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# THE CANADIAN LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS' GAZETTE

PUBLISHED MONTHLY  
By A. G. MORTIMER.

The only Newspaper devoted to the Lumber and Woodworking Industries of the Dominion.

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NO. 20.

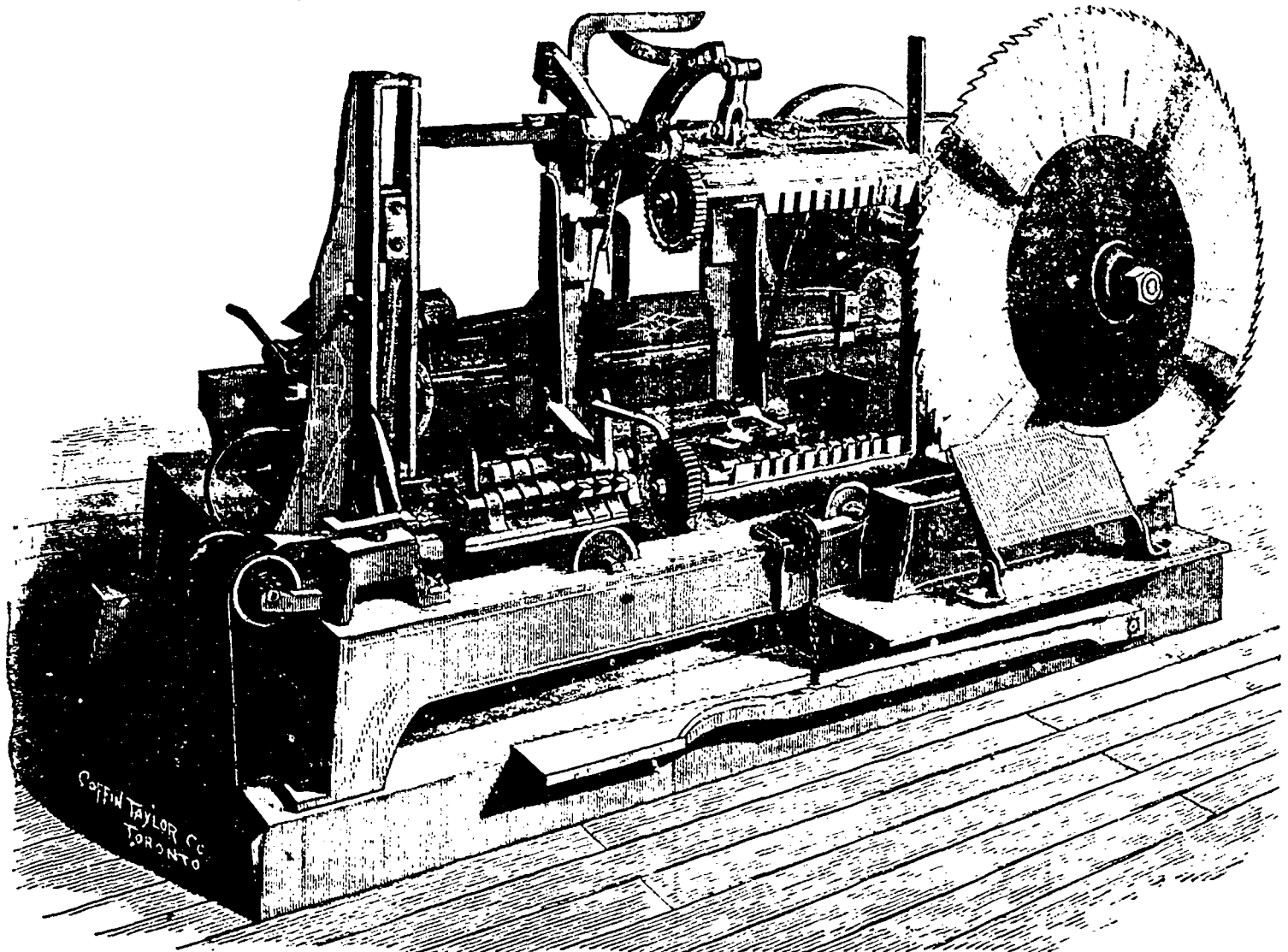
## THE "BOSS" SHINGLE MACHINE.

It has very rarely occurred in the manufacture of machinery, for specific or particular work, that the inventor has been able at one step to produce a machine simple and complete in all its parts, and fitted to do the work for which it

with illustrate (which is the invention of Mr. Isaac M. House, of Gravenhurst) this latter thought is especially true. Mr. House has been engaged in the perfecting of machinery for the manufacture of shingles and lath for the last twenty years. He has at least four patents for

the sawyer. Buts or tips can be cut continuously at either end of the block, at the pleasure of the operator, thus enabling the sawyer to take the best shingles possible out of the material. Another very important improvement is in connection with the feed carriage, which travels at a

perations—strong and durable and not likely to get out of order. Its capacity is from 25 to 50 M. of shingles per day, according to the quality of the material and the speed at which the machine is run. We understand that these machines are already attaining quite a popular-



THE BOSS SHINGLE MACHINE.

was designed in a first-class manner. On the other hand, it is the experience of inventors and users of machinery, that by slow processes of development and minor improvements from time to time, crude and imperfect machines have been brought to such a state of mechanical perfection as to far exceed their most sanguine expectations. With the machine that we here-

shingle machines in the Canadian patent office, each of which is a marked improvement over its predecessor, but it was only within the last year that Mr. House was able to produce a machine which he believes will fully please every manufacturer. His machine has a number of excellent points about it. It is automatic in its operation, and thoroughly under the control of

fast rate of speed for narrow shingles, and at a slow rate of speed for wide shingles or heavy cuts; there is no jar about the carriage when reversing and the top jaw is raised by a foot lever instead of by hand, thus leaving the operator with both hands free to arrange or handle the block. The whole machine appears to be very simple and complete in all its parts and

ity and in some cases are displacing automatic machines of less modern design.

Mr. A. R. Williams, of the Soho Machine Works, Toronto, controls the patents for Canada and the United States.

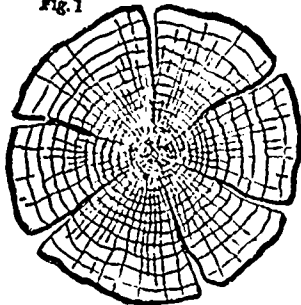
MONTREAL papers are agitating for a graving dock for that city.

**HOW LUMBER SHRINKS.**

A story is told by the "Arkansaw Traveller," about the manner in which lumber was "hauled" across the mountains down in his country. "Why!" said he, "they saw it green, leave it in the sun, and off it starts. I have seen a board turn three summeralls in less than a minute, and get to the other side of the mountain before sunset." "What," asked a bystander, "would be the result if it was attacked in its wild career by a shower of rain, would it come back?" Here was a poser, but the traveller was equal to the occasion and replied: "No, it would turn on the other side and continue its course."

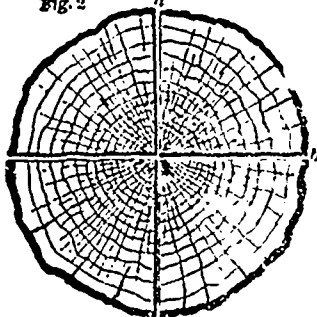
The subject of the contraction of lumber is an interesting one to wood-workers, and the doors

Fig. 1



and shutters in many of our mushroom cities are said to come off the hinges in retaliation of the persistent disobedience of the natural law of shrinkage. An examination of the end of an oak or beech tree will show the arrangement of its structure. It consists of a mass of longitudinal fibrous tubes, arranged in irregular circles that are bound together by means of radial strings or shoots, which have been variously named; they are the "silver grains" of the carpenter, or the "medullary rays" of the botanist, and are in reality, the same as end wood, and have to be considered as such, just as much as the longitudinal woody fibre, in order to understand its action. From this it will be seen that the lateral contraction or collapsing of the longitudinal, porous, or tubular part of the

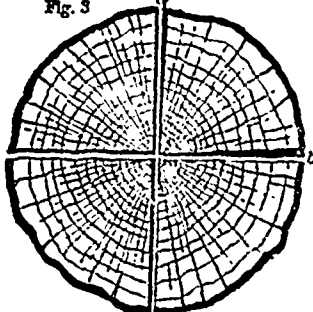
Fig. 2



structure, cannot take place without first crushing the medullary rays, hence the effect of the shrinking finds relief by splitting in another direction, namely in radial lines from the centre, parallel with the medullary rays, thereby enabling the tree to maintain its full diameter, as shown in Fig. 1.

If the entire tubular fibre composing the tree were to contract bodily, then the medullary rays would of necessity have to be crushed in the radial direction to enable it to take place, and the timber would thus be as much injured in proportion as would be the case in crushing the wood in the longitudinal direction. If such an oak or beech tree is cut into four quarters, by passing the saw twice through the centre at right angles, before the contracting and splitting

Fig. 3

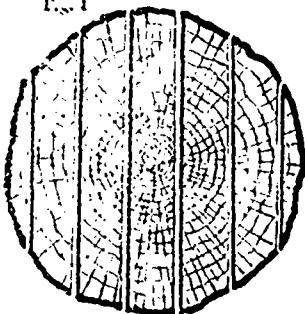


have commenced, the lines *a c*, and *c b*, in Fig. 2 would be of the same length, and at right angles to each other, or in the technical language

of the workshop, they would be square, but, after being stored in a dry place, say for a year it would then be seen that a great change had taken place both in the form, and in some of the dimensions; the lines *a c*, *c b*, would be the same length as before but it would have contracted from *a* to *b* very considerably, and the two *c a*, and *c b*, would not be at right angles to each other by the portion here shown in black in Fig. 3. The medullary rays are thus brought closer by the collapsing of the vertical fibre.

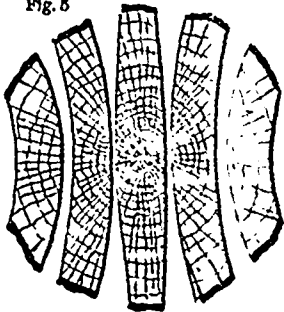
But supposing that six parallel saw cuts are passed through the tree so as to form it into seven planks, as shown in Fig. 4, let us see what would be the behavior of the several planks. Take the centre plank first. After due seasoning and contracting, it would then be found that the middle of the board will still retain the original thickness, from the resistance of the medullary rays, while it will be gradually reduced in thickness toward the edges for the want of support, and the entire breadth of the

Fig. 4



plank would be the same as it was at first, for the foregoing reasons, and as shown in Fig. 5. Then, taking the planks at each side of the center, by the same law their change and behavior would be quite different; they would still retain their original thickness at the centre, but would be a little reduced on each edge throughout, but the side next to the heart of the tree would be the reverse, or hollow, and the plank would be considerably narrower throughout its entire length, more especially on the face of the hollow side, all due to the want of support. Selecting the next two planks, they would be found to have lost none of their thickness at the centre, and very little of their thickness at the edges, but very much of their breadth as planks, and would be curved round on the heart

Fig. 5



side, and made hollow on the outside.

Supposing some of these planks to be cut up into squares when in the green state, the shape that those squares would assume, after a period of seasoning, would entirely depend on the part of the tree to which they belonged; the greatest alteration would be parallel with the medullary rays. Thus if the square was near the outside the effect would be as shown in Fig. 6, namely, to contract in the direction from *a* to *b* and after a year or two it would be thus, as Fig. 7, the distance between *c* and *a* being nearly the same as they were before, but the other two were brought by the amount of the contraction closer together. By understanding this natural law, it is comparatively easy to know the future behavior of a board or plank by carefully exam-

Fig. 6



ining the end of the wood, in order to ascertain the part of the log from which it has been cut as the angle of the ring grows and the medullary rays will show as in Fig. 8.

A plank that has it will evidently show to have been cut from the outside, and for many

years it will gradually shrink all to the breadth. While the next plank shown in Fig. 9, clearly points to the centre or heart of the tree, where it will not shrink to the breadth, but to the varying thickness with the full dimensions in the middle, but tapering to the edges, and the planks on the right and left will give a mean, but with the centre sides curved round, and the outside still more hollow. These remarks apply more especially to the stronger exogenous wood, such as beech, oak, and the stronger fir. The softer woods, such as yellow pine, are governed by the same law, but in virtue of their softness another law comes into force, which to some degree effects their behaviour, as the contracting power of the tubular wood has sufficient strength to crush the softer medullary rays to some extent, and hence the primary law is so far modified. But even with the softer woods, such as are commonly used in the construction of houses, if the law is carefully obeyed, the greater part of the shrinking, which we are all too familiar with, would be obviated, as the following anecdote will serve to show: It was resolved to build four houses; all of the best class, but one of the four to be pre-eminently good, as the future residence of the proprietor. The timber was purchased for the entire lot, and the best portions were selected for house No. 1, but by one who did not know the law, and to make certain of success this portion of the wood had an extra twelve months' seasoning after it was cut up. The remainder of the wood was then handed over to a contractor for the other three houses, who had an intelligent young foreman, who knew the structure of wood as well as how to obey the law, and who, therefore, had the

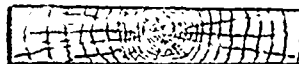
Fig. 8



wood for the three houses cut up in accordance therewith. The fourth house was built the following year by another man; but long before ten years had passed to the great surprise and annoyance of the proprietor it was found that his extra wood house had gone in the usual manner, while the other three houses were without a shrinkage from top to bottom.

A similar want of correct knowledge of the natural figure and properties of the structure of wood, such as the oak, is constantly shown by the imperfect painting to resemble that wood, as exhibited on doors and shutters of many houses. If we cannot afford to have genuine wainscot doors as in France and other countries, but yet desire

Fig. 9



to have an imitation, it would surely be worth the trouble to have a block cut from the quarter of an oak tree, and to have each of its six sides planed and polished, in order to make plain their several features. The house painter would then see what nature really is, and thus save us from the ridicule of other nations, when we mix up "silver grains" and all the other natural features upon one side of a board or panel. This is a subject that should interest all wood-workers and builders and a great deal of attention should be given to the structure of the various woods. It is almost as necessary for a wood-worker to understand the anatomy of his tree, so to speak as a surgeon to understand the anatomy before he commences to operate. The importance of the subject is therefore obvious.

**SUPPORTING THE SLACK SIDE OF AN OPEN BELT.**

One of the simplest problems in belting is to make use of the open belt in connecting one line of shaft with another, yet how greatly mill men differ in this respect. One must have a belt at each end, with one in the centre large enough to drive the whole shaft. Many prefer a single belt at the head end of the driving shaft, where the power for the driven shaft may be taken at once without creating an extra loss of transmitting power any further than need be. And there are others who admire the idea of having the power for the farthest extremity pass down the driving shaft across to the other on a belt, where the slack on the under side will

hang down in front of a doorway, and then back again very nearly opposite from where it started. Rope belts and bevel gears still take an interest in this problem and friction wheels in special cases are still recommended. A stiff connecting rod, with slip-bearing in the centre, has been patented in a number of forms for this very purpose, and the three tie connecting rods made from wire rope will work very well where the shafts extend in opposite directions from the wheels that must have three equidistant crank pins, and all for the purpose of accomplishing what an open belt will do to a nicety if the belts are anywhere near perfect. There is nothing that will cause a belt to switch and thrash so well as to lace in a place of old belting that is of an entirely different grade of material, and yet how quietly they travel when every portion of the belt is similar throughout. When the shafts are supported on the same level, it is no doubt desirable to bring the slack side on the upper fold where the sagging of the belt will have a tendency to increase the hold on the pulleys, but mill men do not always have their choice in the direction that an extra line of shafting is to run, and where the distance is very great a supporting wheel must be called into play to help the slack side from sagging down into the way of the machinery. The shafts are up in the loft of the building where glass cutting and grinding is carried on, and the upper fold has none too much room to pass from one pulley to the other. In this method the three-quarter twist is made use of, which allows the lower stretch to be carried as much above the tight side as it would be desirable to have it below, which gives the belt all the advantage found in a crossed belt. The tight side comes perfectly flat in the centre of the fold where it is in need of all the room there is to spare. If the belt is inclined to brush together much in the crossing, the supporting wheel can be placed to favor it in this respect the same as in every case where three wheels enter into the system for a belt to travel in one direction and still retain sufficient lead in the pulley to hold the belt in place while running in the opposite direction.—*Boston Journal of Commerce.*

**LABOR SAVING MACHINERY.**

Discussing a question which it is not easy to keep down, especially in times of labor agitation and discontent, the *Washington Post* says: "Every labor-saving machine is also a laborer-saving machine. It works for far less than men can, and yet, curiously enough, it oppresses nobody, and robs nobody of wages. On the contrary, it increases wages."

"When George Stevenson, fifty years ago, flung his railway track from Liverpool to Manchester, and whisked a train across it at twenty five miles an hour, all the stage companies held indignation meetings. When the Central Railroad crept up to Rochester, N. Y., farmers met and mobbed the 'new-fangled contrivance,' and drove off the workmen, on the ground that if it should succeed, 'horses wouldn't be worth \$10 apiece.' What was the result? Horses that were worth \$30 apiece before, readily sold for \$100 as soon as the road was finished."

"When Patrick Bell set his reaper into an English wheat field, the excited sickle-reapers broke over the hedge, and captured and burnt up the machine. But those who lived ten years saw it was a blessing to all. The threshing-machine does the work of seventy men; the mowing-machine, tedder, horse-rake, horse-fork and portable engine, in agriculture, are almost equally as effective; yet the wages of farm hands have doubled since these auxiliaries were invented, and were never so high as now."

"Is the sewing-machine, which does the work of twenty women, a disadvantage to seamstresses? Of course not; for their wages are a great deal higher now than they were before."

"Is the automatic boom a disadvantage? No; the number of employed is proportionately less, but their wages are higher, and all the other works in the world are tremendously benefitted by the increased cheapness of fabrics."

"Does the gang-saw rob the lumberman who used to split out boards with wedges? No; for it has enabled men to live in houses, who before dwelt in shanties of bark or in cabins of mud. The workingman is the chief consumer of the products of work."

## ADVERTISEMENTS.

Those wishing to BUY or SELL TIMBER LANDS, LUMBER or SECOND HAND MACHINERY will find THE CANADIAN LUMBERMAN an excellent medium in which to make known their wants. Advertisements, of this character will be inserted at the low rate of 1 CENT A WORD, cash to accompany the order in every case. Address.

A. G. MORTIMER, Publisher,  
Feterborough, Ont.

## General News Notes.

LUMBERING is said to be booming at Baysville, Ont.

THE Ottawa mills are now nearly finished sawing.

THE *Echo* is agitating for a port of entry at Fort William.

THE Essex Centre Manufacturing Co. have sold out their extensive saw mill to T. H. Decew.

In the turtle mountain district of the north-west \$1,000,000 worth of timber has been destroyed by fire.

EDWARD SWALES, of Midland, had his hand badly cut by a drag saw falling on it at Chew's Mill recently.

THE *Armenia* was recently loaded at Deseronto, with a cargo of lumber for a life saving station which is to be established at Smith's Bay.

AN exchange asks: "What has become of the straw lumber which three or four years ago we were told would revolutionize the lumber business?"

MR. A. C. Manzor, of Burk's Falls, is running the Spring Valley Saw Mill to its full capacity on local trade and cannot supply the demand, the call for lumber for local purposes being so great.

THE mills of Messrs. Grier & Co., at the Chaudiere, shut down Thursday for the season. They have lately been employed cutting dimension timber for the erection of a new and more capacious saw mill.

SINCE January 1st there has been added to the wood-working industries of the South about 250 lumber mills, or an average of one and half new lumber mills per day. Within the same time over \$60,000,000 has been invested in productive establishments of various kinds.

A READER of the *Kingston Whig*, says that during the time the dockyard was in operation, there was any quantity of oak timber in Navy bay, and that some must be sunken under water in the mud. Some of it was recovered many years ago, but plenty of it he says must remain.

THE *Observer* says, the steamer *Sir John Young*, owned by the Upper Ottawa Towing Company, and heretofore plying on Lower Allumette and Coulouge Lake, has been condemned and broken up. Her machinery has been taken out and brought to Pembroke, where it will be placed in a new hull to be built this fall and winter.

THE Chaudiere during the last heavy rains rose some 30 inches, and some 20,000 logs were driven nearer the mills; it however, fell very rapidly again, and it is far from certain whether even that small proportion of the logs stuck will be driven to the mills in time to cut up this fall.

It is now a very serious question with the Chaudiere owners of logs whether they will be able to drive the logs this fall, and get them into a safe place to winter them before the ice comes on, in which case it would be a heavy loss as the freights in the spring would carry all the logs into the St. Lawrence.

THE Chaudiere mills are all running at full speed at present. Logs are getting scarce in some of the mill ponds. Mr. E. B. Eddy, intends to run his saw mill until the closing of navigation. Messrs. Parley & Pattee, J. R. Booth, Hurdman & Co. will probably close about the end of this month.

THERE has been a great flood in Muskoka by the bursting of Osborne's mill dam on the Little East Muskoka river. Four bridges were swept away in Cheffoy, and the N & P. J. Railway iron bridge across the Little East River greatly damaged. Much damage has been done, and will take some time to repair it.

A despatch from St. Paul under date of Oct. 20th says:—A great fire is raging in the Turtle mountain district. Over 200 square miles of the prairie and timber land have been burned. Thousands of tons of hay have been destroyed with a large number of houses barns and crops and all kinds of stock. Many of the settlers have lost all their possessions. Losses \$1,000,000.

A CORRESPONDENT to the *Bobcaygeon Independent*, writing from Haliburton says: "There is more lumbering this year than last. A firm has started shanties out eastward in Harcourt, and all supplies come this way by railway, and are sent in by team. We shall do a good business this season in lumber, and there will be plenty of market for farm produce.

Archibald McArthur, near Madoc, Ont., has raised a good saw mill on the Mississippi Branch on the site of the old mill which was burned two years ago. The new mill is one hundred feet long, three storeys high, and will contain apartments for wool carding. Mr. McArthur intends to build in future a grist mill, and a mill for manufacturing cloth.

THE sailing barge *Bentley* which left Parry Sound, Thursday, Oct. 14th, with 500,000 feet of Lumber was caught in a big storm on Thursday night. She lost a portion of her deck load off Red Rock Light-House but managed to run across the Georgian Bay to Cabot's Head when the wind shifted and drove her ashore. She is thought to be a total wreck; the crew were all saved. Two other vessels are also ashore at Cabot's Head.

THE Saunders & McPherson Saw Mill at Burk's Falls is running from daylight to dark on the Ontario Lumber Company contract, and cannot as yet cut for the local trade. This firm has been making important improvements—having cribbed along the edge of the mill pond to the Government Road, and are filling and levelling up, thereby adding a large extent of piling ground. They are paying out from \$20 to \$25 per day for labor, and this is expected to last until the close of the season.

A correspondent writing to the *Pembroke Observer* says:—"Just to ease my mind, I drove up to Messrs. Booth & Gordon's shanty on the Indian River, where Mr. James Carmichael was improving. I witnessed some of the biggest work, done by him in twenty-four days, with seven men and one span of horses, three dams and three slides, one dam 400 feet long, 12 feet high, the slide being 307 feet long, the other 198 feet long, 14 feet high. The slide was 208 feet long. The other dam was 50 feet long, 21 feet high. The slide was 64 feet long. I think it is about the biggest work that has been done on that or any other stream since the first dam was built in Canada.

PREPARATIONS are in progress for the erection of a large building in connection with the car works and shipyard department of the Rathbun Company, Deseronto. The new structure will be 110x36 feet, and 14 ft post. It will contain a large dimension planer for dressing car sills and long plank and timber; also a circular edger for cutting up refuse and edging long stuff. The ship-frame saw will also be transferred to it and a railway track will run through its whole length to carry stuff to and from the shops. The machinery in the old shipyard shed will be regulated to suit the new machinery. The old shed will be used for mortising, tenoning, cutting off and fitting up the material for car and ship-building. In fine the new establishment will be quite an acquisition to Deseronto.

PARTICULARS come from Camp Gilmour, Que., of one of the worst crimes ever perpetrated in Canada. A party of six lumbermen came up from Lower Gattau lumber camps, bringing a large quantity of rum. They were all more or less intoxicated. Soon after midnight the gang made a raid on a house occupied by Mrs. Turcotte, just outside the camp, and finding only the old lady Turcotte and her daughter Nellie at home, they fastened the old lady to a chair

gagged her, and then tying the hands and feet of the daughter, the men originally assaulted her. The girl, who is but 16 years old, fainted, and fearing that she was dying the men released her mother. Finding herself free the old lady made her escape to arouse the camp, when the men set fire to the cabin and escaped to the woods. It was not known for some time whether the girl was left to perish or carried away, as the cabin was so far destroyed when help came that it was impossible to make any search. Later the girl was found with her throat cut from ear to ear, in a thicket near the remains of the cabin. The men have escaped, and while there has been a searching party out to look for them, it is doubtful if they will be discovered, owing to the great number of men constantly going and coming from this section, which is purely a lumbering region.

THE *Chicago Timberman* remarks that "Mr. T. K. Edwards, who is well known in this part of the country, and through the south, as the lumber agent of the Illinois Central Railway, is entitled to the credit of introducing, to this city, a new finishing wood, red cypress, which though it has been employed in other places, has never before been used here. Mr. Edwards has had a room in his own house finished in the wood, and the result is especially gratifying. The color of red cypress finished resembles gum, but the markings are more distinct, and in infinitely greater variety. In its peculiar variegations of color the wood is remarkable, and its beauty in this respect, with its fine, close texture and susceptibility to a high degree of polish, must give it a foremost place among fancy finished woods. It will necessarily come into this category, as the quantity of it to be had is very small. The lumber used by Mr. Edwards came from the mill of Messrs. Farr & Williams, at Pattersonville, St. Mary's Parish, La. This variety of cypress grows altogether in the water, and it is so heavy when it is cut that it can only be floated by chaining it between two logs of lighter wood. It is a handsome material for inside finish, or even for cabinet work, and it is bound to be in demand when its beauty becomes generally known."

## NEW BRUNSWICK.

MADAWASKA, October 28th, 1886.

MR. EDITOR.—It's good for sore eyes to see the CANADA LUMBERMAN again on our table, and I must say that the earnest welcome always accorded its readers for the free use of its columns for the discussion of all pertinent questions is too well known to make further comment necessary.

I notice among your "Exchange Echoes," the *Southern Lumberman* seems to have various opinions about the custom relative to the measurement of hollow logs. No doubt it will be a difficult task to frame any correct rule, which will satisfy both the purchaser of lumber and the manufacturer. Surveyors are supposed to measure lumber so it will hold out after it has been put through the mill, and in order to do so he must use his own discretion as to how much to throw off for defects, and make the lumber merchantable. In measuring cedar for shingles in this province, they measure two thousand as they come, allowing one thousand of the same as merchantable, throwing off one half to make them hold out. The same paper further says: "The Canadian Government wants reciprocity or free trade in lumber with the United States." I beg to disagree. If we look after the interest of Canada, not one stick of lumber should be allowed to leave it before it is manufactured, and Canada reap the benefit of its own resources. The article above quoted winds up as follows: "Whenever there is a doubt what course to pursue, it is always safer to do—nothing." If we never experimented on doubt, we will continue to live in doubt, and the rest of humanity will be content to leave us in the same frame of mind. All doubts should be tested. One thing is certain, where no doubts exist, if we allow our forests to be slaughtered and manufactured over the line, we are killing the goose that lays us the golden eggs, and the near future will prove it to the sorrow of the rising generation.

I believe in free trade, provided it was universal, and am satisfied that free trade and direct taxation is the true policy for any nation

to deal out equal rights to rich and poor. Under the revenue tariff system, a poor man raising one dozen children adds more to our revenue than a rich man with no children at all; but we may not expect any change so long as capital rules labor. The former has the power and will hold on to it as long as they can.

A few remarks about our export duty on logs, which should be prohibited until manufactured. Americans seem to think the export duty is only put on to retaliate against the import, but if they would change places with us Canadians, and see their forest wealth slaughtered, and brought over on our side to be manufactured, and by that means build up our trade, they could see themselves as others see them. However, if the export duty is not enforced more elsewhere than it is in Madawaska, the Americans will not know that such a duty exists. I always thought that the N. P. was intended to encourage the manufacture of raw material, and the building up of mills, etc., but, strange to say, the forest wealth of Madawaska, is slaughtered and taken over the line, and there manufactured in order to save import duty, and this by New Brunswick capital, which has monopolized nearly all our wild lands, and erected mills on the American side, and robbed our country out of fifty million dollars a year in shingle stuff and other lumber. No doubt capital will cause a delay to exact the export duty until the horse is stolen, then our government will lock the door.

Hoping that the CANADA LUMBERMAN may find its way into every dealer's hands in Canada, in order that they may be kept posted on matters so important to this great industry.

Very respectfully yours,  
P. O. BYRAM.

## RAILWAY NOTES.

WORK on the Hudson Bay railway began on Oct. 11th.

It is reported that a contract has been let to take out 40,000 ties from Rat Portage District for the Hudson Bay Co.'s Railway.

THE survey of the extension of the Napanee, Tamworth, and Quebec railway, from Tamworth to Marlbank has just been commenced.

THE Grand Trunk railway directors have decided to recommend a dividend of 1 per cent. per annum on the 4 per cent. guaranteed stock, leaving a small debit balance.

MR. WHITE, general superintendent of the C. P. R., has accepted the presidency of the C. P. R. library board, formerly held by the late general superintendent, Mr. Egan.

THE Canadian Pacific railroad have been compelled to put on extra forces of men in their car shops in Cobourg, Perth, and elsewhere, in order to meet the increasing demand for cars caused by the enormous growth of traffic on their line.

A COMPANY of local capitalists has been formed in Winnipeg for the purpose of securing the construction of a line from Winnipeg southerly one hundred miles to the eastern boundary of Carillon county. The company is to be known as "The Winnipeg, St. Boniface & Carillon railway company."

Perhaps the most extraordinary that success has been achieved in modern science has been attained by the Dixon treatment for Catarrh. Out of 2,000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady. This is none the less startling when it is remembered that not five per cent. of the patients present in themselves to the regular practitioner are benefited, while the patent medicines and other advertised cures never record a cure at all. Starting with the claim now generally believed by the most scientific men that the disease is due to the presence of living parasites in the tissues, Mr. Dixon at once adapted his cure to their extermination; this accomplished the Catarrh is practically cured, and the permanency is unquestioned, as cures effected by him four years ago cures still. No one else has ever attempted to cure Catarrh in this manner, and no other treatment has ever cured Catarrh. The application of the remedy is simple and can be done at home, and the present season of the year is the most favorable for a speedy and permanent cure, the majority of cases being cured at one treatment. Sufferers should correspond with Messrs. A. H. DIXON & SON, 305 King street west, Toronto, Canada, and enclose a stamp for their treatise on Catarrh.—*Montreal Star*.

LIFE ON A RAFT.

Men and Methods Formerly Seen in Daily Life.

The days of rafting on the Mississippi have gone to join the days of romance, says a writer in a late issue of the St. Louis Globe-Democrat. Progress has pushed this business with a great many other slow, but sure, and good things to the wall, and steam machinery sings a monotonous lullaby above its cradle. More white pine comes to this market now from the Wisconsin, Black and Chippewa rivers than ever before, and if the process of getting here was the same as in the early days the grand army of raftsmen, instead of being reduced to almost insignificant proportions, would be as magnificent in its numbers as are the ranks of other industries that have maintained their own against the march of invention. The good old days when rafting was much lower than it is now, will be recalled by many. Those were darling times, as the boys say. Men followed rafting as a regular business, and experience was as necessary as in any other line of skilled work in which a man might embark. A good rafter knew the river like a pilot and was as much at home in its channel as a red dog is under a kitchen stove. Life in the lumber camps and on the rolling wave, was full of its plea-



PULLING INTO THE CHANNEL.

sure, and even the hours of toil were set spinning along on the wheels of music and song. There was lots of fun in the business, and the girls along the shore had their little romances to tell as the fleets went by—romances just like those girls on land can tell.

The same old story, that has been told before, for one heart will trust and another will fall. Until time and change shall be more. The history of those days and nights are left in pleasant rhymes, rattling stories and gleesome songs—some printed and some carried around in the shape of traditions—that once gladdened the hearts of thousands of rafters. As has been said, rafting was slower then than now. It took over two months to bring a fleet of lumber in those times from Wisconsin to St. Louis, where now it takes but two weeks, and of course it was necessary to beguile the hours with pleasures of a popular sort. Every fleet had its fiddler who could scrape out a break-down and play "Rye Straw," the "Rocky Roads," "Haste to the Wedding," and so on; its warblers who filled the moonlight night with glorious songs; and its story-tellers, always primed to the chin with yarns that raised a laugh and made hearts happy. The saga of those days are replete with the genuine poetry that belongs to simplicity and to nature's children, and the history of the



THE COOK'S CASTLE.

period, if written by some scribe with a Mark Twain vein of humor and a Herodotian fidelity

to facts, would make as readable a book as any press ever turned out. The story of rafting on the Mississippi is interesting in every detail. The first recorded arrival of a raft of white pine lumber at St. Louis was in the spring of 1840. The raft was run by twenty men, contained 800,000 feet, and was the first raft to reach here from the vast lumber regions of Wisconsin. The fleet came from near the mouth of the Wisconsin river, and was thirty-five days in making the trip. The history of rafting on the Mississippi, however, antedates this period. It goes back to 1831-32. In those days all the rafting was done within 300 miles of the city. E. O. Shepardson, possibly one of the oldest Mississippi river raft pilots, gives as his opinion that the first lumber raft arrival at St. Louis was in the spring of 1835. He describes the raft as having been 100 feet in length, 30 feet wide, and carrying 150,000 ft. The lumber was yellow pine, cut and rafted in the Gasconade river, about 125 miles from the mouth. The distance from there to St. Louis was 250 miles, and the time required to make the run was seven days. Up to 1840 the principal lumber arriving here in rafts was yellow pine and hard woods. From 1835 to 1840 the receipts ranged anywhere between 1,500,000 to 3,000,000 feet per week.

In 1840 the receipts of white pine lumber aggregated 3,000,000 feet. The rafting business from that time on, had a most remarkable growth, and the following two years numerous saw-mill men of the North followed the example of the pioneer raftsmen, and the result was that hundreds of men were furnished with work in the new field, and the upper river was continually filled, in season, with moving rafts. In 1842, two years after the arrival of the first fleet of white pine lumber, the receipts aggregated 75,000,000 feet, which gives a well defined idea of the rapid increase in the interest. The growth continued with each season until 1860, when the rafts landed 200,000,000 feet of white pine lumber at the North St. Louis landings. During the four years following there was a slight interruption, the result of the civil war. The urgent demand for lumber, however, during that bloody period, brought many new capitalists into the business, and some of them retired after the war with large fortunes. From 1865 to 1872-73 the raftsmen saw their best days. In 1866 the Schulenburg & Boeckeler Lumber Company invented a patent steam wind-lass, which enabled a steambot to handle a raft of from 1,000,000 to 3,000,000 feet. This invention brought with it a great reduction in the cost of running a raft, reduced the danger of wrecking it, and also reduced the number of men required to handle it. The Mollie Whetmore was the first steamer to attempt to run a raft in this way and she proved a success. Other steamers followed in the business, and last summer there were 100 boats employed in the trade, the aggregate value of which is put down at \$1,000,000.

The average raft boat carries a crew of eighteen, which includes the mate and captain. A good stout raftboat is able to push a fleet containing as much as 3,500,000 feet of lumber. To move this vast quantity of lumber by rail, would require seven trains of fifty cars each. The time necessary to tow such a raft from La Crosse, Wis., 700 miles north, to St. Louis, is generally fourteen days, although runs have frequently been made in less time. Nearly all the white pine lumber received in St. Louis comes from Wisconsin, Black and Chippewa rivers. The rafting season opens in the spring as soon as the ice runs out. The first raft of the season from the Upper Mississippi usually arrives here at the beginning of May, and the season winds up about November 15th. The local



CAPTAIN OF RAFT.

season, however, has been known to extend into December. With the advent of raft boats, the days of floating rafts reached their end, and the business to day compared with its former greatness is but a shadow, there being very few floating rafts now seen. Where it formerly required two months' time and thirty five men to run a raft from Wisconsin to St. Louis, a steambot now does the work in fourteen days, with the aid of eighteen men, thereby reducing the cost more than one-half. In the best days of floating rafts, the cost of running one from Reel's Landing or Stillwater to St. Louis, would reach as high as \$6,000.

From 1865 to 1870 lumber rafts were frequently taken as far South as Memphis and Vicksburg. Now not more than two rafts in a year go south of St. Louis, and these only as far as St. Mary's and Chester. The longest distance ever run by a raft on the Mississippi, was from La Crosse, Wis., to New Orleans. The trip was made in 1870, and this lumber raft was the only one that ever went to New Orleans from the Upper Mississippi. The fleet was made up of ten strings, or about 1,100,000 feet. It was owned by the Grauer Brothers Lumber Company, and was valued at \$30,000. Mr. E. O. Shepardson, at present raft superintendent of the Ganahl Lumber Company, piloted the fleet as far out as Vicksburg, where a Lower Mississippi River pilot took charge. The run from La Crosse to New Orleans was made in ten weeks. There are eight regular raft boats coming to this port which bring in each season about 150,000,000 feet. This does not include what outside steamers tow in here, which swells the figures to 200,000,000 feet. The principal lumber landings are located in North St. Louis, and take in the principal part of the wharf from North Market street to Basell's point. The landings are controlled by the Knapp, Stout & Co. Company, Eau Claire Lumber Company, Grauer Brothers Lumber Company, Henry Lange, the Schulenburg & Boeckeler Lumber Company and I. G. Buckley. The landing in the southern part of the city is in charge of the Ganahl Lumber Company.

These are dry details that do not by any means suggest the departed greatness of the days of floating rafts. The captain of a fleet was, as it were, monarch of all he surveyed. He was the political, religious and civic boss of the men in his employ, and he lorded it over them in a majestic, but, at the same time, quite a humane way. Usually a man of magnificent build, the shaggyness of his exterior gives no idea of the bigness of his heart. Heavy boarded, top-booted, and filled with the bracing health of the plieries, his presence inspires awe for the moment, but as soon as his mouth opened and the pleasantness of his careless mouth fall upon the ear, the feeling of sublimity gave way to one of admiration, and soon he held your heart in his hand. There were, of course, some rough captains in the old days, but they have quite perished out of memory, and only the agreeable characters remain behind.

There were many exciting times in the lives of the old raftsmen. When they made the shoot of the rapids there was danger in their positions, but just like the men who court death in the log booms, these old chaps braved any danger, and their days and nights were often full of the enthusiasm and excitement that are born of the proximity of trouble. There were not, as a matter of fact, many such thrilling experiences as that related by the literary liar who wrote the "Pike County Folks," but there were some almost equally as interesting. Shooting the rapids was frequently the least dangerous of their exploits. Pulling the channel or steering shy of a bridge, calls for as much care and coolness of nerve as any other effort put forth by the raftsmen. The forward sweeps had to be



CHIEF OF CUMING

worked with great skill, as the slightest error of judgment or misapplication of strength might prove fatal to the rafter and injurious to the fleet. The cook was the canonized saint of the



THE LAST LOG.

party. The sound of his dinner gong was sweet and welcome to the raftsmen's ear, and it always got a kind greeting from an overwhelming appetite. The cook's hut, with its V shape, its smoking stove-pipe and bough-trimmed apex—the temple in which about the only worship the rafters know took place. Here they worshipped three times a day regularly. The culinary high priest took pleasure in tickling the palates of his devotees, and when at work, whether peeling potatoes on the shady side of his hut, or stirring the huge pots of boiling meat, kept their individual and collective tastes in view, and tried to make the meals and meal hours pleasurable to all. The time passed so agreeably that it was really felt to be a moment of sadness when "breaking-up" came and the rafts were picked to pieces, to be piled away in the lumber yards. Then there came the partings for awhile, often for ever, for in the early days raftsmen were as human as men are now and had their frailties. Whisky often brought on fights, and then the knife and pistol came into play. Many a rafter died a violent death, and the story of his taking off furnished gossip on future trips for those who had known and associated with the unfortunate fellow.

THE LUMBER BUSINESS IN THE OTTAWA VALLEY.

Enormous Output of Square Timber and Sawn Lumber.

Our excellent contemporary the Ottawa Free Press, has the following exhaustive article on the lumber industry of the Ottawa Valley:—The leading commercial industry of the Ottawa district is of course the making of square timber and the taking out and manufacturing of lumber of all kinds. A moderate estimate of the capital invested in the lumbering business throughout the watershed of the Ottawa places the figure at sixty million dollars, though some practical authorities place it as high as seventy and seventy-five millions. It may safely be said that the amount of capital invested in the lumbering industry in the Ottawa valley, is almost if not quite equal to the whole of the capital invested in manufacturing in the Dominion. The principal properties or assets of the firms engaged in lumbering are timber limits—that is areas of natural or standing wood, saw mills, improvements on rivers and streams to facilitate log driving, stocks of lumber on hand, piling grounds, and machinery. The area of timber limits under license on the Ottawa and its tributaries in Quebec province is 9,732 square miles and in Ontario 7,153 square miles. The dues upon these limits payable to the provincial governments of Ontario and Quebec are collected at the Crown timber office, the district tributary to that office including the counties of Ottawa and Pontiac in Quebec, and all the territory situated in Ontario, drained by streams falling into the Ottawa. On the Ontario limits within this territory, there were cut, during the season of 1885, saw logs to the amount of 241,000,000 feet broad measure which with about 255,000,000 feet from the province of Quebec furnished material for the employment of some thousands of men and teams in the woods and saw mills and on the rivers. In addition to the saw logs about twenty

million feet of dimension timber were taken out last year. The greater portion of the vast area of limits before mentioned is worked by firms with head quarters in Ottawa city. The following statement shows the principal licensees and workers of limits on the Quebec side of the Ottawa river, and the total area of square miles worked by each:—

- Gilmour & Co., 2,659, Gatineau, Keewau, and Pickanock.
  - Hamilton Bros., 1,680, Gatineau, Keewau and Pickanock.
  - J. H. Booth, 1,423, Coulouge, Black and Keewau.
  - James McLaren, 956, Gatineau, Desert, Black, Coulouge and Pickanock.
  - Ross & Co., 855, Gatineau, Desert, Black, Coulouge and Pickanock.
  - Alex. Fraser, 842, Ottawa, Black and Dun ope.
  - Bronson & Grier, 628, Gatineau and Jean de Terre.
  - Bronson & Weston, 600, Dumoline, Black and Desp.
  - Hon. George Bryson, 632, Coulouge, Keewau and Ottawa.
  - Gilles Bros., 744, Coulouge, Keewau and Ottawa.
  - Perley & Patee, 700, Keewau, Dumoline and Coulouge.
  - E. B. Eddy, 715, Ottawa and Keewau.
  - Hurdman & Co., 657, Coulouge and Magnitwippi.
  - W. C. Edwards, 414, Gatineau, Keewau and Desart.
  - Bronson, Weston & Edwards, 303, River Ottawa.
- Block A.
- David Moore, 350, Keewau river.
  - McLaughlin Bros., 281, Con once.
  - Latour L. L., 230, Ottawa and Keewau.
  - John Ross, 200, Keewau.
  - Bryson & Charlton, 457, River Ottawa.
  - Thomas G. Over, 320, Keewau and Dumoline.
  - Thompson & Mackay, 404, Gatineau.
  - Grier & Co., 124, Coulouge and Teu-kanouque.
  - Folke & McRae, 191, River Ottawa.
  - T. & W. Murray, 108, Dumoline and Black.
  - Jan. Finlay, 109, B. C. River.
  - W. R. Oswald, 222, River Ottawa.
  - William Mackay, 124, River Dumoline.
  - H. White, 191, Black river.
  - Peter McLaren, 231, Coulouge river.
  - Martineau Estate, 100, Jean de Terre river.
  - Rochester & Doherty, 91, Ottawa river.
  - McLaren & Edwards, 50, Dumoline river.
  - James Cotton, 50, Dumoline river.
  - D. Murphy, 60, Coulouge river.
  - J. B. Dickson, 91, Keewau and Ottawa.
  - John Roche, 66, Le Peche, Gatineau.
  - H. V. Noel, 65, Gatineau river.
  - John Smith, 60, Coulouge river.
  - Est. Sir P. Hincks, 60, Coulouge river.
  - Ed. Allan Grant, 85, Black and Dumoline.
  - H. White, 71, River Ottawa.

The following statement shows the names of the principal holders of limits in the Ottawa agency of the province of Ontario:—

- J. R. Booth, 1,203, Ottawa, Lake Temiscaming, Indian, Petawawa and Bonnechere rivers.
  - Perley & Patee, 955, Ottawa, Chalk, Montreal, Madawaska, and Petawawa rivers.
  - Bronson & Weston, and Grier & Co., 600, Mattawa, Petawawa and Amable du Ford.
  - McLaughlin Bros., 676, Madawaska and Bonnechere.
  - Bronson & Weston, 334, Madawaska and Chalk.
  - Gilles & McLaren, 283, River Missisippi.
  - Barnet & McKay, 258, River Bonnechere.
  - E. B. Eddy, 229, River Madawaska.
  - Wm. McKay, 174, River Madawaska and Amable du Ford.
  - McClyment & Co., 118, River Petawawa.
  - James McLaren, 284, Indian river.
  - Alex. Fraser, 310, Nipissing, Mattawa and Madawaska.
  - Thistle, Carwell & Co., 318, Petawawa and Madawaska.
  - Boyd, Caldwell & Son, 135, Madawaska and Missisippi.
  - R. K. Oak, 100, River Ottawa.
  - Hurdman & Co., 126, Petawawa river.
  - R. Ryan, 100, Montreal river.
  - N. E. Cormier, 89, Petawawa river.
  - Gilles Bros., 68, Missisippi and Montreal rivers.
  - O. Latour, 76, Ottawa and Temiscaming.
  - A. Barnet, 50, River Petawawa.
  - A. & P. White, 50, Ottawa river.
  - H. M. McLean, 61, River Bonnechere.
- Small holders under fifty miles, 600, on streams before mentioned.

THE SQUARE TIMBER TRADE.

The following is an approximate estimate of the quantity of square timber made in the Ottawa and Nipissing district during the season of 1885-86:—

Name of Manufacturer	Cubic feet.
Fraser, Schery & Co.	355,000
David Moore	600,000
E. Moore	170,000
Timmons & Gorman	175,000
Hock & Son	225,000
McCool & Doran	177,000
J. & G. Bryson	160,000
J. R. Booth	245,000
R. White	175,000
William Mackay	180,000
McLaughlin Bros.	350,000
Thistle & Carwell	200,000
Barnet & Mackie	300,000
A. & W. Mohr	100,000
Robert Grant	180,000
John Lamb	75,000
Francis & McCray	55,000
Total	4,042,000

The square timber business has declined in recent years. In 1882-83 the estimated output was 8,760,000 feet, and in 1883-84 6,290,000 feet. The output of 1886 was made principally on lake Nipissing and the Keewau, Colouge, Quinze, Ottawa, Sturgeon, Bonnechere, Madawaska, Missisaga, Black, Petawawa and Amble du Ford rivers. During recent years the production of square timber has fallen off considerably, but that of sawn lumber has increased with the improved facilities for taking out logs, river driving and shipping the lumber. The

square timber produced in this district is taken to Quebec in rafts and there sold for shipment to Europe. Quebec is the great timber market of Canada.

THE SAWN LUMBER.

cut at the mills on the Ottawa and its tributaries is shipped principally to the United States and to other points in Canada. The manner of shipping to the United States is chiefly by means of barges, which are towed down the Ottawa and St. Lawrence and through the canals to Sorel, thence up the Richelieu river and lake Champlain to Whitehall, and down the Hudson to Albany and New York. Considerable quantities of lumber are also shipped by the Rideau canal and Canadian Pacific and Canada Atlantic railways, and latterly some large shipments of square timber have been made over the Canadian Pacific from the lake Nipissing region. The entire annual output of sawn lumber in the Ottawa district is estimated at from 700,000,000 feet to 800,000,000. It is all white pine excepting a small percentage of red and Norway pine. Of the exports to the United States from the Ottawa consular district for the year ending June 30th, 1886, 97.03 per cent. was made up of lumber. In 1885 the percentage was 97.65, and in 1884, 98.22.

THE TOTAL VALUE

of sawn and manufactured lumber exported from this district to the United States in the three years named was:—

1884	1885	1886
\$2,413,576	\$2,254,501	\$2,170,814

The following statement shows the kinds and value of the lumber shipments from the Ottawa district to the United States in the year ending 20th June, 1886:—

Sawn pine lumber	\$2,045,800
Box shooks	46,428
Laths	20,450
Railroad ties	11,604
Picks and curtain sticks	24,761
Match blocks	8,459
Telegraph poles	2,433
Hemlock bars	728
Fence posts	21
Shingles	978
Doors and moulding	2,118

PROVINCIAL TIMBER REGULATIONS.

The timber limits of Ontario and Quebec are owned and controlled by the governments of the respective provinces. The Ottawa Crown Land agency collect crown timber dues for the Ontario and Quebec governments as well as slide dues for the inland revenue department of the Dominion government. The rates of dues charged upon limits in Quebec is somewhat higher than those charged in Ontario. In each province the limits are disposed of at public auction, at so much bonus per square mile, subject to the payment of the regular annual ground rent or dues. The purchaser receives his title in the form of a license for the territory, each birth or limit comprising so many square miles of 640 acres. The license conveys simply the right to cut the timber on the territory therein described for one year, with the prior right to renewal annually in accordance with the prescribed regulations. The purchaser or licensee of a timber limit obtains no rights in fee to the lands covered by his license, but after securing his license at public auction pays a yearly tax for the privilege of cutting timber, and settlers who take up lands within the area mentioned in any license are not liable to be disturbed or prevented from clearing or cultivating land by the holder of such license. The yearly ground rent payable by limit holders is two dollars per square mile, and the transfer bonus one dollar per square mile.

DUES IN ONTARIO AND QUEBEC.

As before stated the timber dues in Quebec province are generally speaking slightly higher than in Ontario. For oak and walnut the dues are four cents per cubic foot in Quebec and three cents in Ontario; red and white pine, cedar and other square timber, two cents in Quebec, 1 1/2 cents in Ontario; five logs 13 1/2 feet long, 17 inches, 22 cents each in Quebec, 15 cents each in Ontario; pine logs, 13 1/2 feet long, less than 17 inches, 11 cents in Quebec, 15 cents in Ontario; spruce logs, 1 1/2 cents each in Quebec, 1 cent in Ontario; pipe staves \$7 per 1,000 in each province; West India staves, \$2 1/2 per 1,000 each province; boom timber, round or sided, pine or tamarac, 1 cent per lineal foot in Quebec, 1 1/2 cents in Ontario; pine for shingles 20 cents per cord in Quebec, 12 1/2 cents in Ontario; cedar for shingles, 16 cents per cord in Quebec, 12 1/2 cents in Ontario; red rails per hundred, 25

cents in Quebec, one cent in Ontario; cedar telegraph poles, 6 cents each in Quebec, one cent in Ontario; railway ties, 2 cents each in Quebec, 15 per cent ad valorem in Ontario; hemlock logs 6 cents each in Quebec, and 10 cents in Ontario; hemlock bark, 32 cents in Quebec and 30 cents in Ontario; hardwood logs and tamarac, 22 cents each in Quebec, 25 cents in Ontario; floors or birch (28 feet long) 25 to 30 cents in Quebec, 1 cent per cubic foot in Ontario. In addition to the foregoing provincial dues, export duties are imposed by the Dominion government upon the following classes of lumber when exported:—White and Norway pine saw logs, per 1,000 feet, board measure, \$2.00; spruce and hemlock logs, per same measurement, \$1.00; shingle bolts, per cord of 128 feet, \$1.50.

LUMBERING OPERATIONS.

Large amounts of ready cash are required by all operators in lumber. In the early autumn months men and horses are engaged "to go to the shanties," that is to go and work cutting timber and log upon the various limits.

The men and horses must be well housed and fed, in the woods, and all wages must be paid promptly. Immense quantities of provisions, flour, pork, potatoes, beans, tea, oats, hay, etc. must be purchased and shipped to the shanties, the cost of transportation to the distant limits being one of the principal items of expenditure. The construction of the Canadian Pacific railway has greatly reduced the cost of sending men and supplies to the shanties on the Upper Ottawa and tributary streams. A small army of shanty men are kept in the woods every winter by the Ottawa "lumber kings." The shanties in which the men live are usually built of logs, and are made as comfortable as circumstances will permit. In the spring when the snow melts the men usually come down the streams "on the drive," that is with the logs that they have cut during the winter, and are paid off, and go to work in the mills or seek other employment. The logs which are cut 13 1/2 and 16 1/2 feet in length are floated down the various streams to the mills. The regulation length of logs is 13 and 16 feet, but in running the rapids, the ends get "broomed," and so six inches additional length are allowed at each, and these ends are sawn off leaving each log smooth and square and proper length.

SAWING THE LUMBER.

Generally the best of the logs are cut into deals for the English market. These deals are three inches thick, ten feet and upwards in length and any width from nine inches upward. They are assorted into firsts, seconds, thirds and fourths, each class having its respective market value, and these grades only are exported, leaving an amount of inferior stock to be disposed of in the most profitable way possible. The balance of the logs are sawed into 10, 12 and 14 inch boards, which are generally exported to the United States. These stocks are culled and piled, according to the various grades. Great care is given to piling, the stocks being arranged in square blocks, single courses, very open. The immense piles of lumber on both sides of the Chaudiere never fail to attract the attention of strangers visiting Ottawa.

THE OTTAWA MILLS.

The immense water power furnished by the Chaudiere and Rideau Falls has been utilized to run a great number of lumber mills as well as some flour mills and cloth factories. The saw mills in this district are generally of large capacity, and are equipped with all the modern appliances for rapid, smooth and economical work. They are all "gang," and contain from four to eight gangs of from thirty-six to forty two saws each, with all the necessary edging tables, all lumber being made parallel and passed over chain butting tables. The lumber manufacturers of Ottawa are fully alive to the necessity of keeping abreast of the times and the necessities of the industry. The mills are run night and day through the short season if not over seven months. They are generally lighted by electricity, which aids materially in night sawing. About two-thirds of the sawn lumber of this district is produced at the Chaudiere and Rideau Falls Mills. Eleven hours a day constitute a day's work for mill hands and others connected with the manufacture and handling of lumber, and wages are paid weekly to mill hands and to men in the woods

as their necessities and those of their families require it.

RATES OF WAGES.

The number of men who find employment in connection with the lumbering business in the Ottawa district is very large, being variously estimated at from ten to twelve thousand. There is of course no fixed rate of wages for any class of workmen, but the following statement as published by the U. S. consul here may be regarded as approximately correct.

Foremen in woods	\$40 to \$60 per month.
Choppers and skidders	15 to 20
Road Cutters	12 to 15
Teamsters and loaders	16 to 18
Cooks	30 to 40
Log measurers	45 to 50
Horse team and teamster	35 to 40
Mill foreman	40 to 100
Lead sawyer for gangs	40 to 45
" " for circulars	40 to 50
Tail sawyers	20 to 25
Edgers and trimmers	25 to 40
" " " "	50 to 60
General help, teamsters &c.	30 to 35

The wages paid to men in the woods are in addition to board, but men employed in and about the mills board themselves. The principal lumber mills of the city and district are those of Messrs. Bronson & Weston, Perley & Patee, J. R. Booth, Grier & Company, E. B. Eddy, Hurdman Bros., at the Chaudiere Falls; Messrs. James McLaren and McClymont & Co., at Rideau Falls; W. C. Edwards & Co., at Rockland; Gilmour & Co., on the Gatineau; James McLaren and Ross Bros., at Buckingham; Hamilton Bros., Hawkesbury; Peter McLaren, Carleton Place; Boyd, Caldwell & Son, at Almonte, and other points on the Mississippi; W. J. Conroy, and E. B. Eddy at Dechenes rapids; W. R. Thistle, Pembroke; McLaughlin Bros., Arnprior; Gilles Bros. Braside. There are also a number of smaller mills cutting chiefly for home consumption.

The Biggest Book in the World.

"Just outside of London they are at work on the biggest book in the world," said a New York publisher, the other day, who has recently returned from a trip to England. "It will be more than four times as large as Webster's Dictionary, and will contain something like eight thousand pages. It is to be the ideal dictionary of the English language, and will supersede all pre-existing authorities. It has long been realized by scholars that the English language is deficient in this respect. The French have two dictionaries, that of M. Littré and of the academy, that are far superior to our own. The Worterbuch, of the German Brothers Grimm, is still more exhaustive and authoritative. Even the Portuguese dictionary, by Vieira, decidedly surpasses anything in English. But the British Philological Society proposes to fill this yawning gap in our reference books. They hold that a dictionary should be an inventory of the language, and that its doors should be opened to all words—good, bad and indifferent. This new work will not be confined to definitions and cross references. The life history of each word will be fully given, with a quotation from some standard writer, showing its shade of meaning and the variations in its usage from one generation to another."—New York World.

In Vancouver there is said to be a land office established in a hollow tree forty-four feet in circumference. In the same section there is a table forty one feet long and four or five feet wide, made out of a solid board.

Fort William Echo.—Fort William is the centre from which radiate all the great lumbering enterprises of Algoma West. Each winter camps are established in every direction, and from the almost boundless timber limits which surround it the products of the forest are culled and prepared for their voyage to the Fort in the spring. Most of the timber employed by the C. P. R. Company in their many and vast enterprises is procured by companies having their headquarters here. From the mills of Messrs. Carpenter and Graham, and Horne & Co., it is an almost daily occurrence to see car-loads of timber and lumber of all descriptions and dimensions proceeding east and west, intended either for the repair of old works or the construction of new ones. Customers for the manufactured material are found as far west as Calgary, and as far east as Sudbury.



# THE CANADA LUMBERMAN

PUBLISHED MONTHLY BY  
A. G. Mortimer, Peterborough, Ont.

Terms of Subscription:  
One copy, one year, in advance..... \$1 00  
One copy, six months, in advance..... 0 50

Advertising Rates:  
Per line, for one year..... \$0 75  
Per line, for six months..... 40  
Per line, for three months..... 25  
Per line, for first insertion..... 10  
Per line, for each subsequent insertion to 3 mo's..... 01  
Cards not occupying more than 12 lines (1 inch) per annum..... 8 00  
Cards not occupying more than 12 lines (1 inch) for six months..... 5 00  
Cards not occupying more than 6 lines per annum..... 3 00  
Cards not occupying more than 3 lines, for 6 mo's..... 3 00  
Special rates will be made for page, half page and column advertisements.

All communications, orders and remittances should be addressed and made payable to A. G. MORTIMER, Peterborough, Ont.

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

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

The CANADA LUMBERMAN is filed at the Offices of Messrs. SIMON, DRACON & CO., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont. NOV. 1, 1884

We expect a great rush of subscriptions during the next few weeks, as a result of our low offer for the balance of the year. Send in your quarter.

We desire to secure active agents in every county who are willing to work on liberal pay to take subscriptions for the CANADA LUMBERMAN. Outfits and sample copies free.

The September fire report for the United States and Canada shows that the fire bug, the small boy with matches and the hired girl and her kerosene can are still putting in their deadly work. Only \$6,500,000 worth of property was consumed, but the annual aggregate this year will far exceed that of 1883.

THERE are increasing signs of an improvement in trade in England, and some branches already show a marked advance in prices, notably in wool, and to some extent in metals. Commercial reports from nearly all the large centres of industry are unanimous in stating that a more hopeful feeling generally prevails.

A new and plausible explanation of the destructive fires occurring in pine forests is offered. The pine resin exuding from the trees is often of lens shape, and before it thoroughly hardens frequently of crystalline clearness. It is surmised that while in that condition a resin lens may focus the sun's rays upon some light twig or resinous point and so start a blaze that quickly eats up a forest.

REPORTS from Ottawa are rather discouraging as regards the American demand for lumber. The state of affairs is principally attributed to the recent strikes in New York and other States. It is estimated that the stocks now piled at the Chaudiere, and which will likely not be removed this season, is greater than at any similar period during the past ten years. Owing to the labor trouble referred to industry was paralyzed for several months, the result being that American lumbermen were left with large supplies on hand. When the strikes ended they were unable to make as large sales as were expected, hence the accumulation at Ottawa.

A VALUABLE sale of timber limits took place at the Russell house, Ottawa, on the 19th Oct., there being a large attendance of capitalists. The limits in question are situated on the Georgian Bay as per government map, being berths Nos. 6, 14, 16, 113, 186, 187 and 198, containing 36 square miles each; and those on Lake Nipissing, being berths Nos. 12, 20, 31 and 33, containing 30 square miles each. There were disposed of No. 6 to Mr. J. G. Bryson, at \$11,300, No. 16 to Mr. David Moore, at \$15,100, and No. 187 to A. & T. McArthur for \$25,100.

PROMINENT shingle manufacturers in Aroostook, Me., say that the present arrangement of manufacturing Aroostook lumber in Americanized New Brunswick mills, taken in connection with the rates of freight for shingles from Aroostook to Boston, if continued, will drive every shingle manufacturer in upper Maine out of business. They assert, and give figures to prove, that lumber cut in Aroostook can be run to St. John or in the provinces, manufactured and returned to the States for from 20 to 25 cents cheaper than they can be made there and shipped by rail at present rates.

DURING the past month a meeting of gentlemen was held at Chelms, Eng., for the purpose of testing the various qualities of different colonial timbers exhibited at the Colonial and Indian Exhibition. The object of the meeting was to bring together the leading civil engineers, timber merchants, builders and other users of wood, to meet experts from the various colonies and to witness the conversion of samples of the woods into railway sleepers, joinery, casks, spokes for wheels, etc. We have not yet learned the result of the investigation.

The publisher of the CANADA LUMBERMAN desires to obtain a reliable and well informed correspondent in every lumbering centre in the Dominion of Canada, and to that end would ask those disposed to act as such, to communicate the fact at once stating the facilities they possess for obtaining reliable, early and full information as to the lumber trade in their respective districts, and the remuneration which they will expect for their services as such correspondents.

MR. HOOPER, President of the Coachbuilders Guild, and member of the London Chamber of Commerce, has recently given some attention to an examination of the woods of Canada as shown at the Colonial Exhibition. As the outcome of his inspection, he is now visiting Canada to inquire into the possibility of obtaining direct from the Dominion the various kinds of woods used in carriage building. Mr. Hooper will spend some time in Ontario, where the chief supply may be met with, and will on his return read a paper on the subject before the Guild. Professor Macdon is also, we believe, to read a paper giving further details as to the qualities and uses of Canadian woods.

IT is curious to note that in the long list of national emblems there are but two trees, viz., the lime or linden tree for Prussia and the pomegranate of Spain. All other nations are represented by flowers or plants which do not rise to the dignity of trees. King Henry VII chose the hawthorn as his device, because the crown of Richard III was found in a hawthorn bush at Bosworth. - *Ex.* The writer of the above, although an American, evidently forgets that in Canada we have a tree which has long been considered as emblem of the country. We call it the maple, and have every reason to be proud of it.

FIRES, lumbering, tanning, wood pulp mills, charcoal, iron smelting, railroad building, all draw on the forest growth, and these are legitimate demands. Fires are the great causes of destruction of forests. In 1880, if the report presented by Prof. C. S. Sargent is reliable, the area burnt over in the United States was 10,250,000 acres, and the value of property destroyed \$25,462,250. In the State of New York, according to the same authority, 149,491 acres were burned over, with a loss of something like \$1,250,000. The largest number of these fires of

any one class were traced to farmers clearing land and allowing brush fires to communicate with the forest. Locomotives are set down among the list of causes, as having set fire to woods 508 times, hunters 628 times, malles 202 times, clearing land 1,152 times.

For the balance of the year we will send one copy of the CANADA LUMBERMAN to any one sending us 25 cents. To new subscribers who will send us \$1 we will mail the LUMBERMAN from now until the 1st of January, 1885. Every lumberman, saw-mill owner and wood-worker in the Dominion should accept this very liberal offer. As this is the only journal of the kind in Canada, and as we propose making it a thoroughly representative organ for the lumber and wood-working industries none can afford to do without it. Send us your money, and receive in return a paper which will keep you acquainted with the ins and outs of the trade, and especially a complete market report.

SOME idea of the extent to which mechanical ingenuity and efficiency have advanced may be had from the following statement:—"It is now possible to construct a complete sewing machine in a minute, or sixty in one hour; a reaper every fifteen minutes, or less; three hundred watches in a day, complete in all their appointments. More important than this even is the fact that it is possible to construct a locomotive in a day. From the plans of the draughtsman to the execution of them by the workman, every wheel, lever, valve and rod may be constructed from the metal to the engine intact. Every rivet may be driven in the boiler, every tube in the tube sheets, and from the smoke stack to the ash-pan a locomotive may be turned out in one working day, completely equipped, ready to do the work of a hundred horses."

Or all the days in the week "Washing Day" is looked upon by the average house wife as the most disagreeable and least to be desired. Inventive genius, however, is coming to the rescue in this as in all other departments of labor, and what a few years ago took a whole day to accomplish can now be done in a couple of hours, and the heavy work of the operation almost entirely dispensed with. A reference to our advertising columns will show the merits of the Improved Washer and Bleacher, manufactured by Mr. C. W. Dennis, Toronto, Ont. This simple device has proved a surprise wherever introduced, and although weighing but four pounds, is so constructed as to do any kind of washing without injury to the finest fabric, and in a marvellously short time. The inventor has selected the LUMBERMAN as the medium to more fully introduce his machine to the public of Canada, and as far as our knowledge of this washer goes, we can recommend the same to the wives of our readers as the best article of the kind yet introduced.

CHURCHILL & SIM. (London, Eng.) in their October circular, show that the slight improvement which began to make itself felt in August has been maintained through September, foreign wood in particular having met with better demand at gradually advancing prices. There is an important reduction in the stock of foreign deals, and a large increase in that of colonial pine. The supply from Canada to the end of September has been—Pine deals, &c., 1,549,000 pieces against 1,161,000 pieces in 1885; spruce, 1,051,000 pieces against 1,188,000 pieces in 1885; and from New Brunswick, &c.:—Spruce deals, &c., 344,000 pieces against 281,000 pieces in 1885; birch timber 2,000 pieces against 3,000 pieces in 1885. Spruce deals have been slightly reduced in stock. Pine has been sent in more liberally, and the stock compares unfavorably with that of last year. The variations in value have been unimportant. Timber generally remains unaltered. London is fairly supplied with all classes of Canadian timber; but the general demand is not satisfactory. Business during the month has been entirely by private sale.

The "Toronto Permanent Exhibition of Manufacturers" is something quite new for Canada, and when in operation will doubtless prove not only an interesting place to visit, but also a profitable place in which to do business. The scheme has been set on foot by Messrs.

Nicholls & Howland of the Queen City, and a special building is now being erected which will be ready for occupation by January next. Some of the advantages likely to accrue to manufacturers are in brief as follows:—The exhibition will be free to all and open throughout the year. It will afford the advantages of a Toronto branch establishment at a very moderate cost. Competent salesmen will be in charge for the purpose of explaining the merits of each exhibit to interested visitors. Machinery will be shown in motion, and the whole establishment will, to all appearances, be a hive of industry.

"BEAUTIFUL HOMES and How to Build Them" is the title of a little book just issued by W. B. Judson, publisher of the *Northwestern Lumberman*, Chicago. It contains a series of practical building plans, comprising something like 19 separate designs for modern frame and brick dwellings, a church and a public school. They were drawn by a prominent Chicago architect and are printed in five colours, making a strikingly handsome and attractive little book. The designs cover a very broad range of architecture, giving nearly all the prevailing modern styles, a remarkable feature of them being the fact that the publisher guarantees to furnish scale drawings, with full details ready to build, of any of the plans to purchasers of "Beautiful Homes" at a further cost not exceeding \$3. The price of the little book is only 50 cents, and besides the plans themselves it contains much valuable technical information for both practical builders and people who desire to build homes.

For the kindly greetings extended the LUMBERMAN during the past month, by our Canadian and American exchanges, we beg to extend our thanks. Kind words do much good, and every reference to our paper from different parts of the country, has a very desirable effect. It is the intention of the publisher to make the LUMBERMAN, both in point of technical interest and typographical appearance, second to no other trade publication in the Dominion. One step has been taken towards this end in adding an attractive cover to the present issue. Next month we propose introducing a fine toned paper throughout; and so improvements will go on until the desired excellence has been attained. We solicit the co-operation of every reader to further this end. If you do not feel equal to writing us something of interest occasionally, you can do a good work by handing a copy of the paper to a friend, and securing his subscription to the same. Stir up, and let us have a grand rush of new subscribers for the coming year.

EVERY mechanic and business man should know the journals especially intended to advocate his respective branch of industry or trade. Aside from the numerous books on the kindred arts, there are many journals published that might and ought to be of great service to the wise craftsman who read them, for there is hardly a single issue of one of them that does not contain a greater or less number of items which would afford a better knowledge of some part of the business to which they have given their time and attention, and through which they gain their livelihoods. Even the advertisements—especially if they be of new material, new machinery, or new processes—contain information well worthy the attention of every one who would better himself, or the craft of which he is a member. Every paragraph which gives an insight into other people's modes of doing business, or which calls attention to new inventions and discoveries, or new uses of old facilities is worthy of study and preservation. The assertion that one "cannot learn from books," is disproved by even a careless examination of any of the numerous trade journals published in America, and the mechanic, master or workman, who would keep himself abreast of the world's progress in his own branch, must give them careful attention. We hope that every lumberman and wood-worker who receives it, will not only read and preserve the successive issues of the LUMBERMAN, but also those of all other similar journals he may be so fortunate as to obtain. They will, in years to come, be even more valuable than now, and, like new friends and new wine, improve with age.

EXCHANGE ECHOES.

Contemporary Opinion on the Various Matters of Interest to the Trade.

Saw Mill Gazette

THE chief timber exporting countries of Europe are Norway and Sweden. From Norway 80,000,000 cubic feet come annually, half of them to England; and 33,000 men are at work in the forests and in the timber and wood-work trades in connection therewith. Large as is the production, it is under control; and no tree is now cut unless another is planted; and only enough are cut to keep within the period of rotation. This country might take a valuable lesson from this, and in time will probably see the necessity of doing something to keep up the supply.

Lumber World.

LUMBER lore is being revised every day by the same class of minds that have decided there never was a William Tell who shot an apple from his son's head, never a Lucretia Borgia who beguiled her hours in administering fatal poisons to her casual friends, and never a Washington who refused to lie about the hatchet and the discombobulated cherry tree. It has lately been demonstrated by these minds that the southern pine is not the native beath of the festive and nocturnal bedbug, that the bark on the north side is not thicker than that on the south side, and that the age of the tree cannot be even approximately judged by the number of rings visible in its trunk. Thus do cherished traditions disappear in the light of science!

Northwestern Lumberman

A CORRESPONDENT makes inquiries as to the best way to pile shingles. Some manufacturers lay the bunches flat, others on the edge; and without being able, perhaps, to give any specific reason that would convince others why the latter is the better, the LUMBERMAN gives it the preference. In either case it is better to use long strips than short ones between the different layers, for by so doing the whole pile is strengthened and less liable to be blown over, or from other causes tumble down. A space of a foot should be left between the piles so as to assure a free circulation of air. No shingles are half piled that are not covered. Especially if the bunches be set edgewise, if a rainstorm strikes them before they are roofed the top bunches will be wet clear through. Ordinarily a manufacturer on a moderate scale carries his piles up ten or twelve feet.

Timber Trades Journal, (London, Eng.)

Although a few isolated transactions may still be expected to take place, we may, nevertheless, consider f.o.b. business as practically at an end for this season. Buyers, both in London and on the coast, look forward with equanimity to passing through the winter with light stocks, adhering to the conviction which they have expressed throughout the summer, that no immediate improvement in the inland timber business is to be expected for some time, in spite of the admittedly better feeling in other branches of the trade. Shippers and their agents still endeavor to prove that stocks must run short, and prices consequently rise considerably during the next few months. But buyers remain absolutely indifferent, replying that in such case they be well content to realize a larger profit on a smaller quantity rather than run the risk of holding unwieldy stocks. The anticipations, therefore, of an active autumn trade seem likely to be frustrated, more especially as all chance of a brisk business has been destroyed by the advances in freights, which prohibited fresh f.o.b. or c.i.f. transactions. Most of the chartering now effected is for goods contracted for, and we understand that the amount of tonnage taken up on consignment or speculative account is considerably smaller than usual. This will prove of especial benefit to the London market, where the present stocks, as far as we can judge, will prove amply sufficient for any legitimate demand likely to be made upon them.

The Lumberman, (Chicago.)

A comparison of the stock on hand in this market on the last inst., with the amount held one and two years ago on the said date, makes a very significant showing. It bears out fully the position THE LUMBERMAN has taken that there is much less lumber here than it has been the habit of the trade to have in pile at this time. As contrasted with last year, the

shortage is 67,982,431 feet, or about twelve per cent. of the total, while as against 1884 there is a difference of 95,227,733 feet or about sixteen per cent. These figures show that the market is not accumulating stock as rapidly, as it usually does toward the close of the season, and therefore that there is little chance that it will recover any of the present shortage; it is far more likely that the amount it is behind will increase with each report. The receipts are running from ten to fifteen per cent. below last year, and with the present low range of cargo prices, and the high and increasing cost of transportation, there is nothing to induce mill owners to push forward anything for which they can find a market at the mills. There is an explanation in the facts of the complaints which are prevalent of a short supply of many grades of lumber at the yards, and a hint of what may be expected in the future. There can be no question but that nearly all the shortage indicated by the comparisons above made is in the grades of stock that are in best demand, and which are hardest to find—long piece stuff, fencing, and common and cull boards, with a few items among the better qualities of lumber.

The Lumberman.

Predictions in respect to the condition of lumber prices in the early future are heard now and then, and as usual there is a notable difference of opinion among the prophets. Some rather careful students of the business conditions affecting the lumber trade, bold, and are not afraid to express, rather sanguine views of the outlook. Basing their opinions upon the improved and improving condition of general business, the active demand for labor, and the evident shortage in the lumber supply, they think they are able to see, just ahead, the opportunity to sell lumber for more than it is now bringing. Less optimistic observers consider the low price of grain, and the condition in which it places a large number of lumber buyers, and are inclined to be somewhat doubtful of the result. It is certain that the market generally, despite the admitted and increasing shortage of dry stock, does not show the strength that should precede an advance in prices. The reason of this is largely that the demand has not been as brisk as was anticipated, and it is possible that even a little improvement therein, of which the better reports received of the past week's trade raise some hope, might result in changing the appearance of things markedly. It is not easy to see how the limited stock of many items in sight for the fall and winter trade, can fail of producing upon values the legitimate effect of a supply that is less than the demand. For such things, at any rate, if not for all grades and kinds of pine lumber, it would seem that higher prices should soon obtain, simply in accordance with the well known principle which is universally admitted to govern their rise and fall.

WHAT THEY SAY OF US.

THE CANADA LUMBERMAN is still published monthly by Mr. A. G. Mortimer, of Peterborough, and is devoted to the lumber and wood-working industries of the Dominion. It is a valuable technical journal.—London Free Press.

The first issue of the CANADA LUMBERMAN under its new management clearly indicates that Mr. Mortimer has not missed his calling, and that the Dominion is going to have a new exponent of the lumber trade. Success to it.—Chicago Lumber Trades Journal.

MR. A. G. MORTIMER, who has for many years been connected with the Mechanical and Milling News, has assumed the proprietorship of the CANADA LUMBERMAN, which will hereafter be issued on the first day of every month.—Deseronto Tribune.

THE CANADA LUMBERMAN published at Peterborough is now under the editorial and business management of Mr. A. G. Mortimer. The LUMBERMAN is a good trade journal, and should meet with success.—Bobcaygeon Independent.

THE CANADA LUMBERMAN published at Peterborough, Ont., has been sold by the Peterborough Review Printing and Publishing Company, Limited, to A. G. Mortimer. The paper has been published semi-monthly, at \$2 a year, but now it will be made into a monthly, the subscription price being placed at \$1.—N. W. Lumberman.

THE CANADA LUMBERMAN has been purchased by Mr. A. G. Mortimer, an old office mate of the editor of the Star, who has changed the paper to a monthly, and has reduced the subscription price to \$1 per year. We wish him every success in his new undertaking.—Parry Sound Star.

THE October number of the CANADA LUMBERMAN is undoubtedly the best copy of that journal which we have yet received. Every person interested in the lumber industry of Canada or the preservation of our forests should subscribe for the LUMBERMAN.—Deseronto Tribune.

THE CANADA LUMBERMAN, hitherto published by the Peterborough Review Printing Co., will hereafter be published by Mr. A. G. Mortimer, of the Mechanical and Milling News, on the 1st of every month, at \$1 a year. The LUMBERMAN will now be in good hands.—Uxbridge Guardian.

THE CANADA LUMBERMAN, published in Peterborough, we are pleased to notice, continues to flourish. Is the only journal in the Dominion devoted to the lumber and wood-working industries, and should find a ready patronage from wood-workers and those connected with the lumber interest.—Port Hope Times.

We are pleased to notice that under its new management the CANADA LUMBERMAN is being enlarged and improved in many ways. Mr. Mortimer seems to have the correct idea of how to conduct a trade publication, and one of his first improvements has been the addition of an attractive cover to be followed by the adoption of a fine toned paper throughout. We wish our successor every success that his enterprise merits.—Peterborough Review.

THE CANADA LUMBERMAN now in its seventh year, has passed under the editorial control and business management of Mr. A. G. Mortimer, who has had considerable experience in the management of trade journals. The LUMBERMAN contains several special features of much value to those engaged in the lumbering business and promises, by its trade reports and attention to the interests which it represents, to be an indispensable periodical.—Ottawa Journal.

A. G. MORTIMER, brother of the publisher of the Dominion Mechanical and Milling News, has purchased the CANADA LUMBERMAN from the Review Printing and Publishing Co., of Peterborough, Ont., and will hereafter conduct it as a monthly journal. The subscription price, which, as a semi-monthly, was \$2 per annum, has been reduced to \$1. Under its new management we hope to see the LUMBERMAN live and prosper.—Dominion M. and M. News.

THE CANADA LUMBERMAN, published monthly by Mr. A. G. Mortimer, at Peterborough, Ont., is one of the best trade journals in the Dominion. As its name denotes, it is devoted chiefly to the discussion of matters affecting the lumber trade of Canada, in all its branches, from getting the logs out of the forest till they are ready to be put on the market in various manufactured states. It is a large 16 page journal, now in its sixth volume, and has so far deserved success that its publishers have decided on introducing several improvements in its make up, commencing with the next number.—Montreal Gazette.

OUR Canadian contemporary, the CANADA LUMBERMAN, published at Peterborough, Ont., has been purchased by Mr. A. G. Mortimer. Under the new management the LUMBERMAN will be issued on the first of each month, and the subscription price will be \$1 a year. Mr. Mortimer has made himself known in Canada by his connection with the Toronto Mechanical and Milling News, and his experience in trade journalism will enable him to keep the LUMBERMAN at a high standard of excellence as a news journal and an advertising medium.—Lumber World, Buffalo, N. Y.

AMONG the many other new advertisements which appear in this issue of the LUMBERMAN we have much pleasure in referring to the one occupying the last page of the cover, that of the Dodge Wood Split Pulley Co., 81 Adelaide St. West, Toronto. The special advantages of this style of pulley can be briefly summed up as follows:—The compression fastenings of wood on iron, with wooden bushing, will hold this

pulley firmly upon the shaft, and is, in a majority of cases, better than an iron pulley, from the fact that it can be made lighter, and thus save weight on the line shaft, and bearings, thereby reducing friction. It is a well known fact that a wooden pulley is better than an iron pulley, from the fact that it holds a belt much better. From the best authority, this latter amounts to at least 33 per cent. The manner of fastening the pulley to the shaft does not mar nor injure the shafting in the slightest degree, and therefore does not tend to throw the pulley out of balance, as the tendency is with pulleys secured by keys and set screws. The pulley is built of wooden segments, the face being made of poplar. The two halves of the pulleys are secured to the shaft with eight bolts. The bushings to fit different sized shafts are made of hard-wood, thoroughly air-dried, then bored and kiln-dried; then each bush is counter-bored to exact size of shaft, then carefully turned on the outside to fit the bore of the pulley. They are then cut transversely in halves. Any further information regarding these pulleys will be cheerfully furnished by the manufacturers.

THE BRITISH WHIG

The nearest Daily in Canada, bright and newsy, \$5 by Mail.

THE WEEKLY WHIG

Rivals Toronto and Montreal papers, giving a better selection of general news, fair and independent.

ONLY \$1 TILL END OF 1887.

The Whig has a larger circulation than the three other Kingston journals combined. It pays always to advertise in the best.

E. J. B. PENSE, Proprietor.

GEORGE GALL

WHOLESALE and RETAIL

HARDWOOD LUMBER

MERCHANT

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

A SPLENDID MILL SITE FREE.

Adjoining Village and new R. R. with Fifty Million feet of Pine and One Hundred Million feet of Hardwood within radius of ten miles, is fifteen miles from any other mill. A great opportunity to the right man. Mill site of eight acres given free to party who will erect mill or manufacturing establishment. Address O. T. KENNAN, Milwaukee, Wis.

GRATEFUL—COMFORTING.

EPPS'S COCOA

BREAKFAST.

"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast table with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—Civil Service Gazette.

Made simply with boiling water or milk. Sold only in packets by Grocers, labelled thus: JAS. EPPS & Co., Homoeopathic Chemists, London, England.



## General News Notes.

PRMBROKE is to have a new machine shop and foundry.

THE new mill at Canning, Ont., is in operation again.

J. U. BLANKY, saw mill owner, Elgin, N. B., has assigned.

EDWARD BURNS, lumber dealer, Hamilton, Ont., is dead.

JOHN McALLISTER, lumber dealer, Windsor, Ont., is dead.

THE International Tent and Awning Co., Ottawa, has assigned.

BUILDING operations are reported brisk at Edmonton, N. W. T.

BRITISH COLUMBIA shingles have been shipped as far east as Calgary.

It is said Rathbun intends starting a sash and blind factory in Picton.

J. A. KILLAM's saw mill at West Brook, Nova Scotia, was lately destroyed by fire.

A NEW saw mill has been started a short distance from Calabogie, Ont., by Mr. A. Grant.

SAW MILLS round about Ottawa are shutting down earlier this year than usual, owing to a scarcity of logs.

THE Canadian Pacific Company is building five miles of snow sheds in the Rocky mountains at a cost of \$1,600,000.

It is estimated that nearly 10,000,000 feet of lumber will be required at Duluth for elevator building before next fall.

A DISPATCH from Byng Inlet says:—A saw log drive of over ten million feet has been struck twenty miles up the Magnetawan River, for want of water.

MR. CHAS. LOULTIT, manager of Gilmour & Co's saw mills at Crow Bay, reports having cut over one million feet of lumber this season. The sales have been as large as last year.

A YEAR ago box-wood found a ready market in the United States at \$100 a ton. Now the market is dull at \$20. The bursting up of the skating-rink bubble did the business.

MR. JAMES MARTIN has purchased the sash and doot factory on Fifth St. Collingwood, Ont., from Mr. McKean. He has also a factory on Hurontario Street, in the same town.

OWING to a break-down of some of the machinery the Midland and North Shore Lumber Company's steam mill at Parry Sound, had to be closed down for the season on the 6th, Oct.

THE wood working shop of O. Goulette, at Gananoque, Ont., occupied also by P. O'Hearn, for wagon making, was burned Sept. 29th. The property was insured for \$5,400 which covered most of the loss.

A meeting of the Council of the Board of Trade will be held soon at Toronto, to consider the purchase of the site for a new building. The American Hotel site is spoken of at a cost of \$35,000. A building to cost \$300,000 is mentioned.

MESSRS. S. J. Hogg & Co., recently received the first consignment of lumber from New Westminster that has been brought to Calgary. The lumber is very clear stuff and can be sold at about half the price charged formerly for this class of lumber.

TRADE prospects in England are brightening. The stocks on hand are nearly 750,000 loads short of the supply last year at this time. Unless there is a remarkable influx to fill up the deficiency, trade is likely to become more active and prices stronger.

THE last issue of the LUMBERMAN contained a sketch of the wood-working industries of Brockville, among which was mentioned the planing mill, and sash factory of Messrs. Kerns & Co. We have this month to chronicle the destruction of these works by fire. The loss is heavy.

THE Campbellford Herald, says:—Two carloads of railway ties were daily shipped from the Rathbun saw mill during last week and the week previous. The mill will be kept running at its greatest speed to complete the work undertaken this season. The frost will close operations there in a few weeks.

THE growth of the lumber trade of the Australasian colonies has been extraordinary within the last few years. The total quantity of rough and finished lumber imported into New South Wales alone during the year 1885 was 65,322,037 feet, valued at \$2,296,760, against 49,603,823 feet, valued at \$1,903,900 for 1884.

A SYNDICATE of well-known Montreal citizens have bought the mills and limits of L'Assomption Lumber Co. from the Exchange Bank liquidators for \$30,000, and propose running the mills again. The area over which the purchasers have a right to cut timber embraces three hundred miles, part of which is situated at Ste. Julienne.

THE Chicago Herald says:—"G. W. Sheldon & Co. entered the first cargo of foreign lumber received at this port for many years yesterday. The cargo contained 200,000 feet of pine and ash lumber from St. Joseph Island, Canada, to Hitchcock & Foster, Chicago. The duty is \$2 per thousand feet, and that is what has made it unprofitable to import."

KINGSTON WHIG: Yesterday Mr. McRossie went to the Cape to see the base ball match. He combined business with pleasure and purchased the machinery belonging to Mr. A. G. Burnham's saw mill. It will be brought to the city and removed to a point, not yet selected, beside the Kingston & Pembroke railway, where Mr. McRossie intends erecting a saw mill.

INFORMATION is wanted concerning the whereabouts of one Patrick O'Connor, about twenty-five years of age, brother of Daniel and John O'Connor. He followed lumbering around Orillia and Gravenhurst, working for Geo. Cox about eleven years ago; boarded at the Cooper House. Any information will be thankfully received by Daniel O'Connor, Cavalier P. O., Pembina Co., Dak., U.S.

MR. LOUIS BRITTON, of Parry Sound, was recently severely injured by the falling of a tree in one of the Conger Lumber company's camps. While walking through the woods on the edge of a lake he was struck by a falling tree, which knocked him into the lake, and but for the prompt aid of a person who was near him he would have been drowned. As it was several ribs were broken, and he was otherwise badly bruised.

MONTREAL is likely to increase materially its export of timber by the opening up of the great railway thoroughfare westward, as 3,500 carloads of square timber, representing 2,000 square feet, have arrived in Montreal within the last two months over the Canadian Pacific Railway from the Georgian Bay and Lake Nipissing districts. These consignments were formerly sent down by water at a much slower rate of progress. If cubic feet are understood, this would foot up to 40,000 loads.

MR. WHITNEY, of Bay City, Mich., is preparing to start lumbering operations on his recently purchased land in Canada. He will run one camp on the Restole river, a branch of the French river, sixty miles from Georgian Bay. The cut will be from eight to ten million feet. The present calculation is to take the logs to Bay City to be sawed. Men and camp equipments will be taken from Bay City. Mr. Whitney's mill at Point Lookout has cut 3,000,000 feet this season.

ON the night of Oct. 14th a fire broke out in the saw mill of the Port Arthur Lumbering Co. The flames had made considerable headway before being discovered, and in a very brief space of time the whole building, full of inflammable material, was ablaze. Two engines were soon brought into service, and were kept at work for some hours. A good deal of anxiety was felt at first for the safety of the immense piles of lumber in the immediate vicinity, but the flames were prevented from spreading from the mill in any direction, and not a foot of stock outside the building was destroyed. The cause of the fire is not known. The mill was running during the day and when closed down was believed to be in a safe condition. It is supposed that the flames originated from a spark near the engine room, and smouldered for some hours unobserved. The mill, stock and machinery was insured for \$8,500 as follows:—Western \$2,125, Queen \$2,125, Citizens \$2,125, and Commercial Union \$2,125. The loss is estimated at \$15,000.

THERE are about 34,000,000 acres of forests in Germany, Prussia, containing 20,000,000 acres. The estimated value is \$2,500,000,000 and they bring in an annual revenue of \$50,000,000. The state forests are taken great care of in all parts of Germany; in Prussia alone \$500,000 a year is spent in replanting, yet the imports exceed the exports by 2,000,000 tons. The oak and the beech are the kinds of trees which do best in Denmark, but the timber trade in that country is very small.

FOR the seven months ending July 31, 1886, the imports of sawed lumber into the United States amounted to \$2,743,755, against \$2,883,651, for the corresponding period in 1885. The total imports of wood amounted to \$3,794,704 in 1886 against \$4,122,093 in 1885. The exports of boards, deals and planks for the first seven months of 1886 were \$3,995,411, against \$3,995,411, against \$3,651,395 in the corresponding part of 1885. The total exports of wood and articles manufactured thereof amounted to \$12,967,412 in 1886, against \$12,031,673 in 1885.

THE Kingston Whig says: There is a rumor afloat to the effect that the Caldwell's are going to stop lumber cutting and close their yard in this city. It is untrue. Lumber cutting is always stopped at this season, but only for the winter, and next summer will see the mills again in operation and doing effective service. The yard here is a success, and the citizens would be very sorry to see it closed. Mr. Frank Scantlon has made the business hum, and it cannot be said of him or the agency, "They never would be missed."

THE Cedar Mill at Deseronto, still continues very busy. Mr. Bick, of Bobcaygeon, well known throughout Canada and the United States, for his skill as a manufacturer of shingles, has taken the position of superintendent of the shingle department. The tie contracts for the several railway lines has been the most busy in the history of the mill. Some 400 pieces of excellent timber have been shipped to build piers at the Murray Canal. Several large shipments of shipbuilding material have been made to Kingston and other points and a quantity of timber is now being shipped for the Grand Trunk.

A gentleman from Tonawanda, who has been up the Huron shore, says more lumber is marked up at Alpena and Oscoda as sold than he has seen at this season of the year in the last 15 years. He said the Churchill Bros. had a quantity of fine logs and asked \$24 for the lumber to be cut therefrom. They were offered \$23, but declined to take it, which the gentleman regarded as a good indication of the strength of the market. It may be said that the choice grades of lumber have readily commanded a high price during the entire season, and there is a demand for more of it than the mills have manufactured. Really choice lumber is growing scarce.

AN important sale of timber limits recently took place at Ottawa. The first put up was twenty square miles north side of the Ottawa River of License No. 240 of 1885-6, Province of Quebec, the adjoining berth 16 square miles of License No. 241 of 1885-6, Province of Quebec. This was knocked down to Mr. Gormully for \$30,400. The next parcel, forty-five miles on the White Pine River of License No. 242 of 1885-6, Kippawa, Province of Quebec, was sold to Mr. E. B. Eddy for \$18,300. The last lot, twenty-four square miles, south side of the Ottawa River, of License No. 97, 1884-5, Province of Ontario, was sold to Mr. H. H. Dickson of Pakenham, for \$7,500.

### RAILWAY NOTES.

It is reported that the Grand Trunk will commence at once the construction of the Sault Ste. Marie extension from Gravenhurst to the Sault.

A party of Canadian Pacific railway directors intend erecting a mammoth hotel at the Banff National Park, Manitoba.

ON October 1st the Canadian Pacific railway took over from the Dominion Government the telegraph system in British Columbia, and will hereafter work it as part of the company's service.

MESSRS. Dan Mann and Tom Holt, both old contractors on the Mountain Division of the C. P. R. have secured the contract for building the first 40 miles of the Hudson Bay railway.

THE British railways only killed one passenger in each 6,000,000 carried last year. That shows careful railroading.

THERE are in the United States 340,000 miles of completed railway, not including the side tracks. Much of this vast aggregation of road was built at a cost of \$6,000,000,000.

### Trouble in the Head.

Roaring sounds and whistling in the ears and deafness. I had been much troubled by roaring and singing in my ears and at times a whistling sound, especially when lying down, writes a correspondent of the Boston Transcript. An old and experienced physician whom I consulted told me to gargle my throat night and morning with hot and cold water. Have one tumbler of hot water, taking the water hot enough to scald the mouth, and one tumbler of cold water. Gargle first three times with the hot, then three times with the cold water. Do this three times making nine times with each. In a short time I was cured by this very simple remedy. Many times I have wished it were better understood how often deafness is caused by the hardening wax in the ear. A great number of people doubtless suffer from what they believe is incurable deafness, old persons in particular supposing it to be caused by old age, when if they would consult any good surerist they would find it was merely hardening of the secretion of wax in the ears. They can generally be removed by a very simple operation and hearing restored.

### HEMLOCK BARK.

The supply of hemlock in Lower Canada will be exhausted, so far as a practical supply is concerned, much sooner than most people think.

It is a fact not known to the average reader that the supply of hemlock in the Eastern Townships, of Canada East, so-called, is practically exhausted. Notwithstanding the immense hemlock forests which existed there twenty-five years ago, the ruthless hand of the destroyer has levelled those great hemlock forests. Very little of the lumber was marketed at the time the bark was peeled, as it would not pay the transportation bills. Hence, millions upon millions of hemlock logs have rotted on the ground in Canada during the past twenty-five years.

Twenty-five years ago Mr. Cutting, of Winchester, brought in the first carloads of consequence from the Eastern Townships into Massachusetts. At that time he only paid \$1.50 to \$2 per cord for bark peeled, dried and hauled to the line of the railroads in Canada.

This was a very low figure, and afforded the buyer more profit to the carload than can be made from half a dozen carloads now. It seemed at that time as though the hemlock forests of that part of Canada could never be exhausted, but to-day the great tanneries erected there twenty years ago are idle and are rotting down, merely because a supply of bark cannot be procured.

When the great tanning firm of F. Shaw & Co., established its tannery at Waterloo, Ont., they bought thousands of cords of bark delivered at their tannery at \$1.25 to \$1.50 per cord. This, of course, gave them a great advantage over those tanneries operated at a great distance from the base of hemlock supplies, but that advantage is fast vanishing, and but a limited number of tanneries can be run in Canada at the present time. Even the great hemlock extract companies, which were located in the heart of the hemlock districts, have been closed, with the single exception at Upton. Never was a great hemlock forest fooled away at no profit to any one as was the case in the Eastern Townships of Canada. The French habitant who felled his hemlock trees, who peeled his bark, who piled it to dry, and who the subsequent winter hauled it to the railroad, getting only \$1.25 to \$1.50 per cord, did not realize twenty-five cents per day for his own labor.

The supply of available hemlock is so small at present that the subject is really one of startling importance, both to tanners and owners of hemlock lands. A thorough investigation of the subject is necessary and important. The area of hemlock lands was never nearly so large as that of spruce or pine, and bark is an article which can only be transported by teams or railroad. It cannot be marketed as ordinary logs can, by rivers and streams.

## Useful Information.

Hot air, drawn over steam pipes that are heated by exhaust or live steam and then blown through pipes to various points where it escapes, is a satisfactory method of heating shops.

It is argued that pulp can be used as a substitute for lumber in articles now made exclusively of wood. By mixing the pulp with clay, stearite, asbestos, plumbago and mica, substances of every possible color and compactness may be produced.

The *Chronique Industrielle* gives the following recipe for a paste that will remove the rust and not scratch the finest polished surface: Cyanide of potassium, 15 grams; soap, 15 grams, chalk (blanc de Meudon), 30 grams, water, sufficient to make a thick paste.

According to the *Moniteur Industrielle*, a mixture of oil and graphite will effectually prevent screws becoming fixed, and, moreover, protect them for years against rust. The mixture facilitates tightening up, is an excellent lubricant and reduces the friction of the screw in its socket.

Following is a comparative statement of the toughness of various woods: Ash, 100; beech, 85; cedar of Lebanon, 84; larch, 83; sycamore and common walnut, each, 68. Occidental plane, 66; oak, hornbeam and Spanish mahogany, each, 62; teak and acacia, each, 58; elm and young chestnut, 52.

The soundness of lumber may be ascertained by placing the ear close to one end of the log, while another person delivers a succession of smart blows with a hammer or mallet upon the opposite end, when a continuous of the vibration will indicate to an experienced ear even the degree of soundness. If only a dull thud meets the ear, the listener may be certain that no soundness exists.

REMOVING FURNITURE BRUISES.—Wet the part with warm water; double a piece of brown paper five or six times, soak it and lay it on the place; apply on that a hot flat-iron till the moisture is evaporated. If the bruise be not gone, repeat the process. After two or three applications, the dent or bruise will be raised level with the surface. Keep it continually wet, and in a few minutes the bruise will disappear.

When a hand saw has been dressed for the silver solder, take a clean piece of borax, wet it and rub on the parts of the saw to be joined. Then pulverize a little of the borax and sprinkle on the solder, first wetting the same; place this between the ends of the saw and sprinkle a little borax on top of the saw. Now heat the tongs to cherry red and clamp them on the saw for one minute; then pour on a little water and take the tongs off.

DYNAMITE FOR PILE-DRIVING.—An Engineer of Pesth, Mr. Pradanovic, has lately used dynamite for driving piles. A circular cast iron plate 15 inches in diameter and 3½ inches thick is fixed on the pile to be driven in a perfectly horizontal position. A dynamite cartridge made in the form of a disk 6 inches in diameter and ½ of an inch thick and containing 17½ ounces of dynamite is placed upon the cast iron plate and exploded by electricity. It is stated that the depth to which the pile is driven by each explosion is equal to five blows of an ordinary pile engine weighing 14½ Vienna cwt. falling 9 feet 10 inches. A cast iron plate on an average resists 25 explosions.

An eminent German physician recommends for the extinguishment of fires in closed places where the use of water or other liquids would be likely to do great damage, a dry compound, which, by its burning, absorbs the oxygen and quickly renders combustion impossible. The compound is composed of powdered nitrate of potash (saltpetre), 59 parts; powdered sulphur 36 parts; powdered charcoal, 4 parts; colcotha, (brown-red oxide of iron), 1 part. This preparation is one that can be cheaply made. It is recommended that it shall be, when thoroughly dried and mixed, put up in tight pasteboard boxes, holding about five pounds each, with a quick fuse in the side of the box—protruding six inches, with four inches inside—to facilitate and insure lighting it.

## THE TRANSMISSION OF POWER.

Power in various forms, and multiplying as the years increase, has always existed, and been used by mankind. History, however, brings us very few facts along the line of mechanics, and it is therefore difficult to say when, how or where, any special form of power or method of transmission originated—at least, this statement is entirely true, if the last two centuries be not taken into account.

In his excellent work on "Hydraulics and Mechanics" Sir Thomas Ewbank remarks, "Tradition has scarcely preserved a single anecdote or circumstance relating to those meritorious men with whom any of the useful arts originated: thus nearly all knowledge of those to whom the world is under the highest obligations, has perished forever."

Probably the earliest power used—outside and apart from human and animal physical strength—was the power of the wind, followed, probably, very closely by the use of water power; and these four powers: human strength, animal strength, wind-force and water-weight, were humanity's powers for over fifty-seven centuries of this world's history. In the application of these powers, for practical, useful, or necessary purposes, transmission of power began, and from the very crudest beginnings, by slow processes of development, along the line of necessity, came the lever, the inclined plane, the wedge, the screw, the wheel and axle and the pulley, all in their place, and by a proper application and utilization of their advantages, becoming means for the transmission of power.

Let me be clearly understood here. I mean just what I say. The lever, &c., have been called from "Times dim morning" mechanical powers; but having no inherent strength or power, are they not (and can they ever be anything else, either separate or in combination) means for the transmission of force, or power in motion?

Ganot defines "power" to be that force which acts to produce motion. Power in motion, therefore, implies the use of means, or matter, and as a consequence, results, and I think we are safe in assuming every construction or machine, and every use of the lever, pulley, wheel and axle, wedge, &c., to be a means for the transmission of power; and whether the machine be of such a construction, (the Webb printing press for instance), as to contain within itself a combination, to a great extent, of all the mechanical forces, or a simple paddle in the hands of a canoeist, the fact remains the same, that the material made use of is a means for the transmission of power. And however varied the results may be, caused by the combination of these forces in the mechanical construction made use of it, the fact remains that in all these forms, the true purpose and aim of the users in the varied combinations is the transmission of power. With the introduction of steam, about the year 1768, a new power was added, and as a result the means and constructions for the transmission of power have been broadened and widened, still along the line of the mechanical forces, however, until the methods and combinations for the transmission of power have been multiplied to such an extent that volumes might be written, if one desired to go into details along the lines used.

In the transmission of power, from the motor—or power producer—in connection with the manufacturing industries of the world, during the seventeenth, eighteenth, and the greater portion of the nineteenth centuries, gearing was used almost exclusively; and many of our present engineers can remember the time when it would be considered heretical (in a mechanical sense) to even suggest the propriety of driving a line of shafting, or the machinery connected herewith, by any other means than gearing. Younger generations, however, not bound by the prejudice that entrained their fathers, nor hindered by the wisdom (!) of school-made "mechanical engineers," pushed by keener competition into developing the most available out of all their resources, have not hesitated to experiment along new lines, to compare the new with the old, and to adopt the better. As a result of this investigation and comparison by practical men, instead of noisy gearing for the transmission of power, belting and pulleys are

now used almost exclusively, and latterly, in a few instances, sheave pulleys and an endless rope.

Gradually, within the last few years, another power—electricity—is coming on to the scene. As yet being used, partially, as a means of transmitting power, and more particularly as a light producer, and not being self-productive, nevertheless, the indications are, that before many decades shall have passed, by the perfecting of the means of producing, controlling and conveying electricity, radical changes will be made in many of the important methods of transmitting power.—L. A. Morrison, in *Dominion M. & M. News*.

## UPPER OTTAWA IMPROVEMENT COMPANY'S OPERATIONS.

The Upper Ottawa Improvement Company was incorporated in the year 1868, for the purpose of acquiring and constructing improvements on the Ottawa River to facilitate the transmission of timber and logs from the Des Joachims Rapids to Ottawa. The company proceeded to purchase and construct booms at Fort William, Des Joachims, Allumette, Melons, Chenaill, Lapasse and Onlo, and also between the head of Dechenes Rapids and Ottawa and at the outlet of the Hull slide. The paid up capital stock of the company is \$108,000, and the present directors are Messrs. Hiram Robinson, E. B. Eddy, E. H. Bronson, C. B. Powell and James Gordon. Mr. Robinson is President of the company, Mr. J. R. Booth, Treasurer, and Alderman G. B. Greene, Secretary. The works built and acquired by the company have been enlarged and improved from time to time as the necessities of the lumber trade required. For the use of their booms between 1868 and 1876 the company charged tolls upon logs and timber. In the last mentioned year additional powers were obtained, by special Act of Parliament, to enable the company to handle and assort for the owners all logs passing down the Ottawa from Des Joachims, and for this service a special rate is charged to cover expenses. The Chenaux boom in Chats Lake was built by the Dominion Government, but is operated and kept in repair by the company—with the exception of the boat and raft trip—the Government allowing the company a percentage of the tolls collected at this boom. The lumbering community find the company's work of great utility and benefit, the cost of bringing logs and timber down the Ottawa having been reduced about fifty percent, since 1876, when the company undertook the handling of loose logs on the river. Rafts and cribs of square timber do not pass through the company's booms. Between the different works, on the navigable stretches, the booms of logs are towed by steamers, the use of a boom being to collect and retain logs which come over rapids singly, the practice being to tow the logs in booms to the head of a rapid and allow them to drift over—to be collected below and towed to the next rapid. All the towing from Des Joachims to the head of the Chats Falls is done by the steamers of the Upper Ottawa Towing Company, seven steamers and tugs being employed in this service. From Onlo to Ottawa the towing for the north side is done by the steamer *Chaudiere*, owned by Captain Goulet, and on the south side by the steamer *Monitor*, the property of the Upper Ottawa Steamboat Company. During the season of 1885, the number of pieces passing the Onlo boom was 2,362,361, and it is estimated that 2,750,000 logs, yielding 392,857,000 feet of sawn lumber will be handled by the company during the present season. During the summer season the company employ between three hundred and four hundred men.—*Ottawa Free Press*.

## A RAILWAY TIE NURSERY.

Hon. R. W. Phipps, Forestry Commissioner for Ontario, has been for several months devoting his time to visiting the principal fruit trees, nurseries, and estates, where attention is given to arboriculture for timber and fuel. In a recent letter from southern Kansas to the *Toronto Globe* he writes:

"One railway board here, knowing that the growing of trees when set about in earnest is neither a slow nor difficult task, have established in Kansas the largest artificial plantation of

forest trees in North America. These railway gentlemen themselves gave out the contract for planting over a square mile of land with young saplings of the catalpa and allantur, and their president, observing the success of their experiment, and impressed with the probable excellent financial results, has had planted at his own expense as a speculation as much more. These are situated near the little town of Farlington, Kan. These plantations, now bare of leaves, stretch far over the undulating prairie in full view of the town. The different sections have been planted, it appears, respectively two, four, and six years ago. About one-fourth is planted with the allantur, the rest with the catalpa, and a few—perhaps 1000 trees—of white ash. Those first planted are now about 25 feet in height, the last about 12. Some of the taller are seven inches through the stem. The first seedlings were brought from Illinois by the railroad, the rest grown in seed beds here. There are in all about 3,000,000 of trees in full growing vigor on these plantations, this calculation leaving out a few on some small portions of poor land which are not flourishing so well, but will be good trees in time. All were planted four feet apart each way to shade the ground, but eight feet is the ultimate intention, which will allow three-fourths of the trees to be cut out, a thing which can well be done when they are fit for fence posts, say seven to nine inches through, or if required, they can stay even longer without injuring the plantation. Were rather larger it is expected the trees will make excellent railway ties, and at their fuller growth of 15 or 20 years they will supply very valuable timber for cabinet work and house building. Those who have only seen the original forest, with its trees growing at haphazard here and there, little ones and big, have but a very vague idea of the large amount of wood the closely planted grove can spare in their process of growth. This process, partly natural, is also by the art of the planter rendered partly mechanical. Extensive masses of young trees planted in this manner are restricted to but one method of advancement—the endeavor to throw out masses of leaves to the light and air of the upper surface. The lower branches, hidden in shade, rapidly die and fall to the ground, and the plantation becomes a multitude of long, straight stems, full of life and vigor, but only spreading into branch and foliage at the summit. If a tree in youth be crooked it straightens itself, if thus surrounded, as it advances in height. One acre so growing will give of wood, which is all the better taken, quite a number of cords yearly till all the superfluous trees are gone. On each acre here there are 2000 more trees planted than will ultimately be allowed to attain full growth. There will be left perhaps 900,000 to come to maturity, and as these, as well as being very useful timber, are fast-growing trees, the profits seem likely to be very large."

## NEW BRUNSWICK LUMBER TRADE.

A considerable quantity of lumber is being held at Miramichi ports for higher prices. According to a correspondent at Newcastle, N. B. it is believed that the amount shipped to Europe this season will not exceed seventy million feet, as compared with 117,149,108 and 87 millions in 1882, 3, 4 and 5 respectively. Following are the quantities rafted at the South West boom in these years:—'82, 77,740,241 ft.; '83, 71,194,651 ft.; '84, 37,049,643 ft.; '85, 37,282,825 ft.; '86, 30,806,383 ft. Charters have ranged from 40 to 45 shillings per standard this year. Snowball's deals have been shipped up to date in 34 sailing vessels. No steamers have been employed this season. Most of the deals forwarded have been to ports in France and on the Mediterranean. Nearly all the deals cut by Richards & Hickson at Newcastle are piled up on their wharf, and Burchill, of Nelson, has only shipped two cargoes this summer. Scarcely any move has been made by operators as to next winter's work and those spoken to seemed to be greatly discouraged over the continued depression in the European markets and the prospect of no decrease in the government stampage tax.

LEISHMAN & PERRY, saw mill operators, Bracadale, Ont., are succeeded by Leishman & Co.

WANTED.

The publisher of the CANADA LUMBERMAN desires thoroughly reliable and competent correspondents at the following named places:—

- Ottawa, Ontario.
Kingston, Ontario.
Quebec City, Quebec.
St. John, New Brunswick.
Halifax, Nova Scotia.
Winnipeg, Manitoba.
Victoria, British Columbia.

The duty of each correspondent will be to give a review of his local market for the month preceding the date of issue, and the ruling quotations for different kinds of lumber, &c. For terms and any other information, address

A. G. MORTIMER,
Peterborough, Ont.

Market Reports.

MONTREAL LUMBER MARKET.

MONTREAL, Oct. 25.—During the month of October, our lumber merchants here have experienced a good trade, the early portion of it showing the greatest activity, and the amount of stock disposed of was very large, prices generally showing good profits. The provincial elections which took place in the middle of the month interfered somewhat with the wholesale business, as these events generally monopolize a goodly portion of the time of country contractors and buyers, but the retail movement at the yards for city trade remained eminently satisfactory, as was also the case with carloads. This last week has shown a resumption of the activity in the wholesale, and dealers are busy bringing down large quantities for the winter trade. Stocks, generally speaking, in Montreal are heavy, and competition is keen in all grades. The mills on the Ottawa have pretty well disposed of this season's cut, and some will be stopping very soon.

Dimension timber is very brisk here, the Canadian Pacific Railway requiring about a million and a half for their trestlework on the south side of the new St. Lawrence bridge. The greater part of this timber is being cut by firms here, and the material is good, as in all probability this trestlework will be permanent. The mills in the west are all busy getting out stuff for the Canadian Pacific for their Smith's Falls and Montreal line.

Oak has been in good demand, both for export and local consumption; 3rd and 4th deals have also had good good enquiry, but higher grades have not been as brisk. Among the many new buildings in course of erection in this city, is a large freight shed for the Grand Trunk railway. The new station for this company will be commenced very soon, but owing to the lateness of the season, not much more than the demolition of part of the old one, and otherwise preparing for the reception of material will be done this year. It has been decided to build the station on piles, about 2,500 of which will be required for the work, and these will have to be in readiness for the first thing in the spring.

The export movement still keeps up, and about half a dozen vessels have yet to be dispatched to South America and the United Kingdom with lumber freight. In connection with this, the value of the exports of lumber from Canada to date are nearly a million dollars in excess of the corresponding period of last year. The exports to date embrace 3,070,483 pieces deals, deal ends, boards and battens to Europe, and 17,763,015 feet of lumber to South America.

The following are the quotations at the yards:—

Table listing lumber prices for various grades like Pine, Spruce, Hemlock, etc., with prices per 1000 or per cord.

TORONTO.

The following are the ruling quotations in this city at present:—

Table listing lumber prices for various grades like Mill cull boards, Shipping cull boards, Scantling and joist, etc., with prices per 1000 or per cord.

OTTAWA.

Concerning the lumber trade of the Ottawa district, the Free Press of that city has the following:—Much comment has been indulged in on account of the large number of lumbermen who have been sent up to the shanties this fall, and an extraordinary cut of timber has been predicted for next season. This supposition, however, has no basis in fact. A much larger number of men have been sent up from Ottawa this fall, it is true, but the aggregate number of men who have been despatched to the shanties is not much if any in excess of the number sent up last year. The cause of this misconception is attributable to the fact that the mill owners have developed a tendency to cut their own logs instead of having them cut by contract. Consequently the shantymen are engaged and sent up by the mill owners instead of by the contractors as formerly, with the result that the men must be engaged at the mills and thus all start from Ottawa, instead of going from different parts of the country as was the case when they were engaged by the contractors. It will thus be readily seen that although a much larger number go from Ottawa than formerly still the actual number sent up is not necessarily increased. Some of the lumber firms, however, contemplate making heavier cuts this year than for some years past, notably Messrs. Grear & Co. The mills owned by this firm were purchased from the Young estate about a year ago. For ten years they have not had a full supply of logs and the firm have determined to make an alteration in this respect. Messrs. Brunson & Weston are said to have a large number of logs on hand and it is reported that they may probably not cut so heavily this season in consequence. It is calculated that Mr. J. R. Booth will have about 150,000 logs on hand after the mills shut down, to open the next season with. This quantity will probably keep the mills working for one month or six weeks in the early part of next spring. An immense number of logs, however, of last winter's cut are being transferred by the firm's railroad from Lake Nipissing to the Mattawa waters and these will be ready to come down the Ottawa next spring and renew the supply which will have been left over during the winter. About 200 men have been sent up to Mr. Booth's shanties this fall and a large cut of timber will be made in the Lake Nipissing district, where Mr. Booth's limits are situated. On the whole next season will be a tolerably brisk one for the lumber trade, but judging from present appearances not much out of the ordinary line.

QUEBEC.

Four hundred and fifty eight sailing vessels have entered at the custom house since the opening of navigation and 413 have cleared; 1836 market steamers and schooners have also arrived. The following export freight transactions are reported: Quebec to Leith, timber, 208, deals

47s. 6d.; Quebec to Greenock, timber, 18s, deals 40s., Quebec to Clyde, timber 18s.

Owing to the continued rains the rivers on the South shore have at last risen sufficiently to run the logs, and in consequence Messrs. Bralloy and Halls have secured the greater portion of their cut. Mr. Breakley's mills now will be run on full time to the end of the season; he expects to cut 1,300 to 1,400 logs per day. It is also reported that the Montmorency Mills will again commence sawing night and day until end of season. Their cut will be about 3,000 logs a day. A considerable proportion of Mr. Breakley's logs are run down to Montmorency, and cut into deals etc.

MIRAMICHI.

A travelling correspondent of the Saint John Sun, writing from Newcastle, N. B., furnishes the following interesting particulars of the Miramichi trade from which we gather that a considerable quantity of lumber is being held for higher prices. The quantity shipped to Europe this season will not, it is believed, exceed 70,000,000 ft. That this will be a limited export compared with recent seasons the following figures will show:—
1882 shipments..... 117,000,000 feet.
1883 "..... 149,000,000 "
1884 "..... 108,000,000 "
1885 "..... 87,000,000 "
1886 (probable) shipments. 70,000,000 "

A corresponding decrease is shown in the number of feet rafted at the South-west mouth during those years, viz: 77,740,000 ft. in 1882; 71,194,000 ft. in 1883; 37,049,000 ft. in 1884; 37,282,000 ft. in 1885, and 30,806,000 ft. in 1886. Chartered have ranged from \$9 60 to \$10 80 per standard this year. No steamers have been engaged this season. Snowball's deals have been shipped up to date in four sailing vessels. Most of the deals forwarded have been to ports in Franco and on the Mediterranean. Nearly all those cut by Richards & Hickson, at Newcastle, are piled up on their wharf, and Burchill, of Nelson, has only shipped two cargoes this summer. Scarcely any move has been made by operators as to next winter's work, and those spoken to seemed to be discouraged over the continued depression in the European market and the prospect of no decrease in the Government stumpage tax.

DETROIT, MICH.

We are having a good demand for local use, while shipping trade is fair. Prices are firm as quoted. Belmont Bros., who sell Dan McCoy's and L. S. Baker's Big Rapids lumber in Ohio and Indiana, report some very large sales, and that trade is good in that country.

Table listing lumber prices for various grades like Uppers, Selects, Fine common, etc., with prices per 1000 or per cord.

OSWEGO, N.Y.

Table listing lumber prices for various grades like Three uppers, Pickling, Cutting up, etc., with prices per 1000 or per cord.

Table listing lumber prices for various grades like Selected, Culls, 1x6 selected for clapboards, etc., with prices per 1000 or per cord.

CORDWOOD.

Table listing prices for Cordwood like Long Maple, Long Birch, Long Beech, Tamarack.

ALBANY.

The Albany Argus, in speaking of the lumber market at that point, says: "It is very apparent even to the most casual observer, that the trade as a whole, exhibits all the signs of a very healthy improvement. Even those dealers who are among the last to recognize and admit the improved condition of things, are beginning to acknowledge that the trade is shaping itself more in conformity to the desires of the seller, and that present indications point to a very improved market in the near future. The very fair condition in which the trade stands, to-day, is too evident to be denied. Very many large orders have been sold during the past two weeks and buyers are making their appearance every day. They come not only to look around, but to purchase, and, as a rule, the sales made are at the terms of the seller rather than at those of the buyer. In fact, it is the common talk in the district of dealers refusing to budge from quoted figures, even in prospective large orders. The difficulty of getting boats still continues to such an extent that it is likely to become embarrassing."

Table listing lumber prices for various grades like Pine, Spruce, Hemlock, etc., with prices per 1000 or per cord.

NEW YORK CITY.

Trade in this city during the past month, has, according to our exchanges been quite satisfactory. On some lines, particularly spruce, the receipts have been liberal. Trade in white pine continues good. Yard business is good. For export the movement, while not as animated as that experienced during the corresponding period in previous years, has been fair. The market for yellow pine has changed but little. Spruce has been moving rather lively.

The wholesale market developed but few features of moment. Trade both for domestic and foreign account continues fair and the general feeling is one of steadiness with prices on some descriptions showing a hardening tendency. Business at the yards has been fully up to that experienced the preceding few weeks. Some of the yards reported a slight falling in trade with them but the increase at other points more than made up for the decrease. As regards

prices, no change was recorded, the market ruling steady in tone. Freight have undergone little or no change during the week. The weaker feeling at the Gulf noticed in our last continuance, but aside from this the tone of the market is one of steadiness. The shipments of lumber from the port of New York during the week aggregated \$32,291. This shows a decrease from the two preceding weeks, the total valuation being \$49,305 for week ending October 12, and \$68,424 for October 5.—Lumber Oct. 20th.

CHICAGO.

Recent advices from this port show that there has been a drop in the prices of green stuff of 25 cents per thousand, cargo lots. The drop is the result of the extra time the stuff must be kept in stock before it is fit for market. Dealers will not speculate in green piece stuff to any extent at this season of the year. It is generally believed that the true policy would be to buy freely now as it is not probable that a better chance will offer. Some appear to think that the drop is a sharp piece of acting on the part of commission men, with the object of shaking the position of mill men. Much lumber by cargo is selling rapidly at firm prices. The offerings of piece stuff have been heavy. Local trade has been heavy and shows a steady increase. Prices continue steady and unchanged, and the prospects are that present figures will hold good for some time.

Dimension, short green.....	\$ 0 50 @ 9 75
Boards and strips, No. 2.....	11 00 @ 12 00
Selected.....	20 00 26 00
Boards and strips, No. 1.....	18 00 19 00
Shingles, standard.....	1 75 1 00
Shingles, extra.....	1 95 2 10
Shingles, cedar, standard.....	1 70 1 50
Shingles, cedar, extra.....	1 95 2 10
Lath, green.....	1 35
Lath, dry.....	1 50

RECEIPTS

Lumber, Shingles.....	54,985,000	18,667,000
1886.....	45,813,000	37,822,000
1885.....		

FROM JAN. 1, TO OCT. 21, INCLUSIVE.

Lumber, Shingles.....	1,379,842,000	650,781,000
1886.....	1,416,838,000	632,170,000
1885.....		

Decrease.....	37,056,000
Increase.....	49,611,000

STOCK ON HAND OCT. 1.

Lumber & timber.....	570,037,401
Shingles.....	410,309,618
Lath.....	44,423,562
Pickets.....	1,636,113
Cedar posts.....	272,357

EASTERN FREIGHT RATES.

FROM CHICAGO AND COMMON PORTS ON CAR LOAD LOTS OF HARD AND SOFT LUMBER.	
To New York.....	25c.
Boston.....	30c.
Philadelphia.....	23c.
Baltimore.....	22c.
Washington.....	22c.
Albany.....	24c.
Troy.....	24c.
Buffalo and Pittsburgh.....	15c.
Shenoady.....	24c.
Wheeling.....	15c.
Suspension Bridge.....	15c.
Salamanca.....	16c.
Black Rock.....	16c.
Dunkirk.....	15c.
Erie.....	15c.
Toronto.....	15c.

LAKE FREIGHTS.

From Muskegon, green.....	1 62 1/2
From Whitehall.....	1 62 1/2
From Ludington.....	1 75
From Manistec.....	1 57 1/2
From Menominee, dry.....	2 00
From Menominee, green.....	2 00
From Cheboygan.....	2 00
From Bay City.....	3 00
From Oscoda, dry.....	2 75
From Alpena, dry.....	2 50

PHILADELPHIA.

Reports from Philadelphia are unusually encouraging. Trade is brightening up, and the "dullness of the market" which has been the cry for the last year or two, has been turned to a different tune. In the local market the distribution is heavy and prices are firm. The demand from car builders and railroads is still heavy. The shipyards are all busy and are drawing from the stocks. All the mills in the city are busy and have orders ahead. The receipts of white pine are now up to the capacity of the yards. Spruce, hemlock and inch sap pine are in active demand. At a meeting

of the Board of Trade of the Lumber Exchange, Philadelphia, a committee on arrangements for the excursion to the lumber regions was appointed. The Pennsylvania Railroad have placed at the service of the Lumber Exchange a special train, free of cost, which will leave Philadelphia October 27th, at 11.30 a. m., for Williamsport, thence to Lock Haven, Tyrone and other places, returning to Philadelphia October 29th. The party will receive every attention at the several places by the representatives of the lumber trade. Valuable results are expected to accrue to the lumber trade of Philadelphia from this trip, as it will tend to place the business upon a surder basis and slide much of the trouble experienced from imperfect classification and the like. The exchange has been greatly interested in this vital subject; each hour spent upon it will give a valuable return, as everything which tends to simplify the business, or make it more secure, is a reduction in the cost of doing the work, and accrued directly to both parties of the transaction.

BOSTON.

Reports from Boston mills are by no means satisfactory. Scarcity of water power seems to be the principal cause of the dullness of trade. This has had the effect of putting up the prices on all classes, except boards, from 60c. to \$1 per 1000. In western pine the market is only fairly active, but in southern stock there has been free arrivals of late. There is an active demand for spruce lumber. There is a fair call for shingles, clapboards, laths, cherry, &c.

The lumber surveyed in Boston for the week ending October 21, was as follows: 405,795 feet pine; 1,263,551 feet spruce; 51,935 feet hemlock; 396,816 feet Southern pine floor boards; 46,415 feet Southern pine timber and plank; 150,366 feet white wood; 141,208 feet black walnut; 128,695 feet hardwood. Total, 2,557,781 feet.

BAY CITY.

Trade in the market is not overly active, there being a boom in nothing but prices, which have risen considerably. The advance in freight rates to Buffalo and Cleveland has had a tendency to check the movement of lumber, and as a consequence the piles at the mills are rapidly increasing. Some sales have been made at good prices the past week, among which are 500,000 feet good stock at \$9.50, \$19 and \$38 by inspection; 1,500,000 feet in three lots ranging from \$16 to \$24 straight measure; 500,000 feet coarse lumber at \$15 straight, and some lots of choice lumber at \$10, \$20 and \$40 under inspection. Hall & Burch & Marquette, also sold 2,000,000 of stock cut at Manistique to Albany, N. Y. parties at \$23. Shingles 18 inch stock have sold at \$1.90 for clear butts and \$2.55 @ \$2.90 for XXX.

LIVERPOOL.

The Timber Trades Journal, Oct. 16th says: With a light import during the past week there has not been any great amount of animation displayed at the docks, either with regard to timber laden vessels discharging cargoes or in the quantity forwarded to the country. Still there is a fair consumption going on in a steady manner, which is only what could be expected from the volume of business now being done in the manufacturing districts. This, however, is principally in low-class goods, such as spruce deals and whitewood blocks, for casemaking and similar purposes.

Up to the present time there has not been any actual advance in the market rates for spruce deals, but every day must bring us nearer the time when such may be looked for if the importation continues on the same moderate scale as it is now.

This is more than probable if the information from New Brunswick and Nova Scotia be reliable, which is to the effect that we shall have a considerable shortage of supplies in the latter part of the import season.

There have not been any public sales of whitewoods during the past week, but we notice that Messrs. Farnworth & Jardine, propose offering by auction on Wednesday next about 300 logs of St. John, N. B., birch timber, now landing on the quay of the Canada Dock, but beyond this we do not hear of any further sales being contemplated.

LONDON.

Timber, Oct. 16th.—We have no change of importance to chronicle since our last. The tone generally has continued very quiet with few signs of any improvement. The present price of good 3rd Swedish deals may be considered about £10 10s. @ £11, and 4th quality about £7 15s. Knowing, say, 12 6s. per standard for present rate of freight, insurance and charges, would leave an f. o. b. price of £2 10s. for 3rds and £1 10s. for 4ths. Few, if any, good stocks are to be brought at these prices, so the market here remains (as it has been through the season), the cheapest buying place. There is, moreover, considerable risk in importing late in the year of goods arriving out of condition, arising from the weather at the shipping ports being very uncertain. Too cargoes are frequently unavoidably loaded in wet weather and on arrival here are piled away in the same wet state, and as often as not in rainy weather, thus causing considerable loss and disappointment to importers. The buyer here who waits to see the goods before purchasing escapes these risks, with the additional advantage that he need only buy exactly what he requires, and as and when he wants it.

The arrivals from Canada have thinned off considerably, and the list for this week is a very light one in the Surrey Docks, the Kalliope, from Quebec, discharges a cargo of deals for Messrs. Price and Pierce; and the West Cumberland, from Montreal, brings 5,000 pine deals and 8,425 boards, for Messrs. Bryant, Powis and Bryant Ltd., the balance of the cargo being divided between Messrs. Churchill and Sim and R. R. Dobell and Co. In the Millwall Docks, the Grafton, from Montreal, brings a cargo of 37,539 deals and 5,967 ends, and the Thorn Holme, from the same port, with a similar cargo, both report to Messrs. Bryant, Powis and Bryant Ltd. The Cotherstone, also from Montreal, brings a mixed cargo of deals, battens and ends, part of which is for Messrs. Bryant, Powis and Bryant Ltd., and the balance for Messrs. Churchill and Sim. The Concordia, from Chatham, with a cargo of deals and ends, is discharging in the Regent's Canal Docks, while the Assyrian Monarch, from New York, brings a cargo of sundries for various consignees; the latter is in the Millwall Docks.

LONDON, ENG.

London Timber, of the 9th Oct., says:—The sales during the past month have been as follows: Quebec pine, waney and square, red pine, oak, elm, ash, hickory; the arrivals have all been on merchants' account, and there are no wholesale transactions to report. Birch: By auction, St. John 1 1/2 inches average, at an average of 15 1/2 per foot; Nova Scotian, 1 1/2 inches average, at an average of 13 1/2 per foot. Quebec pine deals. First quality regular, at from £22 10s. to £24 per standard; oddments, at from £18 to £20 per standard; a second quality regular, at from £15 10s. to £19 per standard; oddments, at from £14 to £16 per standard; third quality regular, at from £8 10s. to £9 10s. per standard; oddments, at from £8 to £8 1/2 per standard. First quality strips, at from £16 to £16 10s. per standard; second quality, £12 to £12 10s. per standard; third quality, £7 per standard. Spruce deals, St. John at £15 15s. per standard; lower part at from £5 5s. to £5 12s. 6p. N. B. and N. S. pine deals: No sales to report. Scantling and boards, at from £5 to £5 10s. per standard, and with the cargo at sawage rates. Palings, pine 1 1/2 by 1 by 3, at 9s per mille. Quebec staves; merchantable pipe at £62 10s. per standard mille.

The Timber of the 9th October says: The rivals from Canada occupy a more prominent position this week. In the Surrey Docks we have the Vera, from Miramichi, with pine and spruce deals, and 644 pcs. birch timber for Messrs. Bryant, Powis & Bryant Limited; the Hebe, also from Miramichi, with pine and spruce deals and birch timber, the bulk of the cargo being for Messrs. Bryant, Powis & Bryant Limited, the balance for Messrs. R. R. Dobell & Co., and the Danholm, from Quebec, with cargo of deals, also for Messrs. R. R. Dobell & Co., now being piled in the Albany yard, the Ashbourne, from Montreal, with cargo of deals, battens and ends for Messrs. Bryant, Powis & Bryant, Limited; the Danholm, from Quebec, with cargo

of pine deals; and the Hovding, from Quebec, also with pine and spruce deals, the three last named discharging in the Millwall Docks, and all reporting to Messrs. Bryant, Powis and Bryant, Limited.

GLASGOW.

Timber Trades Journal, Oct. 16th.—The past week has been a quiet one here, imports have been light, and there have been no public sales held by wood brokers. At a good many of these recently recorded transactions were comparatively light owing to a want of brisk demand or reluctance on the part of buyers to come up to prices required, and a short interval may help to improve the tone at these sales.

There are some hopeful signs of trade generally being in the way of getting better, and should these be maintained the timber trade will soon begin to feel the improvement; meantime, it is a good feature that, regarding most descriptions of wood goods, the market is not overburdened with stock.

From the statement given in last number it would be observed that there are unusually few lower port pine deals on hand, only some 12,000 pieces, being part of a cargo newly landed. The stock of Quebec 3rd and 4th pine deals, however, though not so large as that of last year at 30th September, is still considerable.

We observe that of walnut logs in importers hands there are at present about 190, whereas at corresponding date last year the number held was 834 (at Glasgow), which was a larger quantity than usual, on account of a full cargo per sailing vessel having been landed a few weeks previously. This year the imports of walnut logs to Glasgow have been in small parcels per steam liners, except 150 l.g., which form part of the stock at present held.

From the official report of building operations in the city for the past twelve months it appears that the aggregate value amounted to £394,540, an increase of £45,525 as compared with the preceding year.

The new graving dock at Saltoroct, Govan, which has been four years in construction, was formally opened on 13th inst.

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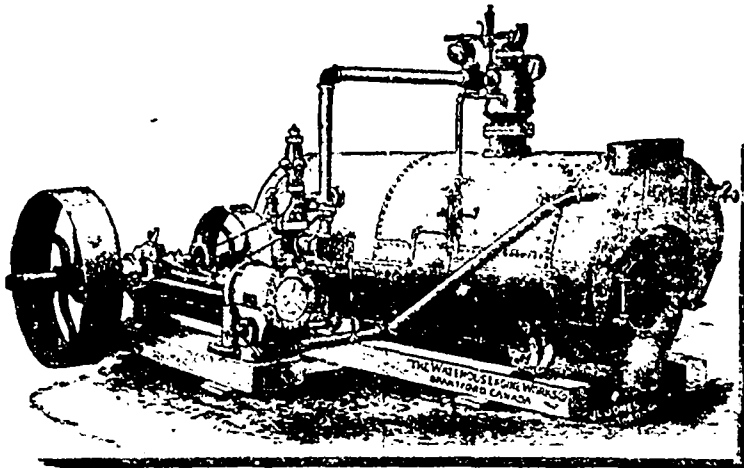
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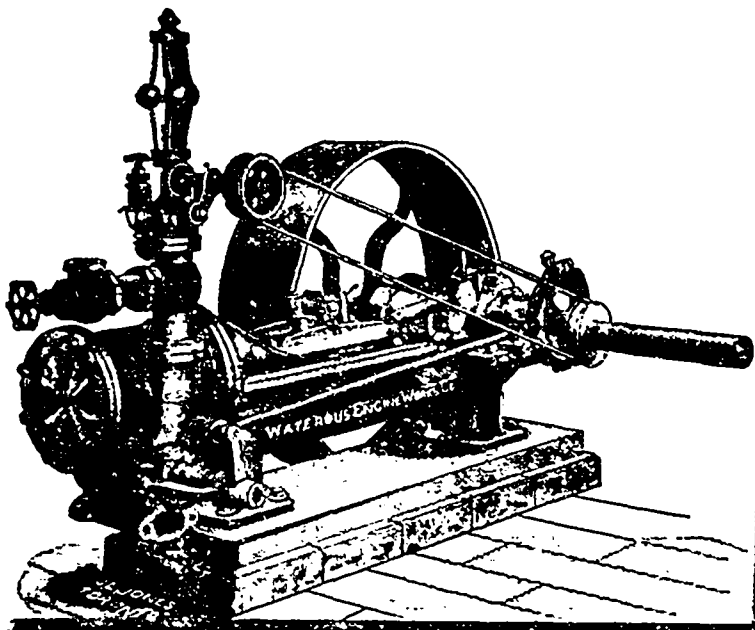
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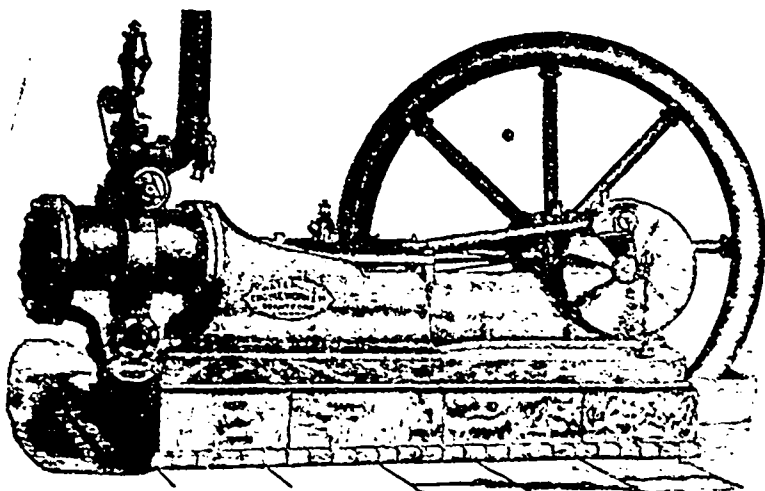
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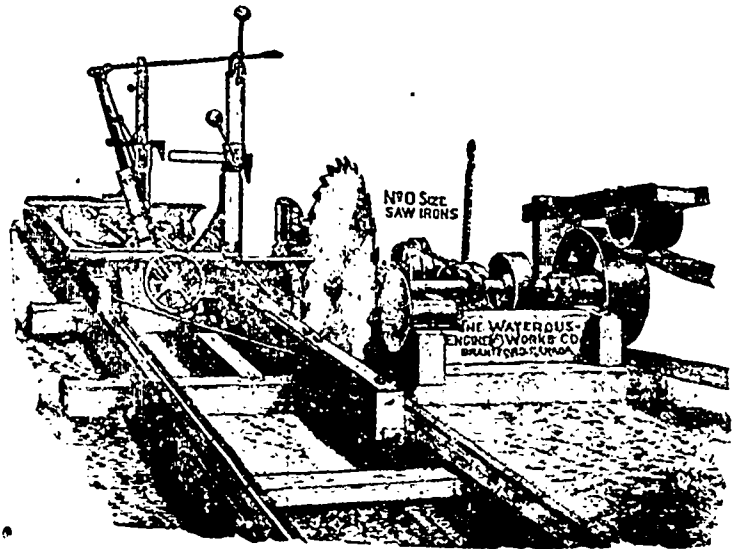


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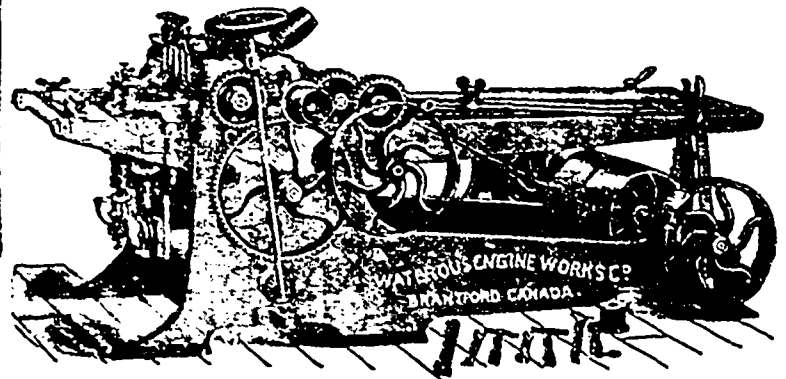


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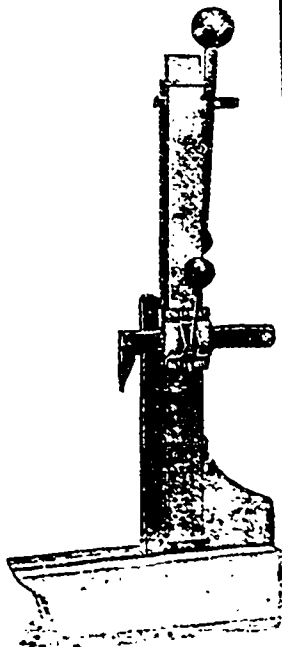
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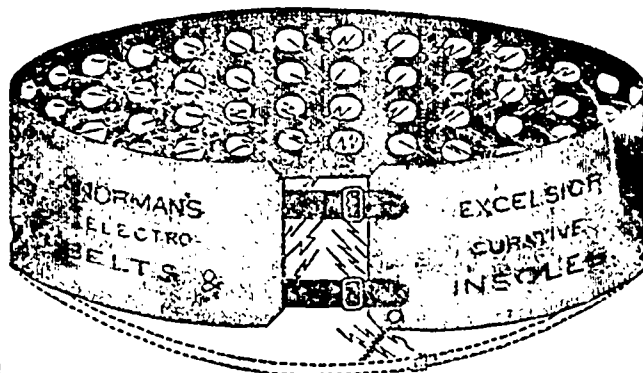
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FOR ITS SUPERIOR

**The Improved Model Washer and Bleacher**Pat. Aug 2nd,  
1884.C. W. Dennis,  
Toronto.

Science triumphs over labor. Thousands testify to its utility and value, weighs only FOUR POUNDS price \$3 Agents wanted in every town in Canada. Delivered to any Express Office in Ontario or Quebec. all charges paid, for \$3.50. To any Express Office in Manitoba or N. W. T., B. C., N. S., N. B. for \$4. If not found satisfactory money refunded in thirty days, less express charges. The clothes have that pure whiteness that no other method can produce. No rubbing required, no friction to injure the fabric. Send for circulars, address

C. W. DENNIS,  
Toronto Bargain House, 213 Yonge Street,  
Toronto, Ontario.

**QUESTIONS AND ANSWERS.**

Q. What kind of boiler do you use?—A. Any kind of a boiler that has a bottom either concave or flat, or an old fashioned washpot. It is the only machine that will work in any kind of a boiler.

Q. How can you have a flow of water at the rate of eight or ten gallons per minute in a boiler holding eight or ten gallons?—A. The same water is used over and over again; and in order to be thus used it must pass down through and through the fabric, and this, with soap and heat, is what does the work.

Q. How can you use a large quantity of water in a boiler already full of clothes?—Fill the boiler three quarters full of water; as soon as the washer commences to work put in the clothes. They absorb it.

Q. Can you wash flannels and coloured clothes?—A. We wash anything that can be washed. Flannels and coloured clothes need but little soap, and from five to ten minutes of the full operation of the washer. Flannels should be rinsed in HOT water. It is the change from BOILING TO COLD water that contracts the fibre, causing them to shrink. Any FULLER will tell you so. Fugitive prints will part with their colours by this or any process, but fast colours will not be injured. It is not best, as every housekeeper knows, to use strong soap or alkalis in washing coloured goods. Many prints and other coloured fabrics have some kind of ACID as a base, and if alkalis are used strong enough to destroy this acid the fabric will part with its colour. This is why English Scarlets, which will not fade in the sun, or by ordinary washing, are ruined by STRONG soaps. These facts are worth remembering by the inexperienced housekeeper.

Q. Can you use the common soft soap of the farmhouse?—A. Yes, if good.

Q. Is it not better to put very dirty clothes to soak over night?—A. No.

Q. Will your washer remove the streaks from dirty wristbands and collars, such as farmers and mechanics wear, after having been worn a whole week, as they usually are? Will not those require extra care in rinsing?—A. The washer will cleanse the dirtiest clothing. Much soiled portions may require a second operation to remove the dirt entirely. Give the clothes a thorough rinsing.

Q. We sometimes find a whitish scum on the top of the washer. What is the cause of this?—A. The water is HARD. When soap is added to hard water, a chemical change takes place. Certain substances in the water having an affinity for the alkali of the soap, unite with it, thus setting FREE other substances; these are PRECIPITATED and fall to the bottom or rise to the surface in the form of a whitish scum, according as their specific gravity is greater or less than that of the water. This is why it is impossible to cleanse fabrics with hard water. It may be softened by the use of borax or sal soda. Pure rain water is the best of ANY method of washing. When the scum referred to above is found on the washer after using, clean with a little coal oil.

Q. How can it be possible for so simple a thing to cleanse fabrics?—A. If you will study the PHILOSOPHY of the Washer carefully and intelligently for a few moments, and consider what is required to remove dirt from clothing, you will ask "How is it possible for it NOT to cleanse fabrics?" A gentleman writing upon this principle, says:—"I must own that when I saw the Washer I was utterly incredulous as to its cleansing powers. My family were still more so. In fact, they had no faith in washers of any kind; but being strongly urged by a friend who had used the machine successfully, I concluded to try one. We made the first trial with a good many misgivings. In fact, I could not see how so simple a thing COULD wash clothing. But when I saw the water pouring out from the discharge pipe at the rate of 8 or 10 gallons per minute, and when I reflected that this amount of water must pass through the clothes twenty or thirty times in the course of an ordinary wash, my doubts began to give way. I saw that there was both philosophy and common sense in the process, and it was impossible that it should NOT prove effective. I am now a firm believer in the Washer, and trust it will find a place, as it deserves, in every household."

The foregoing treatise sets forth as explicitly as possible the merits of the Improved Model Washer and the mode of operating it.

**OPINIONS OF THE PRESS.**

NEW YORK TRIBUNE: "We are often asked our opinion as to the best Washing Machine in the market, as there are a great many kinds. We do not hesitate to say that the cheapest, most durable, and best washer in the world, is the Model Washer."

THE CANADIAN BAPTIST: "From personal examination of its construction and experience in its use we commend it as a simple, sensible, scientific and successful machine, which succeeds in doing its work admirably. The price, \$2.50, places it within the reach of all. It is a time and labor-saving machine, is substantial and enduring, and is cheap. From trial in the household we can testify to its excellence."

CANADA PRESBYTERIAN: "The Model Washer and Bleacher which Mr. C. W. Dennis offers to the public has many valuable advantages. It is a time and labor saving machine, is substantial and enduring, and is cheap. From trial in the household we can testify to its excellence."

DOMINION CHURCHMAN: "Having tested the Model Washer and Bleacher, sold by Mr. Dennis, 213 Yonge Street, Toronto, we can heartily recommend it. Its work is performed thoroughly, and the saving in labor is so great that, combined with its cheapness and simplicity, should bring it into use in every household."

EVANGELICAL CHURCHMAN: "We desire to direct the attention of our readers to the advertisement of Mr. C. W. Dennis, which will be found in our advertising columns. The Model Washer and Bleacher has many and valuable advantages, and from personal trial in the household we commend it as a simple and most successful machine."

TORONTO TRUTH: "One of the horrors of everyday life is "washing day," which comes with such persistent regularity week after week. A dreaded necessity, men have turned their attention to mitigating its miseries by the introduction of machinery which will lighten the labor, and make it less slavish. Among the many machines brought before the public with this end in view, the Model Washer and Bleacher, patented by C. W. Dennis, 213 Yonge St., Toronto, is certainly one of the very best. It is constructed strictly on scientific principles, and does all, and more than all, that is claimed for it. Washing is made light and easy, and the labor becomes almost a pleasure. It saves time and labor, is substantial and cheap, and very enduring. No rubbing is required, and the clothes are not therefore, worn out "in less than no time," as is the case in the ordinary method adopted. Its price is placed at the low figure of \$2.50, and if not found to be all that is claimed for it the money is refunded."

TORONTO TRIBUNE: "In the olden times and in semi-barbarous countries to the present day, apparel was cleansed by beating it between two flat stones. The modern wash-boards and the numerous washing machines operated on the same principle are only in a degree less destructive to clothing than the former process. The idea that hard rubbing is necessary to get the dirt out of articles is entirely erroneous and the only reason why hard rubbing does take the dirt out is that the water and soap used are forced through the texture with con-

siderable force and carry the dirt along with them. Now if this can be accomplished by a process that saves the great wear and tear of rubbing, a very important point is gained. Clothing will wear over so much longer, buttons will stay in their places, and the discomforts of "washing day" be greatly ameliorated, to say nothing of the saving of labor. With this end in view the Model Washer was invented and there is no gainsaying the fact that it does its work effectively. To those ladies especially who are in the habit of doing their own washing, the Model Washer is a boon for which they may well be thankful while the price is so low that none need be without one.

What people think of it, a few of the thousands of testimonials and orders which may be seen at my office.

Dear Sir,—The Model Washer and Bleacher I purchased from you three months ago, is all that is claimed for it by the inventor. We are well satisfied with it, and would not part with it for five times its cost. No family should be without it, as it reduces the labor of washing, which is the most laborious and fatiguing of household duties, to a work of comfort and pleasure.

R. S. RENDALL, Simcoe Street,  
Victoria, B.C., March 13th, 1886.

Dear Sir,—Having used the Model Washer and Bleacher for three months. I have much pleasure in recommending it as it makes the labor of washing easy and expeditious; it also makes the clothes beautifully white.

S. J. H. SHERRING, Spring Ridge,  
Victoria, B.C., March 12th, 1886.

Dear Sir,—I have given the Improved Model Washer and Bleacher a fair trial, and do not hesitate in saying it does all and everything that is claimed for it. It gives full satisfaction and does its work well.

C. H. HARRIS,  
Victoria, B.C., March 13th, 1886.

Dear Sir,—Having used the Model Washer and Bleacher, I have much pleasure in recommending it. It makes the labor of washing easy and gives the clothes a good color.

MRS. C. S. JOSLYN, Chatham Street,  
Victoria, B.C., March 11th, 1886.

Dear Sir,—Having used the Model Washer and Bleacher for three months, and believe it to be the best machine ever invented, and take pleasure in recommending it to the public. It does all you claim for it, and does it well.

A. VTB, Spring Ridge,  
Victoria, B.C., March 11th, 1886.

Dear Sir,—The Model Washer and Bleacher I purchased from you gives perfect satisfaction. It is the first self operating Washer I ever seen, and does just as represented.

MRS. H. SPAFFORD, Cormorant St.,  
Victoria, B.C., March 13th, 1886.

Dear Sir,—The Model Washer and Bleacher has been in use in my family for the past five months, and it has been found to be all that the inventor claims for it. The washing is now done without the aid of that "Rack of Torture,"—the washboard, and where nine hours were required with the old plan, it only requires four hours now to do a larger washing with the Model. The clothes have a better color, and, from the absence of all friction, last far longer. I can heartily recommend the "Model" to all requiring such an article.

Yours respectfully,  
JOHN H. LAND, Grand Secretary R. T. of T.

Rev. John Kay, Pastor of the First Methodist Church, writes as follows:—

Hamilton, December 23rd, 1885.

Dear Sir,—Mrs. Kay says the Improved Model Washer I purchased from you some months ago, has given satisfaction.

Truly yours,  
JOHN KAY.

Hamilton, December 31st, 1885.

My Dear Sir,—The Model Washer and Bleacher you placed in my house some five months ago, has done all the inventor claims for it,—making the washing both easy and quick. It is an article which we consider indispensable in a house and something we would not like to be without.

Yours very truly,  
J. B. BROWN, 46 Horkimer Street.

Hamilton, January 9th, 1886.  
I have had the Model Washer, which you sold me, in use about six months and it has given perfect satisfaction. It is a great saving in time and labor.

MRS. MARTIN, 13 John St. North.

Battleford, N.W.T., 3rd January, 1886.

Dear Sir,—Enclosed please find four dollars, for which send me one Improved Model Washer and Bleacher. I saw your advertisement in Toronto Truth, and wishing to make a lady a present, thought that nothing could make life easier for a Northwest housekeeper than an easy method of washing. The nearest express office is Swift Current, send via that place.

Yours, etc.,  
Sgt.-Major, J. H. LAKE,  
N. W. M. Police, Battleford.

Huntly, March 13th, 1886.

DEAR SIR,—I write you to day to ask you if you have any agents appointed for the Township of Huntly. I have purchased from John Vance, agent of Fitzroy, five of your Model Washers and Bleachers for myself and friends. I never saw such a success or labor saving machine, they are giving the best of satisfaction so far. We have not heard or seen any agent for Huntly. Therefore I want you to oblige me by giving me the Agency for the Township of Huntly. Also I want you to send me the wholesale prices by the dozen by return of mail. On receiving your answer I will send for two dozen to start with. I mean to buy for cash on delivery. I can dispose of them almost in almost every house, I think.

Yours respectfully,  
THOMAS H. ARMSTRONG,  
Kiaburn.

Oromocto, N. B., March 16th, 1886.

Dear Sir,—After using your Improved Washer for nearly a year and found it to give satisfaction, I have decided to canvas for it. I wrote you for agent's terms some time ago. Please mail me 25 of your circulars, which you supply to agents for house distribution, at \$2.50 per thousand copies.

And oblige, yours &c.,  
L. McLEAN, P.M.

Trowbridge, March 30th, 1886.

Dear Sir,—The reason I did not write you last month was partly on account of the severe weather and the bad state of the roads, and partly from a scarcity of money with the farmers. This is a new country, and with poor crops and low prices this year, we feel the hard times. So you see it is hard to drive a bargain with the men, but the women are bound to have the machine, so I have about four dozen orders to be delivered the latter part of May and June. So you see if I can't send you an order every month, I feel satisfied I can more than average it the year round. I can send you a number of testimonials from our most influential citizens if they would do you any service.

Yours truly,  
FLETCHER COZENS.

Trowbridge, June 5th, 1886.

Sir,—Will you please send one half dozen machines to Mr J Borter, Atwood Station. He is selling for me. Send them at once and oblige,

Yours truly,  
FLETCHER COZENS.

St. Marys, April 1st, 1886.

Dear Sir,—I am in a hurry for four more Washers. The people are beginning to find out they are a good thing, and by proper handling and showing the people how to successfully operate it, it can't fail to become increasingly popular. I will send for larger numbers as soon as money becomes a little more plentiful. A good number have been enquiring for wringers and I shall be able to dispose of a good number as soon as farmers begin to spend a little money for these necessities, but shall as far as possible sell them both together. You will please send me four more Washers, C.O.D., by express, to Shakespeare. Yours truly,

H. BRINSMEAD.

St. Marys, April 20th, 1886.

Dear Sir,—I am still pushing the sale of the Washer. The more I sell the more there are that want them. I take pains to show people how to work them satisfactorily, and the people here are more than ever delighted with them. I don't know when I shall be through with Shakespeare, but shall try and supply every family with a Washer. You will please send me six more Washers

C.O.D., to Shakespeare, and things look as though I should sell five or six dozen more. Hoping to be able to do so,

I remain, yours truly,  
H. BRINSMEAD.

Paris, April 9th, 1886.

Dear Sir,—I wrote you some time ago about your terms for selling your Washer, and got two of them. People objected to them upon the ground that they had not been tried here, so I thought it better to give mine a thorough trial. I have done so and can recommend them. I would like therefore if you will send me the remainder of the dozen and give me the agency of the town of Paris and vicinity.

Yours truly,  
MRS. DADSON.

Saint John, N.B., April 13th, 1886.

Dear Sir,—I have seen your Improved Model Washer and Bleacher and consider it the best washer in every respect I have ever seen. Now what I want to know is have you any agent for New Brunswick and if not do you wish one. What are your best terms to agents.

I do not wish the agency for myself, as I am working at bookkeeping for the firm, but wish to procure it for my brother, who, if the terms are satisfactory, I am sure will make a first class man in every respect to handle your patent. Kindly answer by return mail all particulars and oblige, yours truly,

SAM. RICHY.

St. Mary's, April 29th, 1886.

Sir.—We like the washing machine as well as ever. It is worth its weight in gold.

Yours truly,  
D. C. BROWN.

Mosside, April 26th, 1886.

Dear Sir,—To-day we have given your washer a trial. My wife and daughter are well pleased with it. There is no doubt it requires a good brisk fire to make it work. My daughter has washed a very large washing and did not commence until after nine o'clock and had it all done and dinner ready at noon, which is a very unusual thing for a large family as we have. They think it is just the thing for every family to have. If you choose I will endeavor to act as your agent for this township. My wife has just come into my office to tell me that this is two weeks washing for the trial on account of lack of soft water. She thinks for an ordinary washing it can be done in two hours, you may expect to hear soon from me.

Yours truly,  
JAMES McCABE.

Mosside, June 11th, 1886.

Dear Sir,—I have been trying to introduce your washer in a few places. Was out to-day and had my wife with me and gave a trial washing at an Hotel which gave perfect satisfaction. I called in several times to see it at work. They all appear to be well pleased with it. I think there will be no trouble in selling six of them in that place, you can send me up next week half a dozen of them for a trial. My next order will be large. It takes some little while to introduce them. The article looks so small people think it is nothing but a humbug. Only I am so well acquainted, they would set the dogs on me. It is very amusing to hear the various opinions given on it. One man said it was an oil lamp, another would say it was a play toy for the children. So you see the only sure way is to give a trial washing in various parts of the Township which I intend to do next week. Hoping you will send them at your earliest convenience. Direct to Newbury station as before.

Yours truly,  
JAMES McCABE.

Belleville, May 1st, 1886.

Dear Sir.—I am pegging away with the washer. Have sold some which have given excellent satisfaction, and I have many out and still leaving more to-day. I soon expect to send you another order. I have come to Belleville to live, and have taken a little store on the front street and quite near the market. Have filled my window with the washers, and intend painting several signs for it for my front. Yours, with kind regards,

RAYMOND C. ROLPH.

Amubee, May 5th, 1886.

I have seen your new Improved Washing machine, and I would like to know whether I could get the agency for the State of Michigan. I have come over for a visit, and seen your machine work, I never saw one like it in Michigan, and I would like to know whether you could send them over, or get the agency for four or five

counties, but I would like to get the agency for the State of Michigan. Please let me know what you can do with me as I will be going back as soon as I hear from you.

JOHN O. BECKER.

Corbetton, May 8th, 1886.

Dear Sir,—My wife, a week ago, bought a Model Washer and Bleacher from you and likes it very well. I should like to know your terms to agents, and if your terms are favourable I will take an agency for Molancthon and Proton, and give it a thorough trial. Please let me know right away, as I should like to start at once.

Yours truly,  
MARK WILLIAMS.

Belriel, Que., May 14th, 1886.

Dear Sir.—I have just commenced to sell the Washer, people would not trust at first in its good qualities, but now I think I will place the washer more easily, I did not dare to send the money right away, because you might have changed your address. If you trust me send at once half a dozen of the washers, they are anxious to get them. I will send the money for the half dozen as soon as arrived, or, if you don't like to send them write as soon as possible, and I will send the money right away. I would take a dozen of the washers if I could spare the money now, and I know you don't give credit. In three weeks you would get the payment for the dozen. If there is any change in the method of washing please inform me.

Yours truly,  
SERENNE CHAGNOW,

Kinmount, May 10th, 1886.

Dear Sir,—Allow me to write you a few lines in reference to your improved Model Washer and Bleacher. My wife can do good washing with it, and says she would not be without it for twice the sum we paid for it. The people here maintain it would not do its work satisfactorily and consequently would not buy, although I have done trial washing to our satisfaction. Some say it takes too hot a fire and too much water. We have lent our washer to the neighbors around here, and they say they like it very much, and intend buying, but money is hard to get around here, and that has all to do with it. I feel quite sure they will sell if times gets little better. If you wish I will act as agent for you in this vicinity. I here inclose three dollars to pay for washers and bleachers. Please forward by return of mail,

Yours very respectfully,  
JAMES DAWSON.

Fallbrook, Ont., June 14th, 1886.

Dear Sir,—Enclosed please find forty dollars and fifty cents, for which you will please send to me at once one dozen of your Improved Model Washers and Bleachers, and also a half dozen Clothes Wringers. Please pack them carefully so they will not get damaged in shipping. Send them so I will get them not later than June 21st as I have to deliver them at that date. Send five Washers and two Wringers to Archibald E. Bain, Snow Road Station, on the line of the K. & P. R. R., and send seven Washers and four Wringers to Archibald E. Bain, Flower Station, on the line of the K. & P. R. R. Send me half a dozen Yankee Dish Cloths to Flower Station, on the K. & P. R. R. If you would furnish me with Washers and Wringers and wait until I sold them for your pay, I would devote all my time in selling your Washer and Wringer. I have not got money enough to run the business to good advantage, and if you would let me have them until such time as I would get money out of them to pay for them I could do pretty well. I remain yours with respect,

ARCHIBALD E. BAIN.

Fallbrook, May 7th, 1886.

Dear Sir,—Enclosed please find three dollars, for which please send me one of your Improved Model Washers and Bleachers. You can send it to Fallbrook, Ont., and I will pay the expenses of shipping. If your Washer sells well I intend making a business of it. Please let me know what township I shall have, or if I can have two. Please send immediately.

I remain yours with respect,  
ARCHIBALD E. BAIN.

Fallbrook, April 24th, 1886.

Dear Sir,—As I have been hearing something about your Improved Model Washer and Bleacher. I was just thinking that perhaps I might take an agency from you. I would like to take this county for my territory. Please send me your best terms to agents, and oblige,

Yours very respectfully, ARCHIBALD E. BAIN.





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