would not be so great as a 12-foot log would make. So the scale was good for nothing, and any plan for measuring logs yet proposed had failed. Another plan was then proposed and tried:—

to carefully saw into boards, and measure 100 logs of each diameter of each length, and take the average, that is, add together the quantity produced from each log of 100, and take the hundredth part of the sum for the corrected measurement of all logs of that diameter and length. This must make the scale as nearly true as any plan we could devise. We thought all contingencies were then included and cared for in our plan. I notice that Mr. Trout has run into the same error that we did, in supposing that the quantity a log of a given diameter produces varies directly as to the length. It never entered into our heads that a crook does effect a short log as well as a long one. When we found there actually was a difference, we could easily understand the reason.

When I began work on the Alleghany river, the custom was to make boards nearly one and quarter inches in thickness, and a new log scale had to be constructed. The plan adopted was the same as the one previously adopted. All logs were 16 feet long. By sawing according to the custom of the country, a 16-foot log, 19 inches in diameter, made an average of 200 feet a log. A corrected table showed that I could fill any omitted or lost quantity by a certain proportion. A 19-inch log produces 100 feet; 19 minus 1, squared, is 200, as the square of any given diameter less 1, is to the required amount, board measure.

I understood at the time that Mr. Doyle, in constructing his log tables, adopted the same plan of construction that we did. Scribner constructed, and published, a log table by diagrams, assuming that the tree was cut into lengths of 16-feet, but in practice it was found that a very large log would not produce near as much lumber as the scale indicated, and a small log would make more. He revised his table, and still it did not give satisfaction. Doyle's came nearest to being satisfactory of any one published.

In view of these facts, is it at all surprising that Mr. Trout should be able to detect a seeming discrepancy? Mr. Doyle made no mistakes in his computations, and committed no error in adopting his methods of construction.

FORESTRY CONGRESS.

The Forestry Congress at Washington met last week, and was attended by many gentlemen interested. Papers were read by many of these present, and Mr. Phipps, who was there by special invitation, delivered an address. In it he pointed out the difficulties in the way of the cause in Ontario, and sketched the methods in which the Ontario Government were moving in the matter, stating that 15,000 copies of a forestry report had been already distributed; that the counties were being communicated with concerning the best method of encouraging the preservation of those portions of forest in private hands, and that an investigation of some

of the large pine districts of the interior, with a view to their better security from fire and continuance in a reproductive condition, would soon be undertaken. In connection with the last, Mr. Phipps remarked that with regard to the removal of the debris of lumbering—the pine rubbish which is often the cause of great fires, there seemed to him, as an old chopper, no way but one. "If," he said, "you go into the forest for timber, the trunk of the tree is all you want; you do not need the top, with all its branches. If you need square timber there will be great slabs and chips; if round, there will be the chips of cutting the tree down. If you leave them to summer it will be dangerous to burn them. If you leave them a night snow may cover them. What must be done is, when you have got out your log or square stick, chop down the branches of the top until it forms a close mass, pile the slabs or chips on the top and burn it." If lumbermen could see their way to doing this tree by tree, which would undoubtedly be an increased expense, there would be much less food for forest fires. The result would be that lumber would cost a little more, but it would be a great point attained.—*Toronto Telegram.*

The Size of English Trees.

Evelyn mentions the oaks cut down at Newbury, in Berkshire, one of which ran 60 feet clear without a knot, and cut clean timber five feet square at the butt; another gave 40 feet clear, straight timber, squaring 4 feet at the butt and nearly three feet at the top. The "Lady Oak," mentioned by Sir E. Harley, produced a butt of 40 ft., and squared five feet throughout its whole length, thus producing 20 tons of timber. But the most magnificent oak ever known to have grown in England was that dug out of Hatfield bog; it was 120 feet in length, 12 feet in diameter at the butt, 10 feet in the middle, and six feet at the smaller end where broken off; the butt for 60 feet squared seven feet of timber, and four feet its entire length. The wych elm, which grow in Staffordshire (time Elizabeth), took two men five days to fell; it was 10 yards in length, 17 feet diameter at the butt, yielding eight pairs of masts, and 8,000 feet of boards; it contained 97 tons of timber.—*From Knapp's Journal of a Naturalist.*

The *Belleville Intelligencer* says that Buck's drive, which came down the Moura and was driven by James Walker, measured about 30,000 feet. Three drains have been completed and the fourth will soon be finished here. Thirty-three men are now employed at the work. The rafting will be completed when some timber at points between this port and Bay Bay is collected. The tug Eliza Bonar will tow the drains to Garden Island and from there they will be taken to Quebec by the Huron. Calvin.

SUFFICIENT POWER.

Many a mill builder carries out a principle of false economy when he places the boilers and engine in his establishment. A weak man can not lift a heavy weight; a small horse cannot pull a heavy load; yet there are men, and plenty of them, who seem to think a small engine capable of driving heavy machinery. Too often machinery salesmen do much to induce men to believe this. Knowing the disposition of the majority of men to build as cheaply as possible, these salesmen argue that a small engine will do the work satisfactorily. "I want to cut from 40,000 to 50,000 feet of lumber a day," says the lumber manufacturer. "Oh, well," says the salesman, "this engine will do it." Probably it will do it. With easy feed the saw is driven through the log in a manner that cannot be complained of. But by and by there comes a time when there is need to hurry. Advantage is wanted to be taken of a good market, there is a big order to fill, or something of that kind, and the brake is taken off. The time has come to push things, but it is discovered, when it is too late, that there is no pusher. The little engine struggles, but with all its struggling the saw does not "walk" through the log. This, above all things, makes a saw mill man nervous, if not mad. He is anxious to see his mill go at a 2.40 gait, but it doesn't come under the wire in less than four minutes. As he is his own driver he knows there has been no "pulling," and must settle down to the conclusion that the whole fault is with the steed.

An engine should be of sufficient power to drive the mill to its maximum capacity, and that easily. An overworked engine complains as loudly as an overworked man. It speaks plainly for relief at every stroke. It says in language that can not be misunderstood: "You can work me thus hard, of course, if you choose, but though I am made of iron and steel, I cannot endure everything, and if you don't let up you will have to call in a physician." The engine speaks the truth. The strain and friction goes on, and the engine gets sick. It has simply worked itself sick. The physician comes in and at considerable expense doctors it up. Parts are replaced and everything is again put in good shape. The engine is again well, but it is no more infallible than it was before. The same cause produces the same effect. Overwork again prostrates it. A consultation is held and it is decided that the engine must go. It is set on one side, and then the manufacturer of it hears that his engine that was put in at such and such a place has been replaced. It wouldn't do the work; consequently it must be a poor engine. Other manufacturers, to make capital out of it, slyly wink, and adroitly infer that the engine must be poor. The fact is, it is probable that the engine was first class in every respect. It came out of a shop where excellent work is done and good material used. It was simply worked beyond its strength, and the manufacturers of it are not a bit to blame.

The result is damaging to the maker of the engine and to the man who purchased it. The latter has been bothered to such an extent that he has decided that the vexations of the saw mill business are many. The speed of the saw was not uniform enough to produce good lumber. There were big items of expense for repairs. He bore the taunts of his neighbors that he could not lift the broom over his ridge pole. There are unprofitable delays. The old engine has to be sold at a heavy discount, for the dealers in second-hand machinery are like those in second-hand clothing—they generally buy their goods for less than they are worth and sell them for more than they are worth. For the new engine there must be a larger and stronger foundation put in, and altogether the string of perplexities and expenses is a long one.

It is impossible for a man who builds a mill to know before hand how hard it will be necessary to drive it. If the price of lumber jumps up suddenly, he will feel like putting on all the steam and feed possible. And even beyond this something is liable to turn up. It may be found desirable to attach a planer, or some other machinery, and if it is it will be necessary to have enough power to run it, in connection with the saw. To increase the capacity of a mill is

an almost every day occurrence, and, oftener than otherwise, such a change necessitates a new engine and boiler.

We have heard thousands of complaints from mill and factory men because they did not have enough power, but not one because of too much. It is safe to say that no mill man ever found fault because his engine was too large. If it is larger than he really requires, he is pleased rather than otherwise. He not only has the satisfaction of seeing his machinery running easily and at uniform speed, but he knows that in case of an increased demand for the product of his mill, he will be able to meet it promptly without additional expense.

Reserve power is always desirable, at times highly profitable, and the extra cost of an engine and boiler capable of producing such power is one of the best investments a mill man can make.—*Northwestern Lumberman.*

LUMBER IN THE NORTHWEST.

The Northwestern Lumber Manufacturers Association which met in Minneapolis, in April, proved to be an interesting one from several points. In his annual address the president pointed out a policy that might be pursued advantageously, but the trouble is getting the manufacturers to agree upon and adhere to any policy. He said:—"I respectfully suggest that the true policy for lumber manufacturers is to saw less lumber the present season than last carry the unsawed logs in 1885, and provide less logs hereafter, until consumption equals the manufacturing capacity of the country."

He further said: "Another important reason why an effort should be made to prevent a serious decline in values is the fact that the past history of the lumber trade shows that the market does not recover for years the decline of a few months, if caused by over production."

The president suggested that reports be received of the log cut during the past year on the different streams, and Mr. F. Weyerhaeuser reported that the cut on the Chippewa, exclusive of the Red Cedar and Eau Claire, was 886,000,000 feet, but low water threatened to make driving difficult. Mr. E. L. Hospes reported the cut on the St. Croix; that there were about 325,000,000 new and old logs on that stream.

Mr. G. S. Shaw, of Davenport, reported that he had learned that there were about 200,000,000 old and new logs, which is less than last year. The stock of lumber at La Crosse is low and at the points below the stocks are less than was the case last year. The prospect for the drives was not good.

Major Camp, for the the Mississippi, stated that there was 190,000,000 old logs carried over, and the loss on these would probably reduce the amount to 170,000,000. The surveyor general estimated that there was 310,000,000 cut, which would make an aggregate of 60,000,000 less than last year. The stock of lumber on the sticks is about 70,000,000, which is about 20,000,000 more than was the case last year. Of the entire cut of logs, about 150,000,000 would not come to Minneapolis. He estimated that the cut of lumber for the current year would be about 250,000,000. Mr. Cranage for the Saginaw valley, reported that the cut of logs was about the same as last year, and that the stock of lumber was about the same. He did not think the lumber cut would be larger than last year. The water has been low. He thought if there was a deficiency it might be made up from the railroad point, but did not think the cut there would effect this market, as their market is for the most part East. Mr. Merriman asked if it was not a fact that the low grade lumber went West, while the high grade went East. Mr. Cranage was unable to state.

Mr. Swan, of Muskegon, reported that there is about 500,000,000 of old and new logs in that stream, about 200,000,000 old logs carried over and 100,000,000 feet piled up.

The same condition in relation to water prevails on the Muskegon river as upon other streams. The water was exceedingly low. The sale of lumber had been very small thus far, and it had been the theory that it would take care of itself, and that no amount of doctoring would help it. The feeling is general among manufacturers not to push anything upon the market.

Dealers are generally in a better condition to hold it, and on the Muskegon the sales of stumpage has been at such figures that it could not be cut except at a sacrifice at present prices.

Mr. E. W. Durant, of Stillwater, thought the situation had changed within the past twenty days materially. There did not seem to be a prospect of making good drives. If nature is obstinate it will settle the price of lumber better than this convention can. It seemed advisable that a committee be appointed to report a plan for consideration at the afternoon session. The situation had undoubtedly changed for the better within the past ten days. Gov. Ludington said that on Menominee 100,000,000 logs had been carried over and 400,000,000 had been cut, which was 150,000,000 more than could be handled in the boom. He thought that all of these logs would be got down. He believed with Major Camp that we were going too fast in the lumber business.

The chair appointed a committee representing the various streams, which after a thorough canvass reported the log cut to be found as follows:

| District. | Supply of 1883. | Supply of 1884. |
|--|-----------------|-----------------|
| Black river..... | 200,000,000 | 225,000,000 |
| St. Croix..... | 325,000,000 | 310,000,000 |
| Chippewa..... | 1,200,000,000 | 1,200,000,000 |
| Eau Claire..... | 100,000,000 | 90,000,000 |
| Red Cedar..... | 110,000,000 | 125,000,000 |
| Duluth..... | 185,000,000 | 120,000,000 |
| Ashland..... | 45,000,000 | 45,000,000 |
| St. Louis river..... | 60,000,000 | 60,000,000 |
| Wisconsin river, including Stevens point.. | 300,000,000 | 300,000,000 |
| Hung up below Peplin.. | 35,000,000 | 20,000,000 |
| Minneapolis..... | 540,000,000 | 840,000,000 |
| Total..... | 3,420,000,000 | 3,250,000,000 |
| Michigan..... | 3,500,000,000 | 4,200,000,000 |
| Illung..... | | 820,000,000 |

Shortage on same basis 400,000,000

In the afternoon session the committee appointed to formulate a plan of action for the formation of a strong organization among the manufacturers made their report, from which we extract the following preamble:—

"That the log stock of Michigan, Wisconsin, and Minnesota for the season of 1883 and 1884, old and new logs varies but slightly from the cut of 1882 and 1883. That the prospects of a successful drive are very unfavorable throughout the Northwest. That the supply of available logs in sight in the waters of the Northwest will not supply the mills to exceed thirty days. It is found that the supply of logs on the Mississippi and its tributaries is 170,000,000 feet less than last year. That the Michigan district has an excess of 400,000,000 of logs which is more than counterbalanced by the shortage of lumber in the Northwest, leaving the general situation more favorable than it was one year ago."

A formal discussion was entered into. Mr. Ingram thought a big mistake was being made in the effort to cut everything clean from land. The theory has been entertained that unless the timber is cut clean, that the fires would run through and destroy the standing pine. He believed that the owners of stumpage should cut reasonably clean, clear up the under litter, as far as possible and in five years the small timber may be taken and pay for the extra cost. He thought the over-production was largely due to the purpose to cut perfectly clean, and to take lumber of all grades.

Major Camp took issue with Mr. Ingram and held that if the policy was adopted there would sooner or later be an over stock of uppers and commons would be worth most. He thought the time was coming when it would be impossible to buy uppers at any price. The trouble was that the milling capacity was too great, and owners thought it was imperative that the mills should be stocked and run. The only way the thing can be prevented is to reduce the cut.

Mr. Bassett did not think the amount of lumber on hand was unusually large. Sight had seemed to have been lost of the fact that the consumption was steadily increasing and where twenty-five years ago 100,000,000 feet was consumed, 2,900,000,000 feet were now required.—*American Lumberman.*

A BAD CASE OF STARVATION.—To starve the lungs by a lack of vital food contained in pure air. If the lungs are obstructed by colds, remove the accumulated phlegm with the safe and pleasant throat and lung remedy, Haygard's Yellow Oil.

DYING LUMBER.

A new process for drying lumber in just now attracting attention. It is said to be the most effectual and economical method ever practiced. No kiln is necessary, although where a shop has one it can be utilized to an advantage. The process has the great advantage of keeping the surface of the lumber moist during the drying; this holds the pores open, obviates all tendency of cracking and leaves the albumen free to perform its functions. In ordinary kiln drying the albumen is injured or destroyed, and the surface dries first, thus sealing the juices inside, to escape eventually through cracks caused by the uneven expansion of the wood. Some readers may perhaps be surprised to learn that the process consists in surrounding the wood to be dried with a common salt; but those who are acquainted with the peculiar power for extracting moisture which salt possesses will not be at all astonished at this novel and ingenious utilization of this power.—*Builders' Journal*

AUSTRALIAN TIMBERS.

It has repeatedly been asserted that Australia is deficient in timbers suitable for building and other industrial purposes, but the assertion is utterly without foundation. On the contrary, the various colonies, especially New South Wales, are rich in timbers of every possible description, many possessing a beautiful color and grain, rendering them eminently suitable for decorative woodwork. Among the more plentiful of the New South Wales timbers are the following:—Ironbark, generally used for railway purposes, and girder beams for buildings. The retail price is 2s. 6d. per cubic foot for girders, and £1 5s. per 100 superficial feet for sawn timber. Groy gum, generally used for building purposes, palings, and fencing, and is retailed at 18s. per 100 superficial feet. Blackbutt, greatly used for all kinds of house and shipbuilding purposes, and also for street paving cubes; price 18s. per 100 superficial feet retail. Spotted gum, mostly used for shipbuilding, owing to its long lengths and bending qualities; price, 18s. per 100 superficial feet retail. Mahogany, used for fencing and general purposes, is considered to be able to stand a long time under ground; price, 18s. per 100 superficial feet retail. Tallowwood, one of the best timbers for building purposes that can be obtained in the colonies, having a greasy nature resembling Indian teak, and sells at about the same price as ironbark. Blue gum, greatly used by wheelwrights, and also used for general purposes, and belong to the best class of timber growing in this colony; price, 18s. per 100 superficial feet retail. Colonial pine is largely used for all rough purposes in house-building and box-making, and also for flooring boards, and sells at present at £1 2s. per 100 superficial feet retail.—*Land and Water.*

FREE LUMBER.

In a very few years, unless some relief can be afforded them through the free introduction of Canadian lumber, our most valuable forest will have disappeared forever. It is no use trying to avoid this question. Either the duty upon lumber must be taken off or the country must be prepared to lose its white pine forests—long before the close of the present century.

Suppose it could be known that at the present rate of consumption all the coal or all the iron ore underlying the United States would be used up at the end of ten years; would any one for moment advocate an import duty on those articles or seek to exclude their importation into this country? And yet this is the policy of Congress with regard to the supply of pine lumber.

It is known with as much accuracy and precision as such a thing can be known just what is the existing supply of pine and spruce now standing in the United States. It is known that before ten years have passed all our northern pines and spruces will have been manufactured into lumber if the present duty upon such lumber is not removed and the Canadian forests allowed to compete upon equal terms with our own forests in supplying the United States with building materials. This is protection carried to the utmost limit of absurdity.

One of the greatest and most important sources of the prosperity of this country is

placed in imminent peril, not to produce a necessary revenue, for practically the duty produces no revenue worth considering, but to enrich a few thousand wealthy land owners and manufacturers bent on sapping the nation's wealth for the benefit of their own pockets.

That such a condition of things is allowed to exist for a single day longer is not very conclusive evidence of the astuteness and business sagacity upon which the American people are accustomed to pride themselves.

It is, perhaps, not yet too late for the present Congress to consider this subject and act upon it intelligently. A bill placing lumber upon the free list was introduced into the House by Mr. Dorsheimer, of New York, early in the session. It should be passed as a separate measure now, because it is of prime necessity to husband our forest resources in every possible way. There may be more important work for Congress to attend to than this, but if there is it has not come within the range of our vision. *Boston Herald.*

A Collection of American Woods.

Under the auspices and at the expense of the banker, Morris K. Jesup, says a New York paper, a collection of the native woods of the entire United States is being prepared, and will be completed some time this year. It is to be presented at the Museum of Natural History in Manhattan square. The logs are being prepared in the arsenal at Central Park. They are, for the most part, five feet long. At one end a section of half the thickness of the log is removed. In this way the longitudinal and transverse grainings are both shown. There is also a diagonal cut on the section, which displays that grainings also. The remainder of the log remains in its natural condition with the bark attached. The work is being done by S. D. Hill, under the general charge of Prof. Sargent, of Harvard university. Mr. Hill prepared the specimens for the forestry department of the United States census of 1881.

Another Log Story.

The *Mobile, Ala., Register* says: Recently, the 66 inch circular saw at Stoutz & Co.'s mill running 800 revolutions per minute, struck something in a pine log, and flew into a number of pieces. The engine was stopped, and an examination of the log showed that the saw had struck a six-inch iron shell in the tree, cutting off enough to show the powder inside. The slab and one plank had been sawed off, and that was the third cut, showing how deep the shell was embedded. The log was cut from the land in the vicinity of Spanish Fort, and it is believed that this shell was fired into the tree during the terrific bombardment of that place during the late war. It was fortunate that the shell did not explode.

Fresh Uses For Paper.

Paper spokes for wheels are among the latest appliances for that over-increasing article. The paper pulp is forced into iron moulds under heavy pressure, where it dries and hardens; and the spokes thus produced are said to be much superior to wood. Paper is fast supplanting wood in many useful ways.

A paper chimney fifty feet high has lately been put up at Breslau. Compressed paper pulp is stated to be one of the least inflammable of substances, and to make an excellent material for fire-proof doors.

The stable and blacksmith shop of the Duluth Lumber Company, near Duluth, Minn., were burned May 9. In the stable were 23 horses, 19 of which were burned to death. Three of the horses were taken out of the burning building, but two were so badly injured that they were killed for mercy sake. From the stable the fire communicated to the blacksmith's shop, which was quickly destroyed. The barn stood on a foundation of mill refuse, and it was feared that the fire would work through the mass, which was very dry, and thus ignite the mill. A trench was accordingly dug through the debris, so as to cut off the advancing fire. By the strenuous efforts of the firemen and mill hands the company was saved a total loss of its property. As it was, the loss amounted to \$3,000, with no insurance.

A Large Orange Tree.

An orange tree on the farm of Mr. Berrien Blatt, in Hillsborough County, Fla., is said to be the largest in the state. It has a single solid trunk that measures 5 feet, 8 inches in circumference, 15 inches above the ground. This gives a diameter of about 23 inches. The trunk is much larger than this at the surface of the ground. The limbs have a spread of 32 feet and the height of the tree is 36 feet. These figures are all from actual measurement. The crop of oranges upon it the past season numbered a little over 10,000,000. Mr. Blatt says he wouldn't take \$1,000 United States bond for it. *American Lumberman.*

Arbor Day at Quebec.

QUEBEC, May 12.—The second annual celebration of the great national festival of Arbor Day was marked this morning by the display of flags from the terrace, the City Hall, the foreign consulates, and many other public and private buildings. The civic and military dignitaries assembled on the plateau on the cove fields, east of No. 1 tower. Two acres of land were to-day planted with the first instalment of 600 trees purchased by the Dominion and Provincial Governments and the city. The officers of the garrison were in attendance with their band and a large concourse of ladies and gentlemen.

Death of Mr. Calvin.

Mr. D. D. Calvin, ex-M. P. of Kings' n., died on May 18th. after a severe illness. He was a public spirited man and a veteran in the wrecking and forwarding business.

It is proposed to erect a grand monument on Garden island to his memory.

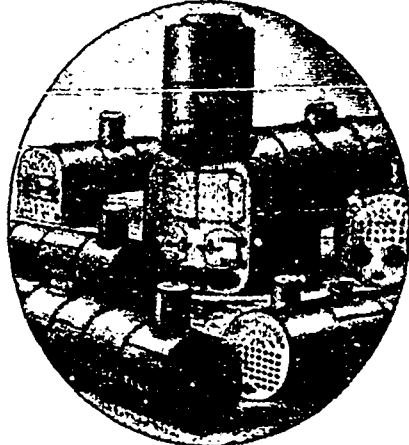
Advice to Mothers.

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

A HANDY SURGEON.—As a dressing for all manner of flesh wounds there is nothing better than Hagvard's Yellow Oil. It cleanses, allays pain, subdues inflammation and heals without a scar or stiffness of the parts injured. It is equally valuable as a pain remedy for internal use.

DON'T BE GIDDY.—Many people are troubled with giddiness or dizziness, which is generally a sign of disordered digestion or unequal circulation. Burdock Blood Bitters restores the digestive powers, promotes a healthy circulation of the vital fluids, allays nervous irritation, thus curing headache and giddiness.

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TORONTO.

A HALT NEEDED TO BE CALLED.

In the lumber industry there is surely something rotten in Denmark. There is a wrong principle underlying the ways of conducting the lumber business. There is an absence of firmness and a lack of determination on the part of the manufacturers to obtain for the product of their mills what it is worth. There is a saying that any article of trade is worth just what it will sell for, and no more. In one sense this old saying, as applied to lumber is wholly wrong. Unwise competition may force prices below where they would go were trade allowed to take its natural course. Hot-house processes, as much as they may be beneficial to the growth of certain plants, are detrimental to any branch of trade.

If the amount of standing pine could not be approximately estimated; if stumpage was of no value; if there was not rapid depreciation in mill property, then a low price for lumber might be excusable. But that the great body of white pine will in a short time, as compared with the time that our great and growing country will demand lumber, be practically exhausted; that stumpage has a positive value, no matter how little it may have cost the present owners of it; that saw-mill machinery from wear and fire is short-lived, are facts acknowledged by all. Then why should a business that is limited as to the time it can be conducted, and the conduct of which is expensive, be carried on at a small profit to some and an absolute loss to others?

Of late years it has been charged by manufacturers that the jobbers of the Chicago and other markets have been responsible for the unsteadiness of prices. The *Lumberman* has claimed that the argument was fallacious, and the conditions of trade as they now exist, prove that such is the case. It is for the interest of the jobbing trade to buy as cheaply as possible, but no matter how much of an effort the jobbers might make to hammer prices, if their yards could not be filled at one price they would at another. The manufacturers have this matter in their keeping. But it seems they do not keep it well. There is no more competition today between jobbers and manufacturers than there is between manufacturers themselves. A majority of the latter have also become distributors, and when several of them meet in one neighborhood to look after their customers they pound prices as hard as the jobbers ever did. The interior Michigan mills make it interesting for one another's customers in the territory reached by these operators south of the state line, and the first cut in uppers of which we learned this spring was made by these very mill men. Yet they stand up and denounce the jobbers, and say they are overlastingly trying to stave the bottom out of the market.

The same conditions exist west of here. Duluth and Minneapolis have had a fight in the Northwest, and Duluth has come out ahead because her mill men can handle their lumber for less money than the Minneapolis mill men can. The latter sought to overcome this disadvantage by low prices and big discounts, but when the other side resorted to the same practices, the disadvantage of the big Minneapolis handling bill was still apparent. So, too, the mill men on the upper waters of the Mississippi, have endeavored to knock out the lower river men, and have succeeded to such an extent that some of the latter openly declare that their present locations are not profitable ones for saw mills. Even the log towing bill stands in the way of successful competition with their neighbors up stream. The policy with the manufacturer is to sell lumber at a fair price if they can, but to sell it anyhow.

This policy we regard as wrong, for the reasons heretofore stated in this article. Every foot of pine in the Northwest ought to bring a price that will pay a fair profit to the owner and manufacturer of it, and further, to both the jobber and retailer. Such a price would be no hardship to any one, and a positive benefit to many. The consumer would be obliged to pay more for lumber; but \$2 or \$3 per thousand feet on the amount of lumber that enters into the construction of the average house or barn would cut but a small figure. If that amount were added to the price of lumber, building operations would not be curtailed, provided the

builders were satisfied the prices had gone up to stay. It is the uncertainty as to prices that calls a halt in improvements.

If firmness could be sustained, not only the retailers but the jobbers would be relieved. As it is now, they do not know when to buy. If lumber is cheap this week it may be cheaper next, and it is almost sure to be if salesmen from different territories visit the town at about the same time.

The *Lumberman* is by no means in favour of exorbitant prices, and prices that would pay a living profit to all, from the owner of the stumpage to the retailer, would not be exorbitant. Such prices every business should be expected to pay, and jobs pay when well conducted. Lumber is a staple commodity, and its value should not be tossed about by bulls and bears, as though it was the watered stock of a railway corporation. It is admitted now that there is little that is speculative in the lumber trade, and if not then values should not be subject to fluctuations that cause distrust and halting by any branch of the trade. The manufacturers, and they only, can say whether the same conditions which now govern the trade shall continue to govern it.—*Northwestern Lumberman*.

FOREST FIRES.

During the past few days the people of New York, New Jersey and Pennsylvania have had sad experience with forest fires, and they have come, too, at a time when they were least expected. Forest fires are usually looked for in times of drouth, and particularly in the latter part of summer or fall, but this time they came before the summer heat has parched the earth, and soon after, if not really before, all the snow in the northern part of New York state had disappeared.

To even approximately estimate the yearly loss from burning forests would be a difficult, if not a hopeless task. There is not only immense loss of property, but every few seasons a loss of life as well. The Peshtigo and Michigan fires, which were so productive of loss of life, are fresh in the minds of all, and rarely a season passes that several names are not added to the frightful list. A person cannot realize to what extent these fires have raged until he has travelled through the Northwest and seen the thousands of acres that have been burnt over, with the millions of trees standing thick, black and limbless. White pine owners estimate that there is one chance in ten that their possessions will be swept by fire every year, and without doubt the per centage is placed low enough. Indeed, many a careful investor shuns pine lands for this very reason.

On the Pacific coast the losses have been many and heavy. The South is the only section that has escaped, and the fires in the Carolinas a few weeks ago prove that even that section is not exempt in the neighborhood where turpentine is made.

What is to be done about it? Forest fires are preventable, the same as many other calamities may be prevented. But no preventive steps are taken. There is a horde of "foresters" and office-seekers who are everlastingly shouting, "Plant trees! plant trees! plant trees!" But we never hear them say a word about protecting the trees we already have from their worst enemy. They seem to think that it is a more laudable undertaking to set out a little staddle or plant a seed that will not become a tree of much worth until we are all dead than it is to protect a tree that is already grown. They should understand that protection is of more importance than reforestation; that at present there is no lack of trees of most kinds, and that their number could not be greatly increased, or, rather, the portion of the country now covered by forests could not be greatly enlarged, except at the sacrifice of agricultural interests, until farming becomes more of a science than it is now. Sure enough, the entire Ohio valley might be reforested for the alleged purpose of preventing floods which have swept that valley from times immemorial, but if it were, it would be interesting to know what would become of the inhabitants.

The only way to prevent forest fires is to collect and burn, under supervision, the dry brush and tree tops. Fire cannot exist unless it has something to feed on. This journal has

held for a long time that every lumberman operating in the woods should be required by law to take such care of his landings that they will not hazard the property of his neighbors. This would be a good deal of labor, and it would cost a good deal of money, but if thereby even a half of the losses by forest fires were prevented, both the labor and money would be well expended. And this rule should not be observed by lumbermen alone, but by others. In forests in which operations are not being carried on there is a constant accumulation of dry limbs and fallen trees, and these the owner of the land should be obliged to remove in some way, providing his wood joins others. If a man's timber is isolated to such an extent that, in case it burned, the flames would not be communicated to the timber lands of others, then let him do as he has a mind to. If he can afford to have his timber destroyed by fire others should not object.

The greatest difficulty to be met in the prosecution of such a work would be from wind-falls. It would seem sometimes as if nature stepped in to hasten the coming of the flames. Swarms, of such dimensions as only the elements can move, are cut through the forests by the wind, and for miles and miles every tree of decent size is laid flat. These windfalls are prolific of intense forest fires, and they have been the starting point of some of the worst fires on record. Here is where nature comes in and says that her trees are not all for the benefit of man, but that she will destroy a portion of them in her own good time and way.

The method described is the only one we believe to prevent forest fires, but the prosecution of it means difficult and prodigious work, and for this very reason, perhaps, it is not advocated by the "foresters," "botanists" and professors who now-a-days are so ready with their advice on all subjects pertaining to our forests, when really they no little about them.—*Northwestern Lumberman*.

CEYLON BOTANIC GARDENS.

In a handbook recently issued by Dr. Trimen, the following interesting particulars are given: The Royal Botanic Gardens at Peradeniya were established in 1821, six years after the final occupation of the Kandyan Kingdom of the English. The site is a little less than four miles from Kandy to the Colombo road, and occupies a loop of the river Mahaveli, which surrounds it on all sides except the south, where it is bounded by the high road. The area, nearly 150 acres in extent, beautifully undulated, its average elevation above sea level being about 1540 feet. The climate is hot, moist, and very equable; the mean annual temperature is about 77° F., April and May being the hottest and December the coldest months. Rain falls on about 200 days in the year, the annual rainfall being about 85 inches; it is pretty evenly spread through the year, but is heaviest in October and November and in June, at the full establishment of the N. E. and S. W. monsoon respectively. February and March are the driest months, but even then there are showers at no distant intervals. Before its occupation as a Botanic Garden the greater part of the land had been a royal demesne occasionally occupied as a residence by the kings of Kandy. The earth-mound and ditch along the south boundary are still evident, and remains of stone buildings have been found. The name *Pera*, Guava, and *deniya*, an enclosed place—indicates its use as a fruit garden of which the existence of some very odd mango trees is further evidence. On another part of the site stood a small temple or flower shrine and priest's house, abandoned, however, before the formation of the garden. This garden now contains considerably over 2000 species of plants. The director has also under his charge, as adjuncts to the Peradeniya Gardens, smaller branch establishments in different climatic districts of Ceylon. Hakgala Gardens are situated at an elevation of 5500, about six miles to the east of Nuwara Eliya on the road to Badulla. They were opened in 1860 as a cinchona nursery. The climate admits of cultivation there the numerous European and Australian plants, and those of the tropical mountain regions. Henaragoda Garden is a completely tropical one, scarcely above sea level, and in a wet steaming climate which varies little. It is about three-quarters of a

mile from the railway station of the same name on the Colombo-Kandy railway. Many of the plants grow at Peradeniya flourish there with far greater luxuriance, and others can be cultivated there only.—*Federal Australian*.

THE LUMBER OUTLOOK.

Now that the logging season has closed we have endeavored to inform ourselves of the situation, and are gratified to know that the resolutions made by our lumbermen last fall to curtail the output of logs has resulted in a material reduction. The Ottawa district shows 1,500,000 less logs on hand than at this date last year, which, averaging the logs at seven to the thousand feet, would be equal to 215,000,000 feet; while the reduction in the St. Maurice district is proportionately greater, being from 50,000,000 feet last year to 15,000,000 feet this year, or a reduction in the output of pine of 250,000,000 feet in these two sections. Should it also be found, which is believed to be the case, that the pine-producing districts of the Georgian Bay, Muskoka, Peterborough and Trent have made similar reductions, there would this year be fully 500,000,000 feet less pine to cut than last year.

Coupling the foregoing with the statement made that the spruce product of New Brunswick and Maine is 268,000,000 feet less, and the further fact that our own spruce districts of the St. Lawrence and eastern townships have greatly reduced numbers of logs, many mills not having stocked up at all, we cannot be far astray in estimating the shortage in pine and spruce east of Lake Huron at one thousand million feet. This curtailment in supply must have the effect of restoring the lumber industry of Canada to its normal condition, and if the conservative action of the lumbermen meets with its reward in enhanced prices for their stock, few will regret it. That the lumbermen may reasonably anticipate higher prices is evident when it is seen that the stock is only two-thirds of last year, and since the home consumption was then fully one-third of the stock, and there is now every appearance of an equally large home consumption this year, this amount, deducted from the small stock of the present season, would obviously leave only about one-half as much on hand for export to Britain and the United States.—*Journal of Commerce*.

A PLEA FOR TREE PLANTING

The following article from the *New York Independent* will repay perusal, at this time: "In every town and village something can be done to beautify and greatly improve the public grounds and highways. All that is necessary is for some one or more persons to start the wheels and unite in calling a meeting of the residents to discuss the matter. Let the ladies take hold in good earnest and start the movement. A village society once organized could do, in a very few years, an astonishing amount of work, with very little effort. One single day in a year devoted to village improvements would very soon change the whole appearance of any place. Such work is rapidly increasing in popularity. Mr. B. G. Northrop, of Connecticut, is now giving almost his whole time in lecturing on the subject of Rural Improvements.

What he said, in a recent address in Shelbyville, Indiana, is highly spoken of by the *Indianapolis Journal*. We copy from a recent report the following interesting points, given by Mr. Northrop on that occasion. His topic was 'Arbor Day.'

It may be objected to Arbor Day, or to any school lesson on forestry, that the course of study is already overcrowded. I reply that the requisite talks on trees, their value and beauty, need not occupy three hours, all told. Those talks on this subject, which Superintendent Peaseley says were the most interesting and profitable lessons the pupils of Cincinnati ever had in a single day, occupied only the morning of Arbor Day, the afternoon being given to the practical work. Such talk will lead our youth to admire our noble trees, and realize that they are the grandest products of nature, and form the finest drapery that adorns this earth in all lands. Thus taught, they will wish to plant and protect trees. This love of trees early im-

planted in the school and fostered in the home, will make our youth practical arborists.

Teachers can easily interest their pupils in adorning the school grounds. With proper pre-arrangement as to the selection and procuring of trees, vines or shrubs, Arbor Day may accomplish wonders. Many hands will make merry as well as light work. Such a holiday will be an attractive occasion of enjoyment and improvement. The parent should be persuaded to approve and patronize the plan. It tends to fraternize the people of a district, when they thus meet on common ground, and young and old work together for a common object, where all difference of rank or sect or party are forgotten. The plantings and improvements thus made will be sure to be protected. They will remain as silent, but effective teachers of the beautiful to all the pupils, gradually improving their taste and character. Such work done around the school naturally extends to the homes. You improve the homes by improving the schools as truly as you improve the schools by improving the homes.

Our youth should early share in such efforts for adorning the surroundings of their homes and planting trees by the wayside. How attractive our roads may become by long avenues of trees. This is beautifully illustrated in many countries of Europe. Growing on lands otherwise running to waste, such trees would yield ample returns. The shade and beauty would be grateful to the traveller, but doubly so to the planter. Having in abundance the best trees for the roadside, no class can contribute so much to the adornment of our public roads as the farmers. In portions of Germany, the land owner was formerly required to plant trees along his frontage. Happy would it be for us if our sovereigns of the soil would each make such a law for himself. When, in any community, each citizen is stimulated to make his own grounds and wayside neat and attractive, the entire town becomes so inviting as to give new value to its wealth and new attractions to its homes."

NEW CAR ROOF.

A Detroit car roof and paper manufacturing company has introduced an innovation in the way of car roofs made of paper. The paper is made of jute, the pulp being first wrought in sheet form the thickness of very heavy wrapping paper. Then it is cut into sheets 3x4 1/2 feet in size, and by laying these sheets together by a peculiar process and chemical compounds a block from six to eight inches thick is formed. This paper block is then placed under steam pressure of twenty-two tons to the inch, and is made into a board three-fourths of an inch thick. When completed the board is of a texture of very close-grained wood. It may be cut like wood of the toughest kind. Being absolutely free from the possibility of knots, rot, or sap, the paper boards will not split, check, or decay, and yet with all their toughness and strength they are elastic and bend without breaking. In forming the roof these boards are laid with their ends nearly together at the ridge of the roof and with their sides closely fitting together. The average life of a freight car is eleven years and the average life of wooden roof is nine years. In consequence the item of roof repairs is a large item for car companies and railroads. A paper roof is guaranteed to last as long as a car does, because the paper composition hardens with exposure, it will not warp, split, burn, or break, and it is considerably lighter than either wood or iron.

HICKORY.

Some of our native woods cannot be equalled or superseded by any foreign woods; in all our knowledge of natural history there has been found nothing possessing the excellent qualities of our native hickory. It is now, as commonly supposed, that good hickory must be grown in the north to be of the best; its habitat extends from the Green Mountains in Vermont following the coast range, the Alleghenies, and the Blue Ridge through the Carolinas, and even to upper Florida. And, contrary to general supposition, the very best of hickory used in the arts, where toughness is required, is obtained from North Carolina and eastern Tennessee. "It is wonderful what toughness the hickory

timber of that mountain region is capable of," said a wheel maker recently. "We can turn a piece completely around a circle without breaking a fibre." Thus, of course, after it is thoroughly steamed.

The First of the Season.

QUEBEC, May 19.—The tug Sir John A. Macdonald arrived down from Garden Island on Saturday with a raft of square timber in tow, which was placed in different booms along the cove. It is the first raft to arrive this season.

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

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

PETERBOROUGH, Ont., JUNE 2, 1894.

OWING to heavy snows on the Adirondaka last winter, and improvements made recently in the rapids of the upper Raquette, the drive down that stream to the mills at Potsdam, N. Y., and below is much earlier than usual. The mills are now busily sawing.

The manufacture of spools for the great Williamamtic Thread Company, is of itself a great industry. The company has 125 men in the Maine woods getting out spool timber. An idea as to the immense number of spools required can be arrived at when it is known that 80,000 gross, or 11,620,000 spools were ordered by this one company for one month.

A saw mill set works, or improved head block for saw mills, has been patented by Mr. Robert R. Parson, of Jackson, Miss. The setting shaft is geared with a rack on the under side of the head block, the shaft having its bearing in the block, and there being a spring applied thereto and to the head block, with various special combinations and arrangements of parts.

In one of the largest saw mills in Memphis, Tenn., recently, a seventy two inch saw, while running at full speed on an eight-inch feed, struck a heavy iron dog. The effect, as described by a correspondent, was frightful. The large saw was broken to atoms, as was the thirty-inch top saw. Every pulley on the mandrel was broken. Such accidents will happen occasionally, but this class of accidents can only be avoided by constant careful attention.

The Kingston News says that W. R. McRossa has returned from Calabogie, where he purchased between two and three hundred cars of square timber. It will be brought to Kingston over the K. & P., rafted and taken to Quebec. Hitherto timber from the district was sent to Quebec via Ottawa, and this purchase by Mr. McRossa will be the first that will come this way. A quantity of lumber will arrive from the Mattawa over the K. & P., and it will be the first consignment of the kind from that place also.

The Brompton Lumber Company has purchased some 500 acres of timbered land near Leeds and Brompton, N. C. The greater part of the timber is lying on the ground, having been blown down by the recent cyclone. This fallen timber is estimated at some 20,000,000 feet.

At a meeting of the American Forestry Congress in Washington the other day, John S. Hick, of New York, urged the planting of trees by railroads and showed that it would require nearly one half a mile in width of growing timber beside each mile of railway to produce a sufficient number of ties for its use exclusive of the timber used in bridging and fencing. This is the age of railways, and if the people could appreciate the wholesale destruction of trees for railway purposes alone they would see the necessity for careful Government supervision of our forests and the general planting of trees by the people.

WALNUT LUMBER SITUATION.

The walnut trade in Boston for the past six months has been very dull and prices have ruled low. Boston is the second walnut consuming market in the country, New York being, perhaps, the first. In this city the main use for walnut is the manufacture of furniture. The furniture trade has been very dull during the past six months and the manufacturers have bought walnut only as they have needed it, then again, there has been a decided change towards cherry for furniture and this has lessened the demand for walnut somewhat also. The result has been, says the Boston Commercial Bulletin, that the large stock of walnut, mainly consigned, which was on the market in the fall, has been sold at prices lower than western, adding freight and purchasing cost. Sales of No. 1 and 2 walnut were made, two months ago at from \$75 to \$85, and lots running \$75 per cent No. 1, were sold at from \$80@85. Dealers are now asking \$90@95 for the same grade of lumber and are making a few sales at that price.

This advance has been due to the fact that the prices in this market were ruling below the western and southern markets and as the stocks here were gradually worked down it was found impossible to replace them at such low figures. The western and southern markets have ruled steadily at about \$75 for No. 1 to which added from \$12 to \$15 per thousand freight and this market at \$90@95 per thousand is only a parity with them. The stocks here at present are light and the receipts are small. The spring demand for furniture has been very small and the furniture manufacturers have generally good stocks of furniture on hand and will not buy lumber. Trade being thus dull there is no inducement for the lumber dealers here to lay in any considerable stock of walnut. The mill men do not care to consign it here being afraid of the same result as in the fall and also as they are meeting with a better demand for it in New York, Philadelphia and Chicago.

The outlook for any substantial improvement for some time to come in the demand for walnut in this market is poor. Owing to the very bad weather and the lateness of spring, the furniture manufacturers have had but very little spring trade. They have generally large stocks which they will carry over into the fall and until these are disposed of they will buy sparingly of lumber. The stocks of lumber here being light, the course of prices depends to a great extent on the western and southern markets. Very little walnut comes from Indiana and Ohio, formerly the main sources of supply, as those districts are practically exhausted. Tennessee and Kentucky now furnish most of the walnut and some is received from Arkansas and Missouri. The lumber received from these States is not as good as that formerly obtained in Indiana and Ohio.

Prices in the west have ruled steady for the last six months. At present there is a disposition on the part of some dealers to advance them owing to the reported operations of an English syndicate who, it is said, have already purchased 5,000,000 feet of lumber and aim to control the walnut trade. They are operating, it is stated, from Nashville, Tennessee, through a lumber dealer and furniture manufacturer of New York city, named Hornerman, who has a branch at Nashville. Some dealers, however, express a

positive disbelief in any English syndicate, and think it a plan of several dealers who are heavily loaded to bull the market and get rid of their surplus. — *American Lumberman.*

FORESTRY EXHIBIT.

On a recent express train to Port Arthur was an extra baggage car containing one of the most interesting exhibits of the natural resources of the Northwest ever collected. The exhibit was destined for the World's Forestry Exposition which opens at Edinburgh, Scotland, on the 18th. of June. It comprised the following articles:

A portable house 12x15, furnished with the common furniture ordinarily used by the settler, also a rough stable roofed with slabs and a driving shed. A barb wire fence was also provided and the whole will be displayed in a similar manner to a prairie homestead. The furniture is of native manufacture and was supplied by Messrs. D. Scott & Co., the barb wire fence by Messrs. Mullholland & Bros. and the buildings were manufactured by the Northwest Lumber Co. from native timber.

The display of agricultural implements was prepared by Messrs. Harris Sons & Co., and consists of wagon, sleigh, plough, harrow, and mower, finished in extra style. A pump made by a Winnipeg firm from native wood and a collection of the ordinary tools used on a farm, such as wheelbarrows, bucksaws, etc., formed part of the exhibit.

The most interesting part of the exhibit is a collection of native woods, comprising thirty-seven varieties, the principal of which are spruce, tamarac, white pine, poplar, birch, Norway or red pine, balsam of gilead, balsam and elm, some of which were three feet in diameter and all sound. Samples of the some woods manufactured were sent.

The C. P. R. land department contributed a complete assortment of Rocky Mountain timber and also sent their usual exhibit.

The collection has been prepared by Mr. T. H. Carman, as managing director of the Northwest Lumber Co., under whose auspices it is being exhibited, and great credit is due to that gentleman, as the exhibit will have a strong effect to dispel the erroneous impression that has been spread abroad in the United Kingdom, that the Northwest is a treeless country. — *Winnipeg Times.*

WOODEN PIPES

Just now a good many lumbermen, for some unexplainable reason, are looking at wooden pump manufacture as a possibly profitable investment for their money and machinery, and the Lumberman has received several letter making inquiries in regard to it. It seems likely that the past two years have been so unsatisfactory to the hardwood manufacturers that they are looking around for some other line akin to their old business, and a number have hit upon the pump log trade as offering inducements.

In conversation with the president of one of the largest wooden pump manufacturing companies in the country, the following facts were learned: The pump men generally bore their own logs, and prefer to do so unless they receive special inducements from parties on whose goods they can rely. Pumps are made of poplar, and the stock should be sawed in sizes from three end one-half inches square to eight inches square, and from 12 to 16 feet long. The stuff must be clear, containing no knots (except, perhaps, some small, aolutely sound ones) shakes, worm holes, nor sap that will not turn off. The logs, so called, should be sawed square and of uniform size from end to end. Parties sawing poplar for this trade should not saw very much of one size. The dimensions used are 3 1/2, 4, 4 1/2, 5, 6, 7, and 8 inches; of these, 4, 6 and 7 inches square can be called the standard sizes. So it will be seen that the manufacturer who should devote himself to sawing 3 1/2-inch logs would have difficulty in disposing of his product. Prices for logs range about as quoted under our hardwood market report. The range at present can be put from \$24 to \$26 per thousand feet, board measure, with not much certainty, however, as to the exact figures.

A recent report from the president of the Wooden Pump Manufacturers' Association of

the United States, contains a table of production for ten years past. According to that table, the number of wooden pumps manufactured annually in the United States varies from 100,000 to 200,000, the latter figure being reached in 1891. The amount of wood in a pump is, on an average, from 40 to 50 feet; so that we can estimate the amount of poplar going into consumption in this line, as from 8,000,000 to 10,000,000 feet per year. It will be seen that the field for operation in this direction is not a large one, and it is hinted that some companies who have invested in boring machinery are getting very sick of their undertaking.

There is one way, however, in which bored pump log manufacture might be made to pay, and that is to combine it with manufacture of wooden pipes for water mains. Probably but few not directly interested in such matters have any idea of how many towns and cities use wooden pumps in their water systems. In large cities its use has not proved profitable, but in places of 10,000 inhabitants, and under, and where no great increase is anticipated, wooden pipes can be laid to advantage; and scores of such towns are using them. Even in such a city as Grand Rapids, Mich., wooden pipes have given satisfaction. — *Northwestern Lumberman.*

AMERICAN FORESTRY CONGRESS.

The American Forestry Congress held its annual session at Washington, D. C., May 7 and 8. Papers were read by Messrs. F. T. Baker, of Topeka, Kan.; D. E. Fernaw, of New York, and N. H. Eggleston, of Washington, on "The value and management of Government timber lands." It was the general judgment, as elicited in discussion, that a distinction should be made between government timber and agricultural lands, and that the laws should be so amended as to secure this result more fully than now. Timber land should be withdrawn from settlement or public disposal. A paper was read by Mr. O. M. Read, of Hudson, Ohio, on the preservation of forests on the head waters of streams, which, the report said, was received with marked attention, and was warmly commended. Mr. John S. Hicks read a paper on the planting of trees by railroad companies, in which he estimated the cost of ties per mile of road to be \$924 every seven years, or a total per annum of \$14,916,000 for the 113,000 miles of railway in the United States. To supply the timber to make the ties it would require 12,672,000 acres of woodland kept in constant growth, or 113 3-10 acres per mile of single track road. This is exclusive of skidways. It would require a belt of growing timber one-half a mile wide along every road to supply the line with trees. All places owned by the railroad companies where trees could be grown should be planted, thus giving protection from wind storms and furnishing timber for ties. A committee reported favorable on experimental forestry schools sustained by government. President Loring delivered the closing address, urging action on the part of congress in the direction of preserving the forests. The next session will be held at Saratoga, probably in September.

Canadian Timber in British Markets.

LIVERPOOL, May 1.—The arrivals from British North America during the past month have been two vessels, 906 tons, against none during the corresponding month last year, and the aggregate tonnage from this date to all places in the years 1882-83, and 1884 has been 59,387, 45,016, 47,640 tons respectively. The import has been nominal, and the deliveries during the month have been generally satisfactory, prices, however, do not improve, and stocks are sufficiently large to meet ordinary requirements until spring shipments come forward, which is very desirable should be on a moderate scale until the tone the market has improved.

The deliveries of yellow pine timber has been double last year's during like month, but stocks are still heavy and price dull. Red pine, elm, and ash: sales have been nominal, and no change in value except as regards elm, which is dearer. Oak: there has been a large consumption, chiefly oak wagon scantling, and prices are a shade easier. Pine deals have moved off more freely; the better qualities maintain their value, but the stock consists almost entirely of thirds,

the prices of which are slightly lower. Staves are heavy in stock and prices lower. The consumption of New Brunswick and Nova Scotia spruce and pine deals has been about an average for this time of year, but the stock is considerably in excess of last year's. There have been on arrivals, the late shipments from St. John having nearly all been diverted to other ports, otherwise there must have been a further decline here on the low prices now ruling; our market is weak, and it is very important that imports should be moderate for some time to come. Lower Port pine deals are low in value and seldom asked for. Birch continues in good demand, and prices are well maintained.—*Farnworth and Jardine.*

SUBSTITUTE FOR MATCHES.

Countless accidents, as every one knows, arise from the use of matches. To obtain light without employing them, and so without danger of setting fire to things, an ingenious contrivance is now used by all the watchmen of Paris in all the magazines where explosives or inflammable materials are kept. Any one may easily make a trial of it. Take an oblong vial of the whitest and clearest glass and put into it a piece of phosphorus about the size of a pea. Pour some olive oil, heated to the boiling point, upon the phosphorus fill the vial about one third full and cork it tightly. To use this novel light remove the cork, allow the air to enter the vial and then recork it. This empty space in the vial will become luminous, and the light obtained is equal to that of a lamp. When the light grows dim its power can be increased by taking out the cork and allowing a fresh supply of air to enter the vial. In winter it is sometimes necessary to heat the vial between the hands, in order to increase the fluidity of the oil. The apparatus thus made may be used six months—*Builders' Journal.*

A Remarkable Slab.

The London *Timber Trades Journal* says:— We have had our attention called to a most remarkable slab of wood lying at Messrs. Hol & Sons' cabinet factory, Ebury Street, which we at first supposed to be African mahogany, but have since learned is from the Island of Borneo, in the China Seas. It was cut by the natives by means of small hatchets only, was found in the exterior jungles, where other similar logs are known to be, it strongly resembles African mahogany in color and texture, is of straight growth, remarkably hard, and consequently of great weight, and measures no less than 12 feet across. Admiral the Hon. Sir Henry Keppel informs us it was given to him by the Rajah of Sarawak, and he further states that, "being at the time in command of a line of battle ship, the *Rodway*, I had, of course, not much difficulty in bringing it home." We understand it is now the property of H. R. H. the Prince of Wales, who has instructed Messrs. Holland & Sons to convert it into a table top. Undoubtedly this will be an object of great interest to many.

Planking Portage Avenue.

The property owners on Portage Avenue are interesting themselves in planking that thoroughfare, and Mr. G. B. Spencer interviewed the Board of Works asking that the avenue be planked with four inch oak plank for a width of 33 feet on each side of the street, leaving a portion of the centre unplanked. The city engineer estimated that the cost would be \$1.40 per square yard, making a total of \$16,000 between Maine and Hargrave streets, of which the frontage owners were willing to pay half, the payment to extend over a term of years.

A Heavy Contract.

J. E. Loxley has recently made a contract with the Calcasieu Lumber Company, St. Charles, La., to cut and deliver at the mill of the company 200,000,000 feet of logs. He will deliver 20,000,000 feet yearly. The logs will be hauled to the Calcasieu river a distance of from three to eight miles, by rail, rafted and run down a distance of about 30 miles to the mill. This company is composed of Saginaw, Bay City and Detroit capitalists, N. B. Bradley, of Bay City, is president of the company.

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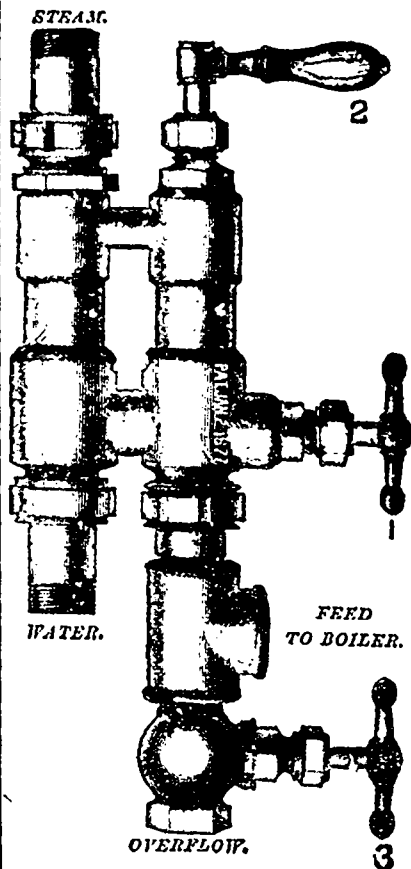
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FORESTRY.

The following paper was read by Dr. Franklin B. Hough, of Lowville, N. Y., at the American Forestry Congress held at St. Paul, Minnesota, and reported to the Ontario Fruit Growers' Association:

Using the term "education" in its broadest sense, as the imparting of knowledge in any mode or form, and assuming that knowledge is indispensable to success in any pursuit in life, we may be allowed to consider some of the means by which instruction can best be given in matters relating to forestry, in order to secure the greatest advantages to the greatest number who may have occasion and opportunity to apply this knowledge.

The special schools of forestry in Europe are, in some instances, elementary, and almost wholly practical in their character, and are intended for no higher purpose than to prepare young men to serve as foremen of working parties, and as forest guards. They are expected to know when the work entrusted to their care is well done; to see there is no needless waste of material or of time; and if the work is done by a contractor, but subject to their inspection, they are expected to know whether the terms of the contract are faithfully observed. They must be taught the protection of game, and the prevention of trespass and spoilage, in whatever form it may be attempted, and must understand enough of the first principles of administrative law to draft a formal complaint as the first step in a prosecution, whenever this may become necessary within the district under their charge. It is only in extraordinary cases that persons thus trained find opportunities for advancement, and they reach the highest point of their ambition when they have done their work well.

But the schools for technical instruction in forestry, of which we find some thirty or more under the patronage of government, in various countries in Europe, have a much higher mission. They take their students after they have finished a course of study in the public schools, and sometimes besides this after they have had a period of actual service in forest labors, under skilled direction, and they endeavor, with this beginning to impart a course of theoretical and practical education that is carefully adapted to meet the future wants of the forest officer in every grade of the service, and quite as special and technical in its nature as in our naval and in our military academies. When this course is completed they are not always sure of immediate appointment, but must wait for a vacancy in the service. The place once secured, there is great certainty of its permanence, and a reasonable prospect of advancement as circumstances may favor, or talent may deserve.

I have thus briefly sketched the object and the motives that lie at the foundation of forestry education in Europe. They apply to countries having large tracts of woodland, in charge of a government or belonging to great hereditary estates, and they are carefully and well devised to meet the wants of these countries, by preparing skilled agents for the management of the interests concerned.

With us, a difference of laws, and in the tenure and inheritance of property, and the perfect freedom to every owner of land in the management of his own estate, must necessarily occasion a wide departure from these methods of special education in its relations to forestry, in order to adapt it to the wants and requirements as they exist among us. I will therefore invite your thoughts to certain points to be considered in connection with forestry education in our own country, and inquire as to the duties that may arise in providing the kind and degree of instruction that will be of greatest practical service.

And first we may remark, that we do not for the present, and perhaps for many years to come, require a class of persons who have been specially trained to the degree that is deemed necessary in the better class of forest schools in Europe, because such persons could not find employment either in charge of public or private forests at the present time. In a journey through Europe and in visiting many of these schools in 1881, I made enquiries about students from America, and so far as I could learn there had been but one from their first beginning, and

this one had but recently entered at Thavand. Of the very few graduates who come to America, every one has, I believe, been obliged to seek other employments, and upon quite a number of occasions in which students or recent graduates have asked my advice about the opportunities for professional employment in America, I have in every case discouraged them from coming, unless prepared to seek some other pursuit than systematic forestry. A time may come when it will be desirable to seek for men well versed in science, who are capable to conduct series of observations at an experimental station, or to manage the forests upon the public domain, should they be put under regular management, as I have urged in my reports, but that time is not yet.

I am well aware that this measure of the establishment of special schools of forestry has been urged upon Congress, and that St. Paul has been mentioned as a proper place for its location. It certainly might as well be there as anywhere. But let me enquire: Where would the graduates, if trained to the highest degree and fitted to accomplish all that those can who leave these schools in Europe, be able to find employment? Neither the general nor the state governments have any system of forest management needing their services. There may be a few railroad companies who would employ one, but this is not certain, and as to private estates, I know of none upon which such a person would be likely to find an engagement. A time may come when this want may arise, but it has not yet arrived.

Should experimental stations come to be established, they should of course have men of the highest qualifications; and they would need a considerable amount of hand labor. In this, preference might be given to young men wishing to acquire skill in planting, and thus these places might become in time the nuclei of schools of practical forestry, but these to belong to the future. Let us then return back to the present, and consider what are the existing needs of the country in the matter of forestry education, and how they can best be supplied.

If we do not need a high degree of special training for a few, we certainly do need a certain amount of instruction of a practical kind for a greater number. We can altogether dispense with the whole of what is taught in the forest schools of Europe, upon the jurisprudence and the administration of forest codes, and the adjustments of rights of common usage. We can leave out what they teach concerning the protection of game. There is a great deal taught concerning "amenagement," that is, the working of a forest through a future given period, upon plans first carefully studied, and which, when once adopted, must be observed to the end, which do not find application in American forestry. There are studies in topography and engineering, drawing of maps, construction of reservoirs, dams, and various hydraulic operations, including leveling for drainage, the building of saw mills and the like, which, however useful, do not necessarily require more than is now taught in our best institutions in courses of study already in operation.

Let us now come to consider what we do want, and how this want can be best supplied, and in this we will begin at the lowest and broadest stage of education, with what our children should learn in their families and in the common schools.

They should be impressed with the idea that the woodlands are not less useful to human welfare than the cultivated fields; and that like them they should be protected from injury or waste, as well from fires as from other causes. They should be made to understand that the birds nesting in our groves are, almost without exception, our friends, and therefore entitled to protection. Under a competent teacher they can be interested in little schemes of planting and rural adornment around the schoolhouse and at home, and this without the formalities of a lesson from books, or under the semblance of a task imposed upon the unwilling, but rather as a reward of merit. These first ideas so easily instilled into the minds of children, leave the most durable impression, and remain through afterlife at least in the way of pleasant recollections of happy hours, and they may and should create a sympathy with nature that the

hard realities of life can never wholly efface.

A skillful and competent teacher might now and then by way of pastime, require the scholars to bring in specimens of woods, and leaves, and flowers, and fruits, and ask them to tell all they knew or could find out about them. The uses of things might be explained, and some idea of the order and harmony of nature thus imparted might awaken observation, and a habit of inquiry, and a desire for knowledge, that might of otherwise lain dormant. An hour or two in a week devoted to this kind of teaching by object lessons, would bring about the best results, and the school boards could well afford to pay something above the current wages to the teacher who could do it well.

This simple and elementary instruction might not go far in the way of education in forestry, but it would be a good beginning, as far as it did go it would be in the right direction. In mountain hills the source may be small, and a feeble obstruction may give the first direction to the stream that finally becomes the river. It would at least impart some knowledge of the names of things, and impress the truth that every part of a created object has its uses, and that nothing is formed in vain.

We have been obliged, in speaking of the teachers of our primary schools, to use the words "skillful and competent," preceded by an "if," because it is painfully evident that they do not apply to them all. And this leads us directly to the next point we have to consider, namely: That our Normal schools, where these teachers are prepared, do not as yet afford that instruction upon these subjects, that should impart that skill and competence that we need. There should be introduced in the way of classroom recitations, or by lectures, or otherwise, a little practical instruction upon the ways by which the children of a common school may be interested in these habits of observation and inquiry, and instructed in the rudiments of knowledge about the productions of nature which are around them. This is done already to some extent in various normal schools, and it might be done with profit and to a further extent in them all.

The cabinets of these normal schools, should contain specimens of woods, and of the leaves, blossoms, and fruits, and the students might be exercised in distinguishing the different species by the bark the wood and the general habit of growth, of the trees of common occurrence around them. The grounds of such institutions should have labelled specimens of living trees, grouped in their natural relations, and in as great a variety as their extent, and the soil and climate would permit. Some correct ideas might also be imparted, as to the time and method of planting, the requirements of particular kinds of trees, and the like, and the classes of young men might be taught in a practical way, some of the first lessons in forest economy that are most useful in after life, or that might be imparted when they go forth to teach. In these lessons, instruction might be given as to some of the relations that exist between forests and the climate, the incidental benefits conferred by woodlands upon agriculture, and some of the economies that may be practised in the planting and care of trees.

Our high schools and academies might in like manner and to an equal or greater extent, impart instruction upon things useful to be known, and with the very best effect. Under zealous and competent teachers the students might be interested in the formation of collections of various kinds, and be taken occasionally upon little excursions into the woodlands, where opportunities for practical instruction are afforded on every hand. This method of education by means of excursions under the guidance of teachers, which is quite common in certain schools in Europe, and is a prominent one in all schools of forestry, should be more generally practised among us, and no summer term should pass in these institutions without one or more of them being had.

In the various grades of schools that have been noticed, an arbor day should never be allowed to pass without being duly celebrated, with ample preparations beforehand, and it would add not a little to the interest in the custom, if the care and protection of particular

trees were assigned to particular ones of the number, who would be expected to give their charge all needful attention by watering in a dry time, through the first season, and by such further attention as their wants might require.

In the various grades of instruction, suitable prizes might be offered for proficiency and merit, and the best results shown in a county or a state, should be rewarded by distinguished mention in the official reports.

Passing from these institutions of the middle class, to those of higher grade, we come to the colleges and universities of the country. Some of these from their location, or on account of their special object, may offer no opportunity for instruction in forestry in any form; but with much the greater number, more or less might be done, without burdening the course of study as already prescribed, or requiring more time than is now allowed.

In the course of instruction in chemistry, botany, natural history, physics, mathematics, meteorology and the like, the application of these sciences to questions in forestry might be noticed, as opportunity occurred. A course of lessons in the class-room might be prescribed as is already done in some of our colleges, as at Dartmouth, and in the Michigan University. The remarks already made concerning collections for the cabinet, and a labeled arboretum, might apply on a more extended plan, corresponding with the more enlarged field of operation and greater opportunity; and no class should graduate without hearing at least one course of a dozen lectures by a person thoroughly qualified for presenting a concise general outline of the whole subject of forestry.

I have thus briefly presented the leading features which I think might be grafted upon our existing system of education, without creating new institutions, or much enlarge the operation of existing agencies. The plan I propose would embrace the whole country, and include in its operation every person who is to become in a few years the owner of the lands upon which our forests must in future be grown. It is no doubt imperfect, but it would be a fair beginning, and its details could be modified from time to time, as experience might suggest. It applies chiefly to the young, but this is the class that learns. It is often said, and there is too much truth in the saying, that a man in middle life or in old age can learn nothing. But these men are passing away, and our greatest hope depends upon our ability to prepare those who are to come after them, to discharge their whole duties, as well in this as in every thing, in such a manner as to do full justice to themselves as to the commonwealth whereof they form a part.

IN A LOGGING CAMP.

Bill Nye, who now lives in Hudson, Wis., visited a logging camp and writes of it as follows to the *Denver Opinion*:

"I put up at Bootjack camp, on the raging Willow river, where the gay plumaged chipmunk and the spruce gum have their home.

Winter in the pine woods is fraught with fun and frolic. It is more fraught with fatigue than funds, however. This winter a man in the Michigan and Wisconsin lumber camps could arise at 4:30 a. m., eat a patent pailful of dried apples soaked with Young Hyson and sweetened with Persian glucose, go out to the timber with a lantern, hew down the giants of the forest with snow up to the pit of his stomach, till the grey owl in the gathering gloom whooped and hooted in derision, and all for \$12 per month and stewed prunes. I did not try to accumulate wealth while I was in camp, I just allowed others to enter into the mad rush and wrench a fortune from the hand of fate while I studied human nature and the cook. I had a good many pleasant days there, too. I read such literary works as I could find around the camp, and smoked the royal Havana smoking tobacco of the cookie. Those who have not lumbered much do not know much of true joy and sylvan smoking tobacco.

They are not using a very good grade of the weed in the lumber regions this winter. When I say lumber regions I do refer entirely to the

circumstances of a weak back. (Monkey wrench, oil-can and screw driver sent with this joke; also rules for working it in different kinds of goods.) The tobacco used by the pine choppers of the northern forest is called the Scandihooivan. I do not know why they call it that, unless it is that you can smoke it in Wisconsin and smell it in Scandihooiva.

When night came we would gather around the blazing fire and talk over old times and smoke this tobacco. I smoked it until last week; then I bought a new mouth and resolved to lead a different life. I shall never forget the evenings we spent together in that log shack in the heart of the forest. They are graven on my memory where time's effacing fingers cannot monkey with them. We would always converse. The crow talked the Norwegian language, and I am using the English language mostly this winter. So each enjoyed himself in his own quiet way. This seemed to throw the Norwegians a good deal together. It also threw me a good deal together. The Scandinavians soon learn our ways and our language, but prior to that they are quite clannish.

The cook, however, was an Ohio man. He spoke the Sandusky dialect with a rich, nut-brown flavor that did me much good, so that after I had talked with the crow a few hours in English and received their harsh, corduroy replies in Norse, I gladly fled to the cook shanty. There I could rapidly change to the smoothly flowing sentences peculiar to the Ohio tongue, and while I eat the common twisted doughnut of commerce we would talk on and on of the pleasant days we had spent in our own native land. I talked to him of his old home till the tears would unbidden start, as he rolled out the dough with a common Budweiser beer bottle and shed the scalding tears into the flour barrel. Tears are always unavailing, but sometimes I think they are more so when they are shed into a barrel of flour. He was an easy weeper. He would shed tears on the slightest provocation or anything else. Once I told him something so touchful that his eyes were blinded with tears for the nonce. Then I took a pie and stole away so that he could be alone with his sorrow.

He used to grind the coffee at 2 a. m. The coffee mill was nailed up against a partition on the opposite side from my bed. That is one reason that I did not stay any longer at the camp. It takes about an hour to grind coffee enough for thirty men, and, as my ear was generally against the pine boards when the cook began, it ruffled my slumbers and made me a morose man.

We had three men at the camp who snored. If they had snored in my own language I could have endured it, but it was entirely unintelligible to me as it was. Still it wasn't bad, either. They snored on different keys, and still there was harmony in it—a kind of chime of imported snore, as it were. I used to lie and listen to it for hours. Then the cook would begin his coffee mill overture, and I would arise. When I got home I slept from Monday morning till Washington's birthday, without food or water."

Planting Evergreens.

Mr. W. D. Boynton communicates to the *American Garden* an article on planting evergreens, which should interest a great many persons, for there are but few varieties of trees which are more beautiful than groups of balsams, pines, and firs, and they are the most likely to thrive after transplanting.

As to the season for transplanting, says Mr. Boynton, either fall or spring is good. The when is not so important as the how. I lean a little toward the spring planting however, as the ground is then more moist, and no other vegetation in the way about the roots and stems to obstruct the work of taking up the young trees.

My first and main precaution is to secure the body of mould immediately around the tree that contains most of the feeding roots in a tree of small growth. I have this lifted out carefully with the tree in the center, as little disturbed as possible, and then wrap coarse sacking about the whole, drawing it up around the trunk and tying firmly. In this shape they can be loaded into a wagon box that has a thick layer of straw

in the bottom, and taken home. They should be set out at once, watered, and staked.

The reader will understand that this way of taking up can only be practiced on short distances, where the trees can be taken home and set out in a few hours at the most. If they are to be shipped, the mould must be detached, and moss worked in among the roots and bound around them. Even here I hold to the idea of wrapping coarse sacking around the whole, and fastening around the stem. The whole mass is then moistened, after which treatment they will stand quite a journey and come out in good condition.

If the planter finds that the roots are at all dried up when he comes to set them out, the tree may as well be pitched into the bush heap at once, for it will sooner or later find its way there. Never use manure of any kind around the roots of a young evergreen tree. Vegetable mould is good, but they do not need a rich soil. They should always be staked firmly, for they offer a thick top to the wind, and if twisted about, the roots cannot get a hold.

The Railways of the World.

The United States in 1882 had 101,810 miles of railway open, which was only 4,600 miles less than all the railways of Europe. The railways of the United Kingdom, although their aggregate mileage in 1882 was but 88,405 carried 712,000,000 passengers and 256,000,000 tons of freight, as compared with 270,000,000 passengers and 290,000,000 tons of freight carried by our railways. The cost of our roads in round numbers was estimated in 1880 at \$5,200,000,000, as against \$3,000,000,000 for the cost of British railway, but the gross receipts of the former were double those of the latter, and the dividend on capital, 4.80 per cent., was larger than in any other country. In Europe the average was 3.80, and the range was from 2.10 in Denmark to 4.21 in Germany. The capital employed in the railways of the United States is nearly equal to that of the British and French railways combined. On our railways, the number of passengers killed and wounded by accidents was 41.1 per 1,000,000, as compared with 10.8 per 1,000,000 in Europe. The number of employees per mile is with us 5, and in Great Britain 15. The railway capital per mile of railway is \$209,000 in the United Kingdom, and \$37,000 in the United States. The ratio of railway capital to the national wealth is 8.8 in Great Britain and 11.4 in the United States. The highest railway in the world is the Lima Aroya line in the Andies, which runs at an elevation of 15,840 feet.

Hamilton Notes.

The correspondent of the *Toronto Globe* says:—The timber trade at Hamilton is much smaller than last season. McArthur Bros. and McRae are doing very little at this port, and Mr. Murphy, of Quebec, is shipping instead of rafting. Flatt & Bradley are rafting, but not to such an extent as last year. The rate from this port to Garden Island or Collins' Bay is \$22, which is about \$13 less than what used to be considered a fair figure. The low rates are a result of the fierce competition of the railroads with the vessels. One timber merchant says that the railroads offered to carry his timber from where it was cut up north to Quebec for very little more than it cost to raft it and send it by the lake and river.

First of the Season.

Robert Ralston, an old-time Winnipegger, but now of Emerson, has arrived from the Gateway City with several rafts containing 100,000 feet of oak logs for Brown & Rutherford. He states that this is the first arrival of the season and that the rafts floated down the Red, without any trouble. He has several more to bring to the city during the summer.

In a cargo of lumber lately shipped from Saginaw to Cleveland, O., were three pine pieces that were a portion of an exhibit at the Philadelphia Centennial, made by Geo. G. Williams & Bro., of Saginaw City. One piece was six, and two four inches in thickness, and all 41 inches wide and 16 feet long. They go to Cleveland as a gift to the Diamond Match Company.

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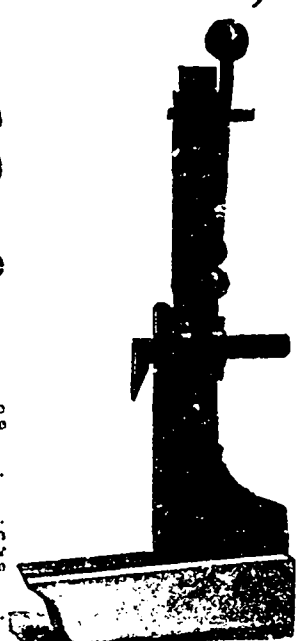
SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

MISSISSIPPI, June 7th, 1883.
HUGH GIBSON, ESQ.—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.
Yours respectfully,
PETER McLAREN.

BURLY, April 20th, 1883.
HUGH GIBSON,—Sir,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take \$50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.
Yours truly,
GEO. S. BROWN, JR.



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Market Reports.

MONTREAL.

From Our Own Correspondent.

MAY 24.—The lumber trade has been improving, but not so freely as in past seasons. The consumer demand has been fair and prices steady. Dealers, however, are chary about increasing their stocks much in the meantime. Laths are cheaper owing to new stocks coming in. We quote prices as follows:—

Table listing lumber prices for Montreal, including Pine, Spruce, Hemlock, Ash, Oak, Walnut, Cherry, Sassafras, Birch, Hard Maple, Lath, Shingles, and Shingles, 2nd.

SHIPPING.

The shipment of deals has been fair for the season and every steamship is taking her share mostly to English ports, and engagements are still making at the following rates: To Glasgow 40s.; to Avonmouth, 45s.; to Liverpool, 50s.; to London, 50s.; to the River Platte by sailing vessels \$13 to \$14. The first vessel laid on for the latter destination is the Bk. Cambridge which will begin loading as soon as her inward cargo is discharged. The following are the shipments recorded at the Custom House since the opening of navigation up to date: SS. Montreal, to Liverpool, 15,734 deals; SS. Lake Champlain, to Liverpool, 6,667 deals; SS. Austrain, to Glasgow, 7,506 deals; Schooner Bernier, St. John, Nfld., 75,000 feet lumber; SS. Sarmatian, Liverpool, 15,402 pcs. boards; SS. Lake Huron, Liverpool, 6,889 pcs. deals; SS. Sarnia, Liverpool, 22,532 pcs. deals; SS. Titania, Glasgow, 3,217 pcs. deals and 125,000 feet-lumber; SS. Parthian, London, 9,978 pcs. deals; SS. Barcelona, London, 9,978 pcs. deals; SS. Milanese, Liverpool, 14,104 pcs. deals, 100 deal ends and 10,180 boards; SS. Texas, Liverpool, 6,322 deals; SS. Gloucester, Avonmouth, 10,511 deals.

CORDWOOD.

Now that navigation is fairly open and the supply beyond the demand wholesale dealers have lowered their price, but even with the reduction the demand is slow, as the retail dealers are doing next to nothing. We quote ex cartage at the wharves as follows:—

Table listing cordwood prices for Long Maple, Long Birch, Long Beech, and Tamarack.

LIVERPOOL MARKET.

Our latest advices state that imports have been on a very moderate scale, while a fair consumption has been maintained though prices generally rule low. A private sale of a cargo of spruce deals from St. John, N. B., per steamer took place, but prices have not transpired, but the wholesale quotation in the market was £6 12s. to £6 15s.

TORONTO.

From Our Own Correspondent.

MAY 24.—There is no alteration worthy of note in the condition of the lumber market, all the yards have a fair run of trade and prices remain about the same. A large amount of building is going on in various parts of the city, and the longer length of bill lumber is in good demand with only a limited supply. All other kinds except 1 1/2 in. and 2 in. cut up and pick to dry are plentiful; the demand for the latter is far in excess of the supply, especially as regards car load lots.

Over our docks shipments continue fair, although not rushing, about the same quantity has been shipped, as noted in my last letter. During the last two weeks the grades of lumber passing over the rail of vessels has been considerably better than that shipped the two weeks preceding, and most of the dry lumber held over from last season has now left the mills, so that this season's cut is all that can be depended on for future shipments. It is true there may be small lots at some of the smaller

mills yet to come forward, still, the quantity will be so small as hardly to be worth taking into account, when compared with the amount brought to this port. The remainder of this season's business will now depend upon the demand from the other side the lake. It is now fully understood that there is a large shortage in the log crop, but unless we have a brisker demand there will be quite sufficient lumber to more than meet the wants of the trade.

Considerable dissatisfaction is just now existing between wholesale dealers and their western customers, by reason of the bungling manner in which the railway companies have performed, or rather neglected to carry out, their contracts at special rates to various points in Western Ontario. So that dealers who have bought at fixed prices f.o.b. cars at the mills have found that instead of a 10 or 12 cent rate, as guaranteed them by the seller, they have had to pay 16 and 17 cents before obtaining possession of their lumber, and they naturally accuse the seller of trying to play sharp, whereas the fault is with the railway companies in neglecting to inform their agents with regard to such special contracts.

The N. & N. W. Railway Company have appointed Mr. Robt. Quinn, late local freight agent here, to the position of general freight and passenger agent, this appointment gives general satisfaction, and if the general manager will only grant him full powers nothing but good will can exist between the company and their customers in the future.

Table listing prices for Mill cull boards and scantling, Shipping cull boards, Scantling and joist, up to 10 ft., 11 ft., 12 ft., 13 ft., 14 ft., 15 ft., 16 ft., 17 ft., 18 ft., 19 ft., 20 ft., 21 ft., 22 ft., 23 ft., 24 ft., 25 ft., 26 ft., 27 ft., 28 ft., 29 ft., 30 ft., 31 ft., 32 ft., 33 ft., 34 ft., 35 ft., 36 ft., 37 ft., 38 ft., 39 ft., 40 to 44 ft.

Table listing prices for Cutting up planks to dry boards, Sound dressing stocks, Picks Am. Inspection, Three uppers, Am. Inspection.

Table listing prices for 1 1/2-inch flooring, dressed, rough, dressed, undressed, dressed, undressed, Beaded Sheeting, dressed, Clapboarding, dressed, XXX extra shingles, Sawm Lath.

BOSTON.

Cotton, Wool and Iron of May 24, says:—There is a very fair business doing, as the season becomes settled for building operations. On general lumber prices are quite well sustained, and receipts are pretty light. Eastern lumber is in good request, with small arrivals. Hemlock boards are in small supply, as are also lath. Southern pine continues very quiet with timber orders scarce and low, and only the better grades of flooring in fair request. Western pine is selling along well at steady prices, especially the better grades. Cherry and walnut of desirable quality also find a ready market. Whitewood is in good request, while ash and oak are rather dull.

CANADA PINE.

Table listing prices for Selects, Dressed, Shelling, Dressed, 1st, 2nd, Dressed Shippers, Dressed Box, Sheathing, 1st quality, 2nd.

WINNIPEG.

The Winnipeg Commercial of May 20th says:—There has been considerable life in the lumber business during the past week, and matters have reached a most satisfactory basis. There is some talk of the mills in the city resuming work very soon, as arrangements have been made to do away with at least a large share of the indiscriminate cutting of prices that has been carried on for months past; the arrangement is not sufficiently definite to allow of quotations being given that could be taken as a reliable basis, but it is, doubtless, a step in the direction of reaching this, and it is to be hoped that further progress in that line will be speedily made. The outlook for the balance of the

season is rather encouraging, and with a further improvement in trade generally the season may yet turn out a profitable one to lumbermen.

Table listing prices for Pine lumber, 1st, common boards, dressed, 2nd, dressed, 1st dressed rough, 2nd do., Sheathing, rough, Timber 10 feet and under, over 10 feet, for each additional 2 feet, Dimension and joists 10 feet and under, over 10 feet for each additional 2 feet, Fencing, 2 and 3 in. battens, A. stock boards, all widths, B. do. do., C. do. do., D. do. do., 1st clear, 1, 1 1/2, and 2 inch, 2nd do. do. do., Window and door casings, Base boards, dressed, 1st pine flooring, sliding and ceiling, 2nd do. do. do., 3rd do. do. do., 1/2 inch split siding, dressed, Spruce lumber—timber 16 feet and under, over 16 feet for each additional 2 feet, Dimension and joists, 10 feet and under, over 10 feet for each additional 2 feet, Boards, 1st flooring, sliding and ceiling, XX shingles, Star A shingles, X shingles, A. do., Lath.

ALBANY.

Quotations at the yards are as follows:—

Table listing prices for Pine, clear, 1st, 2nd, 3rd, 4th, selects, good box, Pine, 10-in. plank, each, Pine, 10-in. plank, culls, each, Pine, 10-in. boards, culls, Pine, 10-in. boards, 10 ft., 11 ft., 12 ft., 13 ft., 14 ft., 15 ft., 16 ft., 17 ft., 18 ft., 19 ft., 20 ft., 21 ft., 22 ft., 23 ft., 24 ft., 25 ft., 26 ft., 27 ft., 28 ft., 29 ft., 30 ft., 31 ft., 32 ft., 33 ft., 34 ft., 35 ft., 36 ft., 37 ft., 38 ft., 39 ft., 40 to 44 ft., Cutting up planks to dry boards, Sound dressing stocks, Picks Am. Inspection, Three uppers, Am. Inspection, 1 1/2-inch flooring, dressed, rough, dressed, undressed, dressed, undressed, Beaded Sheeting, dressed, Clapboarding, dressed, XXX extra shingles, Sawm Lath, Lath, hemlock, Lath, spruce.

BUFFALO.

Table listing prices for We quote cargo lots:— Uppers, Common, Culls.

CHICAGO.

The Northwestern Lumberman of May 24, says:—With the exception of some yards in the farther West, stocks are not excessive, and at many points they are decidedly low. It is true that there is considerable lumber yet to come forward, but both wholesale and retail stocks in the Northwest are much depleted and broken. This fact is evinced by the rate at which the dry supplies in Saginaw Valley have been absorbed, and the rapidity with which they are disposed of on the east shore of Lake Michigan. It is now asserted that there is little in either section that has not been sold outright or spoken for. Much of the Saginaw lumber is yet on the way to the East, and has yet to go into distribution from Albany and other points. Canada stock is beginning also to flow into the eastern States. But judging by reports, the supply in the distributing yards will have become so reduced before the incoming western and Canadian lumber reaches Albany, and is scattered thence into the retail yards, that it is thought the supply will not so much exceed the demand as to weaken prices.

The number of port arrivals for the week ended Wednesday night, May 21, was 231 against 178 the week previous, and 172 for the corresponding week last year. Up to date, since the opening of navigation, judging by the number of cargoes reaching this port, receipts

of lumber are considerably in excess of a relative time in 1883, though there is less green lumber coming this year than last.

Lake freights are reported by the vessel agents as firm and unchanged.

Quotations on lumber, so far as a market price has been made, are as follows:—

Table listing prices for Dimension, green, Boards and strips—No. 2, Boards and strips—Medium, Boards and strips—No. 1, Shingles, standard, Shingles, extra, Lath.

It is claimed by the yard merchants that, though stocks are becoming low, there is plenty of all kinds of lumber to be had at easy prices. This, no doubt, is owing to the fact that receipts of dry lumber have really been heavy since the opening of navigation, and though the bulk has gone into the great yards, it is to be had by anybody at moderate figures.

Receipts of lumber, shingles, etc., for the week ending May 8, as reported by the Lumberman's Exchange:—

Table showing receipts of lumber, shingles, etc., for the week ending May 8, 1884, compared with 1883.

Table showing receipts of lumber, shingles, etc., for the week ending May 8, 1884, compared with 1883, including increase and decrease.

Table showing stock on hand May 1, 1884, 1883, and 1882, for Lumber, Shingles, Lath, and Cedar posts.

OSWEGO, N. Y.

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

TONAWANDA.

Table listing prices for CARGO LOTS—MICHIGAN INSPECTION:— Three uppers, Common, Culls.

LONDON.

The Timber Trades Journal of May 17th, says:—Whether the bottom of price has at length been reached is a matter of opinion, but if not they can hardly sink much lower; at the same time the prospect of a very considerable rise by and by is a very fair one. The season seems to promise well for speculations, and the risk of any very serious loss, through a further decline in prices, would be more than counterbalanced by the likelihood of a substantial advance, were it not for the want of confidence that permeates the inmost recesses of the trade, which does more to retard business than anything else. What is the use of buying advantageously without there is a safe and ready sale for your purchases? It will be this want of confidence that will throw a great deal of stuff into the public sales, which, under other circumstances, would have been distributed in a private way.

At the "Baltic" this week values seemed in some respects better than they have been, but a choicer selection of goods doubtless gave to the prices their improved character. One with another we may put down things as stationary, with a somewhat better demand, which the fine spring like weather we are now experiencing doubtless leads up to.

LIVERPOOL.

The latest number of the Timber Trades Journal tells us that there is no cessation of the cry that business in the manufacturing districts is exceedingly dull, that there is no life in the trade, and that it is exceedingly difficult to wring out any orders from the consumers, and when this done it is done on the next margin

of profits. In this condition of trade the timber market appears to be no worse off than other branches in the manufacturing districts if we may judge from the reports in the commercial papers.

The importation of *pitch pine* continues very small, and this shows up off the accumulated stocks, which are too heavy for this time of year. Pitch pine has been arriving more freely, and several cargoes are now being landed: most of them, however, have been either contracted for or sold entire by private treaty. These vessels are giving the timber quays and docks a great show of life than they have shown for some time past. The vessel which was in the disastrous collision with the steamer State of Florida turns out to be the Pomona, well known in the timber trade between Richibucto and Liverpool. A vessel is reported bottom up in the Atlantic, which may either be this vessel or a vessel laden with pitch pine for a neighboring port, which is now considered overdue.

GLASGOW.

The *Timber Trades Journal* of May 17th, says:—The imports for the past week include four cargoes of pitch pine; other arrivals are sundry parcels of whitewood, staves, &c., per steam liners.

As noted below, an auction sale was held at Greenock on 8th inst., the goods offered consisting of American timber and deals. Some good buyers were present, and over 600 logs of timber were disposed of at prices, which, on the whole, were fairly sustained. As to Quebec red pine, while there is a plentiful supply of pitch pine, which competes with it the demand is weakened and prices depressed, especially so long as slackness continues in our shipyards.

There has been no auction held at Glasgow during the week.

Messrs. Wm. Connal & Co. announce a sale of mahogany and cedar for Tuesday first, 20th inst., at Yorkhill Wharf, Glasgow, to be followed by Messrs. Edmiston & Mitchells, who will offer birch timber, walnut and whitewood.

Deliveries from yards meantime continue to be quiet, but in the course of a few weeks the arrivals of fresh imports may be expected to revive an interest among buyers, who we hope by that time will have their hands filled with fresh orders. From the present state of the market a sparing import for the coming season is advisable.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, May 20, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:

- 298,786.—Auger, H. L. Shaler, Deep River, Conn.
- 298,879.—Box covering and trimming machine—G. Munro, Troy, N. Y., assignor to American Box Machine Co., New York, N. Y.
- 298,765.—Cant-hook and lifting-jack combined—O. H. Mitchell, Springfield, Mo.
- 298,765.—Cant-hook or dog—A. Kennard, Clearfield, Pa.
- 298,979.—Clutch, friction—M. C. Johnson, assignor to Pratt & Whitney Company, Hartford, Conn.
- 299,096.—Oiling shaft-bearings, device for—T. Y. Winter, Philadelphia, Pa.
- 298,755.—Planing machine—L. Houston, Altion, N. Y.
- 298,836.—Saw—W. Peak, Peakville, N. Y.
- 298,965.—Saw clamp frame A. McNiece, Newark, N. J.
- 298,743.—Saw filing machine, gun—A. P. Gathwright, assignor of one-half to W. C. Potts, Harmony Grove, Ga.
- 298,820.—Saw jointer—B. S. Bozard, Brooklyn, N. Y.
- 298,928.—Saw sharpening machine—D. Willey, Concord, N. H.
- 298,892.—Saw tooth, invertible—W. B. Risdon, assignor to American Saw Co., Trenton, N. J.
- 298,737.—Shingle-sawing machine—G. Earl, Pierson, Mich.
- 298,851.—Fiber, machine for converting wood into—J. H. Hayden and J. R. Slesper, Bristol,

N. H., assignor of one-third to O. R. Aldrich, Boston, Mass.

A PLEA FOR TREE PLANTING

The following article from the *New York Independent* will repay perusal, at this time: "In every town and village something can be done to beautify and greatly improve the public grounds and highways. All that is necessary is for some one or more persons to start the wheels and unite in calling a meeting of the residents to discuss the matter. Let the ladies take hold in good earnest and start the movement. A village society once organized could do, in a very few years, an astonishing amount of work, with very little effort. One single day in a year devoted to village improvements would very soon change the whole appearance of any place. Such work is rapidly increasing in popularity. Mr. B. G. Northrop, of Connecticut, is now giving almost his whole time in lecturing on the subject of Rural Improvements.

What he said, in a recent address in Shelbyville, Indiana, is highly spoken of by the *Indianapolis Journal*. We copy from a recent report the following interesting points, given by Mr. Northrop on that occasion. His topic was 'Arbor Day.'

It may be objected to Arbor Day, or to any school lesson on forestry, that the course of study is already overcrowded. I reply that the requisite talks on trees, their value and beauty, need not occupy three hours, all told. Those talks on this subject, which Superintendent Peaseley says were the most interesting and profitable lessons the pupils of Cincinnati ever had in a single day, occupied only the morning of Arbor Day, the afternoon being given to the practical work. Such talk will lead our youth to admire our noble trees, and realize that they are the grandest products of nature, and form the finest drapery that adorns this earth in all lands. Thus taught, they will wish to plant and protect trees. This love of trees early implanted in the school and fostered in the home, will make our youth practical arborists.

Teachers can easily interest their pupils in adorning the school grounds. With proper pre-arrangement as to the selection and procuring of trees, vines or shrubs, Arbor Day may accomplish wonders. Many hands will make merry as well as light work. Such a holiday will be an attractive occasion of enjoyment and improvement. The parents should be persuaded to approve and patronize the plan. It tends to fraternize the people of a district, when they thus meet on common ground, and young and old work together for a common object, where all difference of rank or sect or party are forgotten. The plantings and improvements thus made will be sure to be protected. They will remain as silent, but effective teachers of the beautiful to all the pupils, gradually improving their taste and character. Such work done around the school naturally extends to the homes. You improve the homes by improving the schools as truly as you improve the schools by improving the homes.

Our youth should early share in such efforts for adorning the surroundings of their homes and planting trees by the wayside. How attractive our roads may become by long avenues of trees. This is beautifully illustrated in many countries of Europe. Growing on lands otherwise running to waste, such trees would yield ample returns. The shade and beauty would be grateful to the traveller, but doubly so to the planter. Having in abundance the best trees for the roadside, no class can contribute so much to the adornment of our public roads as the farmers. In portions of Germany, the land owner was formerly required to plant trees along his frontage. Happy would it be for us if our sovereigns of the soil would each make such a law for himself. When, in any community, each citizen is stimulated to make his own grounds and wayside neat and attractive, the entire town becomes so inviting as to give new value to its wealth and new attractions to its homes."

REVIEWS.

MANUAL FOR FURNITURE MEN.—The Industrial Publication Co. of 234 Broadway N. Y., has published a handy little volume of "Hints and

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at **LOWEST MARKET PRICES.**

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Practical Information for Cabinet Makers Upholsterers and Furniture Men Generally." Many of the miscellaneous receipts (carefully indexed) will be found useful not only to workers in wood, but also in the household when minor repairs and renovations are required.

THE "VANCOUVER"

The *Montreal Star* says:—The new Dominion line steamship "Vancouver" arrived in port after her first trip across the Atlantic shortly after two o'clock on Monday. The new steamship, which is 5,700 tons register, 300 tons larger than the "Parisian," is built on very much the same lines as the "Sarnia" and "Oregon," of the same line. Like Lady Jane, the general appearance of the vessel is more massive than beautiful, display having been subordinated in the utmost degree to seaworthiness. She is built with a straight stern, is turtle-docked forward and aft, with a commodious promenade deck amidships, over the deck cabins, which, unlike those of the "Parisian," are extended to the sides of the vessel. She is shiprigged and has four masts and two funnels. As to passenger accommodation nothing superior if equal can be found in any other vessel of the Montreal fleet. Her saloon, which is amidships, is light and airy. The walls are fitted in polished bird's eye maple relieved with aesthetic painted designs and pillars en relief of white and gold and with rich gold capitals. The furniture is upholstered in crimson. A gallery open above the saloon contains a cozy ladies' saloon fitted with gorgeous furniture upholstered in a rich blue. The ship is illuminated throughout with the incandescent electric light, 40 of which illuminate the saloon. On her way up from Quebec, the "Vancouver" accomplished a run of 16 knots per hour. From the *Mail* we learn that this colossal steamship was thrown open to guests of the managing directors, Messrs. David Torrance & Co., on Thursday afternoon, when the vessel was illuminated all over by a myriad of electric lights. It was like passing through fairy-land to take a glance into the saloon, where were forty incandescent lamps in operation, and where an immense throng of ladies and gentlemen were collected at a most agreeable afternoon tea, most hospitably and grandly dispensed by the hosts. This entertainment was a new and most commendable departure from the former practice of steamship companies of giving inaugural banquets on board a new ship to gentlemen exclusively, and it is hoped it will be followed here after.

The Merchant Shipping Act.

St. JOHN, N. B., May 17.—At a meeting of shipowners this afternoon to take action respecting the Merchant Shipping bill, it was resolved to forward a memorial to the Dominion Government to the effect that as there was doubt as to how the bill would affect colonial shipping, and as the Dominion Government have certain

power over colonial shipping, that they petition the Imperial Government to exempt colonial shipping from the operation of the act. It was decided to interview Sir. Leonard Tilley on the subject when he arrives in town.

DANGER SIGNALS.—Reader, if you are troubled with pain, weakness, weariness and a dragging feeling in the small of the back, with thick, high colored—slimy urine, then you have alarming signals of danger, and should resort to Burdock Blood Bitters, the grand kidney regulator and blood and cleansing tonic.

The union bricklayers and stonemasons of Buffalo with few exceptions struck work in consequence of the refusal of the employers to increase their wages.

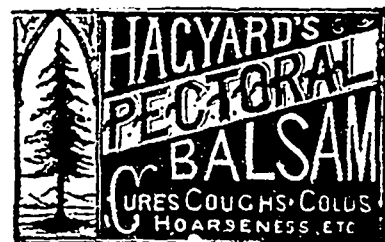
A RUN FOR THE DOCTOR is generally the first thing in case of any injury, but a doctor cannot always respond to the call. If you have Jinyard's Yellow Oil at hand, you have a reliable remedy for all wounds, injuries and pain. It has saved life when even doctors had abandoned hope. Keep it ready for use.

The demand in the United States for crematories as a means of disposing of the remains of the dead has so increased that an institution is to be built in Philadelphia.

IT IS NATURAL.—It is natural for some people to be bilious, being often a result of peculiar bilious temperament, which with high living, too greasy food, indigestion from inactivity, is the frequent cause. The remedy above all others, is Burdock Blood Bitters. It is highly curative for all bilious complaints, and far better than physic for inactive conditions of the bowels.

WANTED AGENTS to sell TUNISON'S NEW AND SUPERIOR CANADA MAPS & CHARTS

As paying as any agency in the world. For particulars, full and free, address H. G. TUNISON, 388 Richmond St. LONDON, ONT.



GOLD for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address Strick & Co., Augusta, Maine.

THE INTERNATIONAL
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LUMBERMEN'S TENTS

The Cheapest and Best in the Market!

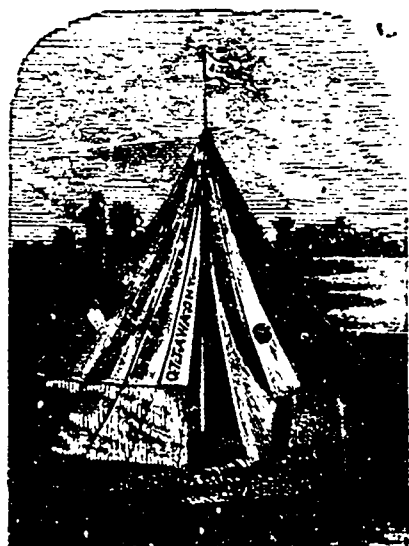
Tents, Flags, Tarpaulins, Waterproof Goods,
 Camp Furniture, etc., etc.

*Estimates for Circus Tents, Range Marquees, Hand-made
 Sails, etc., furnished on application. Liberal Discount
 to Large Buyers.*

PORTABLE CANVAS BOATS MADE TO ORDER

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Camp Furniture!



PRICE LIST!

Send for CATALOGUE

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

Agency for the WILDERMUTH BED SPRING, the best in the Market.

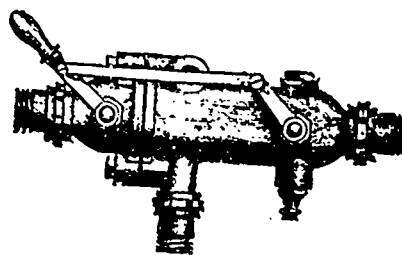
A. G. FORGIE, MANAGER,
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184 SPARKS STREET, OTTAWA.

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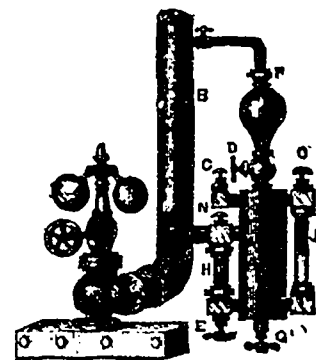
Montreal Brass Works,
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Will lift 20 feet, and take water at 160 degrees. Only one handle to start and stop. No valve to regulate. CHEAPER than any other injector in the market. Also, PATENT EJECTORS for conveying Water or Liquids. CIRCULARS ON APPLICATION.

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 Saves 50 per Cent in Oil.



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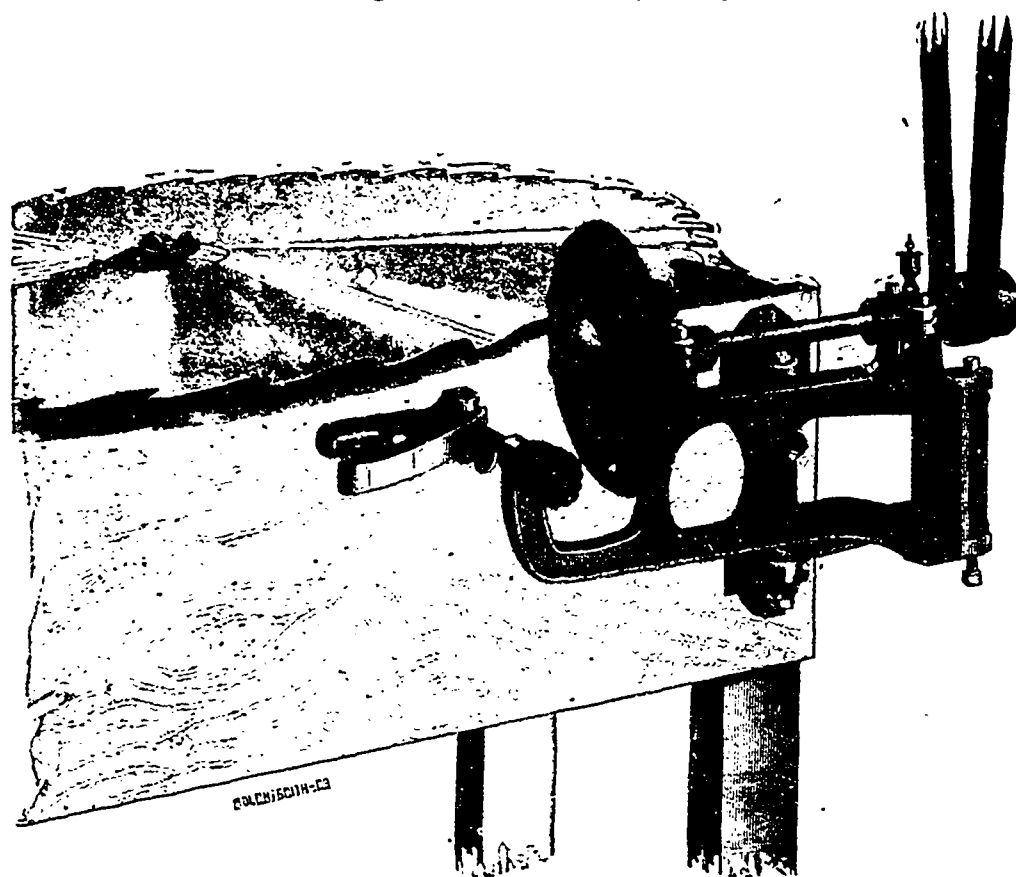
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The Handiest Machine for these purposes ever Invented.



Don't Heat!

Cheap!

Very Simple!

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Complete!

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Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only \$30, including Emery Wheel ; Table and Countershaft, \$10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received :

JAS. HADDEN, Foxmead, says :—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says :—

"I have given it a good trial, and am well pleased with it. I find it is one of the indispensables in a saw mill." * * *

ROBT. R. WEIR, Orillia, writes :—

"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says :

"The Rogers' Saw Gummer purchased from you gives good satisfaction, * * * it cannot be beat."

D. DAVIDSON, Pentanguishono, writes :—

"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes :—

"I have the Gummer running and it is giving good satisfaction."

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Hart Emery Wheel Company, Limited - Hamilton, Ont.

Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

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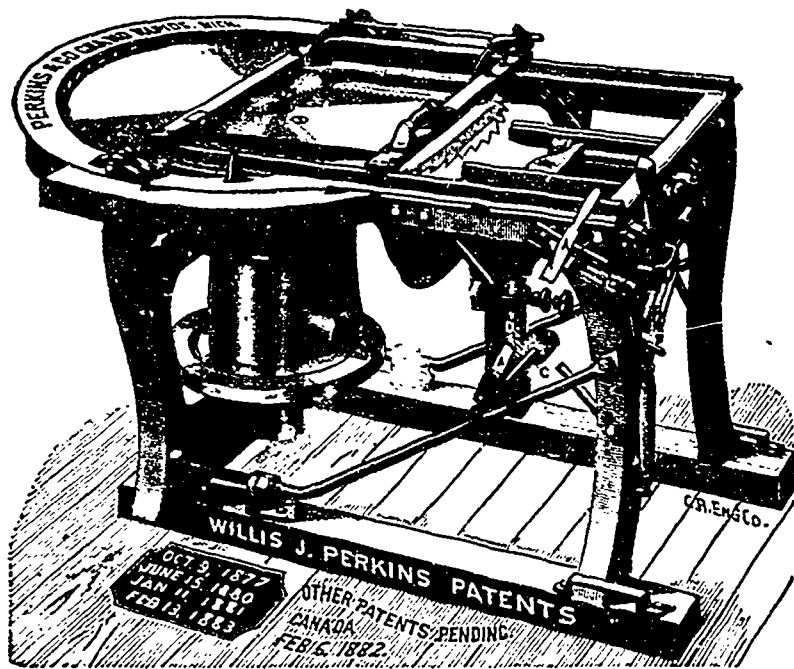
OUR SAW MILL ENGINES are made Strong, Neat and Durable, knowing well the ever varying Strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for Circular Mills and Circular and Gang Mills of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

Besides the variety of Machines we build for the manufacture of lumber we have added to our list the

PERKIN'S PATENT SHINGLE MACHINE.

aving obtained the sole right to manufacture and sell for the Dominion. Also Drag Saws, Bolters, Sappers, Jointers and Packers.



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The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

SECOND CUT ALWAYS A SHINGLE.

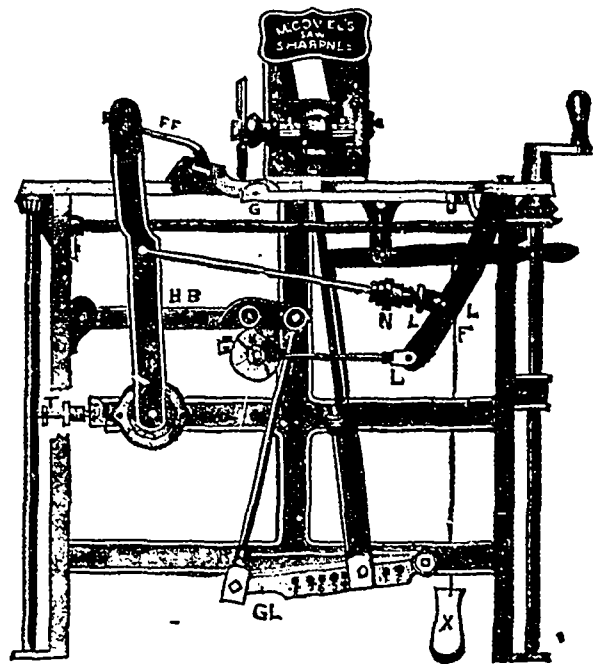
Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut.

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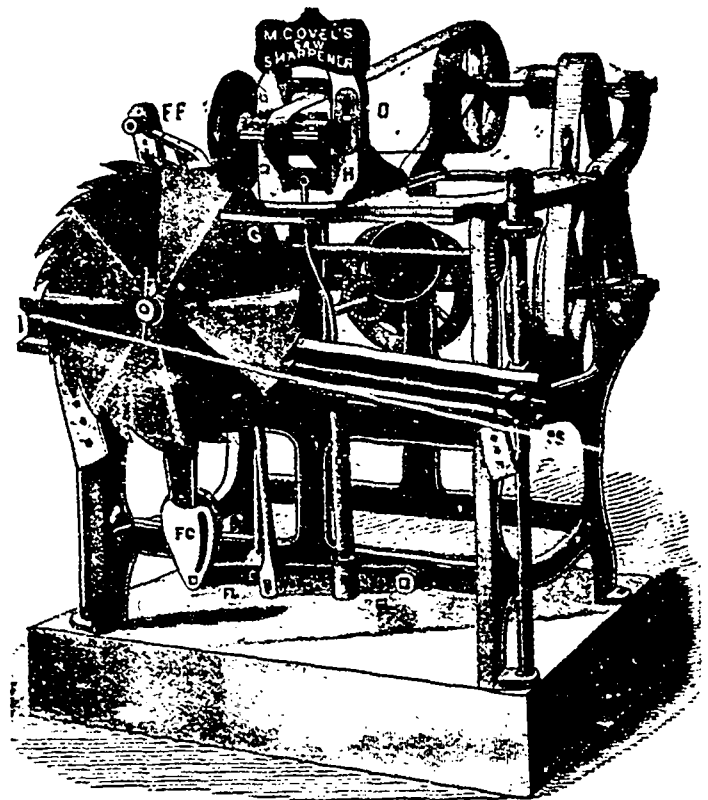
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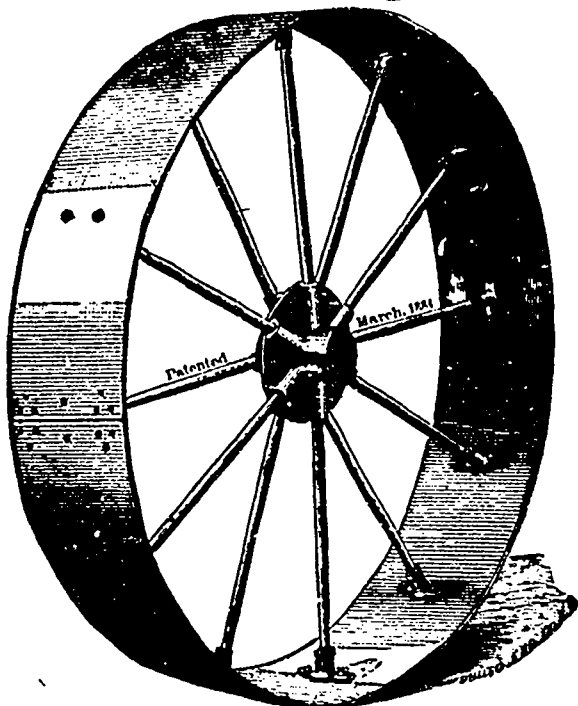
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Diameter.
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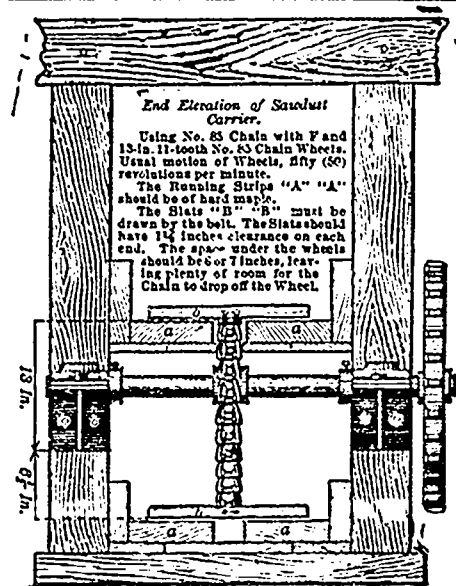
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SPECIALLY ADAPTED For Live Rolls, Lumber and Cant Transfers.

Sawdust, Slab & Offal Carriers. Log Jacks, Loading Logs lengthwise on cars. Loading Ties endwise and Telegraph Poles lengthwise on cars, or vice versa on cars or vessels.

USEFUL TO MOVE ALMOST EVERYTHING

If doubtful whether or not it will apply to your wants Send for information giving full particulars.

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SAVE YOUR TIMBER, (making the price of a saw every fifteen days) by using our Thin Saws,

60 INCH DAMASCUS Tempered Saws, 9 and 10 square, guaranteed at 800 revolutions or less, six to eight inch feed or less.

CLIPPER FLANGE TOOTH SAWS.

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SWAGES GUMMERS, CANT-HOOKS, Side Files, Emery Wheels, and all kinds of Saw Mill Furnishings.

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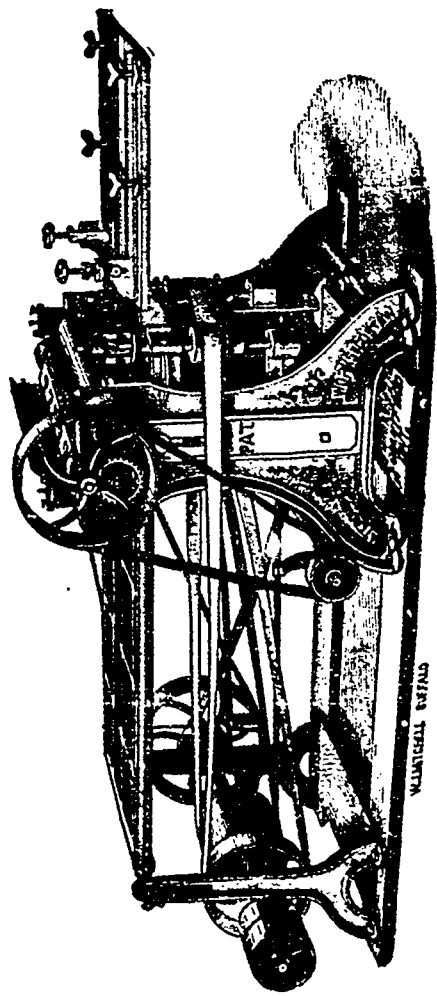
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