

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from:/
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments:/
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



PUBLISHED
SEMI-MONTHLY.

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

SUBSCRIPTION
\$2.00 PER ANNUM

VOL. 3.

PETERBOROUGH, ONT., NOVEMBER 1, 1883.

NO. 21.

R. H. RANGER & Co., at East Wilton, Me., have a panel factory, at which they cut bass-wood panels from the circumference of the log, as it is done in the establishment at Saginaw. The log is first steamed, and comes out of the machine a board, flat ribbon, which is then sawed into the sizes desired, and used mostly for sleighs and carriages. This firm has a large European trade.

The *Northwestern Lumberman* says:—The long-sighted New York lumber dealers have had a splendid opportunity to make a small fortune in lath. Aug. 8, lath sold in that city at \$2.20, and last advices placed current prices at \$3.75, with some sales at \$4, and there are indications that the top is not reached yet. An advance of 70 per cent. in two months may be called a good one, looking at it from the dealers' side of the question.

The Thunder Bay Sash & Door Manufacturing Company, at Port Arthur, Ont., on the north shore of Lake Superior, has a capital of \$30,000. The intention is to erect a three-story frame building 44x80 feet on the ground, an engine house, dry kiln, storehouse and office. The company is to be represented at Winnipeg, so as to make sales throughout the Canadian Northwest. The object is to capture some of the trade now enjoyed by the Americans.

The *Northwestern Lumberman* says:—Timber land in Maine is valuable, both for forest products and agriculture. George H. Fogg, of Eddington, started to make a farm out of 100 acres of forest land, which he bought in the town of Kingman for \$5 an acre. He cut 230,000 lath blocks and the frames for two 500-ton vessels off the lot, and having cleared 40 acres, he this year cut 75 tons of hay and raised 15,000 bushels of potatoes, and has 60 acres of timber left. He must have realized over \$2,000 on his 100 acre lot already, and more to hear from. It would bother a prairie farmer to do as much.

The *Parry Sound North Star* says:—The case of Ferris vs. the Parry Sound Lumber Company, for damages for flooded land, was tried at Barrie this week and resulted in the jury giving a verdict of \$100 damages in favor of Ferris. The amount sued for is \$1000. A similar case brought against the Muskoko Boom Company by Captain Harston, of Ilfracombe, for "drowning" 25 acres of land, was also tried at the same court. The damages claimed in this case was also \$1,000 and the jury awarded damages to the amount of \$50. These cases show that juries cannot be persuaded to award "fancy" damages in such cases and proves that in advising settlers to settle their grievances with the lumbermen without a recourse to the courts we were in the right.

THE LATE MR. JAMES LITTLE.

In its remarks on the death of the late lamented Mr. Little, the *Montreal Herald* says—In 1830 he was married at St. Catherine's, and moved with his wife to a place on the Grand River, now called Caledonia. The whole section was, at this period, a wilderness inhabited by the Six Nation Indians, and Mr. Little passed months at a time without seeing the face of a white woman. He engaged in lumbering, and ultimately his business extended over nearly the whole peninsula lying between Lakes Erie and Ontario. He carried on an active business for nearly thirty years. He came to Montreal at the age of 70 years, and at once became one of the most persistent advocates of forest protection, his personal knowledge of the lumber business and the rapidly decreasing area of forest territory enabling him more rapidly to draw attention to the facts. He was in a great measure successful, as he lived to receive an acknowledgment of the soundness of his views by a special vote of thanks from the American Forestry Congress, and by having his name placed as honorable president of the Forestry Association of this Province. No one to read the able articles that have appeared in the columns of the *Herald*, and other papers could have imagined that these were the productions of a gentleman who had already passed the allotted seventy years, yet his death now at the age of 80 shows that he had passed this period, and recognizing as we do the great importance of forest conservation to the welfare of the country, can truly say that few men have done so much for the country's good, having their whole life's vigor to assist them. He was the first person in Canada to send lumber to the United States' markets, Albany being reached by night and day coaches from Buffalo in a week's time.

SOME MAINE WORKINGS IN WOOD.

The *Mining and Industrial Journal*, of Bangor, Me., says:—There are 2,000 clothes-pin factories in this country. Were it not for our forests of white birch, beech and other kinds of hardwoods, the world's washday would be dark indeed, as nearly every clothes-pin made in the world is made in the United States. There are some 200 factories in Ohio and Pennsylvania. Maine has several. One of these is at Strong, a thriving town under the shadow of Mount Blue. This mill is owned and operated by J. W. Porter & Son, who also turn out large quantities of croquet sets, base-ball bats, ten-pins, staves, excelsior, and wooden articles of various descriptions too numerous to mention. The clothes-pin is made of white birch, which is the best of all hardwoods in the lath, but must be worked green or it roughs up. Two machines make the clothes-pin; one turns it and another saws the slot. Then 10 bushels of pines are dumped together into a large drum, which is made to revolve rapidly; in this way the pines

are rubbed against each other and polish themselves. There is a machine which turns out a complete clothes-pin, doing both the sawing and slotting, but this pin is straight and its prongs have no spring to them; while the prongs of the pin made by the two machines are concaved, and the pin is not so easily split. Croquet sets are turned out here with astonishing rapidity, by means of a variety of lathes. They are made of all kinds of hardwood. A maple bolt is chopped into round balls at the rate of 2,000 an hour, by knives that shape the opposite hemispheres of two balls at once. One clip makes a ball—that is, half of one ball and half of another. By means of patterns and travelling knives, mallet-heads and handles are made in a variety of shapes. The fashionable mallet the past season had a head twice as long as the old-fashioned mallet and a handle about half as long. The mallet-heads are subjected to the same shaking up and self-polishing in the drum that smooths the clothes-pins. The sets are decorated by machinery, the staves, mallets and balls being placed in a painter's lathe and one revolution make a strip. One may invest 50 cents, \$5 or more in croquet. The demand has never been so great as during the past summer. A single New York firm ordered 10,000 sets. As to base-ball bats, the dealers fairly begged for them. The supply failed, for some reason or other, and they could get their orders filled nowhere. Ash and willow make the favorite bats. Willow timber is not easily had, however, as the manufacturers of artificial legs manage to secure all the supply. There's nothing equal to willow for a wooden leg.

PANURGE ON FORESTRY.

The following letter appears in the *Mail*.—SIR,—Looking into Rabelais a day or two ago I lighted on an ancient illustration of the waste deplored by Mr. Phippe. Pantagruel appoints Panurge to the lordship of Salmigondia, upon which the latter dissipates the revenue of three years in a fortnight. One of the means by which this was accomplished is given as "felling timber burning the great logs for the sale of the ashes." Those who have lived forty years in Canada have been amply familiar with this process. But Panurge had a good word to say for his extravagance, which I fear poor Canadians had not wit enough to imagine. He says: The virtue of fortitude appears therein, by the cutting down and overthrowing of the great trees, like a second Milo, making havoc of the dark forests, which did serve only to furnish dens, caves, and shelter to wolves, wild boars, and foxes; and afford receptacles, withdrawing corners and refuges to robbers, thieves, and murderers; lurking holes and skulking places for cut-throat assassins; secret obscure shops for coiners of false money, and safe retreats for heretics; laying woods even and level with the plain champagne fields and pleasant healthy ground, at the

sound of the hautboys and bagpipes playing rooks with "high and stately timber" etc., etc. At any rate it would seem that Frenchmen three hundred and fifty years ago were no wiser than Canadians, and that the acute and witty scholar had eyes for their folly and many words for its reprehension.

Yours, &c.,
JOHN CARRY.

Port Perry, Oct. 13.

TIMBER AND HOUSES IN SKYE.

Throughout the isles timber is a rare and precious article, most frequently the gift of ocean. The man who secures a good log of driftwood has obtained a prize worth having. It may have been a brave old tree, tempest-torn from its home in some distant forest, carried to the sea by rushing torrents, and perchance tossed by the waves and wafted to and fro by many a current, ere it drifted to its rest on those far isles. Or it may be the masts and spars, or perchance the cargo of some wrecked vessel—whatever its story it is treasure trove, and most deeply valued. Though encrusted with barnacles or riddled by pholades it can all be turned to good account; the smallest piece will make a stool or a settle, or a box or a part of a door; while large timbers become rafters—precious heirlooms, for a young couple cannot wed till they have accumulated enough rafters to support their thatch, and should they have occasion to "fit" the only part of their bothy that commands any pecuniary compensation is the roof, not the work only, but also the heavy thatch saturated with thick greasy peat-reek, (in other words with a thick coating of soot). This, when broken up, forms a valuable manure for the unfertile crofts. —*Temple Bar.*

Michoacan Forests.

The state of Michoacan, which Humboldt pronounced the paradise of Mexico, lies in the southwestern part of that great republic, and borders on the Pacific ocean. Besides being a country of extraordinary richness in soil and minerals, it has a vast abundance of valuable woods. The hills and mountains are everywhere clothed with luxuriant forests, in which grow a great variety of valuable woods, such as ebony, mahogany, etc. These forest growths are said to be more abundant in Michoacan than anywhere else in Mexico, and it is predicted that as soon as the present progressive policy of that country causes Michoacan to be penetrated by railroads, its trade in valuable woods will become immense. —*Northwestern Lumberman.*

On Oct. 4, 8,500 bushels of Oregon wheat arrived at Duluth over the Northern Pacific railway, the first shipment of the kind, to Duluth, ever made by way of the newly completed route. This receipt of wheat marks a new area in northwestern traffic and development.

THE LUMBER INTERESTS OF CHICAGO.

On the southwestern border of Chicago is another city whose buildings are the blackened piles of lumber, and whose busiest highways are the passages between, just large enough to afford entrance for a wagon. Through this district flows the sluggish water of the south branch of the Chicago River, its current changing direction with the wind, and its odors unvarying, except to grow a little more intolerable when some huge propeller is fast in the mud, and her own screw, aided by the tugs pulling at her, stirs up the oozy bottom.

Extending into the yards on either hand are long slips from which rise the graceful spars of the lumber schooners, or the stumpy and blackened masts of the barges. Some of these carry nearly a million feet of lumber. The "lumber shovers" who unload them wear a leather apron extending from the belt to the knees, and leather guards to protect the palms of their hands. During the cold raw weather of early spring these men can be seen at work stripped to the waists, regardless of the freezing rain and the brisk lake winds which make such sad havoc with weak lungs.

Almost as far as the eye can distinguish objects through the smoky atmosphere the vast expanse is roofed with the sloping tops of the lumber piles. Here and there rises a planing-mill or saw factory, or more conspicuously the huge grain elevators with their iron roofs and slate-covered sides. Tracks and buildings admit to the heart of the lumber district the locomotive with its string of cars of almost every road in the country, coming to be loaded with the rough lumber, packing boxes, or the finer manufactures of doors, stair rails, and the like. The trains make quite a study of color in the otherwise dingy prospect. Even the cars of the same lines are of different shades from varied exposure to the weather. The air resounds with the hum of the planing-mills, the snorting of the busy switch engines, the jolting of the wagons on the corduroy roads, the rattling of tackles and the whistling of tugs on the river. Scores of chimneys and stacks fill the air with smoke, and the breeze carries with it the finer dust from the saw mills, which finds snug lodgment in the eyes of the visitor, whose effort for relief bedaub his cheeks with the damp soot deposited there.

Scattered about in other localities, generally along the river, are other yards, singly or in groups, aggregating as large an area as that of the "lumber district" described. Even at the mouth of the river, on artificial ground, the mills and lumber piles extend eastward half a mile or more beyond the site of the old lighthouse and Fort Dearborn. The stock of lumber on hand varies from four to seven hundred million feet of sawed stuff and timber, one to three hundred million shingles, forty to seventy million laths, with pickets, cedar posts, etc., in proportion.

The shipments sometimes reach two hundred million feet of lumber and one hundred and fifty million shingles in a single month. The local trade amounts annually to over five hundred million feet.

The town of South Chicago, at the mouth of the Calumet River, twelve miles south, has extensive yards, and, according to the interested parties, bids fair to rival the present city in the future. Many of the citizens of Chicago wish the lumber trade was transferred entirely to the Calumet, for they look with apprehension upon the acres of dry lumber, and fear a repetition of the calamity of 1871. A fire getting good headway in this locality, if fanned by the strong southwest winds prevalent in the summer and fall, could hardly fail to destroy the city as completely as before, despite the efforts of what is called the most efficient fire department in the world.

The region which produces this enormous quantity of lumber extends along the eastern shore of Lake Michigan and half the length of the western side. Reaching far into the interior of the state are streams which bring down the logs rafted together to the saw mills at the river mouths. These lumber towns along the shore are wooden to the last degree. Many are built upon piles driven into the sandy marshes, the buildings all frame, and even the roads made of sawdust, into which the foot sinks as though in

dry sand. Their well water is frequently as yellow as saffron from the decaying wood through which it comes. It seems almost a miracle that any of the inhabitants should escape if one of the forest fires which occasionally sweep through the lumber regions attacked this town. No provision is being made to perpetuate the forests, but they are being cut down right and left, making it only a question of time when the white pine timber will be as scarce as rosewood. As a gentleman connected with the lumber interest remarked, "We are doing nothing for posterity except to decree that they shall not build wooden houses."

The lumber is brought to the Chicago market chiefly by schooners, propellers, and barges, the latter being towed two or three at a time by powerful tugs. The receipts of lumber by rail, except from the south, are comparatively light, although the Chicagoans think it would make a comfortable business for what they facetiously call the "suburban towns," viz., Milwaukee, St. Paul and St. Louis. The immensity of the lumber business of Chicago can not be realized except by taking a drive through the lumber district, and spending an afternoon in the rooms of the Lumberman's Exchange, poring over the statistics compiled by the secretary. There are two hundred and twenty firms engaged either as brokers, manufacturers, or dealers in lumber. Last year one firm alone handled on hundred and twenty-five million feet, averaging in value about \$18 a thousand.

Besides this trade in pine the hardwood lines are in increasing demand. The costly hard woods, domestic and imported, and the cheaper hard pine from Mississippi, form no inconsiderable item in the years' receipts. During the last year the receipts of lumber at Chicago made a grand total of 2,676,757,842 feet, and 1,215,455,494 shingles. Of this, three hundred million feet were of hardwood. The long-leaf yellow pine, heavy almost as mahogany, and so pitchy that a sliver of it will burn like a taper, is rapidly growing in favor for interior work. Good selected stock has a beautifully figured grain, and when darkened a little by time is surpassed in effect by but few of the more costly hard woods. The shipping trade in lumber from Chicago extends northwest, west, and south to the limits of the country, not always stopping there. Some of the lumber towns of Michigan are active competitors for the trade with the Eastern States; but, nevertheless, the city of railroads manages to forward a goodly amount into their markets.

Chicago, being in the centre of a vast system of water and rail transportation lines, is destined to become a larger dealer in lumber every year, although now the largest market for forest products in the world. The millionaire in the metropolis and the section hand on one of the new western railroads both buy the material for their homes from her yards. The boards for the farmers' fences and the ties on the road-bed of the railroad which carried him to his western home pass through the hands of the Chicago lumbermen. The forests of Michigan are still enormous, and the undeveloped West demands their wood. The trade is guaranteed for years to come, and fortunes await those who can skillfully conduct it.—James J. Wait in Harper's Weekly.

AUTUMNAL BUMBLINGS.

The *Timber Trades Journal* of Oct. 6, says: A fortnight ago our Liverpool authority gave the following uncomfortable account of the state of the timber trade in that port:—

"The importation of all kinds of wood goods continues to be far beyond the wants of the trade, and until there is a very marked improvement in the general business of this district, no relief from the present state of depression need be looked for, unless shippers can stop the glut of supplies which are at present being put upon the market."

Since then about eighty ships with wood goods have arrived there, and the same tone was apparent in the report of last week, but a little more hopeful, though on what the hope was grounded was not very apparent. We find the following from the same hand:—

"The importation of North American goods, both timber and deals, continues to be in excess of the requirements of the trade, and therefore,

there is no improvement in prices; at the same time, these are at such a low ebb that there is a probability of shipments being greatly curtailed."

Well, that may be accounted a reasonable source of hope, on a small scale. But as long as there is a ship to load, and the ports are open, we are not likely to have to record the novelty of her coming away in ballast. It is added, however, that

"the last advices from St. John, N. B., report that several of the city mills are shut down, as manufacturers of spruce deals see that it is impossible to make sales at a profitable figure until the English markets show some considerable advance."

This shutting down of the mills is heard of every season, but we have never known it prevent our getting a very plentiful supply in the end. Sometimes it is a drought that stops them, another time great floods have broken up the rafts and scattered their contents over the intervening lands, where they remain high and dry, far away from the navigable channel through which they were bound to their destination. Now, having glutted our market (as they find out), some of the mill owners indignantly shut down their mills, we may presume because only such shabby prices are to be obtained in our chief emporiums. But we have been given to understand that there is always a brisk demand from the States, at the lower ports, which might be expected to keep them going when trade is slack here. At all events, neither in Liverpool nor in London is the reported closing of any number of spruce mills likely to add a dot to the prices obtainable at the public sales in the month of October. Natural causes are now at hand which will stop shipments altogether at most of the ports, both in America and in Europe, and on the termination only of the season—be it early or late—will the trade look for an interruption to the regular routine of importation at this period of the year.

Talking of the approach of winter, it may be permitted to remark that in Europe there are reasons for anticipating that it will be a severe one, and not unlikely to set in early. It is worthy of notice that we appear to have been indebted for the very fine summer we have had chiefly to the southern winds, which have prevailed, with short intervals of change, since the beginning of April. From southeast to south and west has been the rule, northerly and easterly blasts have been of short continuance, and just as they began to be annoying and to effect vegetation the wind has again gone to its old quarters, and however rough it might be, it was almost always genial, and with all the sunshine and rain that was necessary, and latterly—that is, in September—whole weeks of calm, sunny days, though the month began and ended with a storm. In fact, we have had in this country a good old-fashioned English summer, in which each succeeding month brought with it the characteristics which tradition had of old assigned to it.

It used to be calculated that southwest winds prevailed for three-fourths of year in England, but of late this rule has not held good, and not above three years ago the learned and scientific occupied themselves in putting forward theories, to show that the climate of these regions was gradually changing for the worse; and even astronomy was almost turned inside out to account for it. Looking, therefore, to the future of the year, as likely to be consistent with that part of it which has gone before, we may expect that the east and north winds will get their turn with a long innings as the days shorten, already we have a taste of them, and that Boreas will reassert his reign as Christmas approaches, and when he rules at that period he lets us all know it. There is a compensating balance in the seasons as well as in the solar system itself, but its laws are less perfectly known. Rain, wind, and sunshine, heat and cold, are reduced to an average by meteorologists, and, though the years may vary, they find their level in a series and come around again to the happy medium, in which flowers, fruits, and harvest, follow each other in rapid succession "and scatter plenty through a smiling land," after which we may expect that the rigours of winter will be equally conspicuous, and if it should be an early

one, so as to close the Baltic in November, the trade would then have substantial grounds for believing that the import season could not be much further prolonged. That shipments will continue to be made for this country, whether we need them or not, may be pretty plainly seen in the intimation of our Swedish correspondent's last letter. He states, under date of September 22nd, that

"It is not likely any large quantity of goods will be sent from Norrland to London, or similar centres, on consignment this fall."

He then warns us that "if tonnage can be had at reasonable rates, consignments to a limited extent will be made from Finland, not only to London, but to one or two continental ports."

This is not suggestive of a limited extent, and probably some other British ports may be favored with these contemplated consignments, though the timber merchants of the neighborhood may be by no means coveting such preference. At the beginning of the season the trade of this country was assured that consignments to British markets were not to be thought of, as it was evident they were not in a condition to bear them. Prices have given way on this side since then, say 10 per cent. at least, and now consignments are openly talked of as imminent, to a limited extent, which seems to have no other limitation than that of the tonnage to be got hold of before the final arrest of the proceedings by the advance of General Frosty-fist to the rescue. That is all the security merchants on this side have to protect them from an excessive fall in importation. But there is a part of our correspondent's letter which seems to foreshadow a change for the better, though it be more remote than he thinks. At any rate, he speaks out, and with an emphasis which indicates that he is very much in earnest. He describes to us the state of the forests and the results of the measures taken for regulating the cutting, and then he adds

"In spite of the present depression in the trade, it is my firm belief that we are on the eve of a substantial rise in the value of growing timber, and especially of redwood."

It is not easy to see how, while production is going on at such an enormous rate in Sweden and Finland, any check can be interposed that will raise prices here; but if shippers have to pay more for the growing wood they will hardly continue to ship it on speculation with the probability of a loss on every cargo.

We fear that for this season at least the production will not benefit the trade of this country. There appears to be already so large an accumulation of stock in the hands of the mill-owners that they may be considered almost independent of growing timber for the present, and any attempt to increase its price might throw many lumberers out of employment without affecting the free on-board market, till the stocks now preparing for shipment began to be seriously diminished by the demands of another season.

Teakwood.

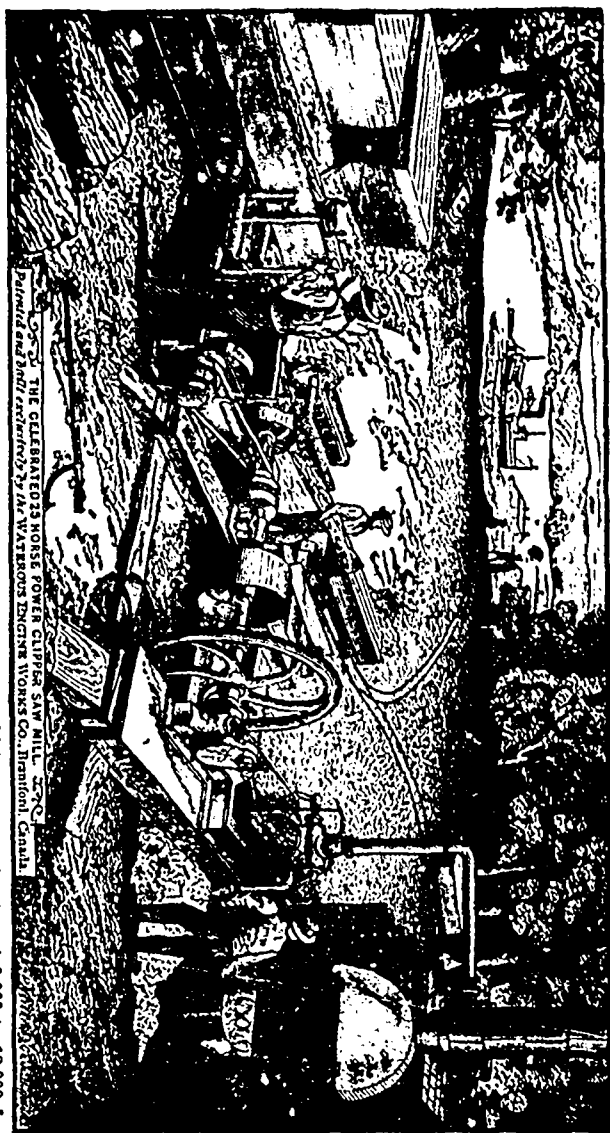
I understand, says a writer in the *Garden*, that some of our enterprising hot-house builders are introducing this wood into horticultural buildings, and it is expected it will supersede pine to a considerable extent. It is light, strong, and durable, and not difficult to work. Teak baskets for orchids are now common, and gardeners know how much more lasting they are than those of hazel and other common woods. Lightness and elegance of structure are important considerations in hot-houses in mere ways than one, and in this respect teak has the decided advantage, for it enables the builder to dispense with heavy rafters and beams, and is not much less durable than iron, to which it is preferable in other respects.

An Ancient Forest.

The *Timber Trades Journal* of Oct 6th, says: At a meeting of the Tees Conservancy Commissioners, on Monday last, Mr. Fallows stated that 134 heavy trees, varying from 10 ft. to 40 in length had been dredged from the river. They were, doubtless, part of the forest which existed in the locality in remote times,

Semi-Portable and Portable Direct Action and Belted Saw Mills!

TEN DIFFERENT SIZES.

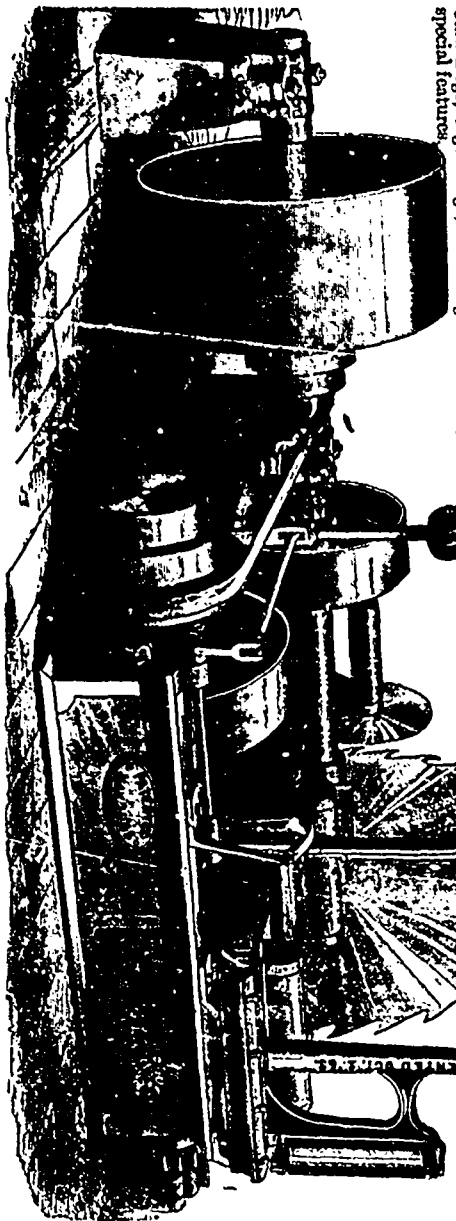


THE CELEBRATED HORSE POWER CUPPER SAW MILL, PATENTED AND BUILT BY WATKINS ENGINE WORKS CO., HAMILTON, CANADA.

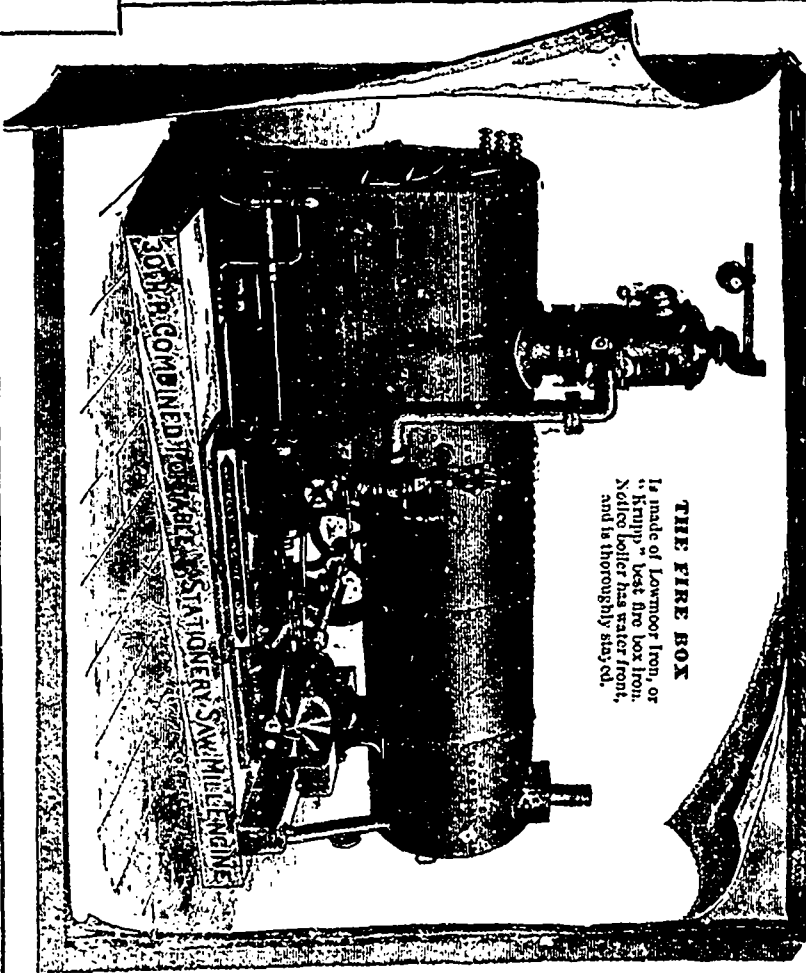
Above cut represents our 25 H. P. Patent Direct Action Mill which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper for thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. Specially constructed for hard work.

IMPROVED SAW FRAME

Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Food Belts, from 2 1/2 to 6 inches wide, takes 72 inch Saw and under. CARRIAGES to cut any length desired for shabbling or stock purposes, ship yards, &c.; Ratchet or Gantry Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receiving Attachment, and special features.



This cut represents the Engine furnished with Nos. 8, 12, 16 and 18 Saw Mills.

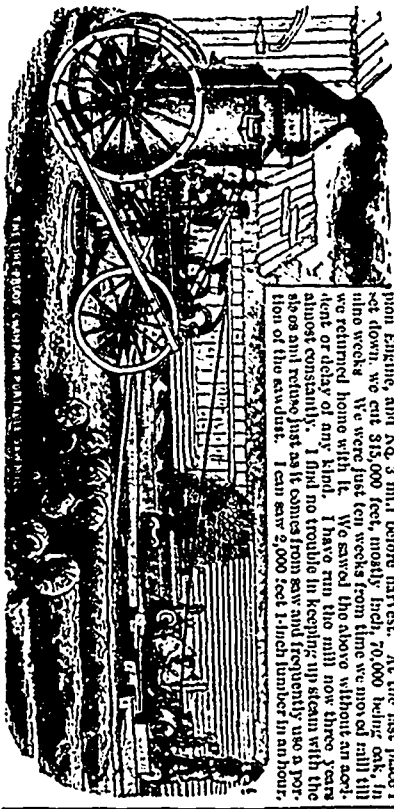


THE FIRE BOX
Is made of Lowmoor Iron, or "Krupp" best fire box iron. Notice boiler has water front, and is thoroughly stay'd.

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

Champion Portable Saw Mills

12, 16, and 20 H. P.



Grange Book writes as follows:—"St. Agnes, Ont., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last piece I set down, we cut 315,000 feet, mostly 12, 16, and 18 inch, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the logs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.

The following are a few who have bought these:

- Canada Pacific R. R. Co.
- G. B. Hall & Co., Que. (2)
- Dominion Land & C. Co. Sherbrooke, Que. (2)
- Sorel R. R. Co., "
- Coolman Rancho Co. Bow River, N. W. T.
- Nor. West Milling and M'ling Co., "
- Bow River, N. W. T.
- Toronto and Nor. West Colonization Co., Near Brandon.
- Morton Dairy & Farming Co., Turtle Mountain.
- Allan Grant, Ottawa.
- Geo. Farley, Ottawa.
- Michigan Native Copper Co., "
- W. W. Stewart, Montreal

Double Edgers, 2, 3 and 4 saws; Automatic Lumber Trimmers, 5 to 9 saws each; Log Turners, Slash Tables, Log Jacks or Haul-up of all Capacities; Endless and Single Chain; Automatic Log Rollers, Transfers, Live Rolls, Shingle Machines, Drag Saws, Knee Bolters or Block Splitters, Shingle Packers, Gang Lath Mills, Stave Machines, Automatic Sawdust Feeders for Gangs of Boilers, Sawdust, Slab and Refuse Conveyors, Elevators, Picking Governors, Worthington and Blake Steam Pumps, American Planing and Matching Machines, American Saws, Solid and Inserted Tooth, Extra Thin Circular Board Saws a specialty, Swages, Gummers, Emery Wheels, and all kinds of Saw Mill Furnishings kept in stock.

WATKINS ENGINE WORKS CO., Brantford, Canada.

Send for New Price List and Illustrated Circular, of special interest to saw-mill men.

Mention this Paper.

THE FORESTS AND THEIR MANAGEMENT.

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

THE BRITISH ISLES.

There are many forests, both Crown and private, in the British Islands, concerning which, as they appear to be managed on different systems, I shall merely state such points as seem to have some bearing on possible operations in Canada, or may show the progress made in late years in planting and foresting operations.

In the New Forest, Hampshire, containing 91,000 acres, much has been planted with Scotch fir and larch in 1853, and with oak in 1857. What is noticeable is that the first, planted as nurseries, are planted here so much before the others (both are elsewhere frequently planted at once). It is done to establish the nurseries, and give shelter from the cutting winds prevalent here. They transplant here from the first nursery to another—the last one near the ultimate destination of the trees.

The Dean Forest, in Gloucestershire, has 22,600 acres, in all. The commissioner visited twelve plantations here, ranging from 1844 to the present year. Nurseries and hardwood are put out together.

In Scotland, the nurseries of Lawson & Sons, near Edinburgh, are noticed. They contain 270 acres. There were thirty millions of coniferous seedlings in the beds. The *pinus pinaster* is largely used for planting on light sandy soils near the sea.

Before sowing or forming the nursery bed the land is trenched to fourteen inches, and a crop of potatoes taken off to clean it. In the following spring the seed beds are laid out, and the upper soil carefully prepared to suit the nature of the trees which are to be sown. Most of the conifers prefer a light dry soil with a considerable proportion of sand, and this has the advantage that the seedlings are easily shaken out and freed from each other for transplanting. In the case of Scotch fir and larch, the seed is sown in May or June, and left in the seed bed for two seasons. The seedlings are then planted out in lines fourteen inches apart, and three inches between each plant, are left thus for sometimes two years, and then planted out for good. It is thought better, if the frost can be prevented from killing the seedlings, to sow in April, and transplant one year after, or even the same autumn, as soon as the leaf bud is hard. The spruce requires two years in the seed beds, as its growth is slower than that of larch. The *pinus pinaster*, *austrica*, and *laricio* are sown in May or June, and transplanted the same autumn into rows six inches apart, the plants close together. Hence they are transplanted the following autumn, into rows fourteen inches apart, where they are left one or two years before being planted out. It is considered an object to shorten tap-roots and encourage laterals. (This last idea, it will be noticed, may assist the tree; but not that main object of forest preservation, the connection between the upper and lower strata.)

The Earl of Sutherland's woods, in Strathspey, give an instance of the rapidity with which planting is going on in Scotland. There are 60,000 acres, of which half are in timber, yet so young, that the commissioner saw little large wood ready to cut, but plenty of thinnings. The overseer intends gradually to plant the whole, so that, in course of time a thousand acres could be cut annually and a thousand planted out, which could not, it is said, fail to bring in a large revenue, without trenching on the capital of timber. Three lines of Scotch fir the commissioner saw lifted and tied in bundles for planting out. This was done expeditiously by the five-pronged fork, two men digging out the young trees, which are then lifted by women, the earth shaken off, and tied in bundles for planting. This list will give some idea of the progress made on only one estate:—Duthill hill, 700 acres, planted six years; Deshar, 1,100 acres, within seven years; Sluemoor, 600 acres, five years; Revock, 700 acres, four years; Bengalupin, 1,200 acres, six years; Advie, 300 acres, one year.

A point here presents itself which, though it seems vague, and not according with Canadian experience, it might be well to examine and find the meaning of. The Strathspey overseer

considers that "in Strathspey, at least, the land should be left barren and untouched, after it is cleared of trees, until the natural herbage, whether heather, grass or moss, which existed before the trees grew, recovers; and that if planted before this takes place, failure will result."

It may be remarked that oak is now little planted here, its use for ship-building being much less than formerly; while, even for backing for ironclads it is abandoned in favor of teak, which has not the injurious effect upon the iron produced by the contact of oak. Scotch fir and larch are much planted, and are rapid in natural reproduction. Whenever the natural vegetation has sprung up in places formerly covered with coniferous trees, the seeds germinate. This is then protected by wire fences with great success. In a large tract of self-sown forest in Granton district, enclosed six years ago, the Scotch fir average six feet high, while individual trees run up to ten feet.

Wire fence, tarred, three feet eight inches high, can be constructed for seventeen cents per yard, posts and all, and is much used. After ten years, or when the trees have grown out of harm's way, pasture is sometimes let. Enclosed plantations for this purpose command 2s. 6d. per acre, while ordinary hill side pasture gets but 6d.

The Earl of Mansfield's woods, in Perthshire. These are about ten thousand acres. Planting is going on constantly. There are nine district foresters, and a large staff of woodmen. A large plantation of Douglas pine is mentioned as doing remarkably well. They were planted in pits fifteen feet apart, fifteen inches square, and ten inches deep, with larch and Scotch fir nurseries at four feet apart. The pines average twenty-five feet in height. The nurseries are being removed. The overseer disagrees with the Strathspey statement as to leaving the land bare, and considers that it is only the insects (the beetle) which hinder the growth of seedlings on land cleared of conifers. He succeeds well by excluding cattle for one year, letting the grass, etc. grow, then burning it when dry, and planting out.

The Duke of Athol's woods, in Perthshire, comprise 10,000 acres, and were commenced in 1728, principally with larch, which has done well in places, but is now undergoing the substitution of Scotch fir which pays better. Oak coppice cut at intervals of twenty years yield \$60 per acre.

WOOD-WORKING FACTORIES.

A correspondent of the *Builder and Wood-Worker*, who has evidently "been there," writes: "We do not have to draw largely on our imagination for persons who make up the rank and file of men setting up and running planing mill machinery. We just take the men as we find them, and the machinery, and by uniting them together the picture soon becomes a reality, and the mystery of imagination ceases at that moment to be mysterious. But the kaleidoscope does not produce a greater variety of fantastic forms than does the vast number of mills through the country, each showing some different person and different style in the management and care of that particular mill. Each has his own particular way, which shows itself in every nook and corner, and about every piece of machinery that has anything to do with. You go into a place and see everything in a tumble down style, and bolts running half off the pulleys on the leader and the other half off on the driven, and boards and pieces of plank nailed up here and there, half worn through by belts they are trying to lead or drive somewhere, the said belts having three or four more lacings in each, and going around the pulleys like a Virginia fence, making it almost like running a gauntlet to get through the mills. Tools lying helter skelter, here and there and, perhaps, on the floor in the shavings; and the first thing you hear from them they go rattling through the suction fan, or the fireman has pulled them out from under the furnaces when cleaning out to start the fire in the morning; and so through the whole arrangement of the mill, everything from top to bottom at loose end.

We do not have to draw largely on our poor ideality to complete this picture. The person

having charge, very likely, leaves everything to the care of irresponsible workmen, whose only care seems to be to get through as little work as possible, and get their overalls off ready to jump out of the mill at the first sound of the whistle or bell; the aforesaid man in charge having left sometime before, that he may spend a little time in a favorite grogery and get fortified for the afternoon's performance or, perhaps, get braced up for to-morrow. Such companionship completes the picture drawn and is true to life.

Now take the opposite conditions, and we see belts running perfectly everywhere; everything is free and clear. One lacing in a belt and perhaps, what is infinitely better, the belts are made continuous by lapping and riveting; everything is in its place. If you want a wrench or file or any tool necessary about the mill, all you have to do is to go where they are always kept and you are sure to find the tool you want, and never, or scarcely ever, find a tool in the shavings or rattling through the suction fan, and there never is found little piles of pieces of boards lying around in the way, taking up room that could be used to very much better advantage as a clean place, where you could put some useful thing if you wanted to. I do not ever see this man leaving any responsibility, which he ought to bear, resting on the shoulders of those who are not fit persons to trust it with, and he makes it a rule to see that everything about the mill and machinery is properly attended to. The oiling is looked after, and there is never a hot box because he knows the condition of every box and bearing about the mill. You never can go through the mill and hear a squeak here and another there and another over yonder, as if there was half a dozen wagons going through that had not been greased for the last decade. You always find this man there quite as soon as any of his men are, and has everything ready to go ahead as soon as the machinery starts up, and is there until the mill shuts down, and never has to visit any saloon or grogery on the way home to brace up for any future task or duty.

This is one picture which this kaleidoscope shows us, and we turn it just a little and we see another. It does not necessarily follow that because a man is orderly and keeps everything in its place, that he would be one that understood just how to file a saw, or sharpen a knife or a side-cutter, and keep it in good working shape. Keeping tools in their place and keeping them in good condition to do their work well and easily, are two very different things, although it would seem that a person who was nice and orderly about one thing would be so in others, and would take pride in the work of his hands.

We will go into a mill, however, and look around, and we come to a saw bench and see a saw with one large tooth and one small one, and one long one and a short one, and one filed very fleaming and another almost square; and and looking at some sawn stuff, it looks as if a thousand demons had gone through it with a hurricane. More than as likely as not this abused servant had three or four black spots on it showing how terribly it had been handled.

This is a specimen of the rest of the tools in the mill. A pair of side-cutters on a bench near by confirms the statement. One is filed short and the other a long bevel, and the grooving bit of one stands out one eighth of an inch further than the other, and one is filed standing and another the opposite, every individual bit is sharpened at a different bevel. We look for stuff that has come from the mill with tools in this shape and we find the last production and, oh! horrors of horrors, the demons have been here surely and have been recruited. Do we wonder that carpenters complain of the bad work done by planing and matching machines? But there is a relief to this picture, and a little turn of our magic picture maker brings it to us in an instant.

We see a man just stopping his saw, and before he shuts off he takes a piece of broken grindstone, and carefully holding it up to the saw, just brushes it over. Noticing this we ask, "Do you joint a saw every time you take it out to sharpen?" He tells us "No," not always, but as often as once a day he just goes over it to keep the teeth of an even length,

which helps to keep the out corners full and makes the saw run enough better to pay for the trouble. When he takes the saw out he holds it up to you, and you see every tooth is so near alike that the eye can not see any difference in their size or shape, and the saw shines like a piece of burnished silver. This draws out the remark that he has not got any black spots on his saw. Pleasantly he tells you there is no need of any if you use the saw right. If you keep a saw round, and the outside corners full, and a good fair set in it, and don't crowd it if it binds in the cut, which it will do sometimes, there is no need of making black spots on a saw. It shows us some of the sawing, and you are surprised that a man can do so nice work, but when he comes to put in another and you hear it make that fine, clean clear cut, so peculiar to a saw in order, that you do not wonder that his sawed stuff looks so nice. He tells us that they have one man to look after the saws and no other man ever has anything to do about filing or setting, which makes the saws all come from the filer, uniform in set and shape of tooth, and if there is hard wood to saw, there is always something ready for the work. We now go on to see the man sharpening the knives of a matching mill, and we see him taking pains that the knife is straight, and he gives it a good bevel so that there will be a good clearance in the cut, so as not to go pounding through stuff instead of making a clean easy cut, which old planing mill men can tell by that peculiar sound given by a mill when it is in good nice working trim. The side-cutters are now looked after, and we see that each bit has done an equal share of the work and are all dull alike; and in filing them to use again, pains are taken that every bit is the same bevel and they are set out alike, and if for working two sides they are set perfectly square and filed, so that they will make a tight joint on the surface. We see the work coming from this mill as near perfect as it can be. The work comes just right, and the matching is neither too loose nor too tight. So ends this picture.

We might keep turning and changing the views almost indefinitely and still there would come continually perfect representations of the different characters, who have the charge of some one of the thousands of mills running in the different parts of the country. Each individual must show his individuality in his personal work, and owners must test these different realities to see which best comes up to the standard which they demand.

NUMBER OF TEETH IN A SAW.

It certainly seems to me that a man must be devoid of all reason and common sense when he undertakes to tell what gauge of saw, number of, or shape of teeth is the best for all purposes. Why, sir, I have seen saws advocated in the numerous articles in your paper of late that would do (if properly filed) splendid work on some mills, and on others would not go one-half its diameter into the log before it would be broken into hundreds of pieces and scattered all over the adjoining country. Where would a 20 to 30 tooth, No. 10-gauge, 56-inch saw be in a 24 inch cut of yellow Texas pine, on a 9 to 12 inch feed, with belt and engine power behind it sufficient to drive the arbor its 850 revolutions per minute, whether the saw went straight or crooked? It would be *non est* in about a second after it touched the log. Again, what would be the result of a 100-tooth, 7-gauge, 56-inch saw on a 1½ to 2-inch feed, in yellow poplar or white pine, with light power to drive it? It would scrape away (not cut) until the belt slips, engine checks down, and the speed of itself slowed down so that the centrifugal force is not sufficient to keep the saw straight against any pressure on the teeth, and consequently doubles up or flops over one way and then the other, until it gets hot from the point of teeth to the eye, and you can do nothing with it until it is cooled off; then you start again and have a repetition of the same.

Now, all I will say in reply to those who think the fewer teeth you have the lighter your saw will run, is for them to try the experiment of laying a board down on some solid foundation, and then take a quarter-inch chisel and place it just far enough from the end so that it will cut

a chip and not scrape, and they will find the chisel can be pushed through any common wood very readily; and then take the same chisel and same board, place the chisel two or three times as far from the end in some other place, and they will find, instead of being able, as before, to push it through by hand, it will require several blows on the chisel, with a mallet or some thing else, which seems to me proof enough that it does take more power to each tooth of the saw that has the less teeth do the same work. Now, they will all probably admit that, but claim that it does not take double the power to each tooth of a 20-tooth saw that it does to a 40. Now, of course, there is reason in all things, and if your feed is enough, say 3/4 or 4-inch, so that your 40-tooth saw can get a firm hold on the timber and cut, the teeth of the 20-tooth saw will each take more than double the power, and besides will require a heavier saw, as the strain is not so easily divided on the rim; in fact, it would scarcely run at all on that feed in hard wood. But if the feed is not more than 1/4 or 2 inch, so that the 40 teeth could not cut but scrape, why of course the 20 teeth would cut and consequently run lighter.

Not long since I was filing for a large mill where among the saws were three new ones from Henry Dison & Sons, all splendid saws, good temper, etc., excepting they were 6x8 gauge. (All saws for sawing logs should be straight—they run steadier and can be run with less awage than a bevel saw.) Now two of these saws were 80 teeth and one a 60-tooth. Our feed when the frictions were new was 7-inch, but we would not put on new ones until the feed would wear down to 2-inch. When the frictions were new the 80-tooth saws would go on the arbor in their turn, and run one-quarter of a day, cutting about 15,000 feet, when I would change for a fresh saw, whether they needed changing or not; but when the turn come for the 60-tooth to go on, it would only be with utmost care in filing and cautious handling of the carriage runner in hard logs and deep cuts that it would stand up for more than 1 1/2 to 2 hours. But when our feed had worn down to 5-inch, the 60-tooth would stand up as straight as a stretched string in all cuts, and do its work on 80 pounds of steam where the other saw required from 90 to 100 pounds to do the same work. There is no rule for the gauge of saws, number or shape of teeth that will work regardless of feed. On the feed depends everything, and I defy any living man to prove otherwise. Now, one can first find out his feed and timber to be sawed, then tell very near (if he understands his business) what gauge of saw and number of teeth would do the work properly, with the least power.

I have found 12 teeth to the inch of feed or straight 8-gauge saws to be about right for yellow pine. Very hard wood or thinner saws require more teeth in proportion. A saw should be strained or hammered, so that when it is at its speed and cutting in the log, the rim, (which is expanded by centrifugal force and work the teeth are doing) will not warp sideways, but be perfectly straight and stiff. If the eye is tight and stiff when standing still, it will hold the rim from straightening out when in motion; consequently, as it expands it must go somewhere and will warp and assume a snake-like appearance. On the other hand, if the eye is too open or loose, and the expansion of the rim does not take up all the slack when running, the saw will not be stiff and firm, and will give back when striking the log, causing the eye to push out or in, and rub on her log or board and heat. Every saw filer should be a practical saw hammerer, or at least understand the theory of it; for very often much trouble arises from a saw not being properly strained for the speed it is run, though the number of teeth and shape of them may be all right.—J. F. Capron, in Cincinnati Artisan.

LARGE STICKS OF TIMBER.

Descriptions of some of the big sticks of timber of the Pacific coast, are well calculated to excite the credulity of many of our mill men who are used to dealing with much smaller timber. The Architect and Building News, of San Francisco, in speaking of some of these large sticks, says: One piece is 144 feet long by 18 inches in size, and contains 3,456 feet of lum-

ber. For over 100 feet there is no knot that a five-cent nickel will not cover, and in the whole piece of timber the largest knot can be covered by a half dollar. It is wonderful that a stick of timber of the size given should be so remarkably clear of knots. Its companion is of the same length, 16 inches square, and contains 2,352 feet. When it is taken into consideration that the tree from which the first mentioned piece of timber was taken was cut several feet above the ground, and that 150 feet from the cut made to fell the tree it was of such a size as to enable millman to saw the log so as to produce a piece of timber of the size given, one can imagine the size the butt must be, and partly comprehend the amount of labor required to handle such an immense stick. It costs about one-half more to land on our wharves a stick of timber of the size mentioned than it does of ordinary lengths. These pieces of timber were sawn at the Port Blakely Mills, Washington Territory, the owners being Renton, Holmes & Co., the well-known lumber merchants of this city. A short time ago there was received in this city a stick of timber 104 feet long, 24 inches square, and almost free from knots. After its arrival here it was allowed to be on inspection for a short time, when it was taken to one of mills and sawed into joists, as the purpose for which it was manufactured was given up and no use could be found at the time for a stick of timber of such large dimensions.—The Woodworker.

FOREST FIRES.

Passengers on the Fredericton express Saturday evening, from the time the train left Nerepis until it reached Rusagornish station passed through a continuous gauntlet of fire. At several points near the track, especially along the Fredericton branch, large fires were burning freely there, lighting up their surroundings for miles. Innumerable small fires also seemed to have been set by the falling leaves, which, all on fire, were carried long distances by the wind. Several miles back of the track huge fires in the woods were reflected in the zenith like the lurid glow of a burning city. The air along the rail was stifling and some of the passengers suffered considerably. Fredericton was enclosed in a dense pillar of cloud this morning, which utterly shut out the sky and rendered all objects invisible at a distance of about one hundred yards. Big fires were raging back of the city near the race track, seriously threatening the city. The effect of another week's drought is fearful to contemplate. Earnest prayers for rain were offered in most of the city pulpits at the capital yesterday. At Douglas, Stanley, Heron's Lake, Hanwell, and Keswick, the fires have spread over thousands of acres, and miles of fences on the Keswick have been destroyed. From Stanley, Major Wilkinson (71st Batt.) and a company of men only succeeded in reaching St. Mary's Sunday night after a gallant struggle, as the fire rapped over the Miramichi road in places and the horses were badly frightened. Farmers at Manors-Sutton had a hand to hand fight with the flames. Great anxiety prevails at Fredericton and outlying districts.—St. John, N. B. News.

THE lake receipts at Buffalo, N. Y., for September, were 37,350,000 feet of lumber and 6,100,000, shingles, and for the season to October 1, 165,127,000 feet of lumber and 30,096,000 shingles.

The Northwest Lumber Company, at Selkirk, Man., will this winter improve its mill. An addition 30x40 feet will be made, that will contain a first-class trimmer and slash board. An office 18x24 feet will also be put up at once.

On Thirty Days Trial.

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

A REMARKABLE RESULT.—W. A. Elgars, of Frankville, was a terrible sufferer from Chronic Kidney and Liver Complaint, and at one time was so bad that his life was despaired of. He was cured by four bottles of Burdock Blood Bitters.

AXES
And LUMBERMEN'S
HARDWARE

Broad, Scoring, Blocking, Timber and Chopping AXES, (Of Superior Shape and Quality.)

Chalk Lines, Raising Knives, Timber Guages, Cross-Out Saws, Files, Sleighshoe Steel, Chains, and general line of HARDWARE at the LOWEST PRICES.

SOLE AGENT IN CANADA for the Sale of the following CELEBRATED AXES:—B-A-N-Y, RED MANN, and WETMORE'S HAND MADE, WARRANTED. "The Best in the World."

GEORGE STETHEM
IMPORTER OF HARDWARE,
PETERBOROUGH, ONTARIO.

IRWIN & PHILP
Commission
Lumber Dealers
FORWARDERS,
Shipping & General Agents
PORT HOPE.

THE GREAT CANADIAN PAPER
EIGHT PAGES WEEKLY MAIL BEST AND CHEAPEST ONE DOLLAR YEAR TORONTO CANADA

THE WEEKLY MAIL stands far in advance of any other Canadian paper. \$1 a year.

It has the Largest Circulation, the Latest News, both Local and Foreign. A Splendid Story Page. First-class Agricultural Page. Reliable Market Reports. Legal Column Household Department, Children's Department, etc.

THE MAIL is the great medium for advertisements of FARMS FOR SALE

Agents Wanted

ADDRESS THE MAIL Toronto, - Canada.

The American Hotel,
BARRIE, ONT.
Collier Street, Adjoining the Market.
RATES REASONABLE, CENTRAL LOCATION,
FREE BUS TO AND FROM ALL TRAINS.
Every accommodation for Commercial and LUMBERMEN.
W. D. McDONALD, Proprietor.

J. K. POST & CO.
LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N. Y.

E. S. VINDIN,
Commission, Shipping, Forwarding and General Agent.
LUMBER MERCHANT
Office, Tempest's Block, Port Hope.

DODGE & CO.
Pine & Hardwood Lumber
Office:—Cor. East Falls Avenue and Stiles Street,
BALTIMORE, MD., U.S.A.
Correspondence Invited.

J. T. LAMBERT,
Lumber and Commission Agent.

ORDERS FOR DIMENSIONS AND ALL OTHER KINDS AND GRADES OF
American Lumber
PROMPTLY ATTENDED TO.
Timber Limits and the Square
Timber Trade a Specialty.
Office, Wellington Street, OTTAWA.

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

\$500 Reward!
We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough, Ont.

HILL'S English Extract of **BUCHU**, One of the Best **KIDNEY** INVESTIGATORS IN USE.

It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Glycosuria, Gonorrhoea in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust, Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Stravel in all its forms, Inability to retain the Urine, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.
PRICE, \$1; or, Six Bottles for \$5.
Send for Circular. Sold by all Druggists.
W. JOHNSTON & CO.,
161 Jefferson Ave., DETROIT, MICH.



DEDICATED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
T. O. ER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance..... \$2 00
One copy, six months, in advance..... 1 00

Advertising Rates:

Per line, for one year..... \$0 50
Per line, for six months..... 30
Per line, for three months..... 20
Per line, for first insertion..... 10
Per line, for each subsequent insertion to 3 mo's. 05
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 5 00
Cards not occupying more than 6 lines for 3 mo's 3 00
Special rates will be made for page, half page and column advertisements.

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

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

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

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

PETERBOROUGH, Ont., NOV. 1, 1883.

THERE are twenty saw mills along the line C. P. R. from Thunder Bay west, with an aggregate cutting capacity of about 1,000,000 feet per day.

AN Ottawa correspondent says that Mr. W. H. Baldwin has invented and manufactured a gang circular saw mill which he calculates will saw up three eighteen inch logs per minute.

AN artificial rise of seven feet in the Chipewawa river cleared out from 10,000,000 to 15,000,000 feet of scattering logs, bringing them from Paint creek and Little Falls to the Beef Slough, Wis., works.

THE Kingston *Whig* says—People have little conception of the supplies that go out on the Kingston and Pembroke R. R. for the lumbermen. One consignment of 250 half chests of tea was sent by a grocer to a shanty this week.

JOHN F. Carr, a New York lumber dealer, who has for many years interested himself in working up the redwood trade, recently shipped 40,000 feet of that lumber to Australia, and has made several shipments to England and Germany.

THE fine forests of Arkansas are being rapidly opened up to trade, by the numerous saw mills which are rapidly springing up all over the timbered sections. More mills are probably being built there than in any other state in the union.

THE Edmonton *Bulletin* of Sept. 29th says: Dan Noyes delivered three rafts of saw logs to Hardisty & Fraser's mill on Wednesday. On the trip down one of them was partially wrecked at Big Islands owing to the low water. About thirty of the logs were lost.

MR. RUSSEL HEATH, of Carpinteria, Cal., has an English walnut orchard of two hundred acres of rich level land near the seashore. The trees are from ten to twenty five years planted. His crop in 1882 was 630 sacks of 70 pounds each; this season he expects the harvest will aggregate about one-third more.

A CORRESPONDENT of the *Northwestern Lumberman* who has visited the mill of the Tacoma Mill Company, located at Tacoma, Washington Territory, says that the logs, as they come into the mill, are covered with teredoe, a species of small shell fish. The slaughter caused by the saws is tremendous, and a constant fishy smell pervades the mill.

THE *Northwestern Lumberman* says that a reliable estimate lately made upon a certain quarter section of redwood timber in California was 32,000,000 feet. In comparing this with the pine lands of the Saginaw, Mich., district, it is stated that 2,000,000 feet was an extraordinary growth on the best of the land, when good forties were plenty, and 100,000 feet to an acre is called the biggest yield on record in the Saginaw region.

THE *Timber Trades Journal* says:—The adoption of wood paving in the principal provincial towns is steadily on the increase. Some towns, such as Norwich, Liverpool, &c., have spent large sums in recent years. At Plymouth this paving has been so much appreciated that the Corporation has resolved to lay down a further quantity in Bedford Street, and at Northampton tenders are invited for laying down 1,200 yards of wood paving to replace granite blocks.

A KENTUCKY paper states that Dana, the great coal man of the Kanawha valley, says that sawdust has saved him hundreds of thousands of dollars. When a coal barge becomes so leaky that pumping will not overtake the inflow, sawdust is used as follows: A nail keg with both ends out, nailed to a handle, and with dampened sawdust packed therein, is joggled against the bottom of the barge, the sawdust hunting the crevices, and the remedy is effectual. F. R. Knulberch saved a demoralized barge at Gallipolis in this manner recently.

THE proposal to hold an "International Forestry Exhibition" in Edinburgh during the summer and autumn of next year has been taken up with much earnestness in Scotland, and a large sum has already been obtained, without any direct appeal to the public at large, as a guarantee fund. Besides specimens of forest produce, implements used in forestry, fungi, rustic work, etc., there will be a collection of illustrations of trees, scenery, forest labor, and the like, along with books, maps, and reports bearing on forest history, surveys, and the geographical distribution of trees.

THE committee of the proposed International Exhibition of Forestry, at Edinburgh, has already received large contributions and hearty co-operation of the Duke of Buccleuch, Lords Derby—who takes a particular interest in forestry—Reesbery, and others. It is intended that the exhibition shall embrace all the objects of forest economy, and illustrate the various modes by which, in different countries, forest products are utilized; while also bringing together specimens of forest fauna and objects illustrative of the commercial, scientific, social, and legislative aspects of forestry and forest conservancy throughout the world.

GAS FROM SAWDUST.

To the Editor of the *Canada Lumberman*.

DEAR SIR,—My attention has been directed to an article in your issue of Oct. 1st, entitled "Gas From Sawdust," which contains certain erroneous statements which seem to me to need correction.

The article in question quotes an item from the *London Timber Trades Journal*, in which it is stated that "Mr. R. Tomlinson, late manager of the Cottingham Gas Works, near Hull, has just completed the erection of the gas works for lighting the town of Deseronto, Ontario, Canada, the works being erected for the purpose of making gas from fine sawdust."

The Mr. R. Tomlinson referred to in the above item came here some months since in search of employment as a pipe fitter and was employed by me in that capacity for a few weeks, but I was obliged to discharge him on account of his too frequent potations of "fire water," Mr.

Tomlinson had an exuberant imagination which becomes very vivid indeed when under the influence of "fire water," and it is probable that during one of his frequent potations he communicated the information concerning the Deseronto Gas Works to the *London Timber Trades Journal*.

As a matter of fact I am, as far as I know, the only person who has conceived or put in practice the idea of making illuminating gas from sawdust, and the works here for making gas from sawdust have been erected solely under my supervision.

The statement in your article that the gas made from sawdust is far superior to that made from Cannel coal is an erroneous one, sawdust gas being by no means equal to that made from Cannel coal, but the quantity obtained from an equal weight of sawdust is about four times as great, and the addition of a small amount of Petroleum gas brings the illuminating power up to any point desired.

Yours respectfully,

GEORGE WALKER,

Manager of Gas and Chemical Works for the Rathbun Co., Deseronto, Ontario.

NORTHERN MANITOBA.

Meeting Mr. F. T. Graffo, lately arrived from an exploring expedition up the Winnipeg and Bear rivers, some one hundred and twenty miles distant from Winnipeg, a *Times* reporter interviewed him and obtained the following information:—

"The settlement abuts on the Indian reservation which extends some three miles above Fort Alexander. The soil is, generally speaking, a rich clay loam, heavily timbered with poplar, birch, spruce, tamarac and jack pine—the ridges being covered with a good quality of oak. Soft maple and blue beech are met with in the low lands, and thickets of cranberries (high bush) and wild plums are numerous."

"As a lumbering country what do you think of it?"

"I have seen none better in the Province. There are two saw mills situated on the Winnipeg river—one driven by steam and the other by water power, the latter being located at Pino Falls, seven miles from the mouth of the river. As regards the capacity of these mills, I cannot speak positively, but I should judge that they would each average about 45,000 per day, consequently the settlers are well provided for in so far as building requirements are concerned."

TIMBER AND HEALTH.

How fatal are the results which attend careless indifference on this point, says the *Builder*, is singularly shown by what has followed in Italy on the disforestation of the once well-wooded peninsula. Not alone have the recent terrible inundations in the north of Italy been directly traced to this cause, but the fatal *aria cattiva*, the poisonous breath of the marsh lands, which has within twenty years or so invaded almost every province of the peninsula, now reigns supreme, driving from the once fertile plains thousands of the unhappy inhabitants. Here we see the direct influence of false economy in this one direction. When we consider, in addition, that Italy could, undoubtedly, by proper management, grow a large portion of the timber which at present she has to import, we see another direction in which a false economy has impoverished and impoverished an already poor nation. England, without having reached this sad position, cannot be said to be beyond blame. There exists in our country many a broad stretch of land which, by the action of science, might be rendered productive, and at the same time beautiful. The growth of timber is not of a nature to tempt the speculative demands of modern private initiative; it is for this reason that it behoves the Government, or, at least, local authorities, to take up the question. They, at least, standing virtually independent of the consideration of immediate gain, are the only fit instruments by which such work can be done; but the system once set in order, the returns, it is evident, will be no less regular, even more so than from the ordinary sources of profit. A close study of the matter—an inquiry into the admirable methods adopted on the continent, in France, in Bel-

gium, and in Germany—would form an interesting subject of inquiry either for some Government commission, or for some privately appointed body. The question is one of something more than passing interest. Whence are we to obtain our supply of timber? Nature unaided will soon cease to be able to satisfy our demands; but we have here another of the many instances where science intelligently directed can solve the difficulty, and thus once again be of the utmost service to the world not alone practically, but rationally.

THE OTTAWA RIVER.

Mr. W. C. Edwards, of Rockland, some time ago addressed a letter to Mr. J. W. McRae, of this city, in regard to matters concerning which lumbermen doing business along the Ottawa have reason to complain. He points out that for the last year or more there has been some agitation regarding a proposed scheme for the purpose of overcoming two difficulties which almost annually are a source of great loss and inconvenience to the inhabitants residing along the banks of the river and to lumbermen, namely, (1) the flooding of the banks of the rivers in the spring of the year, a vast area of what would be valuable agricultural soil being rendered almost unfit for cultivation; and (2) extreme lowness of the river in midsummer. This is a question which has already occupied the attention of Mr. John Rochester, and it will be remembered that he brought it up in Parliament but so far nothing of a practical nature has been done. The desirability of action is again being forced on public attention. Mr. Edwards points out that both difficulties have been growing for some time as the country has been cleared up, and are seriously felt by all who have anything whatever to do with the navigation of the river. Unless something be done to remedy the state of affairs complained of the evils must continue to grow. Mr. Edwards says:—

"First, the clearing up of the forests on the main river and its several branches causes the snow to melt rapidly as this progress of clearing goes on and thereby a greater volume of water is poured into the river during a shorter space of time each year, and it must be patent to an ordinary observer of such things what the course of this difficulty must be.—Unless some artificial means are resorted to to hinder it, it must go on increasing year by year, and the damage must be greater. Next, from the same cause the navigation of our river must grow continually worse. Not only does the surplus water, or the water created by the melting of our winter's ice and snow, run off earlier in consequence of the clearing up of the forests, but for the same reason our average downfall of rain is becoming lessened during the summer season, and evaporation is very much increased, all tending in one direction, viz.: To cause the navigation of the stream to grow year after year more difficult. Now in my opinion both these difficulties would be greater to-day than what they are were it not for the many dams built by the lumbermen on the several branches of the Ottawa, and the streams and creeks tributary to the same for driving purposes. Was the whole body of the water kept back by this means, until required by the lumbermen, allowed to flow into the main stream each year, the deluge caused thereby would be very great, and bad and all as matters are to-day they would be very seriously worse."

Mr. Edwards goes on to point out that damage done is of so serious a nature that the attention of Parliament should be called to it. He says it has been suggested by practical men who have given the subject consideration that the difficulty complained of can be overcome by a process of damming up the larger lakes in the main river and some of its branches, which are not and never will be dammed by the lumbermen. By this process of damming he thinks the freshets could be largely decreased in volume by holding back in the dams large bodies of water, which would otherwise run off. It is held that if the water thus retained in the spring were allowed to run off gradually in the summer it would furnish a sufficient supply to keep the navigation of the Ottawa good throughout the season, Mr. Edwards urges Mr. McRae to take the matter up by securing the formation of a committee at Ottawa for the purpose of

making such representations by petition to Parliament as will convince members of the desirability of supporting the carrying out of such a scheme as is proposed. The question is one of considerable importance, and one which must sooner or later demand attention.—*Ottawa Citizen.*

PAPER PULP FROM CEDAR BARK.

A new use of cedar has been undertaken at New Bedford, Mass. The Acushnet Paper Mill, at that point, is nearing completion, and was built for the express purpose of manufacturing pulp and paper of cedar bark. It is the first enterprise of the kind ever undertaken, though the process has been satisfactorily tested on a small scale. An agent of the company is now in Maine purchasing a supply of bark. There is a large quantity at Bangor, Calais, and at St. John, N. B., where large quantities of cedar shingles are sawed. The bark is taken from shingle butts, that are 16 inches long, and are bundled for shipment like lath. The Acushnet mill will work up three cords of bark a day. The first product will be used for carpet linings, but the paper is said to be equally adapted to other important uses. For carpet linings it will be unequalled, on account of its quality of keeping off insects. Eastern ingenuity is bound to devise an endless variety for the utilization of woods, this invention for making paper of cedar bark, being the latest evidence of it.—*Northwestern Lumberman.*

WOOD PULP ROOFING.

A Mansfield, Ohio, company is said to be manufacturing a roofing material from wood-pulp, consisting of two-thirds spruce and one-third poplar. It is then prepared, under patents owned exclusively by the company, in such a manner as to give the greatest durability, and adapt it generally for roofing purposes. It is claimed to be the best roofing in the world, all things considered. It is not affected by heat or cold, as metallic roofs are, nor can it corrode. It is much lighter than slate, and can be walked upon without injury. It is practically fireproof though not absolutely non combustible. It can be used on any kind of roof having not less than 1 1/2 inch fall to the foot. It is especially adapted to locations where smoke and sulphurous gases abound, which generally destroy metallic roofs in a short time. It is flexible, and can be used for valleys, flashings, ornamental cut-work in gables, panels, bay windows, verandas and irregular-shaped roofs. It can also be used with perfect success for sheathing warehouses and grain elevators.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Oct. 19:—

	1881.	1882.	1883.
Waney White Pine...	9,029,051	2,063,811	3,213,313
White Pine.....	5,578,640	7,699,814	0,747,758
Red Pine.....	1,974,730	1,435,065	484,090
Oak.....	2,035,159	1,149,452	1,750,207
Elm.....	1,010,395	701,020	309,261
Ash.....	397,906	203,190	257,023
Basewood.....	3,576	1,273	2,244
Butternut.....	2,091	2,039	1,028
Tamarac.....	24,416	51,443	7,409
Birch & Maple.....	151,742	208,333	133,803
Masts.....	25 pcs	33 pcs	— pcs
Spars.....	— pcs	61 pcs	— pcs
Std. Staves.....	303,722.29	352,631.12	627,011.22
W. J. Staves.....	445,422.30	1150,900.12	610,233.05
Br. Staves.....	75,433.23	87,211.19

JAMES PATTON,
Supervisor of Cullers.

International Exhibition of Forestry.

The thirtieth annual meeting of the Scottish Arboricultural Society was held recently in Edinburgh. Thanks was awarded to Mr. Little, Montreal, for a gift to the Society's museum of 60 specimens of Canadian wood. Referring to the International Exhibition of Forestry to be held in Edinburgh next year, one of the members said the prospects of the exhibition were highly gratifying. The exhibition was assuming much wider proportions than he ever had contemplated; and it appeared to him that if it went on as at present this would not be the only exhibition of the industrial arts in Scotland, but be only one of a yearly series, such as

those held at Kensington. If the Lord Provost and Magistrates granted the use of Castle Hill gardens, the committee could erect buildings of a handsome description thereon in the form of Swiss chalets of a rustic nature, emblematic of forestry. One of the courts might be devoted to Indian exhibits, another to Australia, another to Canada, another to the United States, and so on. The idea met with much favor.

Timber for Well Work.

The best timber for curbing a well is hemlock, which is very durable when under water, and gives no flavor to the water. If hemlock cannot be procured, tamarac would be the best. The timber should be cut in two or three inch planks, and put together by halving the timbers at the end and holding the halved parts dovetailed or cornered together, so that the sides cannot be forced in by the pressure of the earth—the upper half of one piece fitting upon the lower half of the other piece.

The *Northwestern Lumberman* says—There is another story about a buzz-saw encountering a bomb-shell that was embedded in a log. This time the incident happened in New Orleans. Before it was in South Carolina. The forests of the South were well peppered with shot and shell during the late unpleasantness, and it would not be surprising if embedded shells should use up several saws. But when once one of these stories is stated there is no telling how it will multiply.

A. & T. J. DARLING & Co.
TORONTO, ONT.

Specialties—"Darling" Axes, Saws, Outlery, "Black Diamond" Files.
HARDWARE.

FOR SALE.
A LATH TRIMMER,
NEW, and in good order, will be sold Cheap. Address,
THE RATHBUN COMPANY,
6L19 Deseronto, Ont.

FOR SALE.
SPALT MACHINE
For saving Lumber refuse, second hand, but all complete and in good order, taken out to replace one of greater capacity.
Address,—
THE RATHBUN COMPANY,
6L19 Deseronto, Ont.

FOR SALE.
THE SUBSCRIBER OFFERS FOR SALE THE LEASE AND MACHINERY, PLANT, &c., OF HIS
SAW MILL
AND
LUMBER YARD
In Ashburnham.

For particulars apply to
J. Z. ROGERS,
6489-2121 Peterborough.

WATER POWER
TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND
1280 LAKEFIELD, ONT. w1619

SHINGLE MILL MACHINERY.

Parties requiring New Machinery for Shingle Mills, will do well to communicate with us before purchasing.

THE RATHBUN COMPANY,
6L19 DESERONTO, Ont.

SAW MILLS AND TIMBER LIMITS

WITH
Logs, Lumber, Store Goods, &c FOR SALE
In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

Canada Pacific Railway now running through part of the property.

For full particulars address:—
WILLIAMS & MURRAY,
L117 GODERICH, ONT.

SAW MILL MACHINERY FOR SALE.

STEEL AND IRON
Slabbing and Stock Gang Gates
WITH OSCILLATING MOTION, ALSO,—
IRON PITMANS, FLY WHEELS,
Driving Pulleys, and other Saw Mill Machinery,

In Good Order, which has been taken out of Mills that have been closed. Address,

The RATHBUN COMPANY,
6L20 DESERONTO.

MACHINERY, ENGINE, BOILER, ROTARY MILL, &c.,

IN THE
St. Martins Manufacturing Co's Factory and Saw Mill at St. Martins,

CONTAINING
A Waterous 80 H.P. Engine and Boilers, Rotary Saw Mill,

Saw Tables Planers, Shafting, Hangers, Pulleys, Belting, Lathes, Pumps, etc.

One Fleming & Sons' 50 H.P. Engine and Boiler,

Waterous Saw Mill, Daniel Planer, Band Saw, Planer and Matcher, Saw Tables, Shafting, Belting, etc.

If not sold on bloc by the 10th of October, will be sold in lots to suit purchasers.

Catalogues giving particulars of the Machinery, etc., can be had from the liquidators, or at the offices of W. H. OLIVE, No. 167 Prince William Street; T. McAVITY & SONS, 13 King Street, St. John; and W. E. SKILLEN, St. Martins. 4121

MAPLE TIMBER.

Parties having quantities of first-class HARD MAPLE that they can cut to sizes as furnished, please communicate with us.

W. H. BROWN & Co.,
4L18 INGERSOLL, Ont.

HENDERSON BROS. LUMBER AND TIMBER.

Building & Bridge Timber Sawed to Order.
Pine, Spruce and Hemlock Lumber by the Cargo.

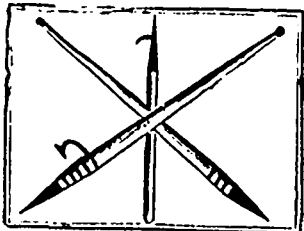
Steam Saw Mills, Box Factory and Yards—342 to 390 William St., and 130 St. Constant St., Montreal.
Steam Saw Mills, L'Assomption, P.Q.
P. O. Box 804. 14121

VULCAN IRON WORKS
(ESTABLISHED 1842.)

STEWART & FLECK, Jr.,

Manufacturers of every Description of
Saw and Grist Mill Machinery,
Water Wheels, Steam Engines, Derrickes, Boilers, Steam Pumps, Mining Machinery
20L REPAIRS PROMPTLY EXECUTED. 1y
Wellington Street, OTTAWA, Ont.

WM. AHEARN

MANUFACTURER OF
HAND SPIKES  **CANT DOGS**
Lumberman's Tools, etc.,

HIGHEST AWARDS IN CANADA and U.S.
L20-1y **OHAUDIERE, OTTAWA.**

ST. LAWRENCE CANALS.

Notice to Contractors.

SEALED TENDERS, addressed to the undersigned, and endorsed "Tender for St. Lawrence Canals," will be received at this office until the arrival of the eastern and western mails on TUESDAY, the 13th day of November next, for the construction of a lock and regulating weir and the deepening and enlargement of the upper entrance of the Cornwall Canal.

Also for the construction of a lock, together with the enlargement and deepening of the upper entrance of the Rapids Plat Canal, or middle division of the Williamsburg Canals.

Tenders will also be received until TUESDAY, the 27th day of November next, for the extension of the pierwork and deepening, &c., of the channel at the upper entrance of the Galops Canal.

A map of the head or upper entrance of the Cornwall Canal and the upper entrance of the Rapids Plat Canal, together with plans and specifications of the respective works, can be seen at this office, and at the Resident Engineer's office, Dickenson's Landing, on and after Tuesday, the 30th day of October next, where printed forms of tender can be obtained.

A map, plans and specification of the works to be done at the head of the Galops Canal can be seen at this office and at the lock keeper's house, near the place, on and after TUESDAY, the 13th day of November, where printed forms of tender can be obtained.

Contractors are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms, and—in the case of firms—except there are attached the actual signatures, the nature of the occupation and residence of each member of the firm; and further, an accepted Bank cheque for the sum of Two Thousand Dollars must accompany the Tender, which sum shall be forfeited if the party tendering declines entering into contract for the works at the rates and on the terms stated in the offer submitted.

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

By order,
A. F. BRADLEY,
Secretary.
Dept. of Railways and Canals, }
Ottawa, 28th Sept., 1883 } d78-1aw

THE LIVERPOOL MARKET.

The October circular of Messrs. Farnworth & Jardine contains the following:

The arrivals from British North America during the past month have been 59 vessels 51,527 tons, against 24 vessels 18,598 tons during corresponding month last year, and the aggregate tonnage to this date, from all places, in the years 1881, 1882 and 1883, as shown by the table below, has been 256,860, 284,089, and 322,082 tons respectively.

The arrivals have again been heavy, and, notwithstanding there has been a large consumption, stocks are rapidly increasing, and the market is weaker.

CANADIAN WOODS.—Yellow Pine Timber: There has been a fair demand for prime square and waney timber, but commoner qualities are difficult to sell; stocks are heavier than they were a year ago. Red Pine has been in fair demand, though at rather low prices. Elm and ash have come forward more freely and have met with ready sale. Oak: There has been a steady demand and prices have been fairly maintained; planks for wagon building still rule at disproportionately lower prices. Pine Deals: The better qualities are scarce and wanted, but of third quality there is a large stock and prices rule low. Slaves: Pipe continues in good demand, but puncheon are dull of sale at low prices.

NEW BRUNSWICK AND NOVA SCOTIA SPRUCE AND PINE DEALS.—The consumption has been good but the arrivals have been very heavy and stocks are increasing, being fully double the very light stock of last year, though only 25 per cent. larger than in 1881, prices are lower and have now touched a point at which importers may fairly consider it safe to hold. Lower Port Pine Deals have arrived pretty freely, and have been sold at low prices. Birch: There has been a rather large import and the consumption has also been large; prices are easier.

NORTHWEST TERRITORY.

We take the following extracts from the official report of the evidence of Prof. Macoun, Botanist to geological survey, before the Committee on Immigration and Colonization:

Q. On these very dry plains, you say they were dry because the water could not permeate the soil?—Yes; particularly on account of the old soil. The salt lands of the North-West get so thoroughly baked in the dry weather that it is impossible to penetrate them, and yet when they are broken up in the spring and are a little moist, they are like ashes, and remain so in the summer if they have been broken, but if not, the rain evaporates and none goes into the soil, and that is my reason for saying it is climatologically not barren.

Q. What about the rainfall?—The rainfall of the south is light and the rainfall of the north is heavy. We all know what the cause of the deficiency of rainfall in Ontario at the present time is. There is a gentleman who has a big farm and it is without grass or anything upon it, and he sees a rainstorm, a thunder storm, coming in the distance, and one part of it goes to the right and one to the left and he is without a drop, and when it passes him the two parts meet again. Why? Because the farm was radiating too much heat and the clouds were dispersed, and instead of the rain storm stopping it dispersed. It is the same in the North-West. The rain is brought from the south, and over the grassy plains, scarcely any rainfall takes place until it comes in contact with the wooded country, and then down comes great quantities of rain, and that is the reason. As soon as cultivation commences and trees are planted the North-West, instead of being at its worst, as it is now, will improve climatically, the rainfall will be less in the north and greater in the south, and settlers will be sure of having no drought.

Q. You think there should be tree planting?—Certainly.

Q. Explain why the heat radiating causes the clouds to separate?—South of our boundary there is a radiating surface in the United States of over 300,000 square miles—it may be 500,000. Upon that great plateau to the south, there are scarcely any trees. As the moisture that comes in from the Gulf of Mexico or even from the

Gulf of California goes over that plain instead of being deposited there, the sun is pouring down heat and this heat is radiated again in the atmosphere, and the result is that moisture and heat are both carried north, both from the east and west, and as they come up over on to our plains, as soon as they strike the Wood Mountain and the Turtle Mountain and the Moose Mountain, where we have a series of broken hills, environed by ponds and covered with wood, the rain pours down. The clouds pass on, and on the interior plain, where there is no wood, you can see a thunder storm playing round a little hill—a local storm—and in another place you get none, because it is a dry region. At the Elbow of the South Saskatchewan there is a group of sand hills. When I was there, there was no rain at the Elbow though there was everywhere near us, because it was too hot. The clouds passed on up to Humboldt till they struck the wood, and the rain there fell in torrents. We got in the Northwest the rain that ought to fall on the American plateau geographically, but it is carried on up to our country, and I can see the heat flowing far to the north, beyond where any one of us believe, and I see the summer climate there suitable for anything. The heat and moisture of the south is spread over our whole North-West, and in time this will be better understood. When my head is in the grave men will say "Macoun told the truth though it was hard to believe him." Mr. Fleming once asked me, when they were putting the railway into the Leatherhead Pass, "why is the country up from Edmonton to Leatherhead so very wet?" I said "it is on account of the glaciers that are around the head of the Athabaska and the North Saskatchewan, and the air comes down and condenses the moisture, and down it comes in great quantities, and that is the reason why the Peace River region is a prairie and has a light rainfall, because the rainfall that should go there is stopped on the watershed of the Athabaska and the Saskatchewan."

Q. Do you think that trees can be successfully cultivated on the prairie now treeless, and please give your reasons for such belief?—I profess to be a scientific botanist, and on that ground I take my stand. Here are certain points: Men have said to me, "What is the use of talking about trees on the prairie? If they were suited for the prairie they would have been there." Please notice this. Throughout the whole world every species of tree has its own particular region. I will give you a remarkable fact in connection with the prairie maple that is now being planted—the ash-leaf maple, the *negundo aceroides*. Where there is a great deal of moisture in the air that tree is not hardy. It is not hardy to the east and it is hardy on our plains. That shows that when men say the maple will not grow there because it is not found there they are wrong. The maple of the North-West is not hardy in many parts of Canada and the United States, because the air is not suitable for its growth. Down to the south of the Coteau, near Regina, at the base of the Dirt Hills, I found growing *fraxinus viridis*, what you call rim ash, the river ash. The Indians make their baskets of it principally. I found it growing along the base of the Coteau and not in river valleys, but on the open prairie, and other trees in that region. The beech, which is a very prominent tree in our woods, never grows further west than the straits of Mackinaw. Would any one who found the maple in an isolated group at the west end of Lake Superior, say it is stopped there by the cold? No. Looking at it in that way, I say our maple and trees of that nature, and all our oaks, every one, are sure of being successfully grown in the North-West. All our oaks, because the oaks grow naturally—I am speaking of our white and black oaks—on a sandy, dry soil in our woods. If the land gets very dry there, which it does not, but if it should, then these trees would have moisture enough to keep them growing. All that is necessary is for the seeds to be taken out to the North-West and planted, and the proof of my words will be found at once. What is the reason why the country is found without wood? I have gone up and down the prairie on a straight line from north to south, and have always found—I have travelled for eighty miles

on a stretch, and have never seen a bush except a rose-bush, not a willow or a poplar, but I got permanent water. The first willows I struck were at the northeastern corner of a pool. For instance, there is a pool. The fire would burn on each side and leave the grass, and I would find the willows where the fire could not touch them. The first poplars we would strike would be always in a little depression, where the fire would come up to a little hill first where there was short grass. I found on the big plain north of the Cypress Hills, where trees are not supposed to exist, twenty-three big poplars, 2 ft in diameter, some of them in the midst of the sand-hills, where the fire could not touch them—enormous trees standing alone, buried in sand—and there they are yet, unless they were cut down last year by the C. P. R. people. Willows and poplars do not grow from seed, except when it suits them. They do not depend on their seeds. Cut a willow or a poplar, stalk, and put it down and it will grow. Those trees propagate from their roots, and then thousands of little trees grow up. People say they come up from the seeds. It is nonsense. They come from the roots. As soon as the root of the willow or poplar is burnt out and rotted, there is no power in the prairie to reclothe itself with wood.

Q. This conflicts with the statements given by Professor Bell?—Professor Bell is a geologist. I am a botanist, and I may conflict with any gentleman, for I speak my own knowledge from my own standpoint.

Q. You say the trees are devoured the same as cattle would devour if they were unfenced, and the fire cannot get at them the same as if there were a fence to stop the cattle?—Exactly, they are fenced from the fire. In the driest part of the country, I was camped near the bow of the South Saskatchewan, where none of the storms would come near us. There was lots of wood. We were in sand hills and the fire could not burn it out, and in every place where there is sand there is wood.

Q. Mr. Darwin agrees with you entirely. He mentions where a piece of wild land was fenced, and there was no appearance of trees, and in a few years it was full of vegetable and animal life?—Not a doubt of it.

Q. Have you examined the catalpa tree?—I have. I was talking with Mr. Saunders, of London, about that tree. Any tree that ripens its wood—I mean, for instance, our common lilac; it takes a rush in the spring, grows about 8 inches or 10 inches and stops, and no power can make it grow any more that season—any tree of that type can stand the North-West climate, because it will harden its wood. If the catalpa hardens its wood, it will stand the North-West, because it is not the intense cold that kills trees. It is their inability to resist changes of temperature. That is where the question comes. If the North-West was subject to such changes as we have here—for instance, a sudden thaw, and the temperature rises to 50°, and a few days after the sap would be flowing, say, moving down to 40° below zero again. Our trees burst and our fruit is destroyed in that way.

Q. We could not expect, then, that our fruit trees would succeed in that climate?—You are right there.

Q. How about these Russian varieties?—I have brought this pamphlet with reference to that.

Q. Do you believe that at any time these prairies were covered with timber?—I have not the slightest hesitation in this answer. No one on this Committee, who is acquainted with the east, ever saw trees growing in a salt marsh. Every salt marsh in the North-West, I am quite sure trees would not grow there, because vegetation of a certain character will not grow where there is a superabundance of salt. Then the St. Pierre beds, where the waisting clays are going on, there are certain tracts of those lands that I do not think were ever covered with trees in the past. They were unsuited for the growth of trees. With the exception of these two tracts, I believe our whole North-West has been covered with trees.

Q. You only saw small trees there?—Poplar, the two or three kinds of poplar, or the poplar of the region.

Q. You never heard of stumps being discov-

ered in any excavations in the North-West, have you?—No.

Q. You say the whole country of the North-West must have been covered with forest, except those places you mentioned?—Yes, I am quite positive.

Q. Except those places, you believe the same conditions geographically and climatically exist, that existed when the forests were there?—Yes; except that to-day the North-West is at its worst, because the south is abnormally dry and the north abnormally wet, owing to the want of forests in the south.

Q. But not sufficiently to prevent vegetation?—No.

Q. If the fire sweeps over the ground, it devours the trees and burns the stumps?—There is a book written in the year 1859. In that book, Professor H. G. Hind, of Windsor College, N. S., records his explorations. Where he saw large forests, I passed over in 1880 and never saw a twig, because the stumps and everything were gone as you state.

Q. Did you ever observe shrubbery and some trees on the north side of the hills and the south side bare?—Yes. Here is where Palliser went wrong on that. I went and looked at the same hill he mentioned. The sun shone on the southern part of the hill. All the fires come from the southwest or the west. As soon as the fire comes, the south of the hill is dry. The fire comes to the south side of the hill and sweeps off a line of the timber. Next year it goes further in, and at last the whole southern part of the hill is clear of timber. The other side of the hill is damp and the timber remains there because it is not burnt off. There is not a river throughout the length and breadth of the North-West, and up to latitude 62 or 63 that the north side of the river is totally without wood, while on the south side it is just the opposite. In latitude 66 the cactus was growing on the north side of the river, and on the southern I got the Arctic flora. The southern slopes are always dry and always burnt.

Q. Is it not the case on the Qu'Appelle River at some points?—The Qu'Appelle River, from one end to the other, is without wood, except in the ravines.

Q. I travelled through the treeless valley of Dakota and found in a number of places, where the timber had been protected, where there perhaps was not a tree within a hundred miles, there were places between lakes where the fire had never reached, I have seen timber cutting 60 cords to the acre, and that satisfied me a large portion of the country had been covered with timber. They are planting there now, altogether almost, ash-leaf maple and the catalpa, and they claim that those two trees will flourish the best in the North-West?—I am in favor of the catalpa.

Q. You attribute the bareness of the southern slopes of the hills altogether to fires. Would it not be caused by the heat of the sun rotting the bark of the trees?—No; I deny that. No proof can be given that the sun destroys any trees in the North-West.

Q. Not even fruit?—That is a question I want to find out. I agree that our present fruit, with one or two exceptions, will never do in the North-West.

Q. Do you think that if raised from the seed, they would become acclimatized there?—I do; at least a part of them.

Q. Does not the wild plum occur there?—Yes.

Q. Would not that make an excellent stock for fruit trees?—No; I have tried it. It will not work.

Q. There was no indication of decay in these two trees, while in a number of others there was indication of decay?—I think the catalpa is like the lilac, grows for a time and then stops for the season.

Q. You gave an interesting description of the country about Gaspé and north of the lower St. Lawrence, but there is a very extensive country between Lake Nipissing and Lake of the Woods near the line of the Pacific Railway, and the climate is mild towards fall. How do you account for that. What influence would these inland lakes have on the climate?—Lake Superior makes the climate in the vicinity of the lake of a low temperature all the year round. The reason I mention this is—I compared the

tables for Halifax, N. S., and the tables for Fort William, Lake Superior, and found the two had about the same summer temperature. Three miles outside of Fort William, as you go up the Dawson Road, the whole character of the country changes, and instead of having the temperature of the lake shore, it has the temperature of the more favored localities in Ontario—speaking from plants. I could see no difference in the plants.

Q. About the Mattawan?—Yes. When I was at Mattawan, I found everything there growing as thrivingly as anywhere else. The influence of the lake ceases as soon as you attain the level above the lake. I was at the Pio and Nipigon and all around there, and, as you receded from the lake, I found the temperature change, and one or two miles from the lake it became the same as the whole way across. I am positive that all that we need is the application of common sense to the knowledge we have, to show that our vast interior here has a climate suitable to the growth of everything we need. But local causes produce local effects, and I am speaking only on the general line. I have no doubt the whole of the line of the Pacific Railway will be found suitable for continuous settlement except through the marshes.

Q. Half of that country or a large portion of it is covered with water. There are many deep lakes between Lake Nipissing and Lake of the Woods, both south and north of the watershed. These lakes get highly heated in summer though they are cold in the spring. You find a temperature of 70 very often in the lakes. Must not that have an influence on the climate in the fall?—Yes. Snow will fall there before frost comes, and I, would not be the least astonished to find that potatoes could be left out in the ground the whole winter, simply because frost comes so late. Owing to the water and the heating power of it, the temperature does not sink locally until it sinks generally, and a sudden change finds everything growing, and down comes the snow and covers it.

Q. Where it was wooded, I understood you to say it would have the effect of bringing the rain fall. What extent of wooded land would it require to produce that result?—In a protracted drought, it would require a great deal to change the condition, but, where the drought was not protracted, a very little would change the temperature so as to cause condensation and produce rain, but where the drought is long protracted—it is not for me to say how much; I could not do it; I should be going into the region of theory.

Q. You said water was falling all around some hills where you were?—Yes; and never came near those sand hills because they were so hot.

Q. How much territory was there?—Only five or six square miles.

Q. The trees prevent the evaporation of the absorbed heat?—Yes; and cause condensation.

Advice to Mothers.

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

Do NOT BE DUPED.—A recently advertised and highly puffed remedy for deafness has lately been exposed as an unmitigated fraud. Not so with Hagyard's Yellow Oil; none name it but to praise. John Clark, of Millbridge, testifies that it cured him of deafness.

A GREAT SOURCE OF EVIL.—Every farmer will admit that one of the most destructive evils of good crops is that of worms or parasites that prey upon vegetable life; other species of worms infect the human system and are productive of much suffering and ill health. Freeman's Worm Powders will effectually rid the system of this trouble, are pleasant to take and contain their own cathartic.

Chips.

The Boston correspondent of the *Northwestern Lumberman* says:—The spruce market is showing considerable activity, a prospect of a shortage at the mills has had a tendency to run up prices, and as the demand is good, the situation is encouraging to those who are able to fill orders. It is even a better state of affairs in hemlock. The demand is larger than the supply, and prices are very firm.

OAK of the finest qualities, chestnut, various kinds of pine, poplar, beech, locust, elm and hickory are abundant in East Tennessee. Black walnut, ash, cherry and holly are obtained in large quantities. The shipments of lumber are rapidly increasing in Boston, Cincinnati, New York, and to Europe. Especially is the European demand for oak, black walnut, and locust of importance.—*American Lumberman*.

IN the whole world there are no known redwood forests outside of California. It is a significant fact, however, that one fourth more finished lumber, suitable for interior housework, can be obtained from Humboldt timber than from timber grown in any other county in that state. Unlike many other kinds of trees, redwood stumps can be used to profitable advantage for veneering purposes, slices from these stumps are said to be highly prized, and may probably in time prove almost invaluable.—*American Lumberman*.

THE hand of fate has again been laid heavily upon the property of O. D. Peck & Sons, Oshkosh, Wis., or rather the probability is that it was the hand of an incendiary. Within the last few months this firm has had its saw-mill burned to the ground, and last Thursday the planing mill was destroyed, having on two previous occasions been severely damaged by fire. This time the loss amounts to \$100,000, including a quantity of sash, doors and blinds stored in an adjacent warehouse, which was burned. The insurance is \$41,300.—*Northwestern Lumberman*.

THE *Lumberman's Gazette* says:—It may be set down as a fact that 350,000,000 feet of the log cut of last winter in the Mississippi district has been hung up and will not reach the market this season, and the same state of affairs exists in the Saginaw valley district, as also in Wisconsin, although to what extent has not been definitely settled, which makes an enormous shortage in the anticipated supply, and the lumber business therefore, so far as prices are concerned, may be considered more than ordinarily safe from fluctuation. The purchases already made for delivery next season also demonstrate beyond a peradventure the faith that dealers have in the stability of the market.

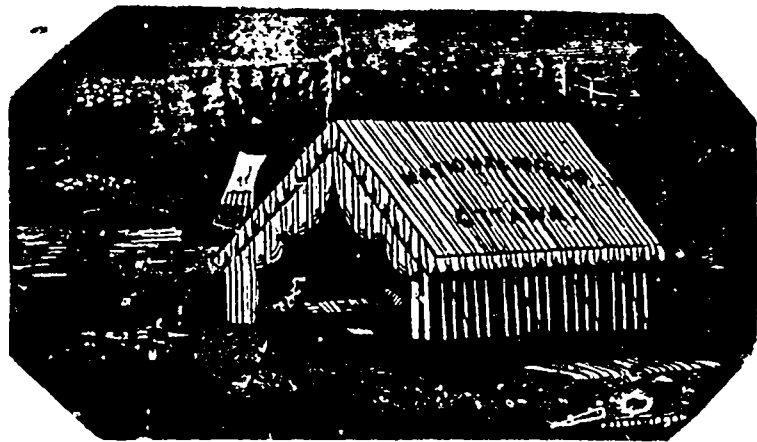
THE economy practiced in the saw mills hereabouts, says a Bay City, Mich., paper, excites the admiration of every observer. There seems to be no waste whatever. The dust as it falls from the saw passes on to the engine room where it is used for fuel. It is very valuable for this purpose. The edgings of the timber are generally used for filling dock property and worked up at the woodenware factories. The ends of the logs are sold for stove wood. Large edgings are turned into slabs which are piled up a short distance from the mill and used for fuel. In view of the remarkable faculty possessed by lumbering men of turning every portion of the logs to some account, the fact that large fortunes are made in the business excites no surprise.—*The Woodworker*.

THE Ottawa *Free Press* says:—E. B. Eddy fairly deserves the name of the most enterprising lumberman in the Ottawa Valley. Since the erection of his new premises he has had a complete electric fire alarm system (larger than the city of Ottawa's) put in operation, the stations of which cover every important point throughout the mills, factories and yards. The alarm bells are placed in the residences of the superintendent, foremen, etc., and also connected with the fire station. In addition to the above Mr. Eddy is now having his extensive establishments fully equipped with electric light thermostats for automatically and immediately giving notice of fire, even before any smoke or flame is visible. Mr. Eddy evidently realizes the value of electricity and will have one of the best protected concerns in the country.

National Manufacturing Co.

160 Sparks Street, Ottawa,

MANUFACTURERS OF



TENTS!

Camp Furniture and Hosiery.

OUR GOODS ARE THE BEST IN THE WORLD!

Four Gold and Silver Medals and Thirty-two First Prizes at the Toronto and Guelph Exhibitions, 1883.

Highest Awards at Sydney, New South Wales: Exhibition, June, 1883.



Lumbermen's Tents

A SPECIALTY!

At Prices Lower than ever before.

HEAVY SOCKS

Our own make, and at Prices Very Low!

SHANTY BLANKETS

IN GREAT VARIETY.

Liberal Discount to Large Buyers. Send for Catalogue

National Manufacturing Co.

160 Sparks Street, Ottawa.

P. O. BOX 345

Market Reports.

TORONTO.

From Our Own Correspondent.

Oct. 21.—Shipment by water are now rapidly drawing to a close. Owing to the low rates prevailing vessel men can not afford to lay sailors \$2.50 per day and carry lumber to Oswego at \$1.25 per M, so that after the end of this month most of the lumber crafts will tie up for the winter. The total shipments from our docks for the last two weeks amounts to 3,000,000 feet of lumber and 550,000 of shingles, and it is likely that as much more may get away before the winding up of navigation. The retail yards seem to be doing a fair trade, although the plasterers strike is having considerable effect in reducing the volume of trade. Architects offices are said to have plenty of work in prospect, and usually when this is the case some one of the building trades mar their prospects by a labor strike. If, as predicted by some, the coming winter should prove open and mild, considerable building will be carried on in this city.

It is now almost certain that the stock of logs to be got out this winter will be much smaller than usual, owing to the large quantity of lumber to be wintered over. Our Lanks are steadily refusing to advance mill men funds to any considerable extent, with which to stock up their mills, and it is devoutly to be hoped for that this policy on the part of the banks will be regularly adhered to, and, if so, the opening of the spring of 1884 will witness a much better state of things, to the ultimate advantage of all concerned.

The only article in the wood line that has money in it just now is cordwood, the price of which is advancing steadily after that of coal. Dealers are now offering as high as \$3.50 per cord for good hardwood, on ear, here, so that any persons holding any large quantity of good wood are likely to reap a golden harvest.

The charges mentioned in my last letter for shunting cars of lumber to the various sidings within the city limits are being rigidly enforced to the great annoyance of all the lumbermen concerned.

You will doubtless have noticed the last report made by N. & N. W. R. R. Co. showing their traffic receipts to have increased some \$15,000, as compared with the same period of last year, but they have neglected to inform the public that this increase is mainly due to the increase in their passenger traffic, whereas, but for their folly in advancing the tariff on lumber to western points their receipts on that kind of traffic should have doubled itself during the past two years, the lumber trade having increased with western Ontario nearly double during that time—wisdom will come to them in due time.

Table listing lumber prices for Mill cull boards, Shipping cull boards, Scantling and joist, Cutting up planks to dry, Sound dressing stocks, Three uppers, Am. inspection, 1-inch flooring, Dressing, 2 Beaded Sheeting, Dressing, Cask, canling, dressed, XXX sawn shingles, Sawn lath.

WINNIPEG.

The Winnipeg Commercial of Oct. 16, says: The demand for lumber continues brisk, and there will likely be a lively business done between now and Christmas. The quotations remain as follows:—Pine lumber, 1st, common boards, dressed, \$26.50; 2nd, dressed, \$25.50; 1st, do rough, \$26.50; 2nd, do., \$25.50; sheathing, rough, \$25; timber, 16 feet and under,

\$24; do. over 16 feet, for each additional 2 feet, \$1; dimension and joists 16 feet and under, \$24; do. over 16 feet for each \$1; fencing, \$25; 2 and 3 inch battens, \$30; A. stock boards, all widths, \$50; B. do., \$45; C. do., \$40; D. do., \$35; 1st clear, 1, 1 1/2, and 2 in, \$60; 2nd do. \$56; window and door casings, \$50; base boards, dressed, \$50; 1st pine flooring, siding and ceiling \$10; 2nd do \$35; 3rd do., \$30; 1/2 inch split siding, dressed, \$30. Spruce lumber timber 16 feet and under, \$22, do. over 16 feet, for each additional 2 feet, \$1; dimensions and joists, 16 feet and under, \$23; do. over 16 feet, for each additional 2 feet, \$1; boards, \$22; 1st flooring, siding and ceiling, \$28; XX shingles, \$5.25; Star A shingles, \$5.25; X shingles, \$5.00; A do. \$4.50; lath \$1.50.

MONTREAL.

The Montreal Gazette of Oct. 19th, says:—The local market has been quiet during the week, but former prices are sustained. There is a good demand for hard wood for the American market, but supplies are not excessive here, and dealers, therefore, do not care to sell. Laths have again advanced 1/2c. being now up to \$1.85 per thousand and are likely to go higher still, as they are very scarce.

QUEBEC.

The Chronicle of Oct. 12 says:—There seems to be no change for the better in this branch of business. Some more rafts have arrived, but the Quebec shippers seem to be well stocked for all present requirements, and are not inclined to purchase except at even lower rates than the present. We hear that 100,000 feet of choice St. Lawrence pine, of 18 1/2 inches, changed hands at 32 cents. We hear of no other transactions this week.

ALBANY.

Table listing lumber prices at Albany yards, including Pine, clear, Pine, fourths, Pine, selects, Pine, good box, Pine, 10-in. plank, etc.

BOSTON.

Cotton, Wool and Iron of Oct. 20, says:—The general market holds its own quite satisfactorily. There is a good, steady demand for supplies of white pine of all grades above common. Coarse and lower grade lumber, as a rule, is little wanted. Spruce and hemlock continue firm and in steady demand. Laths are as scarce as ever, and prices are high and stiff. Southern pine moves fairly at about previous prices. The best grades of cherry are in good request, and similar remarks apply in a less degree to ash and walnut. Our quotations are for car-load lots.

CANADA PINE.

Table listing prices for Canada Pine, including Selects, Dressed, Shelving, Dressed, 2nds, Dressed Shippers, Dressed Box, Sheathing, 1st quality, 2nd.

BUFFALO.

Table listing prices for Buffalo lumber, including We quote cargo lots, Uppers, Common, Culls.

CHICAGO.

The Northwestern Lumberman of Oct. 20, says: The arrivals of lumber cargoes at this port during the past week have been less in number than during the week previous—namely, 218 this week and 265 last week. On Saturday 59 loads put in an appearance, and on Sunday 26, so that a big fleet was present at the sales docks, about 6,000,000 feet being afloat for the usual busy time on Monday and Tuesday. From Monday to Wednesday the wind helped the loggers away from port, but was unfavorable to those that sought to get in. The result has been to effectually clean out offerings, so that on Thursday morning there was nearly a bare market, and the winds still unfavorable to the incoming fleet. This state of things leaves the hookers nearly all over the lake loading, with the prospect that when the wind changes there will be another rush and a crowded market.

Though prices have been rather limber, and on dimension have wavered around the pivotal point of \$9, the offerings have not been in such quantity as to cause an absolute glut and stagnation, though sales were somewhat slow the latter part of last week on account of an unusual fleet on Thursday. Cargoes have sold right along since Monday, the disposition of the commission men being sufficiently accommodating to start and keep up a movement. It is conceded by all that dimension has sagged a little in price, while No. 2 inch stuff has settled somewhat, in sympathy with dimension. The cause of this decline is apparent to all—too much coarse stuff is being offered in proportion to No. 1 lumber. The weakness of inch lumber pertains mainly to the poorer and less desirable qualities, and simply because dealers do not desire to continuously load up with it when they can not get good stock to sandwich in with the poor.

Really good cargoes are scarce, and any that give promise of turning out a fair percentage of selects and uppers are eagerly sought and well paid for.

Table listing receipts of lumber, shingles, etc. for the week ending Oct. 18, 1883.

Receipts of lumber, shingles, etc. for the week ending Oct. 18, as reported by the Lumberman's Exchange:—

Table showing receipts of lumber and shingles for 1883 and 1882, categorized by month.

STOCK ON HAND OCT. 1.

Table showing stock on hand for 1883 and 1882, including Lumber, Shingles, Lath, Pickets, Cedar posts.

OSWEGO, N. Y.

From Our Own Correspondent.

No change in quotations since last report. Receipts are still very light, nearly all arrivals now are of green lumber, the assortment is very good and the market well supplied. Receipts to date, 1883, 161,000,000; 1882, 81,000,000.

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

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Table listing prices for Tonnawanda lumber, including Three uppers, Common, Culls.

LONDON.

The Timber Trades Journal of Oct. 13 says:—The waney board at Wednesday's sale was in

request at \$5 5s. to \$5 15s. a load, but the two lots of square pine went very low at 67s. 6d. and 72s. 6d. a load. Stocks of ash are large, which seemed to tell unfavourably on the sale of the parcel of Quebec ex Brilliant, without reserve, on Wednesday, but the dimensions were not very large. Amongst the deals spruce went low, and the old parcels of pine as well did not exhibit any improvement on previous prices.

The Miramichi pine ex Atlantic, without reserve, went cheap enough, best wide stuff 12 to 20 ft., 11 up to 16 inch board, being knocked down at £12; but the price did not appear to create any surprise, the wood being known to be of a very coarse nature. The 2nds, also broad, went at £10 10s., the planks, and deals falling at a little better than spruce prices.

We observe that several of the reserved lots were bid for, and these mostly were allowed to go at 5s. on the broker's quotations. Whether this is indicative of more activity in the demand, or is due to the low upset price the goods were offered at, we can hardly say, but we are inclined to think it is to the latter that the seeming readiness on the part of the room to buy the reserved lots may be attributed. We are afraid the turning point in prices has not yet arrived.

GLASGOW.

The Timber Trades Journal of Oct. 13 says:—The consumption during the quarter ending 30 September last shows great activity, being as nearly as can be computed as follows:—Quebec waney board-wood and yellow and red pine logs, 16,900 loads; Quebec oak logs, 1,800 loads; elm, 980 loads; birch (all sorts), 725 loads; pitch pine logs, hewn and sawn, about 13,060 loads.

Compared with corresponding quarter in 1882 these figures show an increase over all to the extent of about 9,000 loads. The stock of birch, it will be observed, is very low. This year has been quite exceptional as regards lower port birch, of which there has been hardly any arrivals. Any early import would bring good prices. The consumption of Quebec deals (all sorts) for the past three months amounts to about 2,000 St. Petersburg standards, and of lower port deals to 2,500 standard.

LIVERPOOL.

The Timber Trades Journal of Oct. 13 says:—We've still having a fair amount of timber-land vessels on the arrival list, and these give the market no rest, for if a satisfactory price be not obtainable by private treaty, the goods are immediately put up for sale by auction, and forced off at the best price obtainable.

On Friday last, three auction sales were held by three different houses: at eleven o'clock in the morning by Messrs. Farnworth & Jardine, who offered 573 logs Nova Scotian birch timber and a few spruce deals; at twelve o'clock Messrs. A. F. & D. Mackay offered a parcel of St. John, N. B., spruce deals &c., and a cargo of Miramichi birch and pine timber, pine and spruce deals, &c.; followed by Messrs. Edward Chaloner & Co., offering a cargo of sawn pitch pine timber, planks, deals, &c.

SWEDEN.

The Stockholm correspondent of Timber Trades Journal writing on Oct. 6th, says:—Fall shipments from the north of Sweden are continuing reasonably moderate, although probably ample enough for the requirements of the English and French markets after the surfeit of goods sent forward to the countries named earlier in the season. One or two consignment shipments of sawn redwood to London by steamer are reported, but now that even steamer freights and insurances have risen, the chances of favorable auction realization are sufficiently remote to act as an effectual curb on ventures of this kind, notwithstanding the assurances held out to millowners by those whose interest it is to facilitate consignment business. I am therefore inclined to believe that the consignments now going forward are due to special circumstances, and this method of realizing Swedish sawn wood will only be resorted to in few cases this autumn. Planed wood, however, on the other hand, is being frequently shipped on consignment to London, even by the best firms,

one or two good marks being only obtainable there through the medium of the auction sales.

The statistical return of the Swedish wood export up to the end of August, 1883, as compared with the two preceding years for similar period, reads as follows, viz. —

	1883.	1882.	1881.
Sawn and planed wood	548,805	475,816	339,685 stds.
Sq. & partly			

Sq. timber 9,599,160 11,287,313 7,916,325 c. ft
This return is deserving of the very greatest attention by both exporters here and importers on your side. At the end of August, for instance, it is reasonable to assume that the irregularities of the earlier months, caused by an earlier or late opening of the ports, and which impair the comparative value of the statistics, have been effaced, and that we can first then form a pretty shrewd guess, not only what the total export of the season will be, but also how great an advantage stocks imported earlier in the season may be expected to have over those of September and October. I wish here to except London, however, as it has been found an extremely imprudent thing to base business calculations on what the stocks there may be expected to be like even a month hence. Returning to the statistics we find that the excess of sawn and planed wood in 1873 over last year, which was 46,971 Petersburg standards at end of July, had jumped to 72,989 standards at the end of August. Or, if we compare the present year with 1881, we are surprised to learn that the excess in 1883 of 165,266 standards up to 31st July had advanced at one leap to 209,120 standards at close of August. These figures are illustrative of the enormous development of producing power called forth by two or three prosperous seasons. It speaks well for the vitality of the trade that, notwithstanding the enormous export both last year and this, prices have not fallen more than they have done. It may in any case be taken for granted that full stocks exist at the present time in consumers' hands, and that a continuation of the export in similar volume to this and 1882 will inevitably lead to a disorganization of the trade in spite of the somewhat improved aspect of the market at present.

THE GLASGOW TRADE.

Singleton, Dun & Co.'s timber circular, dated Glasgow, 4th October, says:—

Stocks are much heavier than was supposed, and to balance this it will be necessary that shipments during the remainder of the season be on a very restricted scale. In almost all the items of stock the import up to the present has been over an average, and when to this is added the extra imports from the north of Europe at exceedingly low rates, it will be seen that the market on the whole is very tender. The consumption has been very fair, but the cry is here as elsewhere, that "there is no money in the business." It is quite evident, that as regards Quebec goods, holders dread the extreme prices, and turn over what they have as rapidly as they can, profit or no profit,—and, as regards Baltic goods, the facility with which supplies can now be put in the market by steamers make it useless to "hold" large stocks, as the moment there is a prospect of a spring in anything, extra supplies are forthcoming to make up a suspected deficiency. There is no doubt that European goods are largely displacing Canadian, and what with this, and the wretchedly low prices for pitch pine, the prospects for Quebec goods are the reverse of promising. Our local industries are fairly employed, and the aggregate consumption of wood will be large during the coming winter.

BOARDWOOD.—The stock is unusually large, and it should be noted of inferior quality to the usual average. Primo 20 in. average was placed at 2s 6d to 2s 7d. A parcel, really good, 45 feet average was sold at 2s 1 1/2d, and a parcel 18 in., excellent wood, at 2s 5d der cubic foot. A parcel, fairish 21 in. average, went at 2s 5 1/2d, and some 24x27 in average at 2s 7d to 2s 8d, while a parcel 23 feet and up, by about 24 in average, is offering at 2s 10d. Common qualities are very hard to move, and importers desire to quit these at best rates obtainable.

WHITE PINE.—Dock plank wood—Sales of

this were made at 2s 7d. to 2s 8d per c. foot for primo 65 to 60 feet average, and a lot of choico 70 feet average at 2s 11d per cubic foot. The stock of primo deck plank wood is small however. Good fair average is most difficult to move, and importers decline now to contract for such. Jointing was sold at, for 35 feet average, 18d to 19d, and for 45 feet average 19d. A parcel of good 40 feet average brought 19d, and a line of 75 cubic feet average realized only 19d. It is most difficult (almost impossible) to obtain prices to cover cost of this wood, consumers finding it easy to get other cheaper woods substituted, and only when sellers are induced to accept low rates will white pine be taken. The stock, however, is not very large, and if quantities are not greatly increased, present rates should be sustained.

RED PINE.—The stock is moderate; but rates do not improve. It is quite hopeless to realize prices to cover Quebec quotations so long as European goods and pitch pine are so abundant and cheap. For 30 feet average 12 1/2d to 13 1/2d was taken, and for 40 feet average 15d to 16d per cubic foot.

Deals—1st pine.—The demand is only for wide and long. Oddments are seldom asked for. Parcels were sold at from 2s 3d to 2s 11d, and an entire parcel, all under 11 in., at 2s 6d per cubic foot. 2nd Pine—Demand very slow. 3rd Pine—For 12 to 16 ft. 11 x 3, price is from 13d to 14d.—cl. fly 13 1/2. A nice parcel, all 10 to 11 x 9 and 11x3, recently landed, was cleared at 12d 12 1/2d. Broad deals are worth 1sd to 17d per cubic foot, according to specification. At Greenock some parcels were sold at 11 1/2d. 4th Pine—At Greenock several parcels were sold at 9 1/2d to 10d. At Glasgow a small parcel was sold at 11d, and a parcel 12 in. and up at 13d.

THE AUSTRALIAN TRADE.

Messrs. Gemmell, Tuckett & Co.'s latest report, dated Melbourne, August 27th, says:— Since last issue the deliveries from the store-yards have been below the average of several months past, and we do not look for any improvement in this respect during next month. Dealers report a fair town trade, but a considerable falling off in the demand for up-country. American lumber.—Sales, ex Scottish Prince, Emily F. Whitney, Coriolanus, and Freeman. Michigan clear pine realized 1 1/2, 1 1/2, 2, 2 1/2, 4 in., good quality, £17 to £17 2s. 6d.; inferior, 1 1/2, 2 in., £14 7s. 6d. to £15; 12x1, 14x1, 16x1 dressed clear pine, £16 to £16 2s. 6d.; w. p. shelving, 12, 14, 16 in., £11 7s. 6d. to £12 10s., according to quality; Canada clear pine, 1 1/2, 1 1/2, 2 in., good, £14 17s. 6d. to £15 5s.; 1 1/2, 2 in., inferior, £12 15s. to £13 7s. 6d. per M. feet super. Prices on the whole show an advance on last month's rates. The trade hold moderate stocks, and prices are likely to continue firm.

Messrs. C. S. Ross & Co. say:—We have to report a fair amount of business since last issue, but owing to a falling off in the demand for consumption and heavy arrivals, prices generally are lower. The arrivals of flooring boards have been excessive, and as importers show no inclination to hold, prices are declining. A fair average business is reported for consumption; but as money is dearer with a tendency to harden, the building operations of the colony will not be so large as last year. The arrivals for past four weeks have been the Ben Cruchan, Loch Sloy, Loch Long, City of Agra, Holmsdale, Arisides, Crofton Hall, Macduff, Gulf of Carpentaria, Gulf of St. Vincent, Respigadera, Pathan, Newcomen, Aristomene, Loddington, and Amalii from United Kingdom, with red deals, flooring, laths, &c.; Sumarlide, from Fredrikstad; Broderens and Union, from Laurvig, with flooring; Freeman, from Boston, with spruce deals, t. and g. ceiling, clear pine, &c.

THE Ottawa Free Press of Oct. 20th, says:—Chaudiere and other saw mills in this district are still running regularly. Night watches in some of them have been discontinued. The market remains quiet, a steady business being done. No more lumber will be carried over this winter than last, and although all the stock yards will be well filled, as usual, most of the stock is disposed of. As regards the prospects in the woods, it is said that the quantity to be

WILLIAM COOK & SONS,
GLASGOW STEEL and FILE WORKS,
SHEFFIELD,
Manufacturers of Best Quality Steel, Files, Saws & Grucible Steel Castings.
ly **AGENTS FOR CANADA:—** 121
RAE & WATSON, 22 Church Street, TORONTO, Ont.

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

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut
And all other Kinds of **HARDWOOD LUMBER.**
White and Yellow Pine Lumber and Timber.
Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally. 17

taken out this winter will be only about one-third the quantity taken out last season.

RAFTS ARRIVED.

The Chronicle gives the following list of rafts, etc., arrived at Quebec:
Oct. 11.—J. K. Ward, pine, &c., St. Lawrence Docks.
McArthur Bros., staves, New London cove.
D. D. Calvin & Co., oak, &c., sundry coves.
David Moore, white pine, &c., Cap Rouge.
Collins Bay Co., oak, &c., Sharples' cove.
Cook Bros., white pine, St. Michael's cove.
Oct. 18.—S. A. Julien, deals, Commercial wharf.
John McRae & Co., staves, Indian Cove west.
Ross Brothers, deals, Bridgewater cove.
Simon Wyle, staves, Woodfield cove.
McArthur Bros., deals, Levis.
D. D. Calvin & Co., oak, &c., sundry coves.

LUMBER
Shingles, Doors, Sash, Flooring, &c.,
WANTED,
STATE QUANTITIES AND PRICE TO
SHORE & DAVIS,
Head Office, 514 Malne Street, Wintupcg, Man.

D'FOWLERS' EXTRACT OF WILD STRAWBERRY
CURES
CHOLERA CHOLERA INFANTUM DIARRHŒA.
AND
ALL SUMMER COMPLAINTS
Sold by all Dealers.



BARRON'S LUMBER DRYER
J. J. CURRAN, Inventor.
CURRAN & WOLFF, Proprietors for the U.S.
39 & 41, Franklin Street, Chicago.
A. F. BARRON,
Patentee and Builder for the Dominion of Canada,
Office, 9, Corn Exchange,
MONTREAL,

Send for descriptive Pamphlet containing list of parties using this Dry Kiln in the United States. Dryers built and in working order by the following Companies:— James Shearer, Saw and Planing Mill, Montreal; James Crossen, (car builder), Cobourg, Ont.; Canada; Pacific L.R., Perth, Ont.; Kingston Car Works, Kingston, Ont.; Pike & Richardson (Cooperative Co.), Chatham, Ont.; Evers, Manufacturing Co., Sash, Doors, Blinds, Mouldings, &c., Toronto, Ont.; Grand Trunk R.R., London, Ont.; Steinhoff, Schnoor & Co., Staves and Heading, Wallaceburg, Ont. 121

DOWN'S' ELIXIR
N. H. DOWN'S' VEGETABLE BALSAM
ELIXIR
Has stood the test for FIFTY-THREE YEARS, and has proved itself the best remedy known for the cure of
Consumption, Coughs, Colds, Whooping Cough and all Lung Diseases in young or old. **SOLD EVERYWHERE.**
Price 25c. and \$1.00 per Bottle.
DOWN'S' ELIXIR

WOODEN COLUMNS.

A series of experiments have been conducted on the testing machine at the Watertown arsenal by Prof. Lanza, of the department of mechanical instruction of the institute of technology. The object in view was to ascertain the strength of wooden columns of the size and length commonly used in the construction of cotton and woollen mills. The experiments were made at the instance of the Boston Manufacturers' Fire Insurance Company, of which Edward Atkinson is president. This testing machine was recognized as an invention of the greatest importance in the bestowal through a committee of experts, of the gold medal, the highest award of the recent mechanics' fair. Although it has been for some time in operation for scientific and other tests, it gains through this fact a new interest for the public. A part of the columns thus tested were yellow or hard pine, and a part oak. About a dozen so far have been subjected to the process of compression in the machine, the strain having been brought upon them endwise for the purpose of ascertaining what is called the "crushing strength" of the timber. Outside of these experiments and a few others at Watertown, none have been made on wooden columns of sufficient size to furnish reliable data for practice. The experiments made elsewhere, and those on which the formula in text-books are based, have been upon columns of about two inches on a side and of four or five feet in length. From the results thus reached the strength of columns of dimensions actually used in buildings has been computed. It is plain that a series of experiments conducted under the direction of experts, and by them authoritatively recorded will constitute much more satisfactory data for the text-books. The experiments, therefore, have a significance beyond the nowise unimportant one that pertains to them in the matter of mill construction. All but two of the columns experimented on were round hollow columns, of from eight to eleven inches diameter, the two being about nine inches square. The greatest amount of pressure exerted in any case was about 250,000 pounds. The tests have disclosed frequent instances of defective boring in the columns. The object in boring is to open an air passage through the heart of the stick for the prevention of dry rot after it is in position in the building. It is essential, of course, that the bore should extend from end to end, but this has not always been effected. The sticks were bored first from one end then from the other, and the borings have sometimes failed to meet in the middle of the stick. The tests also show that to taper the sticks is a mistake, inasmuch as it weakens the column more than has heretofore been estimated. Reasons for exercising more caution in other respects in the construction and adjustment of wooden columns in building having also been disclosed.—*Boston Advertiser.*

CANADIAN SHIPMENT TO LONDON.

The *Timber Trades Journal* of Oct. 6, says: The arrivals this year from Quebec are somewhat in excess of those of last year, so that if the increase in yarded stocks had been even more marked, it would not have been a matter of surprise. There were between the 1st of January and the 4th of October, 1882, 28 cargoes from Quebec, 19 from Montreal, and five from Saguenay. This year to similar date, Quebec supplied 32 cargoes, Montreal 23, and Saguenay only 1. On the whole the difference is only slightly in favor of the present season. From the spruce ports the present year is also more prolific in tonnage and brings the stocks up considerably in excess of those of 1882, though the shipments this year up to the present time are by no means inordinately large.

There are more spruce deals in stock now than this time twelvemonth by 80,041 pieces, and battens of this description are already 67,703 or so over and above what were in stock at similar date last year, ends are also more by 7,756 pieces.

The arrivals last year up to the 4th October were: Miranichi 5, Halifax 2; St. John 3, and Betaniamit, 3; altogether 13, against ten cargoes come forward up to the present time from the ports named.

The Canadian shipments, including the spruce

cargoes with the pine, give a preponderance for 1883, as against the year before. The difference in favor of the present year being, as stated, all made up of spruce shipments.

WALNUT IN VIRGINIA.

A correspondent to the *Tradesman*, Chattanooga, Tenn., writes as follows concerning the lumber interest at Pocahontas, Va.: Two large firms are engaged in the lumber business here, their operations being at present confined to the walnut trade. Some days as many as 100 wagons come to this place loaded with walnut logs and lumber. Recently, one of these huge logs which came in measured 1,000 feet of lumber, and is worth about \$85. Twelve thousand dollars worth of logs have been sent off in a single week. The representatives of the Tazewell Lumber Company says that they have bought enough walnut lumber in Tazewell to keep 10 teams running for 25 years to haul it to Graham. The other firm, J. M. Thomas & Co., has sold and has on the ground 1,600,000 feet. It sells to a Baltimore firm, which ships the pick of the stock direct to Amsterdam and Bremen. The rate of depletion will soon exhaust the walnut, but there remains almost untouched millions upon millions of oak, hemlock, ash, pine, hickory, cherry and other woods, which will make this a centre for lumbermen for years to come, as it is the natural trading point for six counties, three in Virginia—Tazewell, Bland and Russell—and three in West Virginia—Monroe, McDowell and Wyoming.

Summer Frosts and Tree Planting.

The following appears in the *Globe*:—The visit of Messrs. Gordon and Payne to the North-West will, no doubt, be the means of adding very largely to our present stock of information in regard to the North-West climate. Lieut. Gordon, in conversation with a *Globe* reporter, said that summer frosts were not uncommon in some parts of the North-West, but how far they would interfere with wheat culture was impossible yet to say. In the Far West, he thought many of them might be prevented by the planting of whole townships in forest. Such plantations would furnish a screen of vapour over and around them for some distance, which would check the excessive radiation of heat into space which now occurs in clear weather as soon as the sun goes down. The forests would alone repay their cost by furnishing supplies of wood to the railways and to settlers.

At East Wilton, Mo., a large amount of birch lumber is annually shipped to Scotland for spool making. Large quantities of boards are also shipped from that point to South America and places in this country.

The claim of the Keowatin lumber company to the island in the Lake of the Woods has been relinquished. The Dominion government has entered into arrangements with the company to grant them certain additional timber limits on Clearwater and Ptarmigan bays, in order to secure their lease to the islands to facilitate mining operations.

The elm trade between Ontario and the United States is growing in importance. There are large tracts of low lands in western Ontario, covered principally with elm. Of late years the demand for hoops and staves has prompted the conversion of this elm into cooper stock, and numerous stave and hoop mills have been started, and considerable capital invested in the business.—*The Woodworker.*

SEVERAL of the Michigan lumbermen have declared that unless the existing extra rate of 20 cents per thousand feet for transporting logs, charged by the Michigan Central road, is removed, they will not put in any more logs by rail, claiming they can be floated more cheaply.

It is now asserted that the box shooke business did not originate in Bangor, Maine, but that the first shooke ever manufactured by the process now in vogue were cut out in Dexter, on a machine invented by Reuben Flanders, and which machine has for many years cut out on an average one hundred thousand boxes per annum and is still running in the old mill.

An Abandoned Vessel Saved.

The *Timber Trades Journal* of Oct. 6, says: On Wednesday week the mate and three seamen of the Familien Minde, a Norwegian vessel, took into Newport a derelict Portuguese vessel named Pora Amelia, which they had picked up off the banks of Newfoundland on the 26th August. She was loaded with timber, and during a gale the master and his son were washed overboard. The crew then abandoned her. The vessel and cargo will prove a valuable prize for the sailors. The Familien Minde arrived in the Thames on Tuesday, and as she was coming up the river the mate of the Portuguese vessel, who had been brought on by the barque after having abandoned his vessel, tied a grindstone to his neck and jumped overboard. It is supposed that he committed suicide to avoid the consequence of having abandoned his ship.

Lake Winnipeg and Bearings River.

Mr. Alexander McKay, of Ottawa, Ont., recently made a trip from Winnipeg, Manitoba, to Lake Winnipeg and vicinity, to investigate the situation. He was interested personally to the extent of the ownership of a 50-mile limit on Bearings river. A gentleman who accompanied Mr. McKay says regarding the Lake Winnipeg and Bearings river district, that there is considerable spruce and comparatively little pine there, and none of any size. The Bearings river is very rough, and the rapids are very numerous, though not to such an extent as seriously interfere with log-driving. The cost of operating will be considerable, but the lumber business, it is supposed, will pay reasonably well.—*Northwestern Lumberman.*

New Iron Frame Gang Mill.

The William Hamilton Manufacturing Company of Peterborough are now engaged in constructing an Iron Gang Frame for the mill now in course of erections for Messrs. Cook Bros., Serpent River Georgian Bay. This gang is largely the personal design of Mr. Wm. Hamilton, and when completed will weigh over twenty tons. We shall give our readers a full description of it ere long.

THE *Timber Trades Journal* says:—Another illustration of the extreme old age to which wooden vessels survive is that of a smack of 37 tons register, named the John and Samuel, which is now discharging old iron at Greenock. She is 121 years old, having been built in London in 1762. This little craft, which is one of the oldest merchant vessels afloat, seems in fairly good trim.

THE *London Timber Trades Journal* says:—There appears to be a considerable movement in the spruce market, which, in company with Baltic whitewood, has remained in a very dull state for the most of the season, and now, as the shipping season is practically over, the importers in Liverpool and elsewhere are able to form a moderately accurate estimate of the quantities that will have to be dealt with.

THE Ottawa correspondent of the *Globe* under the date of Oct. 17th, says:—"Mr. J. B. Tackaberry sold by public auction to-day the following timber limits on the Georgian Bay, belonging to James McLaren and others:—Limit 48 sold for \$20,000 to Thomas Kenney, and also limit 56 for \$36,000; limit 63 to James Worthington for \$24,500; limit 64 to Thomas Kenney for \$5,200, limit 72 to James Worthington for \$15,000. The sale in all amounted to \$110,000."

TRIED IN TORONTO.—Mrs. Mary Thompson, of Toronto, reports the removal of eight feet of tape-worm by the use of one bottle of Dr. Low's Pleasant Worm Syrup. This medicine is reliable for all kinds of worms that afflict children or adults.

A COMMON ANNOYANCE.—Many people suffer from distressing attacks of sick headache, nausea, and other bilious troubles, who might easily be cured by Burdock Blood Bitters. It cured Lottie Howard, of Buffalo, N. Y., of this complaint and she praises it highly.

CAUTION.—We advise all who are afflicted with a cough or cold to beware of opiates and all medicines that smother and check a cough suddenly, as serious results surely follow. Hayward's Pectoral Balsam loosens and breaks up coughs and colds in a safe and effectual manner.

McCracken, Gall & Co.,

WHOLESALE AND RETAIL

LUMBER MERCHANTS
And MANUFACTURERS,

Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM-VITÆ, RED CEDAR, &c., American and French VENEERS.

Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.

Yard: Cor. Wellington & Strachan Aves.

Factory: Corner Soho and Phoebe Streets.

Office: 39 Adelaide Street East, (First Floor, nearly opposite the Post Office).

15 TORONTO, ONT. 15

How Many Miles Do You Drive!

The
ODOMETER
Will Tell.

This instrument is no larger than a watch. It tells the exact number of miles driven to the 1-100th part of a mile; counts up to 1,000 miles; water and dust tight; always in order; saves horses from being over-driven; is easily attached to the wheel of a Huggy, Carriage, Sulky, Wagon, Road Cart, Sulky Plough, Harrow, Mower, or other vehicle. Invaluable to LIVERYMEN, PLEASURE DRIVERS, PRIVATEERS, FARMERS, SUBSCRIBERS, DRAYMEN, EXPRESSMEN, STAGE OWNERS, &c. Price only \$5.00 each, one-third the price of any other Odometer. When ordering give diameter of the wheel. Sent by mail on receipt of price, post paid. Address

McDONNELL ODOMETER CO.,

2 North La Salle St., Chicago.

Send for Circular. 16110

\$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you, men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly so well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUX & Co., Augusta, Maine.

Health is Wealth.



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

DR. FOWLER'S
EXTRACT OF WILD
STRAWBERRY
CURES
CHOLERA
CHOLERA INFANTUM
DIARRHOEA.
AND
ALL SUMMER COMPLAINTS
SOLD BY ALL DEALERS.

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,
ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills
L711



Established 1874.

Established 1874.

NORMAN'S ELECTRO CURATIVE APPLIANCES

RELIEVE AND CURE

Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

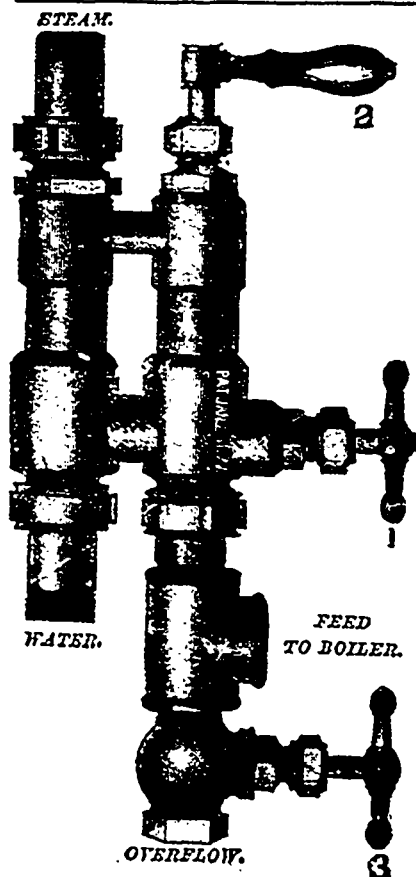
A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1117



THE

Hancock Inspirator

The Best Feed known for Stationery, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED!

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

Over 50,000 Now in Use.

MANUFACTURED BY THE

Hancock Inspirator Co'y

5 CUSTOM HOUSE SQUARE,
MONTREAL, P.Q., CANADA.

Manufacturers of Inspirators, Ejectors, and General Jet Apparatus.

12120

MONTREAL AXE WORKS

MOCOCK & SON

St. Gabriel Locks, - Montreal,

-MANUFACTURERS OF-

AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

12120

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

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

LOWEST MARKET PRICES.

12120

H. R. IVES & CO.

Hardware and Stove Manufacturers
AND FOUNDERS.

No. 2, Portable
Forges.

Boring Machines.

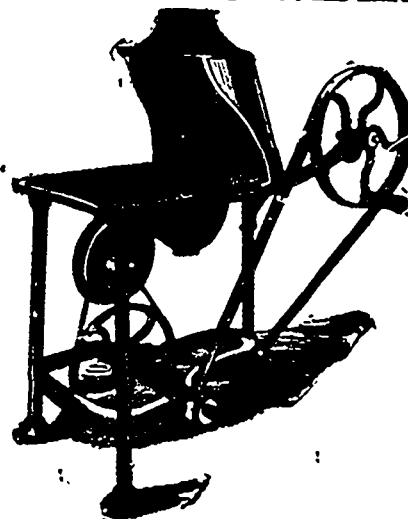
Mortising "

Jack Screws.

Cook Stoves.

Shanty Stoves.

Stove Pots.



Anvils and Vice
Combined.

Blacksmith Drills

Tuyere Irons.

Camp Ovens or
Chaudrons.

Tin Kettles.

&c., &c.

MONTREAL, P.Q.

SEND FOR CIRCULAR AND PRICES.

2120



**THOS. GRAHAM & Co.,
File Manufacturers**

ETC.,
150 FRONT STREET EAST
TORONTO.

FILES FOR SALE. FILES RE-CUT

F. E. DIXON & CO.

MANUFACTURERS OF

STAR RIVET



LEATHER BELTING

70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. Send for Price List and Discounts.

EAGLE FOUNDRY!

GEORGE BRUSH

14 to 34 King and Queen Sts, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,
Hand and Power Hoists for Warehouses, &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

AND AGENT FOR

15121

"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

ROBERTSON'S

LIGHTNING CANT DOG

STEEL RING.

The Lightest, Cheapest and Most Durable
CANT DOG in the World.

PETER ROBERTSON,

Chaudiere, - Ottawa.

12120

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 tables with a delicately flavored beverage which will save us many heavy doctor's 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 in this only (3-lb. and 1b.) by Grocers, labelled thus:

JAMES EPPS & Co., Homoeopathic Chemists,
15121 London, England.

WISE

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

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



CHICAGO, ROCK ISLAND & PACIFIC R.R.

By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depot, with the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of most comfortable and beautiful Day Coaches, Magnificent Horton Heating Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

"ALBERT LEA ROUTE."

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, North, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

All Through Passengers Travel on Fast Express Trains.

Tickets for sale at all principal Ticket Offices in the United States and Canada.

Baggage checked through and rates of fare as low as competitors that offer less advantages.

For detailed information, get the Maps and Fold-ers of the

GREAT ROCK ISLAND ROUTE,

At your nearest Ticket Office, or address

R. R. CABLE, E. ST. JOHN,
Vice-Pres. & Gen'l Mgr. Gen'l Trk. & Pass. Agt.

CHICAGO.

READY MADE HOUSES.

We have before referred to the large business carried on in some sections of the country by the manufacturing of ready made houses. A correspondent of the *Old Colony Memorial* paid a visit not long ago to Fairfield, Mo., where a large establishment is located for the production of these knock down houses, and he says that few have any idea to what extent this business has been carried in Waterville and its neighborhood, or to what perfection it has been brought. In the establishment to which we refer dwelling houses are made, like boots and shoes, in any quantity, and of any size or style, and for any market in the wide world. Not long since this concern received a single order for 50 houses for Cape May, to be delivered speedily and in complete finish.

These houses were to be not sheds or shanties but regularly ordered dwellings; and they were made accordingly and so delivered, and contain hundreds of occupants at this moment. An order will be received for a \$50,000 hotel, or an ornate, French roof cottage, for a fine country estate, and these as easily and expeditiously furnished as an ordinary boarding house for a country village, or a barn for a ranch in Kansas or Colorado. Do not suppose that only a coarse, rough frame is thus sent out, to be trimmed into shape on the spot where it is delivered! On the contrary, the house is complete when it leaves the factory, and as ready to go together as is a musket when it leaves the armory at Springfield, all the parts being found, even to the knobs for the doors, and the screens and shades for the doors and windows, according to specifications. Great trains of freight cars stand waiting about, and are freighted almost daily here. The refuse trimmings and edge cuttings of the lumber are carted off to a neighboring pulp mill, and there speedily turned into material for paper or other products. Machinery for almost every conceivable use in connection with wood is at hand, and house materials of any kind or size or shape, seem to drop out like meal from a hopper. In a recent instance where a large building was furnished for a southern order, the parts were thus made, and when put together in the city where the building is now standing the length of the latter was found to vary not the eighth of an inch from the original specifications, although its length on the front numbered hundred of feet. Every inch of this building, from the sill to the last shingle, was sent ready prepared from this factory, and "set up" as readily and almost as quickly as a nail cask.

On the Line of the C. P. R.

The Thunder Bay Sentinel gives the following classified list of the saw mills along the lines of the C. P. R. They are as follows:—

Owner.	Location.	Cutting capacity per day ft.
Winnipeg Lumber Co.	Winnipeg	90,000
Brown & Rutherford	Winnipeg	18,000
D. E. Sprague	Winnipeg	40,000
J. H. Sutherland & Co.	St. Boniface	155,000
Corney & Watson	Emerson	20,000
R. A. Balfour	Emerson	25,000
E. M. Birnison	Croes Lake	4,000
John Ross	Whitemouth	10,000
Dick & Banning	Keewatin	50,000
F. T. Bulmer & Co.	Keewatin	15,000
John Mather	Keewatin	100,000
Rainy Lumber Co.	Rat Portage	200,000
F. T. Bulmer & Co.	Rat Portage	50,000
Algoma Lumber Co.	Fort William	40,000
Thunder Bay Lumber Co.	Port Arthur	60,000
Jarrett Bros.	Port Arthur	20,000
Shields & Co.	Brandon	40,000
Northwest Lumber Co.	Selkirk	40,000
W. A. Smith	Portage la Prairie	3,000
W. P. Smith	Portage la Prairie	10,000

Falling Leaves.

"There is something inexpressibly touching in the fallen leaves," sighs an esteemed author. There is, there is, indeed. It's when you slip on one of the articles on a wet morning, and touch the unsympathetic pavement. But there is in reality touching language—language uttered from the heart, yes, from the depths of the soul, in the many thousands of testimonials and letters (unsolicited) that come from those who once were sufferers from lung disease, asthma and consumption, and who have used N. H. Down's Vegetable Balsamic Elixir, and have been restored to their wonted health and activity.



The William Hamilton Manufacturing Co'y

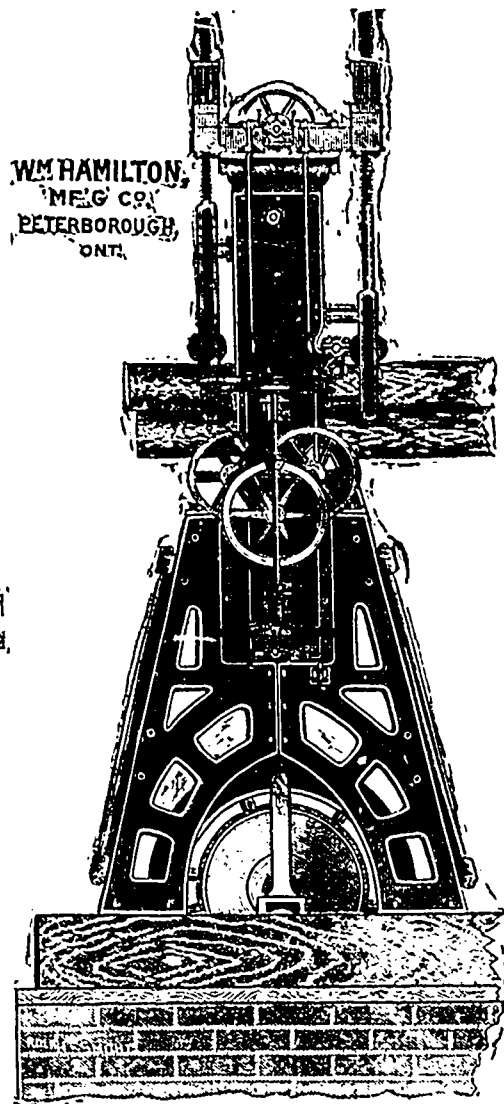
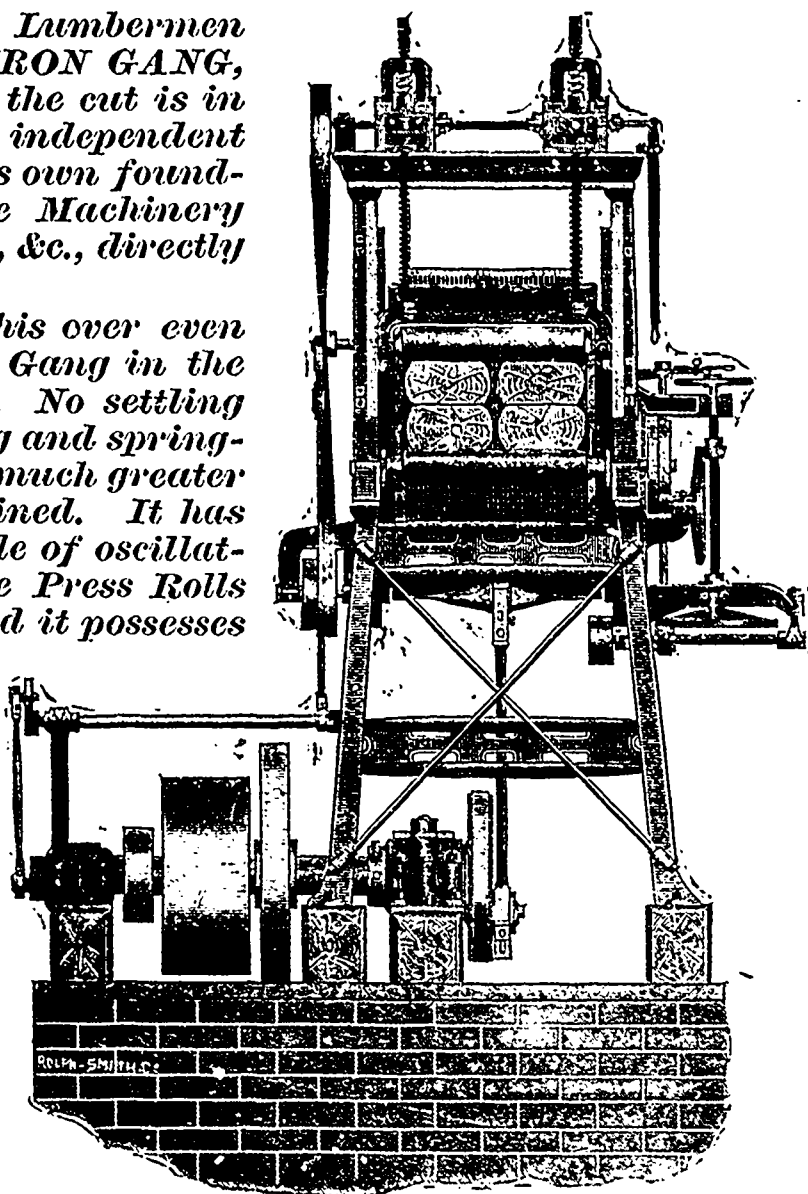
MANUFACTURERS OF (LIMITED)

Saw Mills and General Machinery

PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power; and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines, satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

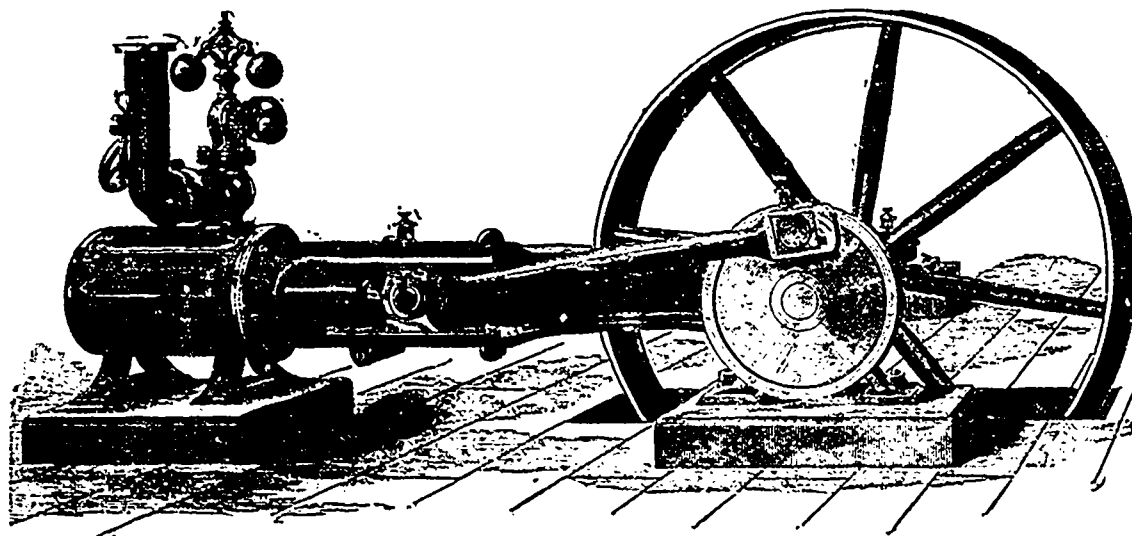


WM. HAMILTON,
MFG. CO.,
PETERBOROUGH,
ONT.

We make these Gangs one of our specialties and manufacture them of different sizes.

— ALSO —

ENGINES AND BOILERS.



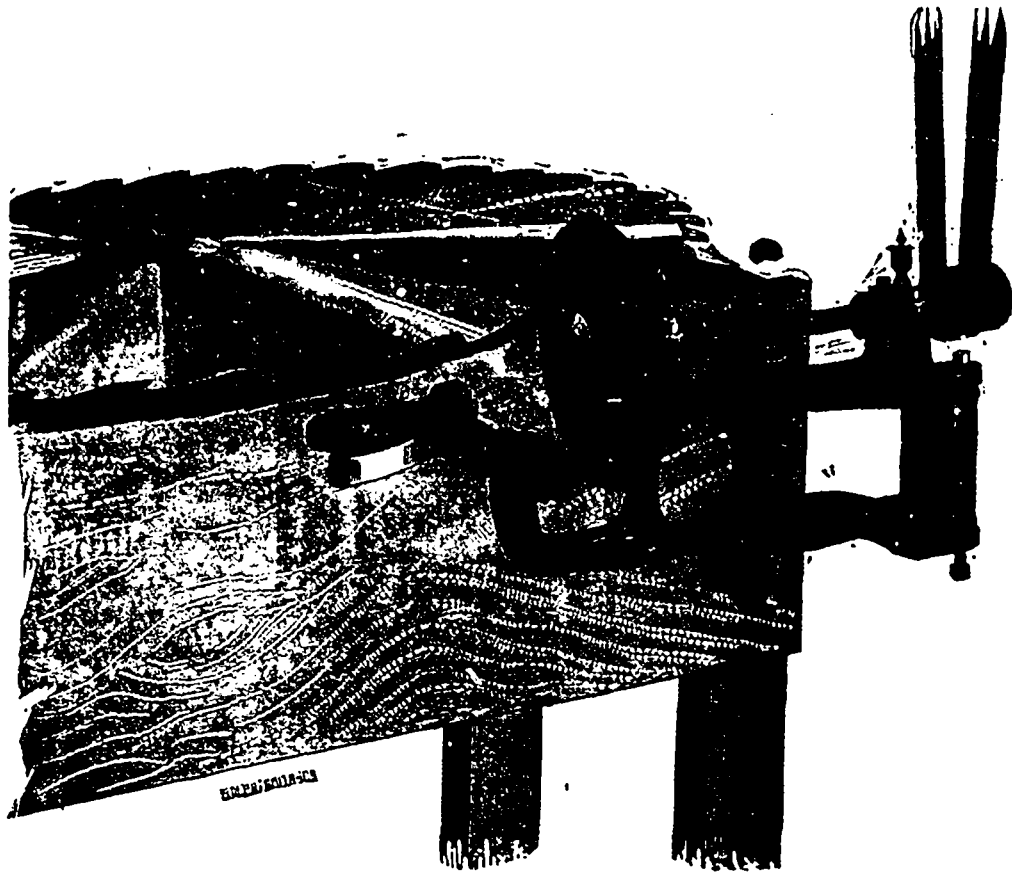
This cut represents our SAW MILL ENGINE, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.

Lumbering Season, 1884

Won't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

ROGERS' PATENT SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever invented.

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

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

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

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

CHAS. ANDERSON, Anton Mills, says :—

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

ROBT. R. WEIR, Orillia, writes :—

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

CRONEN PATTON, Hoc Roc Mills, Gravenhurst, says :

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

D. DAVIDSON, Pentanguisheno, writes :—

"We are well pleased with the Gummer."

W. W. BELDING, Wyovale, writes :—

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

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

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