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Wood-Workers', Manufacturers' and Millers' Gazette

VOLUME XXIII.  
NUMBER II.

TORONTO, CANADA, DECEMBER, 1903

{ TERMS, \$1.00 PER YEAR  
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BALATA  
AND  
CAMEL BRAND  
BELTING**



NOT AFFECTED BY DAMPNES  
MOST DURABLE THE BEST FOR MAIN DRIVES  
**W. A. FLEMING & CO.,**  
771 CRAIG ST., MONTREAL.  
Branch  
ST. JOHN, N.B.

**SANDVIK SWEDISH STEEL**

**The Ottawa Saw Co.  
LIMITED**  
Middle Street, OTTAWA, ONT.

**Sandvik Swedish Steel**  
Band, Gang and Circular Saws  
P. M. FEENY, Manager.

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## Leather Belting

It isn't the price, it's what  
you get for the price, that  
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DANVILLE, QUEBEC.

**D. K. McLaren**

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**Oak Belting**

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Wholesale Manufacturer of

**LUMBERMEN'S  
SUPPLIES**

Tents and Tarpaulins made of our special non-  
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Never is  
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will Not Fail You  
in Cold Weather.

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You Need the Best  
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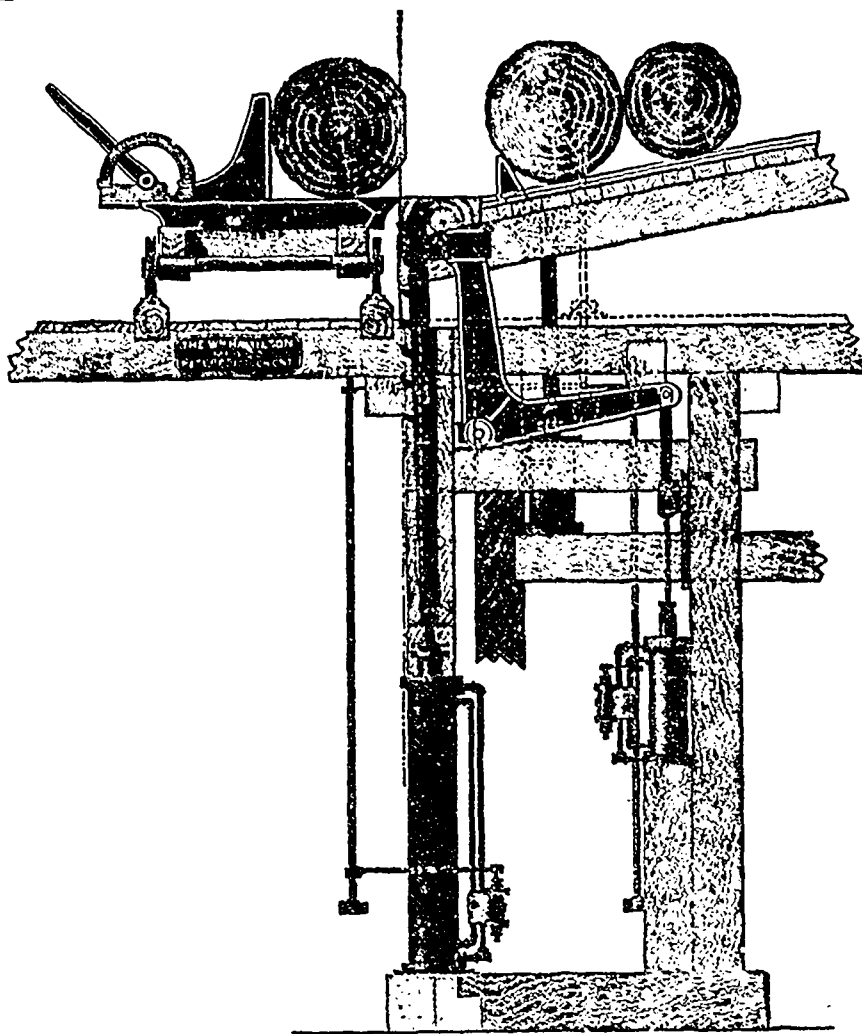
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The best and most modern turner on the market; no floor plate, no more broken tooth bars.

A necessity in every mill where good lumber and quick sawing is desired.

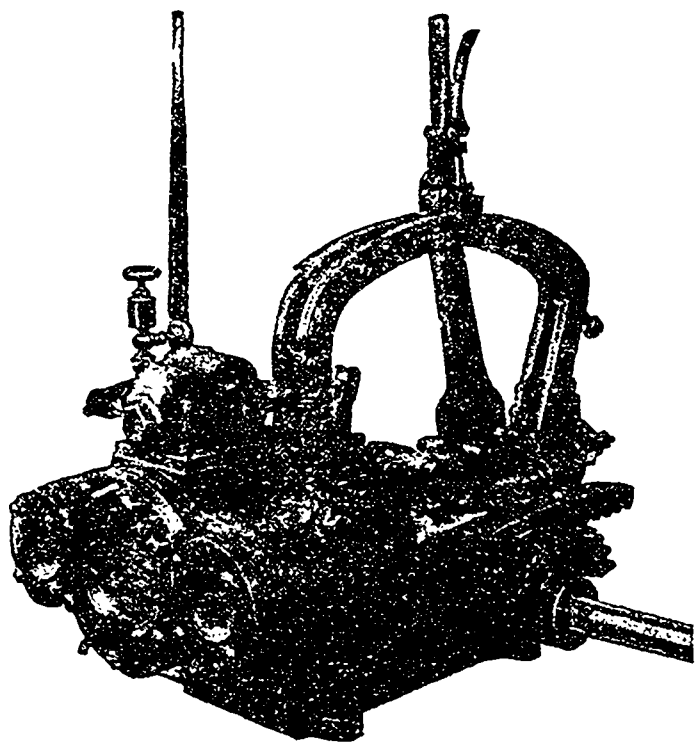
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For Saw Mill Carriages



A labor-saving device of real merit; one that is fast making friends among the best mill men.

We have added some improvements to this machine which all lumbermen will appreciate, making it a better machine than all others.

Write us about it, our Catalogue is free.

The Wm. Hamilton Mfg. Co., Limited,  
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# R. H. SMITH CO., LIMITED

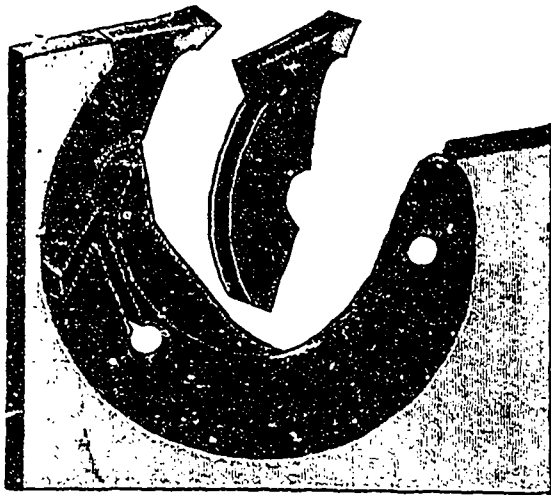
— St. Catharines, Ont. —

We are the Sole Manufacturers of Saws  
under the

## Simond's Process

in the Dominion of Canada.

There is no process its equal for tempering circular saws. Other makers recognize this fact, as some of them, in order to sell their goods, claim to have the same process. All such Claims are FALSE, as the patentee in the U. S. and ourselves are the only firms in the world who use it.



## INSERTED TOOTH SAWS

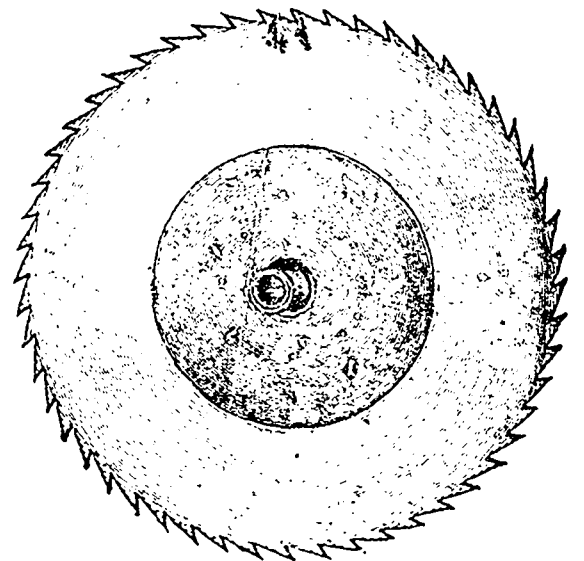
Notice the improved shank. We call particular attention to the swell which strengthens it at the weakest part and which gives it more wear than the old style.

Shanks made in usual gauges and to fit your saws perfectly.

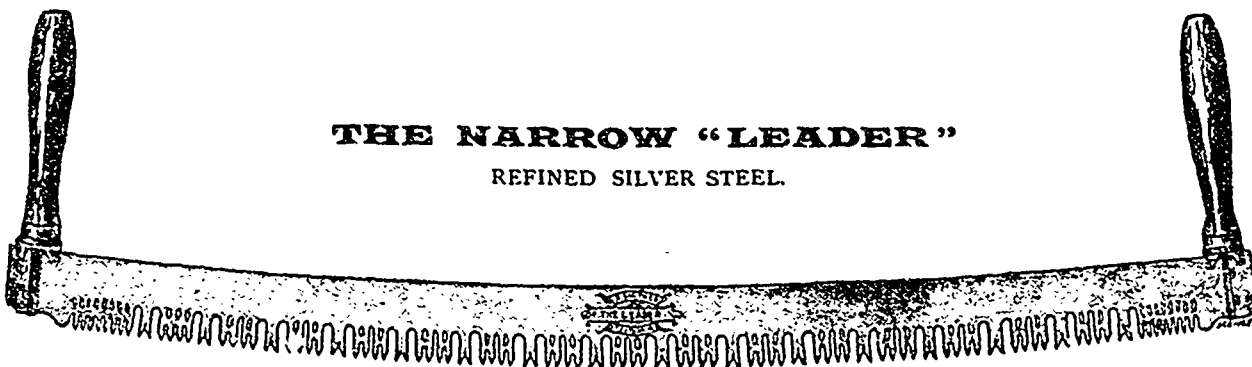
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The quality of the "Simonds" Shingle Saws is proven by the fact that the largest shingle and machine manufacturers in Canada are using them.

Run a "Simonds" and you will increase your output.



## CROSS-CUT SAWS



**THE NARROW "LEADER"**  
REFINED SILVER STEEL.

The Simond's temper and style of tooth make the "Leader" the fastest and easiest cutting saw manufactured.

Write for prices.

R. H. SMITH CO., Limited, St. Catharines, Ont.

**When in Toronto**

call at H. W. Petrie's New Warehouse adjoining the Union Station, and inspect the following machinery.

**AUTOMATIC ENGINES**

- 8 x 24 Wheelock.
- 13 x 34 "
- 1 x 10 Ideal Engine.
- 10 x 10 Peerless.
- 11 x 10 "
- 4 1/2 x 6 Jewel.
- 5 x 7 1/2 "
- 6 x 7 1/2 "
- 7 1/2 x 8 "
- 8 x 10 "
- 9 1/2 x 10 "
- 10 x 12 "
- 10 x 15 "
- 11 x 15 "
- 12 x 15 "

**PLAIN SLIDE VALVE ENGINES**

- 4 x 5 Dutton, Centre Crank.
- 5 x 7 1/2 "
- 6 x 7 1/2 "
- 7 1/2 x 8 "
- 7 1/2 x 10 "
- 8 x 10 "
- 9 1/2 x 10 "
- 10 x 12 "
- 10 x 15 "
- 11 x 15 "
- 12 x 15 "
- 5 x 7 1/2 Upright
- 3 1/2 x 5 "
- 4 x 5 "
- 4 x 5 1/2 "
- 5 x 7 1/2 "
- 7 1/2 x 8 "
- 7 1/2 x 9 "
- 7 1/2 x 10 "

**MARINE ENGINES**

- 6 x 5 Dutton, New.
- 7 x 7 1/2 "
- 7 1/2 x 8 "
- 5 1/2 x 10 "
- 3 1/2 x 5 with shaft and wheel.
- 9 x 9 new.
- 10 1/2 x 12 re-built.
- 3 and 5 1/2 x 4 1/2 Fore and Aft Compound, New.
- 4 and 5 1/2 x 4 "
- 7 1/2 x 12 Steeple, Compound, New.

**ENGINES AND BOILERS ON WHEELS**

16 H. P. Russell & Co., Traction.  
17 H. P. on skids.

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1 to 25 H. P., complete with tanks and batteries.

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- 44" x 165" - 36 - 3" "
- 44" x 132" - 39 - 3" "
- 41" x 132" - 45 - 3" "
- 42" x 156" - 43 - 3" "
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- 41" x 166" - 46 - 3" "
- 48" x 142" - 42 - 3" "
- 48" x 156" - 53 - 3" "
- 60" x 192" - 43 - 4" "
- 72" x 165" - 84 - 3" "
- 60" x 189" - 35 - 3 1/2" "
- 6" x 210" - 54 - 4" "
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- 45 h. p. "
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- 28" x 44" - 13 - 2" Tubes, Vertical, new.
- 37" x 44" - 37 - 3" "
- 20" x 68" - 70 - 2" "
- 24" x 19" - 19 - 2" "
- 30" x 50" - 31 - 2" "
- 3" x 36" - 43 - 2" "
- 20" x 72" - 13 - 2" "
- 34" x 60" - 31 - 2" Tubes, Submerged, new.
- 30" x 72" - 54 - 2" "
- 30" x 84" - 54 - 2" "
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- 10-24" Pony Planers, new
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- 24 inch Major Harper Planer and Matcher.

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- 3 x 2 x 3 Duplex Steam Pump, new.
- 4 1/2 x 2 1/2 x 1 "
- 6 x 4 x 7 " new.
- 8 x 5 x 12 "
- 16 x 10 1/2 x 3 Special Cameron Pump, new.
- 6 x 9 x 9 Condensing Pump

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- 12 in. Arch/median Brns. Waterous.
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- No. 22 Tuerk's Water Motor, 4 to 6 H. P.

Prices and Descriptions of the above machinery, also Catalog of Mill and Engineers' Supplies, sent on request. I carry a very large line of iron working tools and am prepared to make close prices on same.

**H. W. PETRIE,**  
131-145 Front Street West, TORONTO  
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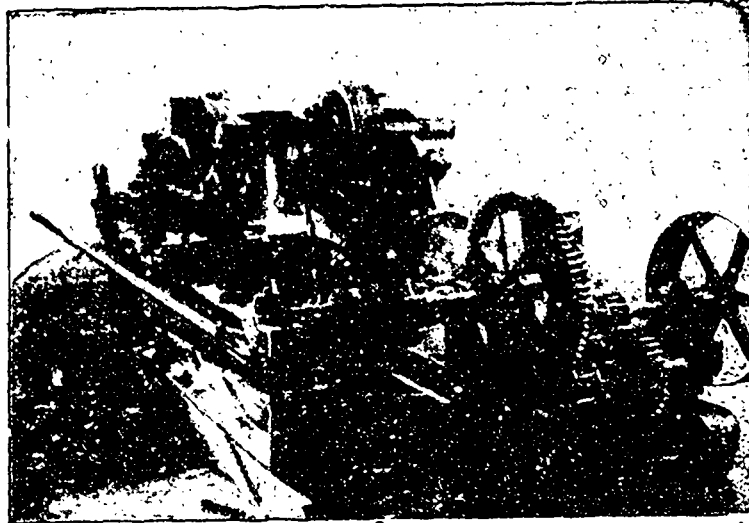
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**Adjustable Log Siding Machine**

is without a peer.

This machine will slab opposite sides of a log in one operation at the rate of two thousand logs in 10 hours.



**A MONEY MAKER**

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Gentlemen - Replying to yours of recent date and referring to your adjustable log siding machine, must say it has given us general satisfaction, and we have done good work with it. Any one desiring a machine of this style for the purpose of slabbing small logs, we would recommend yours. Respectfully,  
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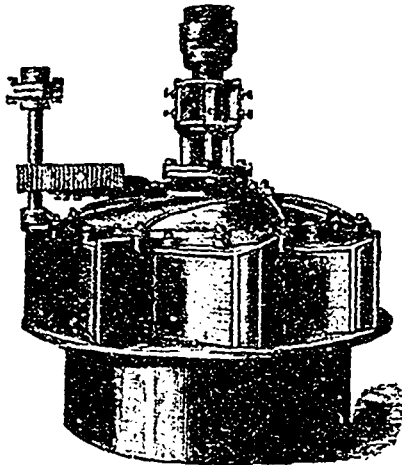
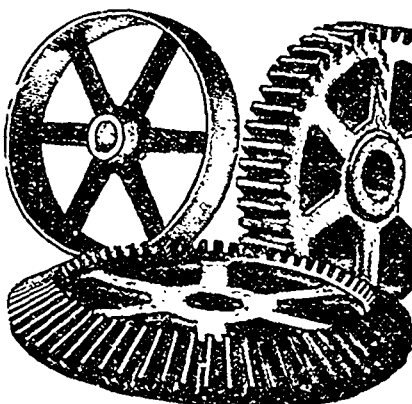
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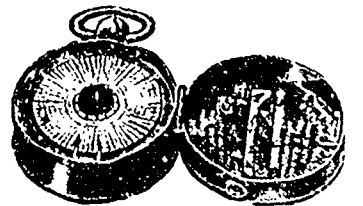
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Heavy Machine Dressed Gearing, Iron Bridgetrees, Rope or Belt Pulleys, &c., for Mills or Factories. Swing Shingle Machines. Superior Steel Castings. Iron or Steel, Sectional or Solid Propeller Wheels for all purposes.

**Watchman's Time Detectors**  
That Cannot Fail.



Contain all the modern improvements. Warranted in every way. Cannot be tampered with without detection. Manufactured by  
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Typewriters**

The following cash prices are the best value that have ever been offered in rebuilt typewriters. All machines are in the very best of order, and sample of work of any machine selected will be sent on application

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Special Rental Terms on Above Typewriters.

The Canadian Typewriter Exchange  
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Oneida Split Pulleys  
STEEL CENTRE - WOOD RIM

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ALL WOOD

Complete Saw Mills

WOOD AND METAL WORKING  
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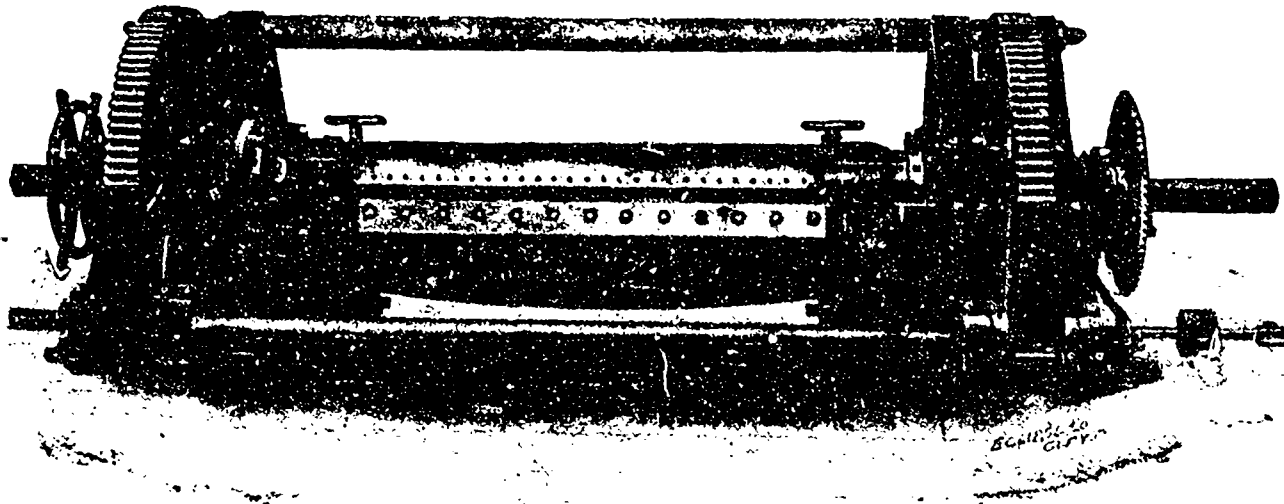
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SHAFTING, HANGERS, MILL  
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Our Celebrated

# Rotary Cutting Veneer Machines

made in over sixty sizes, have stood the test and proved equal to any proposition to reduce logs into thin lumber and veneers.



The product is high grade.  
The output is great.  
The cost of operating and maintenance is reduced to a minimum.  
Quite a combination, is it not?

Timber and mill owners should get in early.  
Buy a Coe Veneer Cutting and Drying outfit and prepare to supply thin lumber and veneers which have a healthy growing demand. More money in it than saving your logs into lumber.

WRITE US.

**THE COE MANUFACTURING COMPANY, Painesville, Ohio, U. S. A.**

Established 1852.

Largest Builders of Veneer Cutting Machinery in the world.

## PERFECT SWING SHINGLE MILL

Fitted with our Automatic Trip.

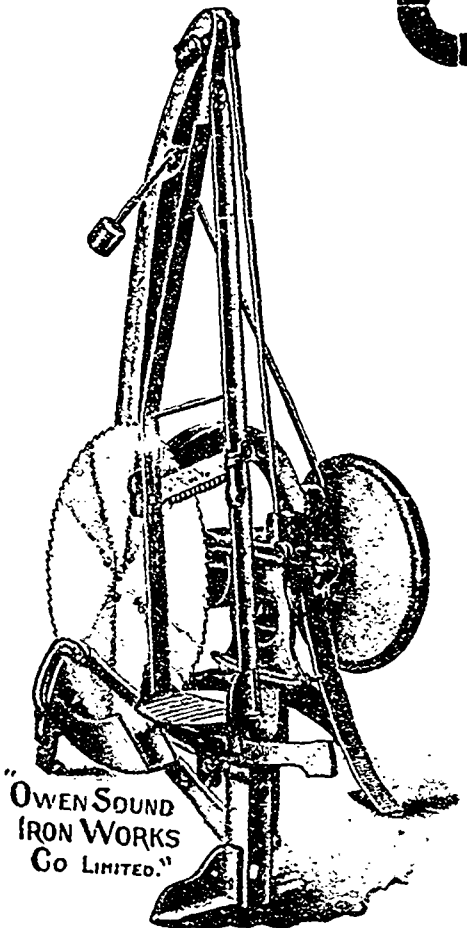
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MADE BY

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MANUFACTURERS OF

**Saw Mill Machinery, Engines and Boilers.**

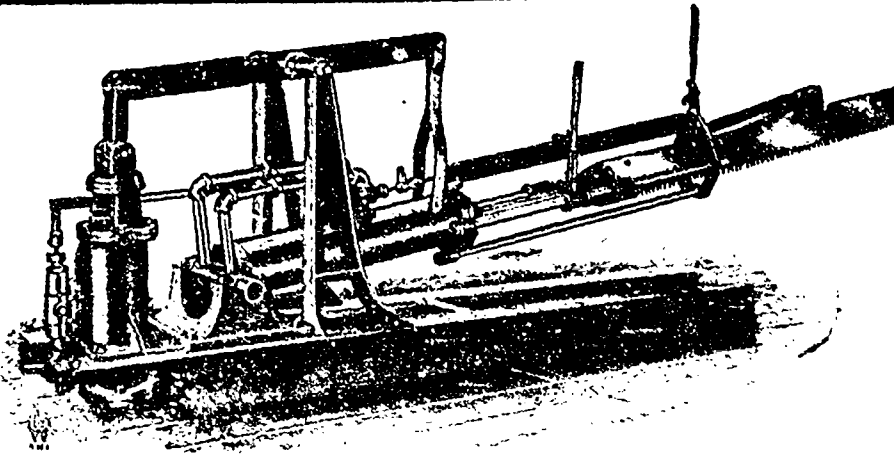


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IRON WORKS  
CO LIMITED."

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THE HILL IMPROVED STEAM DRAG SAW



WM. E. HILL & CO., 415 North Rose St., Kalamazoo, Mich.

*W. H. Hill & Co.*  
*Brooklyn, N. Y.*  
*1899*

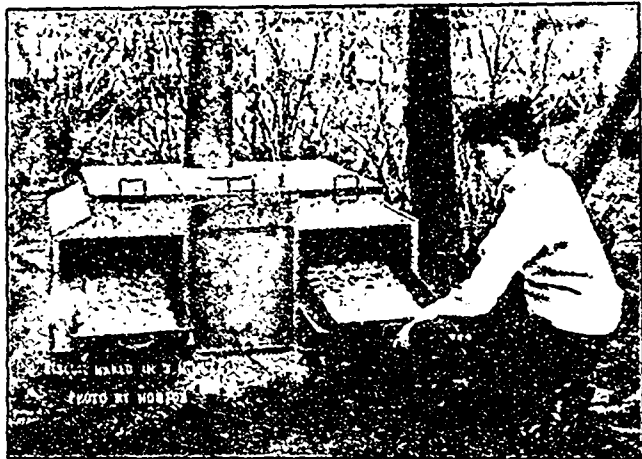
The Walker Yonker and Pinal Works,  
 Alpena, Mich.

Gentlemen:-  
 In reply to your favor of the 1st inst. I beg to say that we have the W. E. Hill & Co. Steam Drag Saw in use at all our plants and have no hesitation in saying that they are the best Drag Saw in the market. They will do more and better work than any Drag Saw made. They are well and strongly made and in an experience of over three years with some six or seven of these Drag Saws we have, I think, never lost a day with one of them.

Yours truly,  
*Wm. H. Stephenson*  
 President.

ISN'T THIS TESTIMONY CONVINCING?

Watson's Portable Air Tight Baker



The most convenient stove ever constructed for use in the Woods, on the Drive, in the Camps. Bakes as perfectly as the finest range.

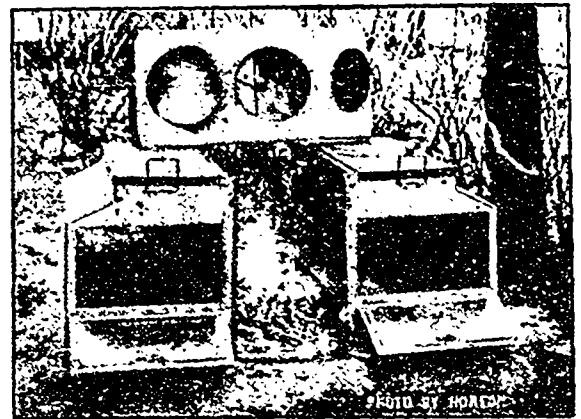
Read What Experienced Woodmen Say of it:  
 "We used your Portable Woods Baker all last season with a crew of men in the woods, travelling from place to place. We found it convenient to handle and the best steel range cannot beat it in baking. It is a perfect baking oven and a success in every way."

The cooking is not affected by rain or weather and can be used outdoors or in a tent.

Yours truly,  
 MENOMINIE RIVER BOOM CO.,  
 Per Wm. H. Stephenson, Gen'l Supt.

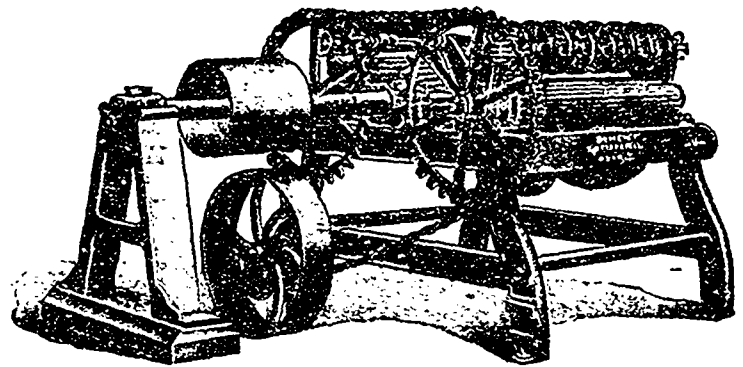
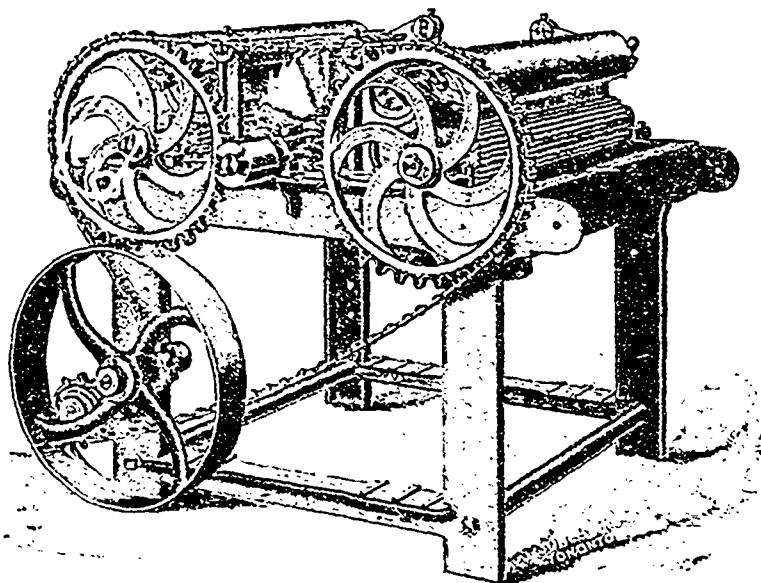
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 Manufacturers  
 MARINETTE, WIS.

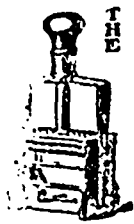


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 Suitable for Mills from 8,000 to 25,000 capacity.

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**RUBBER STAMPS**  
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We make a Specialty of Supplies  
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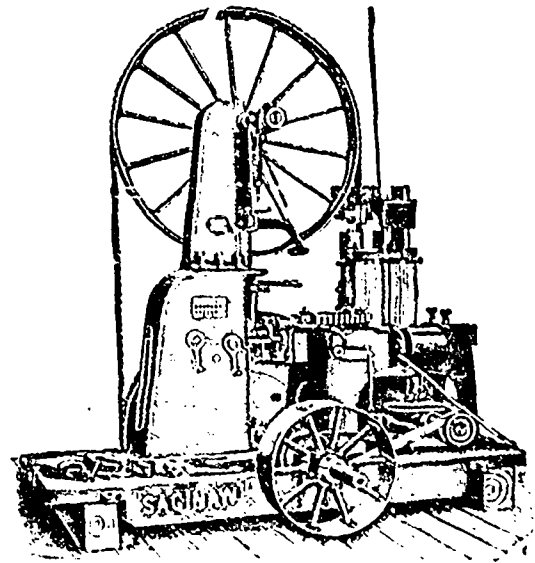
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Buy Direct and Get the Genuine

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SAGINAW, MICH., U.S.A.

WRITE FOR PRICES.

100 Bits No. 3 Go 8 Pt.  
FOR  
INSERTED TOOTH SAWS  
MANUFACTURED BY  
**E. C. ATKINS & CO.**  
INDIANAPOLIS, IND.

FORGED FROM  
HIGHEST GRADE TOOL STEEL

EVERY BIT GROUND  
ACCURATELY TO GAUGE

PERFECT PATENT TEMPER

MOST SKILLFUL WORKMANSHIP

WRITE FOR OUR SAWYERS HANDBOOK.

# ATKINS GREAT "TALKING" POINTS

The points of "SUPERIORITY" in Atkins Silver Steel Inserted Tooth Saws are as numerous as the points on a Porcupine's back and are as apparent. They point the way to better lumber, more satisfactory and economical production. Do you see the point?

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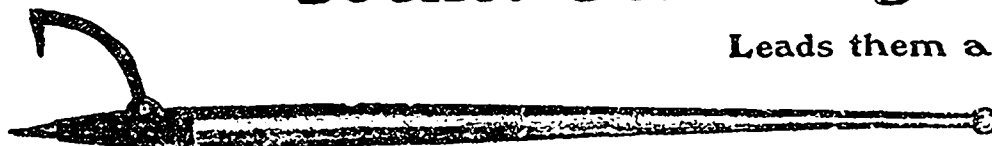
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Leads them all



Used in every Lumbering District from the Atlantic to the Pacific Ocean

Extra Fine Quality Split Rock Maple Handles      Round and Duck Bill Peaveys and Cant Hooks

Write for quotations. It once used you will never return to the old malleable sockets.

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 Heavy Lumber Wagons  
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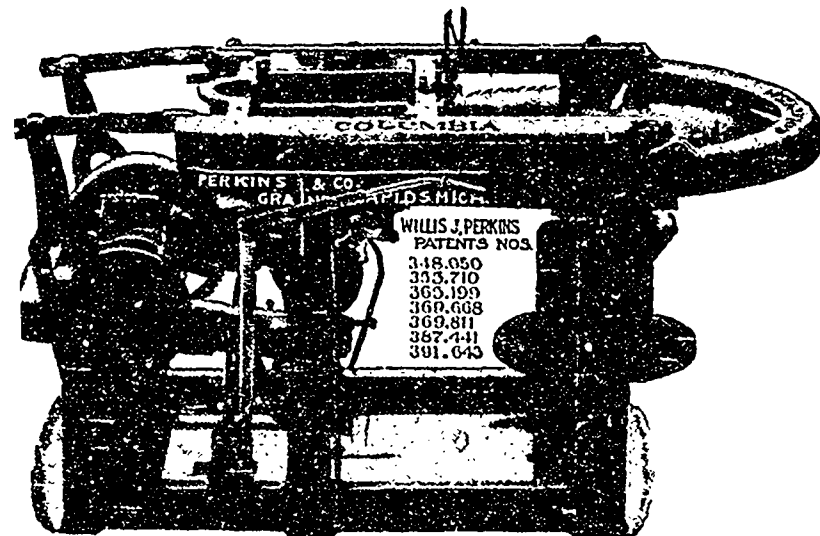
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Hand Feed Machine \$150.00 and over.  
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**COLUMBIA**  
 HEADING AND SHINGLE MACHINES



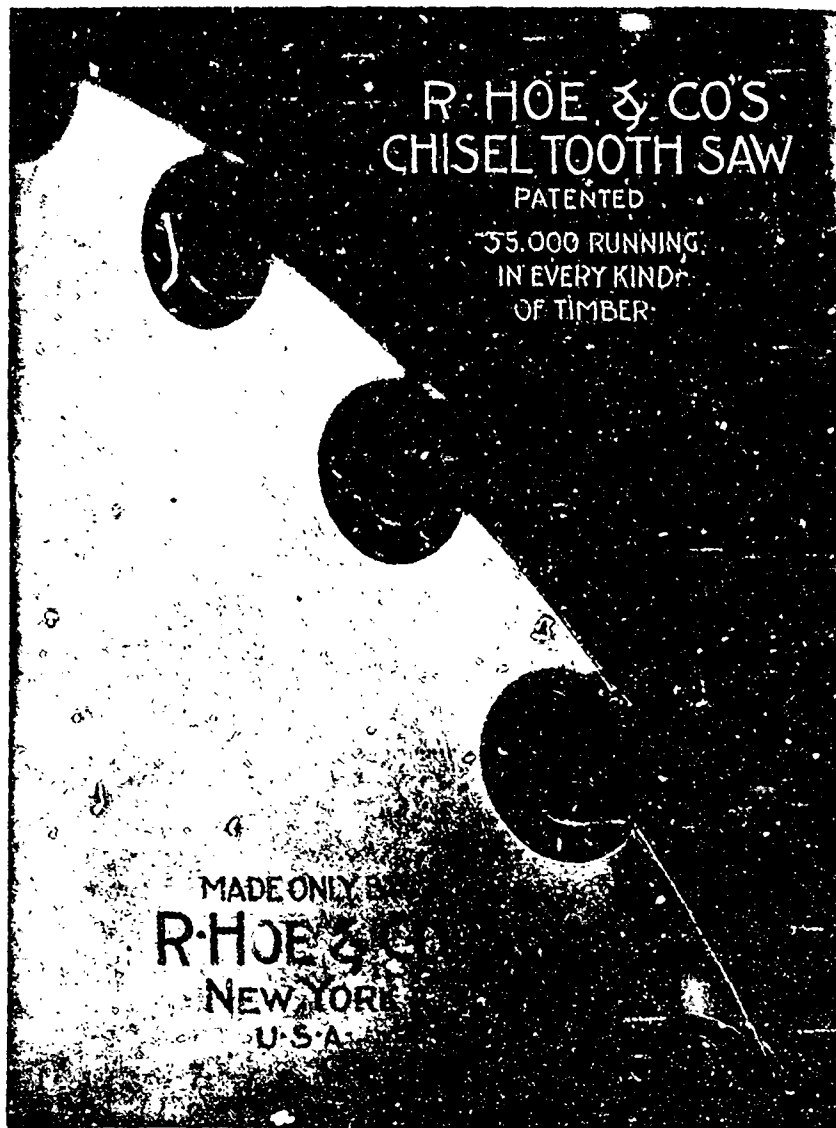
THEY WERE WELL PLEASED.

PERKINS & CO. HAMPTON, N. B.  
 DEAR SIR:—Replying to your favor of 18th inst., Mr. Shives has not called  
 on the Columbia as yet. Our man is feeding her on the fly now; he don't  
 a clip. We are very much pleased with the machine.

Yours truly,  
 THE G. & G. FLEMING MANUFACTURING CO.

WE ARE LEADERS. WILL INCREASE YOUR CUT AND  
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PATENTED

75,000 RUNNING  
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| <i>Band Saws</i>            | <i>Turning Lathes</i>       |
| <i>Jointers or Buzz</i>     | <i>Engines and Boilers,</i> |
| <i>Planers</i>              | <i>all sizes</i>            |
| <i>Cabinet Planers</i>      | <i>Saw Tables</i>           |
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| <i>Planers and Matchers</i> | <i>Saw Mills</i>            |
| <i>Shapers</i>              |                             |

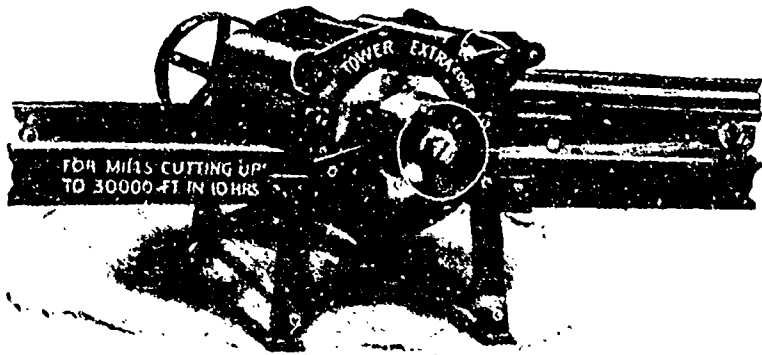
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Our Edgers and Trimmers are pre-eminently simple and practical. They have everything that is essential and nothing that is superfluous. That is why we can afford to sell them at such extremely low prices.

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## The Tower 2 and 3-Saw Edgers, Improved

For mills cutting not to exceed 20,000 ft. in ten hours.



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A larger and heavier edition of the TOWER, for mills cutting up to 30,000 ft.

### The Tower One-Man 2-Saw Trimmer

With this trimmer one man can easily trim the output of a mill cutting up to 30,000 feet in ten hours.

We also manufacture the celebrated

### Gordon Hollow Blast Grate

which burns wet, green or frozen sawdust or other refractory refuse readily giving as good results with them as a draft grate gives with dry wood

## The Gordon Hollow Blast Grate Co.

ESTABLISHED 1889.

GREENVILLE, MICHIGAN

the largest manufacturers of Blast Grates, Edgers and Trimmers in the world.

Send for Catalogue D.

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For  
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Elevating  
and  
Conveying

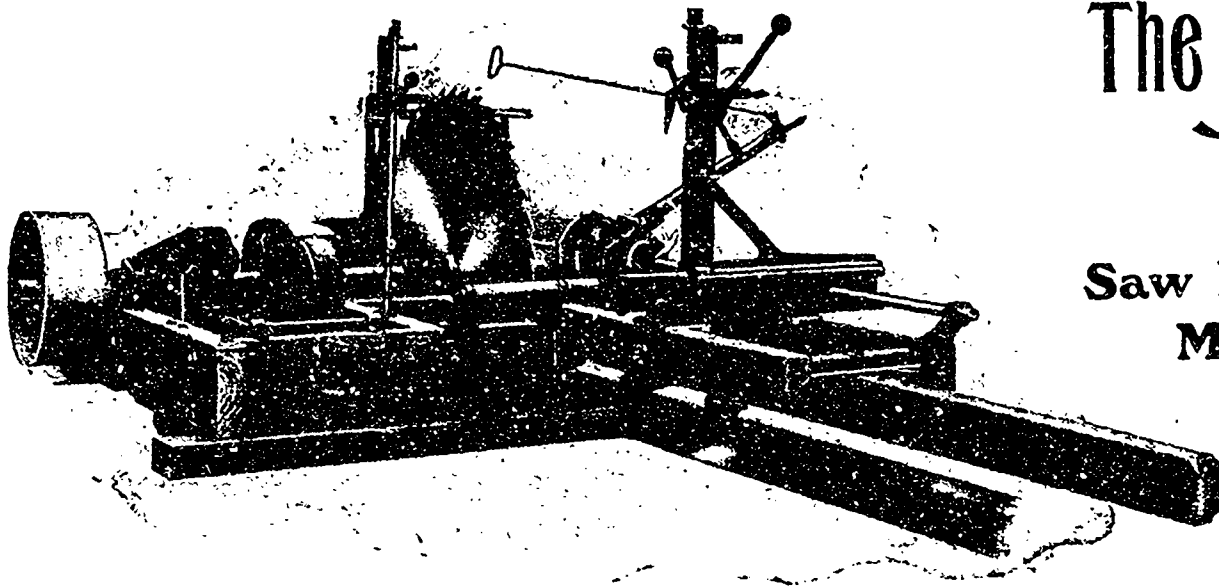


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Branches: Montreal, Winnipeg.



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GANTON, OHIO, U. S. A.

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TO BE WITHOUT A



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The Only Perfect Register on the Market.

We will send one of these Registers FREE on 30 days trial to any address and pay return charges if not entirely satisfactory.

# The GEORGE REGISTERS

is being used by the largest Planing Mills in the country, who have given their written testimonials.

Here is a sample:—

THE STOUFFVILLE BRASS & STEEL WORKS,  
Stouffville, Ont.

Burks Falls, Ont., Feb. 13, 1903.

GENTLEMEN—In answer to your inquiry with regard to the S. George Lumber Register, we desire to say that it has given every satisfaction. We put in one of 8000 ft. capacity lineal in the spring of 1902 and have used it constantly ever since and it has never given any trouble whatever, has never been out of order or laid up for repairs. We may further say that we are so well pleased with it that we have ordered another of the larger capacity of 60,000 ft. lineal, which we intend to use on another machine. In conclusion we may say that we do not see how this machine could be improved upon and we feel certain that it will be a long time before a lumber register is produced which will be superior to the S. George. Yours truly,

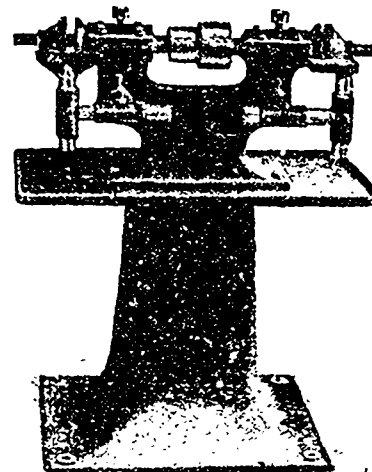
THE KNIGHT BROS. CO., HENRY KNIGHT, Manager.

# EMERY GRINDERS

The annexed cut represents our latest and most improved style of Emery Stand and the incessant demand for a frame that will resist the vibration of the stone when running at full speed has made us particularly careful to make "rigidity" one of the principal features of the same.

THE STOUFFVILLE BRASS & STEEL WORKS  
STOUFFVILLE, ONT.

SQUARE BASE EMERY GRINDER



Write for Prices and Terms

# THE DODGE IS THE PERFECT CLUTCH

Because it Embodies all the Good Points known in Friction Clutch Construction

We are ready to prove that the Dodge Split Friction Clutch possesses the following exclusive points of superiority and merit : **PERFECT BALANCE, EASE OF ADJUSTMENT, LIBERAL CLEARANCE, EXCELLENT LUBRICATION, REPAIRS EASILY MADE, SIMPLICITY, POSITIVE FRICTION, THE SPLIT FEATURE, REASONABLE FIRST COST, DETACHABLE SLEEVE.**

We are also ready to demonstrate that the use of this clutch will be a most profitable investment for you in many places in your power transmission plant.

Write to-day for details of this perfect clutch and its wonderful power saving and efficiency producing qualities.

**DODGE MANUFACTURING CO'Y OF TORONTO, LIMITED**  
Toronto, Ont.



## WIRE ROPE

.. For all Purposes ..

Alligators, Towing, Boom and Fall Ropes  
LARGE STOCK CARRIED—CUT TO ANY LENGTH

Special Ropes for Lumbering  
Blocks, Clips, Thimbles, etc.  
The Dominion Wire Rope Co., Limited  
MONTREAL, QUE

The CANADIAN CASUALTY  
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Head Office : N. E. Cor. Adelaide and Victoria Streets, TORONTO.

Special Attention given to Steam Boilers

The Steam Boiler Policy of the Canadian Casualty and Boiler Insurance Co. gives Free of Cost—Regular Inspection of Boilers. Free Insurance of Engineers and Firemen, Public Liability Protection, and the advice of our Consulting Engineers — FREE.

Write to-day for Booklet "To Steam Users."

ALEXANDER SUTHERLAND, D. D., President  
H. N. BATE, W. S. DINKICK, Vice-presidents.

A. G. C. DINKICK, Managing Director  
A. M. WICKENS, Chief Engineer.

Every lumberman wants it 35 cents buys it

## Scribner's Lumber and Log Book

TRIFLING OF EVERY-DAY,  
PRACTICAL INFORMATION

Address :  
THE CANADA LUMBERMAN, Toronto

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Run no chances in using inferior metal, but ask your dealer for the "SYRACUSE SMELTING WORKS" Babbitt Metal, the largest manufacturers of Babbitt Metal and Soilder under the British Flag.

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HAMILTON, ONT. MONTREAL, QUE.

# THE CANADA LUMBERMAN

VOLUME XXIII }  
NUMBER 12 }

TORONTO, CANADA, DECEMBER, 1903

TERMS, \$1.00 PER YEAR  
Single Copies, 10 Cents

## THE LATE MR. E. W. RATHBUN.

Mr. Edward Wilkes Rathbun, president and general manager of The Rathbun Company, of Deseronto, Ontario, was on November 24th called to his last resting place. His death was due to heart trouble, following a somewhat prolonged illness. The management of the numerous and varied associate industries of which he was the head was a vast undertaking for one man, and his health in late years had become greatly impaired by too strict attention to business. By some of his acquaintances it is said that he was the victim of overwork.

Thus endeth a most useful life. From his boyhood days Mr. Rathbun was engaged in the building up of Canadian industries. The loss sustained by his death is felt throughout the Dominion, while he will be especially missed in the town of Deseronto and its vicinity. One has said of him that he belonged to a class of men who have done much to develop this young country industrially while helping to raise it to a higher plane of civilization. He was a captain of industry, and although of foreign birthright had become a true Canadian through long residence in this fair land. He was a public spirited man and a firm believer in the future greatness of Canada, and was on many occasions influential in promoting public improvements.

As a lumberman Mr. Rathbun stood in the front rank. Commencing operations when the lumber business was in its infancy, his hand guided the destiny of a most extensive saw-milling enterprise into channels of success. Not content with simply sawing the logs into lumber, he in early life took steps to establish associate industries, so that the lumber might be further manufactured and all the refuse of the mills utilized to the greatest possible extent.

Deceased was born at Auburn, N. Y., in 1842, and was the eldest son of the late H. B. Rathbun, the founder of Deseronto. He was educated in New York, and received his business training there in the house of Storm, Smith & Company, East India merchants. In 1861 he took charge of his father's enterprises at Millpoint, Ont., near where Deseronto now stands. The firm name was then H. B. Rathbun & Company. In 1884, by special act of parliament, it was changed to that of The Rathbun Company, and Mr. Rathbun became its president and assumed the complete management of the concern. The company under his

direction became the pioneer in many industrial enterprises in Canada, including the roller process floor mill.

The lumbering and wood-working operations of The Rathbun Company have grown wonderfully, until to-day the company owns about 550,000 acres of timber lands under Government license, 60,000 acres of deeded timber lands, and 7,750 acres of timber rights only. Mr. Rathbun's policy has always been to conserve the timber, and his economical lumbering methods have been held up as an example to

Gravenhurst, the company operate at the former place a sash, door and blind factory, car works and charcoal plant, the latter consuming much of the waste timber from the mills. The Bay and Quinte Railway and the Kingston, Napanee and Western Railway were also built and are owned by the company, chiefly for the purpose of transporting their forest products. The company have branches at Oswego, N. Y., London and Glasgow, Toronto, Napanee, Kingston, Gananoque, Picton, Belleville, Campbellford, Lindsay and Brockville. The Canadian Portland Cement Company, whose works are at Marlbank and Strathcona, is controlled by the Rathbun Company. Of these many enterprises Mr. E. Walter Rathbun, eldest son of deceased, is now the acting general manager.

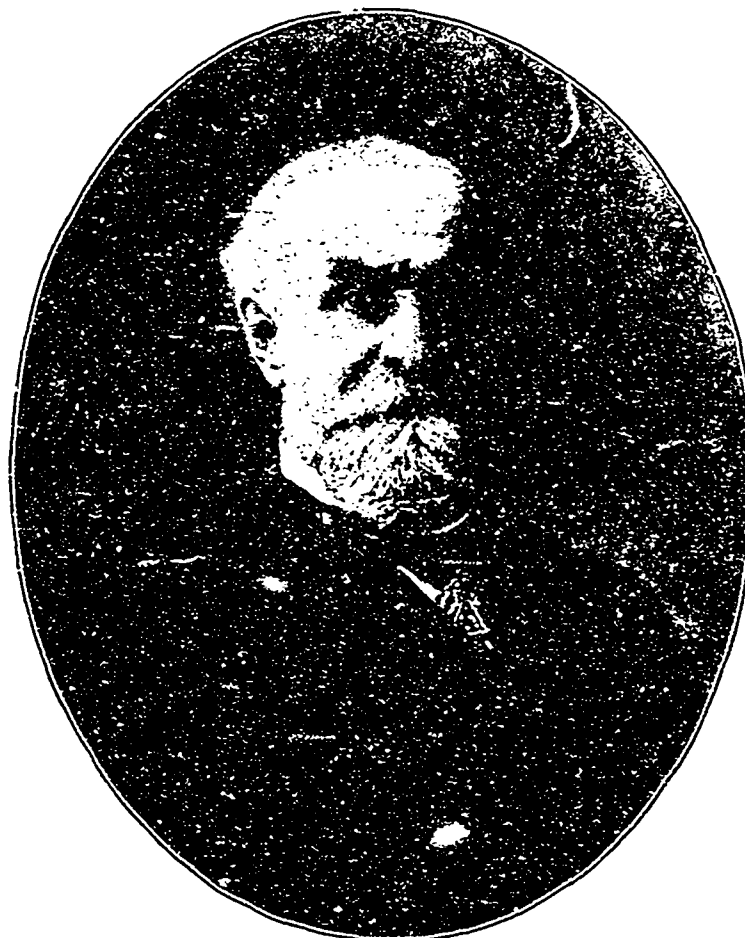
The subject of our sketch was a prominent member of the Ontario Lumbermen's Association and an influential factor in inducing the Ontario Government to adopt the manufacturing clause respecting timber which has proved so beneficial to the province.

The late Mr. Rathbun was Mayor of Deseronto from the time it was incorporated till last year. His whole business career has been identified with the upbuilding of that town, and as his business prospered the town grew. Last year he was instrumental in having canal tolls abolished on the waterways near his town. He held many important positions and at the time of his death was vice-president of the Boiler Inspection and Insurance Company, of Toronto, and a director of several other corporations. In politics he was an independent Liberal and in religion a Presbyterian, and for many years a trustee of Queen's University, Kingston. He is survived by Mrs. Rathbun and a family of seven

children, E. Walter, Harold McMurrich, Marvin and Adrian Rathbun, Mrs. C. A. Masten, and two unmarried daughters, Misses Pansy and Marjorie. His three brothers predeceased him.

## NATIONAL WHOLESALE LUMBER DEALERS' ASSOCIATION.

At a meeting of the Board of Trustees of the National Wholesale Lumber Dealers' Association, held in New York on November 12th, it was decided to hold the next annual meeting at Washington, D.C., the first Wednesday and Thursday in March, 1904. Full arrangements have not as yet been made, but all details have been left with the executive committee, who have power to act in the matter. The secretary of the association is Mr. F. E. Perry, 66 Broadway, New York City.



THE LATE MR. E. W. RATHBUN,  
President and General Manager of The Rathbun Company, Deseronto, Ont.

to be followed by his confreres. He endeavored to educate the public as to the value of practical forestry and never missed an opportunity of emphasizing the necessity of protecting the forests from fire. His sentiments in this regard were well known, and in 1897 he was one of five who composed a commission appointed by the Ontario Government to report upon the subject of restoring and preserving the growth of white pine and other timber trees upon lands which were not adapted for agricultural purposes or for settlement. Many of the recommendations contained in their report have since been adopted by the Government.

Besides the large saw mills at Deseronto and

## NOTES BY THE WAY.

(By Our Travelling Representative.)

From a trip through Wisconsin I came direct to Chicago, where I found great activity in the yards of the large wholesalers.

The E. S. Hartwell Lumber Company has been succeeded by the Herman H. Hettler Lumber Company. Mr. Hettler is the president, Mr. J. L. Philips is vice-president, and Mr. Ed. L. Casey the secretary. The offices, yards and mills of this vast concern are situated on Elston Avenue, Chicago, with a southern branch at Tilton, Georgia, and a northern branch at Midland, Ontario. Mr. Hettler was for a number of years the joint partner of Mr. E. S. Hartwell, and by his energy and thorough integrity, guided by sound judgment, has always commanded the respect of the lumber trade. Mr. Hettler is still a young man and began his lumber experience when a lad of sixteen. It was in 1887 that he went into business for himself with Mr. Hartwell. He is a man who studies every possibility of the lumber business, always looking for improvement. The secretary of the company is the energetic Edward L. Casey, who began his business career with the Hartwell Company and is peculiarly adapted to hold this office. The yards are very extensive and at the head of deep water navigation on the Chicago river, where vessels are readily loaded or unloaded. The Hettler Lumber Company carry a stock of lumber at all times of from 25,000,000 to 35,000,000 feet, and are able to supply almost everything on the white pine list. In addition they are heavy handlers of Norway bill stuff and hemlock, yellow pine, cypress and hardwoods. They are heavy dealers in and manufacturers of Canadian white pine lumber.

I had a pleasant visit to the offices of Houston & Curtis, situated in the magnificent Marquette Building, on Dearborn street, Chicago. There I had the pleasure of meeting the head of this progressive and up-to-date company. They are not only large manufacturers but wholesale dealers in all kinds of wagon, carriage and implement wood stock, hardwood lumber and box boards. They make a specialty of supplying axles, bolsters, reaches, tongues, sawed felloes, spokes, hubs, singletrees, yokes, wheels, shafts, etc., and enjoy a continental trade with a reputation for fairness and right dealing that holds their customers permanently.

Up at 463 West 22nd street I visited the works of the National Hoist and Machine Company, of which Mr. Parker is manager. This company manufacture derricks and hoisting engines for use around lumber mills or lumber yards. They also manufacture hooks, chains, sheaves, stump pullers, wire and cable stretchers, etc. The renowned "Parker" derrick is one of the very best known machines for the handling of timber and lumber, while its simplicity makes it cheap and within the reach of every lumber dealer.

From the "Windy City" I went to Elgin, Illinois, where the American Tower & Tank Company have recently established their works. This company make a specialty of supplying water towers and tanks to lumber mills and yards.

It was quite a journey from Elgin to Indianapolis. Here the Long-Knight Lumber Company have their headquarters. They are large manufacturers and dealers in hardwood lumber, making a specialty of cypress. Mr. W. W. Knight is the president of the company and Mr. J. M. Pritchard secretary, both well-known to the world's lumber trade. They handle Mississippi oak and ash for export and the home trade. They cater to the furniture factories, planing mills and wagon manufacturers.

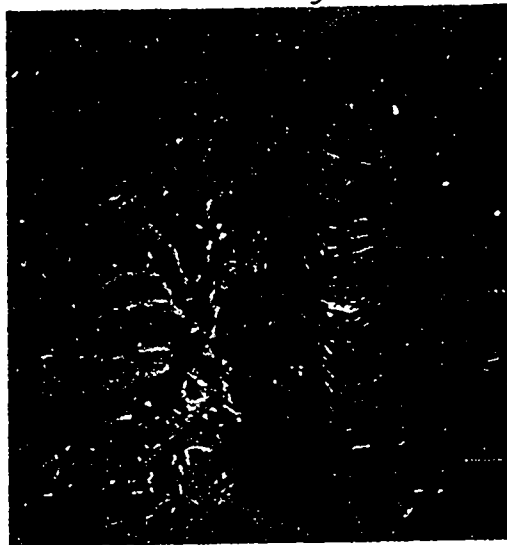
The Indiana Lumber & Veneer Company are one of the largest manufacturers of quartered oak veneer (sawed and sliced) in the world. A. K. Hollowell is the president of this company and O. M. Pruitt the manager and secretary. The capacity of their mills is 100,000 feet per diem, and when I was there they were running full capacity, night and day. In the factory there is a gigantic "slicer," six veneer machines and two band mills. In the extensive yards and sheds is probably the largest stock in America, from which they fill orders to all parts of the globe. In the stock I saw immense logs of hardwood up to 5 feet in diameter. In a very cleverly written illustrated

booklet, the company have a parody on "The House that Jack Built," which runs as follows:—

There were some men in the Hoosier State,  
And wondrous wise were these;  
So with a saw and many draws  
Sawed down some white oak trees.  
But when they saw the trees were down,  
With horses, power and men,  
They straightway took another saw  
And sawed them up again!

Then in a series of pictures they show the following views and rhymes:—

- 1—This is the Mill in the Hoosier State,  
2—This is the timber from farmers' acres,  
That is cut into logs for cabinet makers,  
That came to the Mill in the Hoosier State.
- 3—This is the log so large and white,  
That makes the "flitch" that's out-o-sight,  
That came from the timber,  
That came to the Mill in the Hoosier State.
- 4—This is the flitch quartered and clear,  
That's ready to saw into fine veneer,  
That came from the log,  
That came from the timber,  
That came to the Mill in the Hoosier State.
- 5—This is the saw without a nick,  
That saws the veneer one-twentieth inch thick  
That came from the flitch  
That came from the log, etc.
- 6—This is the veneer that's made with pains,  
That shows the flake for golden oak stains,  
That came from the saw  
That came from the flitch, etc.



- 7—This is the flake contained in oak trees,  
That these men have endeavored your wishes to please,  
That came from the veneer,  
That came from the saw,  
That came from the flitch,  
That came from the log,  
That came from the timber,  
That came to the Mill in the Hoosier State.

We have pleasure in herewith presenting a view of "the flake" referred to. Its beautiful natural grain is shown to perfection. J. R. H.

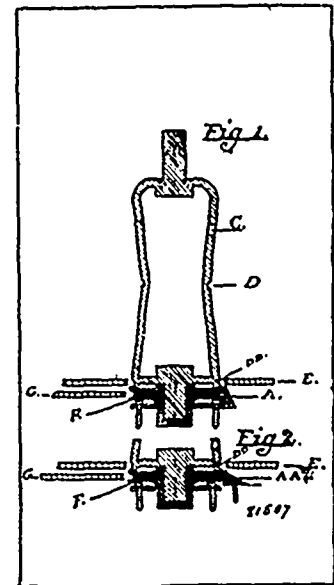
## TIMBER FOR BUTTER BOXES.

Mr. J. S. Larke, Canadian Commissioner at Sydney, New South Wales, writes: "There has been some little concern as to getting supplies of timber for butter boxes, but an enquiry has shown that the supplies of white pine from New Zealand are likely to last for some years yet, though the price has gone up and is likely to be maintained. When this timber is done the spruce of British Columbia is the best substitute. The prejudice against spruce has not been overcome, and the price here is too low to induce British Columbia timber exporters to place a well seasoned parcel on the market just yet."

W. H. Gilmour, of Vancouver, B. C., is supplying the machinery for the new mill of the Arrowhead Lumber Company at Arrowhead, B. C., which will include a double cutting band mill. Mr. Gilmour is also installing machinery for the Okanagan Lumber Company, who are doubling their capacity.

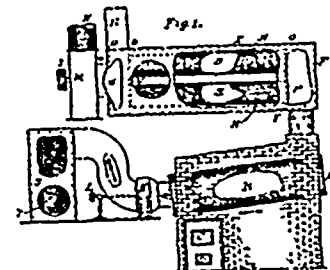
## PATENTS FOR LUMBERING AND WOOD-WORKING DEVICES.

Patents have recently been granted to Canadian inventors for the following devices of interest to lumbermen and wood-workers:



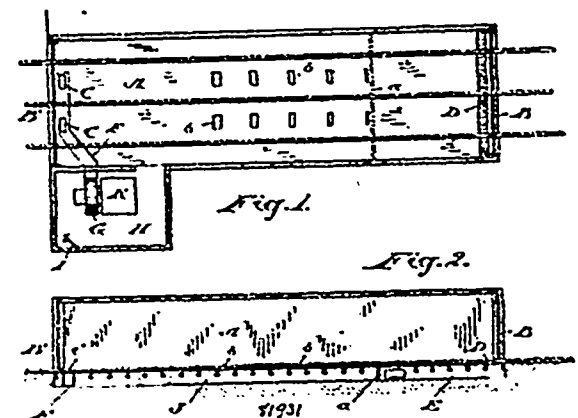
LOGGING MACHINE.

No. 81,507, to Charles T. W. Piper, of Vancouver B. C., for a logging machine, as illustrated. It consists of a logging device comprising roller C having bearings at each end, and rope groove D, sheave F, and rope guide A, all formed, arranged and combined substantially as and for the purpose set forth.



DRYING APPARATUS.

No. 81,430, to John D. McEachren, of Galt, Ont., for drying apparatus, consisting of the combination with a metallic rotary cylinder dryer B, having heat applied to its outside surface of the fan K of the heater 5, or its equivalent, also the drum E, chimney R, and exhaust fan M.



KILN FOR DRYING LUMBER.

No. 81,931, to John Stephenson, Galt, Ont., for a kiln for drying lumber. The claim is for a drying kiln, the combination of the drying chamber having moist air outlet near one end, a return flue communicating

with the drying chamber between the ends, and means for circulating air through the drying chamber and return flue, from a point at or near the end opposite the moist air outlet; an air inlet at or near the other end, both inlet and outlet being located at or near the bottom of the chamber, and means for supplying the place of air escaping from the moist air outlet, substantially as shown.

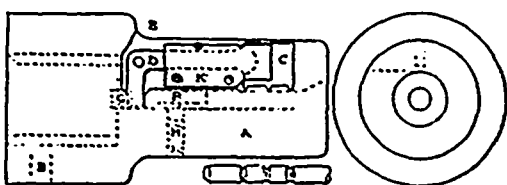
W. S. Brande and Frank J. Root, of Binghamton, N.Y., have been granted a patent in Canada for a process of making wood alcohol. It consists of subjecting wood to destructive distillation, maintaining upon the gases so produced a substantially fixed pressure slightly less than that of the atmosphere by means of a steam exhaust acting directly upon the gases not readily condensed and regulated by the tension of such gases, recovering the gases readily condensed in primary condensers, subjecting the gases not readily condensed to a definite proportion of steam, such proportion being regulated by the tension of said gases, and recovering the acids freed by the steam in a secondary condenser.

Among other patents recently granted were the following: No. 81,174, to Charles E. Evans, of Paducah, Kentucky, for a log loader; No. 81,362, to H. E. Moffatt, Woodstock, Ont., for a steam boiler; No. 81,956, to Emil Hansler, of Webster, Iowa, for a saw mill; to E. J. Moore, of Windsor Mills, Que., for a device for cutting saw teeth; No. 81,441, to W. T. Synnot, of Philadelphia, for a match-making machine; No. 81,276, to James Cutadel, of Dallas, Texas, for band saw mechanism; No. 81,600, to Joseph E. Queen, of Queens, West Virginia, for saw mill mechanism; No. 81,520, to Edward F. Smith, of DuBois, Pennsylvania, for apparatus for leaching tan bark; No. 82,175, to G. C. Gale, of Hartford, Conn., for a machine for edging and matching lumber; No. 82,065, to Pollard & Metcalf, of Silsden, York, Eng., for a machine for grooving lumber; No. 82,115, to Ashland Iron Works, Ashland, Wis., for a drag saw frame.

**TOOL FOR GROOVING DOWELS.**

The device shown in the sketch was made for cutting three equidistant grooves around several thousand 1 1/2-6 1/4-inch round birch dowels. The tool was made to be used on an old speed lathe that had been laid aside. We got the head of the lathe fastened to a bench and a temporary countershaft put up and all belted so as to run our tool at a high speed.

The tool was composed of the main part A, of cast iron, threaded to fit the nose of the



TOOL FOR GROOVING DOWELS.

lathe spindle, with radial holes B for a wrench. The body, after being fitted to the spindle and turned on the outside, was bored a little larger than the dowels and turned out bell mouthed, and then was cut away almost one-quarter section for the working parts.

These parts consist of the cutter C, that is caused to slide in and out by the lever D pivoted on pin E. The tool rotates rapidly and continuously; the operator inserts the dowels one after another, pressing them against the sliding piece F, which engages with the end of lever D, forcing the cutter in and turning the three grooves simultaneously. The cutter is made from 3/32-inch sheet steel, hardened, and the points sharpened with an oilstone. The screw G is an adjustable stop to regulate the depth of the grooves. The

headless pointed screw H secures part F in place, besides permitting it a free sliding movement. The plate K, fastened by three screws, serves as a strap to hold the lever and cutter in place without clamping them tight. The tool will groove dowels just as fast as the operator can handle them, the large bell mouth allowing a quick insertion of them. The tool was very successful altogether, a run of 10,000 being permissible before sharpening the cutter. The lever D is so proportioned that a slight movement of F will throw the cutter in sufficient to make the grooves. We first used a small helical spring to force the cutter out, but a few trials convinced us that this was unnecessary, as centrifugal force would do this, and its presence only made more work for the boy grooving the sticks. — Correspondence American Machinist.

**TRADE OPENINGS.**

The August report of the Department of Trade and Commerce contains the following enquiries relating to Canadian lumber and manufactures of wood:

**INQUIRIES FROM THE HIGH COMMISSIONER OF CANADA, LONDON.**

Inquiry has been made for names of a number of small joinery mills in Canada who might be willing to enter into negotiations for the supply of doors, moulding, etc. (Reference No. 92.)

A Paris firm wishes to be placed in communication with producers of Canadian wood pulp desiring to be represented in that city. They are also willing to do business in other classes of Canadian goods, and to act as buyers of French goods for Canadian houses. (Reference No. 93.)

**INQUIRIES FROM THE CANADIAN COMMERCIAL AGENT AT BIRMINGHAM, ENGLAND.**

Large quantities of spruce and ash are wanted by a firm in Great Britain. (Reference No. 5.)

A large dealer in basswood, pine and spruce broom handles, and poplar rake and hoe handles, ash and hardwood D-shovel handles; would like to open up correspondence with manufacturers in Canada. (Reference No. 6.)

A firm in Great Britain wishes to communicate with manufacturers in Canada of wooden wash boards, not metallic faced, and also clothes pegs. (Reference No. 6.)

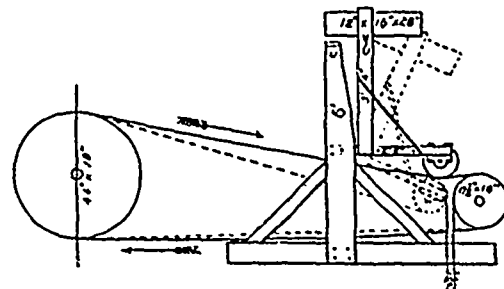
A firm in Great Britain are prepared to handle wooden products, handles, etc. (Reference No. 7.)

A firm in Great Britain wishes to communicate with manufacturers of best spruce deals, 2 1/2 in. wide preferably, cut to thin stuff or supplied in deals, say 11 in. If not 11 in. wide, will take them any width, free from sap knots, etc. Price per standard (St. Petersburg) equalling 60 deals 12 ft. long, 11 in. wide and 3 in. thick, delivered Glasgow or Liverpool. Also pine wanted to the same specification. (Reference No. 8.)

The firm of Haley & Sons, box manufacturers, St. Stephen, N. B., are building an addition to their mill, 25x65 feet. They have also purchased the old Short ship-yard containing 2 1/4 acres for storing their logs.

**AUTOMATIC BELT TIGHTENER.**

A correspondent of Power says: I am now using a tightener arranged in the manner shown by the sketch, which I believe is doing all that could be reasonably expected of a belt of this size. The belt is a 10-inch four-ply rubber belt, 49 feet 10 inches long, running off a 44-inch driver onto a 17 1/4-inch driving pulley. It drives a 54-inch rotary saw, 625 revolutions, cutting Alaska red spruce. Frequently the saw is buried the whole cut without the least sign of slipping of the belt. When the saw is out of the cut, the weight that the tightener



AUTOMATIC BELT TIGHTENER.

applies to the belt is about 20 pounds. When the duty required brings the top and bottom sides within 4 1/2 inches of each other under the tightener pulley, the weight applied to the belt by the tightener equals about 130 pounds.

Of course, the length of the tightener frame, the standard that carries the weighted box, and the weight placed in the box, governs the proportion of weight placed on the belt at different points. I find it is useless to overload with weight, and very often belts are too tight. I place my belt loose enough to give 4 to 5 inches sag in 10 to 12 feet to center, or, in other words, 5 inches sag to a belt when the centers of the two shafts are 24 feet apart.

I have seen tighteners placed on or under a belt, then a lever used to pry up and block up until the belt would almost ring if hit. Such tension takes the spring and life out of a belt, and its only friend is the belt manufacturer; it never gives a belt a rest. Place your belt tightener right, run your belt loosely, and you will get lots of work and a long life. Give your belt a rest whenever you can; it needs it.

This form of tightener may be placed on horizontal, vertical, or belts at any angle, and if properly proportioned and properly loaded will surely give satisfaction every time. Construct your tightener frame so that if the belt doesn't run squarely on the pulley the frame can be moved slightly one way or the other, and the belt will run true.

There are right and wrong ways to run a tightener on a belt. For instance, take the tightener shown and turn it around, and the first time it goes down it will be very liable to break something—that is, if it is fastened properly. By placing the tightener about 4 inches from the driven pulley and having belt slack so there will be about 5 inches sag in the center of the belt in, say, 10 to 12 feet, when the strain comes on the belt the tightener drops, as shown by the dotted lines. This gives a greater percentage of belt grip on the pulley just at the time it is required, and when the load is thrown off the tightener is at once brought back and the strain released.

## LOGGING OPERATIONS THIS WINTER

Reports from Different Sections of the Dominion indicate a General Curtailment.—Cost of Taking Out Timber Steadily Increasing and Labor Scarce.

The following communications to the CANADA LUMBERMAN show the extent to which logging operations are being carried on this winter. It will be observed that with few exceptions a policy of curtailment is being pursued.

**PLAYFAIR & WHITE, Midland, Ont.:** We do not think that the logging operations in our district this season will be quite as heavy as last year. The cost if anything will be a little more, as labor is even rather higher than what it was then, and the quality of the men poorer. There is also quite a shortage of labor, which will interfere with the production. We also think there are a few more logs left over at the different booms than last year, which may account for operators not putting in quite so much.

**THE PEARCE COMPANY, Marmora, Ont.:** The past year has been the best in our history. Labor has been scarce, however, and wages high, but indications seem to point towards a better supply this winter. Very little is being done in the woods in the immediate vicinity, and we have the field practically to ourselves. Good men are hard to find and shanty supplies are high.

**GEO. G. GLADMAN, Parry Sound, Ont.:** As far as I can learn the stock of log taken out this season will be from 25 to 30 per cent. less than last season, owing to the scarcity of labor and the high rate of wages. Many camps in this district have only got their full complement of men within the past two weeks and have not half the quantity on the skids at the present time that they usually have at this time of the year.

**JOHN CAREW, Lindsay, Ont.:** The lumbermen in this locality are not taking out as heavy a stock this season as last. This is due partly to the high wages and to the scarcity of men, that is, good bush men. The cut will not be as heavy this season as last.

**JOHN FENDERSON & COMPANY, Sayabec, Que.:** Prospects are very favorable for a good winter's operations and we think the cut this year will be as great as last year. The cost of the logs will be about the same as last year. Men seem to be more plentiful in this vicinity this year but wages are the same.

**THE ALEXANDER GIBSON RAILWAY AND MANUFACTURING COMPANY, Marysville, N. B.:** As far as we know the cut of spruce, pine and cedar will be about the same as last season and the cost per thousand will be from \$1.00 to \$1.50 per thousand greater, caused by increase of stumpage, increased cost of provisions, hay, oats, etc., and last but not least the very great increase in lumbermen's wages.

**M. BRENNAN & SONS MFG CO., Hamilton:** We are taking out this coming season about the same amount of logs as last year. The wages are about 5 to 10 per cent. higher. We would judge that if there is favorable weather during the drawing season the output of logs in our vicinity will be about the same as last year.

**THE KNIGHT BROTHERS COMPANY, Burk's Falls, Ont.:** We are not in a position to speak any further than with regard to our immediate locality, regarding which we would say we consider there may be rather more taken out than last year at about the same or slightly less cost. The peculiar conditions connected with logging in our immediate locality are that there are no large stocks of pine left to be taken out, nothing but the hardwood and hemlock, with a little spruce.

**J. R. BOOTH, Ottawa:** Logging operations are probably being as extensively carried on, in so far as the number of camps operating is concerned, this season as last on the Ottawa river, but because of the scarcity of men most of the camps thus far this season have been running short handed, and unless the remainder of the season continues exceptionally favorable for cutting the

output will not reach that of 1902-3. I have just now about succeeded in filling up my camps with workmen. Ordinarily in the past this has been accomplished between the 1st and 15th of October. The cost is bound to be much in excess of last season (which was by far the most expensive in my lumbering experience). I shall not be surprised if the cost of logging this season exceeds that of 1902-3 by 20 per cent., increased cost of labor contributing nearly the entire advance.

**T. CROCKETT, Riviere-du-Loup Station, Que.:** The lumber operations in this vicinity are on about a par with last year, that is, the cut will be about the same. The cost, however, I figure will be about 10 per cent. greater than last year, owing to the increased wages and the cost of supplies. The snowfall, however, has an important bearing on the cut; if we should have an unusually heavy fall of snow early it will curtail the cut somewhat. There is about 40,000,000 feet of last year's logs hung up on the streams for want of water; so, with good driving next spring there will probably be 30 per cent. more lumber go to the market next year than went this.

**THE RAT PORTAGE LUMBER CO., Rat Portage, Ont.:** Present indications are that logging operations this winter will be even more extensive than those of last season. The weather has not been particularly favorable for getting out supplies, but in all cases sufficient have been sent in to last until the ice is fit for sleighing. Men are much more plentiful than last winter and of a better class. Wages are practically the same as last year, probably a little lower if anything. About one hundred million feet of logs will be banked for the Rat Portage mills, besides half a million ties and a large quantity of poles and piling for the C. P. R.

**E. GARROW, Crown Timber Agent, Webbwood, Ont.:** Regarding logging conditions in my agency, I beg to say the existing conditions are much the same as they were at this time last season. Men have been very scarce and the average wages somewhat higher than last season. Reports invariably come in with the proviso, "If we can get men." Men, however, have got more plentiful within the past ten days, and now, as a great deal of the cutting is yet to do, very much depends on the kind of winter we get; if we have a moderate amount of snow, so that cutting can proceed, the estimated output of the various lumbering firms may be fully realized, but should there be a great amount, it will interfere with the cutting, and consequently the estimates may fall short. From present indications the output in my agency, the eastern division of Algoma district, will be in the neighborhood of one hundred and thirty million feet B. M. This is a large cut for the extent of territory, but it is from 15 to 20 per cent. less than last season's cut, which was abnormally large, and somewhat smaller than the season before, which was also a large one. The cause of the decrease is owing principally to the fact that a number of firms cut out their limits last year and removed to other parts.

**CHEW BROS., Midland, Ont.:** While we believe that the operations are not this year generally so extensive as last year, in our particular case we are doing more. Our cut last season was less than 2,000,000 feet. This season we anticipate having from six to seven millions. We have not experienced the same difficulty in securing men for our camp labor this fall as we did last, although we think the average wage per month will be about the same. We are operating in the Township of Creighton, which is reached by the Manitoulin and North Shore Railway, running in about fourteen miles from Sudbury.

**E. I. WHITE & SON, Sand River, N. S.:** Logging operations will be on a larger scale in this vicinity than usual on account of very destructive forest fires last June. Probably in the vicinity of 30,000 acres in this immediate vicinity were burned over. It is improbable

that there will be any more stock for the English market, but more stock for the United States, as operators will cut smaller timber. The cost will probably more per thousand than last year.

**W. C. EDWARDS & CO., Rockland, Ont.:** It is our opinion that a less quantity of lumber will be taken out on the Ottawa the coming winter than the past winter, and there is one thing we know as an absolute certainty, that it will be taken out at an enormous increased cost.

**PEMBROKE LUMBER CO., Pembroke, Ont.:** We consider the logging operations in this district to have experienced very favorable conditions, as we have had a very excellent fall, but labor was very scarce in the first part of the season, which has handicapped us some. At present we have sufficient men in the woods, and on the whole expect that we shall have a very good season. We expect to get out about twice the number of logs we took out last year, but we do not think this is the case with most of the firms, owing to the labor market. There will be a small additional cost in operating all over this district, owing to the small amount of work to be obtained from the men as compared with former years.

**E. J. DARBY, Crown Timber Agent, Ottawa:** It is a little too early to give definite information, as the assistant rangers are not yet at work, but from present appearances the output will be about the same as last season should the weather conditions continue favorable. The cost of production per thousand will be slightly higher than last season, owing to provisions and wages being higher. Should the limits along the Temiscaming line of railway that are for sale on 9th of next month be operated on this season the production of square and waney timber will show an increase from last season.

**THE GEORGIAN BAY LUMBER COMPANY, Waubesa, Ont.:** So far as we are able to judge the cut of logs this season will be much less than last season, and the cut last season was not large. This is chiefly brought about by the condition of the labor market, which is most unsatisfactory. Men are very unsteady in their work, and will not in many cases try to do a fair day's work though they receive high wages. They appear to prefer travelling around from place to place to being steadily employed. Horses, as well as supplies of all kinds, are high. The timber supply is getting further away from the mills, and this adds greatly to the expense of taking it out. We would not be surprised to find that this season's output of saw logs was one quarter less than last season.

**THE CLEVELAND-SARNIA SAW MILLS CO., Sarnia, Ont.:** In our locality we find the conditions of lumbering practically the same as last year. Wages are running about the same. In some cases operators are offering from \$1.00 to \$2.00 per month more than last year. We find it not as hard to secure men for the woods this year as last, but do not think that they are quite as good a class of men as the average last year. We are having more or less difficulty in getting experienced teamsters and hook men. We cannot see that the cost of logging will be reduced any this year from last. Taking it on a whole, we do not think that there will be quite as many logs put in this year.

**H. CARGILL & SON, Cargill, Ont.:** Logging operations in this section do not commence until snow comes, and the output altogether depends upon the length and steadiness of the weather during winter. We do not anticipate that there will be as much as usual put into the mills this year. Men are very scarce and wages higher than ever before in this section.

**AN OTTAWA VALLEY MANUFACTURER:** Our logging operations on the whole will be less than last year. Wages have been abnormally high, and what is even worse, the class of men as a rule are very inferior, many boys or very young men who under regular conditions would not be hired at all. Supplies are also very high, all of which is going to greatly affect the cost of production, and as to labor the number of logs. We think that the output will be considerably less than in 1903. I speak for the Ottawa Valley in particular. Prices of lumber are very firm, stocks on hand unsold are very small, with us smaller than usual. Owing to

greatly increased cost of production prices must advance if lumbermen are to make anything, or else manufacturing be curtailed. Ottawa mill men have decided that they must have an advance of from 12 to 15 per cent. for deals. Considering the cost of stumpage, enormous extra cost in producing the log, and also considering that the largest and best logs only are taken for deals and to make a very reasonable return to the manufacturer, this advance would be rather unwise than over the mark.

**THE C. BECK MFG. CO.,** Penetanguishene, Ont.: Our operations will be on about the same scale as last year, or perhaps a little larger. We were handicapped a little the early part of the cutting season for lack of men, but are now in a better position, and expect to get our full stock out. As a rule, we think operations have been curtailed somewhat this season.

**A GEORGIAN BAY MANUFACTURER:** So far as we are concerned we went into the bush earlier than usual but have not so many logs skidded as last year at this time. Men have been hard to get and since the wages got so high they do less work, the result being stocks are costing too much to get out. The mill men should early in the fall fix the wages and not be bidding against each other; this kind of thing makes men uneasy and they are continually jumping from one camp to another, which means expense to the lumbermen.

**OTTAWA VALLEY MANUFACTURER:** Wages have advanced 20 per cent. and this will affect cost of hay and oats, as the greater part of the cost of these to us is the hauling from railway. Other supplies about as last year. We are only doing about 75 per cent. of last year's business owing to increased cost, and trying to work only our own horses and not use any hired ones. Think these conditions are general in this district.

**THE HANBURY MANUFACTURING CO.,** Brandon, Man.: So far this winter has been very favorable for our logging operations. We have plenty of snow now for skidding and hauling, although we have not yet started hauling. Men are plentiful and wages are inclined to be lower. We are paying from \$20 to \$30 and think that the average will be \$24 or \$25 per month and board. The wages on the American side will average about \$22 per month this year, which is the cause of men being plentiful here. We hope to take out a large cut this year.

**THROUGH WISCONSIN.**

(BY OUR TRAVELLING REPRESENTATIVE).

Wisconsin has lost her supremacy as the leading white pine producing state, and this honor now lies with Minnesota. In fact, Wisconsin is being rapidly cut out.

Although most of the timber around Marinette had been cut years ago, Marinette lumbermen will enjoy the experience of again seeing logging this winter. Gagnon & Dumville have contracted to put in 2,000,000 feet near Goll, Wis., and the logs will be hauled and dumped into the Menominee river just a mile from the city limits of Marinette.

The following word-picture of the life of the lumberman, which I saw in the Eau Claire Leader, presents current conditions in Wisconsin:—"Never forget early habits is a net which entangles us all more or less in its mesh, and what's bred in the bone won't come out of the flesh. The pioneers of the lumber industry in Michigan and Wisconsin came from the state of Maine, where lumbering constituted the chief industry of the people. These men created a mighty empire in the north-west which is now crumbling away owing to the disappearance of the pine. Most of them have made a decent competence and could retire from business but that would not suit. They love the smell of turpentine too well, so they take up timber limits on the Pacific slope and erect new mills. Nearly all of the great lumber concerns are purchasing limits in Washington and some are already moving their plants there. The crash of the falling pine is music in the ears of these

men. They will follow up until they get the last tree. Well, why not? In this respect, how do the lumbermen differ from men in any other line of business?"

Out in Wisconsin a certain justice some time ago vacated his office, moved into the country and started dealing in timber lands. This industry having petered out he tried selling lumber, but says he could get none to sell. Then becoming disgusted, he moved back to his old office last spring and was re-elected. Under the heading "BACK FROM THE WOODS" this is the advertisement he had in the papers:—"All those persons who may wish to get married or arrested, or if out of a law suit and want to get in, or if already in and wish to get out, please walk up the stairs of the Union block. The expense in either case is about the same, and in many instances the results bear a strange similarity. Charges reasonable in any event."

At Oshkosh I visited the great sleigh and wagon works of A. Streich & Bro. and Gabriel Streich. The latter makes a specialty of logging carts and sleighs, logging wagons and trucks, doing an immense business in this line.

The town of Phillips turned out to see the big load of logs which was brought in from Camp No. 2 of John R. Davis Lumber Company, of which Joe Hunter is foreman. The load was expected in the afternoon but



MONSTER LOAD OF HEMLOCK HAULED ON A GABRIEL STREICH LOGGING SLEIGH.

did not arrive until late in the evening. The delay was caused by having to clear out the trees which stood too near the road and in getting up one large hill where it required thirteen teams to pull it. This great monster of a load was loaded by Joe Hunter and John Murphy and consisted of 114 logs, which scaled 16,860 feet. It was a marvelous piece of work and one wonders how they got them there, as the load was all of 20 feet high. This gigantic load of hemlock was hauled a distance of twelve miles by four horses which were driven by A. LaFontain, except up one or two hills where more horses were required. On one of these hills it required twenty-six horses. The sleighs were made by Gabriel Streich, of Oshkosh, and carried a twenty foot bunk, so that the base of the load was about fifteen feet wide. While this is not the largest load ever hauled in this vicinity, yet it is the largest ever hauled so great a distance. We have pleasure in presenting a view taken from a photograph on the occasion. It speaks well for Gabriel Streich's sleighs.

At Fond du Lac I visited the immense works of the B. F. & H. L. Sweet Company, who make lumber wagons and sleighs. This firm has a splendid reputation, not only in Wisconsin but throughout the north-west, for the work they put out. Their patent lumber wagon is a new thing and merits attention, as one man can unload a heavy load of lumber inside of two minutes without unhitching or uncoupling. The bed is provided with a main roller, pinions and crank; this roller is fitted with vanes or ribs which do not injure the lumber. There are also two smooth rollers to supplement the main roller. By turning the crank the load is moved back until it balances on the hind axle, when the bed with the load tips, allowing the back end to

strike the ground. The driver then starts up his team and the wagon moves out from under the load easily, the bed forming an inclined plane, down which the forward end of the load slips until it reaches the ground, thus avoiding any drop whatever. As there is no jar, the lumber is left on the ground in just as good order as if piled with the greatest care. The Sweet Company also make a patent buck-board. I had the pleasure of sitting in one of these and must say it is a capital one for use of hunters, lumbermen, cruisers or surveyors. Other high grade vehicles made by this company include lumber buggies and trucks, haul-off and dump wagons, slab and saw-dust carts, etc. We present in this number a cut of one of the logging sleighs.

At Milwaukee there was nothing doing on Lake Michigan except the cargoing of lumber. The lumber trade, I was told, was the only encouraging feature of lake commerce. Many of the owners of lumber vessels recouped the losses they had incurred owing to the previously dull season. Large quantities came in from the Georgian Bay region to the lower lake ports. Milwaukee and Chicago are getting a lot of Canadian pine and seventeen vessels arrived in Chicago in one day lumber-laden. This I believe was a record day.

On account of the dullness and uncertainty in the building trades the heavy dealers in lumber have been very slow to stock up. The lack of demand has enabled the Chicago yards to make heavy purchases to hold for future demands. The Report of the Bureau of Statistics, Department of Commerce and Labor, for September contains an interesting review of the internal commerce of the United States, a feature of which is a statement of the receipts of lumber at ports on the great lakes for the first eight months of the year. Milwaukee does not rank high in the list.

Port.	Feet.
Buffalo .....	70,868,000
Tonawanda .....	47,380,000
Chicago .....	179,263,000
Cleveland .....	229,137,000
Detroit .....	40,605,000
Frankford .....	49,437,000
Ludington .....	79,338,000
Milwaukee .....	62,740,000
Toledo .....	34,471,000
Michigan City .....	27,937,000
Total .....	1,105,171,000

The top notch in lumber shipments for the season was reached at Ashland, when a fleet of twelve vessels, loaded with 12,700,000 feet of lumber, left the port on the same day. Eight of them went to the lower lakes and four to Lake Michigan.

At Milwaukee I had the great pleasure of meeting Mr. Frank N. Snell, one of the city's well-known lumbermen. He gave me a pleasant day's visit to the city and made me acquainted with many of the lumber "kings." Frank is a real good soul, which accounts for his being Senior Hoo-Hoo. Everyone in the lumber line knows him and they all expect he will be Snark of the Universe at St. Louis next year.

I also met Mr. C. C. Johnston, who is treasurer of the South Arm Lumber Company. This company operates at Marquette, Mich., owning mills and timber lands in that vicinity.

The American Hardwood Lumber Company, of Madison, are one of the large concerns in the interior. I met the genial vice-president, Mr. W. S. Heddles, who said the company were well satisfied with the season's work.

Racine was formerly a lumber shipping point, but very little goes out now, and more goes in. From this point I went direct to Chicago, passing Dowie's famous Zion City. As we approached the place I noticed an enormous sign-board labelled "ZION CITY—Northern Boundary." The city is assuming metropolitan proportions, and although people may talk of Dowie and his methods, he has a clean, beautiful town. As I passed I noticed on signs "Zion City Planing Mill" and "Zion City Lumber Yards," both of which, I was informed, were owned and run by the Zionists.

Running into Chicago by the North-western line one is impressed by the great floating population of Chicago, which ebbs back and forth into the great city. Computers trains by hundreds take the toilers to their suburban residences. On the way in I passed a "Daily Milk Express," consisting of fifteen refrigerator cars laden with fresh milk brought over a hundred miles to help feed Chicago.



# THE Canada Lumberman

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ADVERTISING RATES ON APPLICATION.

THE CANADA LUMBERMAN is published in the interests of the lumber, wood-working and allied industries, being the only representative in Canada of these important interests. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special pains are taken to secure for publication in the WEEKLY LUMBERMAN the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations. Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, wood-working factories, pulp mills, etc., the CANADA LUMBERMAN is undoubtedly the cheapest and most profitable advertising medium. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which are inserted in a conspicuous position on front page of the Weekly Edition.

#### DEVELOPMENT OF THE HARDWOOD TRADE.

The status of the Canadian hardwood lumber trade is not by any means all that might be desired. Manufacturers have been able to dispose of their output, and in most instances, in late years at least, at some margin of profit, but neither the manufacturers nor the community at large have realized the full measure of benefit from the cutting of the timber. Too much of it has been exported in a semi-manufactured condition instead of being worked up into the smaller stuff for which there is such a large market in Great Britain and elsewhere. So great is the demand for this class of material that a number of importing firms have sent representatives to this country solely for the purpose of reporting upon the possibility of obtaining supplies here. From personal conversation we know that some of them have been disappointed and have so reported. And why? Not that there was an insufficient quantity of hardwoods to be found, but because the hardwood trade did not seem to be organized as it should be; there was no uniformity in prices; no association to demand recognition for the hardwood trade; and no uniform rules for grading the lumber. Every manufacturer makes his own grade and his own price, and frequently these are so wide apart as to cause astonishment to the Canadian buyer, not to speak of the Britisher who is not familiar with our methods.

Contrast these conditions with those which the buyer finds when he steps across the line. A National Hardwood Association for the entire country; uniform prices at all the leading centres, and rules of inspection which are recognized from north to south and from east to west. Is it any wonder that business

originally intended for us is placed with our neighbors?

How to remedy the existing conditions is a problem difficult of solution. There are a vast number of small hardwood mills widely scattered throughout the Dominion, making it almost impossible to organize them. Perhaps the best that could be done would be to form provincial associations and adopt standard inspection rules. This in itself would be of great benefit to the hardwood industry, and doubtless it could be accomplished if a few of the leading manufacturers would only take the matter up.

#### THE LOG INPUT.

For some years the lumber business has enjoyed prosperity and the country at large has been benefitted by the increased activity. Manufacturers, store-keepers and business firms generally have shared the profits with the timber operators and saw mill owners. That the lumber business may continue to prosper is much to be desired, for no branch of manufacturing exerts a wider and more potent influence upon industrial conditions. In the interest of such desire, it is sincerely to be hoped that the threatened reduction in the input of logs this winter may be realized. Volume does not mean profit, and there are reasons why a curtailment should be the policy pursued.

There is no denying the fact that the United States is at the present time passing through a period of industrial depression. How long it may continue and whether it shall become more serious are questions which no person can answer with any degree of certainty, but it was only reasonable to expect some reaction after the high tide of prosperity which has prevailed for the past two or three years in the United States and to a lesser extent in Canada. While prices of lumber have not yet receded to any extent, there will no doubt be a readjustment provided the industrial depression continues for any length of time. Nor can it be argued with reason that this country would escape the effects of bad times across the line.

Further, the owner of standing timber has in it an asset which is gradually increasing in value. It is not necessary that he should turn it into the manufactured product in order to increase its value. He should remember that the supply is not inexhaustible and that the timber does not reproduce itself excepting at long intervals. In that respect it differs from many other materials which furnish the raw product of the manufacturer, such as cotton, wheat, corn, etc.

Elsewhere in this issue will be found letters from several manufacturers telling of their proposed logging operations. Increased stumpage dues and excessive cost of labor and provisions are prime factors in the decision of many to reduce their cut. Apart from these items of expense, the cost of logging is much greater than a few years ago. Although the bushman is paid a much higher wage he is disposed to work more leisurely and does not accomplish some say within 50 per cent. of as much work as the woodsman of ten years ago. The fact that much of the timber adjacent to the

streams has been cut is another factor which increases the cost of getting logs to the mill.

From present appearances there will be no over-production of logs this winter, a condition which is much to be desired, for a continuation of production in the same ratio as in the past two or three years might place lumbermen in an unenviable position should there be a marked falling off in consumption.

#### UNFAIR COMPETITION.

The vigorous steps that were taken about two years ago by the lumber manufacturers of British Columbia to secure the imposition of a duty on United States lumber coming into Canada were not successful, the government not wishing to disturb the prosperous conditions then prevailing. Since that time very little has been heard of the matter, but certain interests have been working quietly with the object of strengthening their position and making another effort for a duty at an opportune time. This time has now arrived, and it is some satisfaction to learn that it is proposed to put up another determined fight to gain some protection for the lumber business.

The productive capacity of the mills of Canada has been greatly increased within the last three years. This applies more particularly to the province of British Columbia, where many new mills of large capacity have been erected. The spirit of progress has, we fear, not always been tempered with wisdom. In too many instances investments have been made in lumbering enterprises without due consideration of the prospects for a remunerative business when times should become less prosperous, a condition which was almost certain to arise. It may be said, however, that in the expected future development of Manitoba and the North-West Territories there was sufficient ground to encourage investment in mills to supply that promising market.

A growth of industrial establishments is to be desired, but when such growth exceeds the requirements of the available market a policy of retrenchment should be pursued until natural laws bring about a change in conditions. The combined capacity of the British Columbia mills catering to the car trade is estimated at 800,000,000 feet of lumber and 800,000,000 shingles per annum, while the present consuming capacity is about 600,000,000 feet of lumber and 500,000,000 shingles. It is plainly evident that production has increased at too rapid a rate and that some steps must be taken to limit the output. The situation has been intensified, moreover, by the fact that United States mills, being unable to dispose of all their output in that country, are using the Canadian market as a dumping ground for their surplus products, even offering them below the cost of production. This competition is encouraged by the Dominion Government, which has so far refused, or neglected, to place an import duty on United States lumber and thus place the Canadian manufacturer on an equal footing with his confrere across the border.

The United States manufacturer has also an advantage in supplying the Manitoba market.

account of a lower freight rate. The rate from the British Columbia mills west of the mountains is forty cents per hundred, and from the mills in the eastern part of the province thirty-three cents. Most points in Manitoba can be reached by the Minnesota mills on a sixteen cent rate.

Unless some protection is afforded by the government, the lumber industry of Canada is likely to suffer to a considerable extent during any period of commercial and industrial depression which may occur in the United States, and there are now some indications that such depression is not far distant. The export of lumber from this country would be greatly diminished, while no doubt we would suffer severe competition in the home market on account of there being no duty as a protection. Many of our mechanics and laboring people would be thrown out of employment and the progress of the lumber industry be seriously hampered. All that is asked is a duty equivalent to that imposed on Canadian lumber shipped to the United States.

#### EDITORIAL NOTES.

In a recent issue of THE LUMBERMAN it was stated that Mr. Louis Miller had disposed of his entire timber holdings in Newfoundland and returned to Scotland. The statement was ventured that much of the timber in Newfoundland did not compare in quality with that in Canada, a consideration which it was surmised had determined Mr. Miller to withdraw from that field. How far this is correct may be judged from the fact that within the past month he has purchased an extensive timber property in Nova Scotia, with the intention, it is said, of carrying on lumbering operations on a large scale. He is also reported to hold options on other properties in Nova Scotia and New Brunswick.

The cutting down of trees is accomplished in this country by means of the axe or the saw, the latter being employed only to a limited extent and being confined almost exclusively to the Maritime Provinces. Some interesting and successful experiments have recently been made in France in cutting trees by means of electricity. A platinum wire is heated to a white heat by an electric current and used like a saw. In this manner it is said the tree is felled much more easily and quickly than by the old method of axe or saw, and the slight carbonization caused by the hot wire acts as a preservative of the end of the timber, preventing it from checking. It is claimed to require only one-eighth of the time consumed by the sawing process. We are not told in what manner the electric current is obtained.

The dangerous period for forest fires is from May to October. This season has just been passed, and with a record of few serious fires. To what extent the fire ranging system and the greater precautions taken by settlers and hunters contributed to this result will not be known until the official reports are submitted to the different governments, but it is quite evident that the public are beginning to recog-

nize the wisdom and necessity of protecting our forests from fire. The Canadian Forestry Association is doing splendid work in diffusing information along this line, and it is a very great pleasure to the CANADA LUMBERMAN to learn of the financial assistance which has been rendered the association by the various Canadian governments. The money so granted will no doubt prove a profitable investment.

The sale of timber limits to be held by the Ontario Government on December 9th has aroused not only a Dominion but an international interest. Ontario lumber men will not alone be the bidders for the valuable areas of pine timber, as applications for maps and conditions of sale have been received by the government from many outside parties. The decision to extend the time allowed for cutting the timber from ten to fifteen years is doubtless a wise step. The fixing of a period of ten years in which to cut the timber on such a vast territory would be likely to result in the sacrifice of an asset of ever-increasing value. In some quarters speculation is indulged in as to whether the increase in the rate of stumpage dues to two dollars per thousand feet will not affect the bonus or purchase price. If this should be the case the government would not profit by the increased dues. The first outlay by the purchaser would not be as heavy, but he would be obliged to pay a larger amount as the timber was cut.

The advocates of preferential tariffs may contend with reason that as yet the plan has not received a fair test. Were it otherwise the figures of imports into Canada from the United Kingdom and the United States since the passing of the Canadian preferential tariff law might be construed as an argument against duty preferences. The imports from the United Kingdom have increased in value from \$29,000,000 in 1897, when the Canadian preference was established, to \$65,000,000 for the year ending June 30, 1903. The imports from the United States increased in that period from \$61,000,000 to \$137,000,000. It must be admitted, however, that the United States has pushed out for Canadian trade more energetically and systematically than has great Britain. This fact is now being realized by the British manufacturers, and we may expect a different showing in the near future. In this connection Canadians should endeavor to take every possible advantage of the preferential tariff which has this year been put into operation in British South Africa. In this country also the United States have secured a strong foothold, having increased her exports from \$3,638,000 in 1893 to \$29,000,000 in 1902, or an increase in ten years of nearly one thousand per cent.

An ingenious country lumber merchant on the other side of the line who wished to establish a claim for inferior quality of a certain lumber shipment had the boards photographed, showing knots, etc., and forwarded prints of these pictures with his claim. His case was unanswerable.

#### FITTING SHINGLE SAWS.

On reading a late number of The Wood-Worker I notice a request from a filer who claims he is in need of general experience with shingle saws, and, for the benefit of my fellow-workman, I will try to explain the care of shingle saws from the anvil until they reach the machine for cutting. With many years of experience in this line, I find it very necessary to carefully do the hammering and filing. My work now is filing band saws, and I think it takes as much experience with large thin shingle saws, and perhaps more, than for band saws.

When I commence hammering shingle saws I use first a 16-inch straightedge and a pin on the side of my anvil to swing the saw upright. Use the straightedge all the time throughout the work on the side of the saw; find the lumps around the saw and level them, then mark on opposite side and strike with a hammer on each place till the saw becomes as nearly level as possible.

Now lay the saw on the anvil and work the tension to an even circle from the rim to center. Use a straightedge that will reach from center to rim. Half way the saw should drop from straightedge about three thicknesses of a postal card. Now use the 16-inch straightedge again straight across the center of the saw, pulling up on the edge with the other hand. See that the center of the saw will drop away at center to let a piece of writing paper slide under freely.

This must be done on both sides. Should your work cause the saw to drop away too far from the straightedge at center, use your straight-face hammer, pointing from center to rim, about 3 inches from the teeth of the saw, on any lumps that may be found. This will raise the eye much quicker and with less hammering than with a round-face hammer, and not interfere with the tension. When the saw has even tension and eye, is perfectly straight from one side to the other in any way you put a straight-edge on it, it is ready to place on the collar, but before putting it on the collar see that the face of the collar is straight from center to edge—that it is not saucer-shape. If your collar is straight, it is all right; if not, use writing paper where it is needed to make it true. If your saw is saucer-shape to the cut it will buckle when passing through.

Now for filing. See that your grinder is perfectly square with the blade of the saw; that the center of the mandrel, when cutting, is directly over the center of the saw; that the tooth may be ground square and the back of the tooth filed with about 30 degrees bevel; that you have a good round throat, the back a little round so that the saw will not jerk when striking knots and not spring when in heavy cuts.

There should be a goose-neck gauge used for setting, with a screw on each side of the saw, so you can use a piece of thin iron wedge under the screws for set on each side of the saw. That is, should the saw be 16-gauge, the entire cut should be from 12 to 13 for clearance for sawdust.

Now for lead. Start the machine, cut a shingle and pass the machine as near the eye as possible, with the spalt held fast. See that it clears the center about 1/32-inch, or close to it. Your saw is now ready to do its duty, and will run easily, cut smoothly and stand nearly all the feed that can be put to it.

## EMERY WHEELS FOR BAND SAWS.

In regard to proper speed for wheels of ordinary grades for saw sharpening, general practice, says Packages, recommends the following approximate speeds: 14 inch, at 1,300; 12 inch, 1,500; 10 inch, 1,800; 8 inch, 2,400; 6 inch, 3,000. But a faster speed for soft wheels and a slower one for hard wheels often renders a wheel otherwise condemned entirely satisfactory. A wheel of medium hardness is preferable for saw sharpening, since it will cut quicker and heat and glaze less than a hard one, though it will wear out a little sooner. A hard wheel, if run too rapidly, will produce, to a greater or less extent, a case-hardening which cannot be touched with a file, and from which cracks are likely to result. When the color of the steel goes beyond a blue, under the action of the emery wheel, the steel is red hot and hardens.

There is much in the selection of emery wheels of good grade, and much in keeping the wheel in condition to cut freely without undue feeding to saw. The perfect wheel will cut freely without tendency to glaze or fill up with the minute particles of dust and steel. It holds its shape without frequent dressing. Its finishing cut should leave the tooth unblued and free from burn or roughness. A saw sharpener with motion such that the emery wheel stops long in bottom of throat, is objectionable, as this is exceedingly apt to heat or case-harden the saw at base of the teeth.

Then, if the gullet is not well rounded, it offers an opportunity for cracking. An 18-gauge saw requires a finer-graded wheel than one of 14-gauge or heavier, so that the wheel may grind to a fine edge without blueing the points of teeth or leaving a coarse wire edge. A coarse wheel will not leave a smooth surface to the edge of the teeth, and, consequently, the saw will not cut so well. If the wheel is too fine for the gauge of the saw to be ground, it will glaze and blue the gullet and point with the slightest grinding. A soft wheel is very objectionable, for it will wear away a trifle on each tooth, making it impossible to maintain the desired shape, and, as a result, the hook will be run out and there will be no uniformity between the teeth on a saw or between the different saws. Having a sharpener equipped with a number of different speeds, and perhaps driven by a separate

engine, it should be possible to properly speed wheels of fair quality to suit their size and the work.

The use of emery wheels with the face concaved is recommended to those who carry considerable hook in their saws, as wheels thus faced will hold their shape with less requirement for dressing than straight-faced wheels. When facing an emery wheel with the dresser, avoid undue pressure. If the wheel is allowed to trace the entire surface of the tooth, in grinding, its shape and that of the teeth will be better preserved. The teeth will be ground up to a sharp keen edge, every tooth alike, and the uniform width of the saw maintained. The use of a sharpener simply for face grinding or as a gumming machine, will result in having no two saws with teeth shaped alike. But if you have a sharpener that will not grind to a sharp point, and you are obliged to face with the machine and point the back with the file, see that the saw is kept properly jointed.

The less that a file is used on the teeth, the better, unless for lightly pointing off a feather edge, and with a good machine and a good wheel this should be unnecessary. In general, the use of an upset should be avoided, as it makes the teeth of uneven length and prevents a uniform grinding. The use of a face swage requires a greater amount of face grinding, and renders the preservation of hook more difficult, than the use of a top swage. If you use a face swage, and the logs are gravelly, requiring a frequent swaging, and a consequent large amount of face grinding, you are likely to run the teeth back too fast and make them too slim, with a tendency to dodge or vibrate, and must shape the grinding to avoid this.

Always keep a good-sized gullet so that the dust will clear easily. The teeth should never be allowed to get short and stubby, or without the proper amount of hook, as they will do less work and take more power, and the saw has a greater tendency to bind and heat, owing to the want of sufficient room in the gullets for the saw dust to escape rapidly. If you have occasion to grind in a deep gullet, a coarse wheel may be employed, to be followed up with a fine grit wheel for finishing and pointing.

In sharpening saws, the pressure of the emery wheel should be light on the work. It is

erroneous to suppose that the heavy pressure produces rapid cutting; it simply results in the glazing of the wheel and the hardening or burning of the teeth, which will then crumble or fracture in the cut or when swaging. If a saw has been badly fitted, and it is necessary to remove such metal, instead of forcing the wheel as hard as possible to the plate and making it red or blue from the heat, the work should be gone over lightly a number of times.

Having a saw with teeth uniform, you should, after swaging, place the saw on sharpener and grind around once to remove any feather edge resulting from swaging, then side-dress with a pressure side-dresser, and then finish sharpening. If any teeth have been bent in swaging or from other cause, straighten them. A saw will cut smoother, stand more feed, and run longer when side-dressed with pressure side-dresser than by any other method. Constant attention to the matter of keeping the teeth exactly alike and perfectly fitted, is essential to a fine cutting saw.

#### COST OF MANUFACTURING COOPERAGE STOCK.

Mr. E.C. Chittenden, of Ashley, Mich., submitted to the Slack Cooperage Stock Association some figures as to the cost of manufacturing slack cooperage stock, reporting as follows:

"We made a test of the amount of staves produced from twenty-seven cords of bolts, which were round elm 32 in. long, cut from timber after hoop timber was taken out, which produced 24,433 staves.

Cost of bolts, 27 cords at \$3.00 per cord.....	\$81.00
Cost of manufacturing 24,433 staves at \$2.00....	50.86
	<hr/>
	\$131.86

Above produced 11,551 No. 1 28½ in. staves at \$6.50 a 1,000 .....	\$75.07
Above produced 13,883 No. 2 28½ in. staves at \$3.50 a 1,000.....	48.59
Loss on day's cut .....	8.20
	<hr/>
	\$131.86

"We also made a test on heading. We took one cord of hardwood bolts, 40 in. long, which we turned into mill-run 19½ in. heading, which produced 176 sets of heads which cost as follows:

One cord of 40 in. bolts.....	\$3.00
Cost of manufacture, wire, loading, etc., 176 sets heading at 2½ cents .....	4.40
	<hr/>
	\$7.40

176 sets headings sold at 4¼ cents per set.....	\$7.40
Margin left.....	.08

## LUMBER INSURANCE AT REDUCED COST

Pennsylvania Lumbermen's Mutual Fire Insurance Co.

632 Drexel Building

PHILADELPHIA, PENNA.

BUYERS OF  
**Young Hyson, Japan and Ceylon Teas**  
 SHOULD WRITE US.

WE HAVE EXTRA VALUES—

**BEANS, RAISINS, CURRANTS, IMPERIAL SYRUP, ETC.,**  
 IN FULL SUPPLY.

**LUCAS, STEELE & BRISTOL, - HAMILTON, ONT.**

**TRADE NOTES.**

The Canadian Northern Railway are sending out an attractive booklet entitled "A Short Story of the Commercial Development of North-West Canada.

The Massey-Harris Company are installing a "Standard" kiln at their works in Toronto for drying lumber.

The Pere Marquette Railway has recently secured running rights over the Michigan Central from Buffalo to St. Thomas, Ont., subject to approval of the Canadian Government, and over western lines into Chicago.

Circular No. 3, just issued by the Sleeper Engine Company, of Montreal, describes their direct connected electrical generating units adapted for lighting purposes in small isolated plants or for independent factory service of any kind.

Gilmour & Company, Trenton, Ont., have been notified that the Wolverhampton Art and Industrial Exhibition, 1902, have awarded them a commemorative diploma for their exhibit of doors, etc., in the Canadian section.

The attention of our readers is called to the advertisement in this number of THE LUMBERMAN of the Dymont-Butterfield Manufacturing Company, of Barrie who manufacture an excellent line of saw mill machinery, prices and particulars of which they will be pleased to furnish to anyone making request for same, mentioning their advertisement in this paper.

Mr. W. D. Sheldon, who recently purchased the business of the McEachren Heating & Ventilating Company at Galt, Ont., has admitted Mr. S. R. Sheldon as partner, and the business will hereafter be carried on under the firm name of Sheldon & Sheldon. Although the firm is changed in name, the management and staff will remain the same excepting that Mr. McEachren has retired from the business.

The new firm state that they are very busy at present and are experiencing a large demand for their goods. They make a specialty of drying, heating, and ventilating appliances, forge and cupola blowers, exhausters, etc.

Messrs. Clark & Demill, manufacturers of wood-working machinery, Galt, Ont., are for the fourth time increasing their works by an addition 80 x 60 feet to the machine shop. They make an up-to-date line of machinery, from entirely new designs and patterns. That their machines meet the demands of the public is demonstrated by the fact that they are unable to keep up with the requirements of patrons, but with their increased space they will be better able to handle their growing business. The newest addition to their list of wood-working machinery is a single and double cylinder lighting planer and matcher, which planes 13 inches wide by 7 inches thick and weighs about 6,000 pounds. As on all their goods, they use cut gears on this machine. The members of the firm give their personal supervision to the manufacturing department, thus insuring the best of work.

Among recent sales of the Hill steam drag saw, illustrated on another page of this paper, are the following: T. Harlan & Son, Trenton, Tenn., Chicago Mill & Lumber Co., Blytheville, Ark., Mengel Box Co., Louisville, Ky., Florida Land Co., Montbrook, Fla., Kaul Lumber Co., Birmingham, Ala., National Cooperage & Woodenware Co., Clarendon, Ark., Tomahawk Stave & Veneer Co., Tomahawk, Wis., Consumers Lumber & Veneer Co., Apopka, Fla., Georgia Iron Works, Augusta, Ga., Cape Fear Lumber Co., Wilmington, N. C., Allis-Chalmers Co., Milwaukee, Wis., A. Bruner & Son, Tiffin, Ohio, Blacksher-Miller Lumber Co., Brewton, Ala., Florida Saw Mill Co., Florida, Ala., Chickasaw Cooperage Co., Tudor, Miss., Simonds Mfg. Co., New Orleans, La., Jeremiah Arn, Arnheim, Mich., Mason County Logging Co., Little Rock, Wash.,

J. A. Bell Lumber Co., Lake Charles, La., Ricardo Honey, Tetepango, Mex., Indiana & Arkansas Lumber Co., Mariana, Ark., Henderson, Mitchell & Henderson, Huntsville, Ala., Halliday, Henshaw, Buckley Co., Seattle, Wash., Oklawaha Lumber Co., Silver Springs, Fla., W. W. Carre & Co., New Orleans, La., J. C. Stout, Lake Charles, La., Colonial Mfg. Co., St. Johns, Newfoundland, Parkersburg Mill Co., Parkersburg, W. Va. These sales indicate the widespread popularity of these machines and are the best criterion by which to judge their merits. Full information regarding them can be had by addressing the manufacturers, Wm. E. Hill & Company, 415 North Rose street, Kalamazoo, Michigan.

**CLARK'S PORK & BEANS**

are the best made in Canada and equal to the finest imported. **Clark's Canned Corned Beef** knows no superior. Get quotations from your jobber.

**W. CLARK, MANUFACTURER, MONTREAL.**

**P. PAYETTE & CO.**

Manufacturers of Saw Mill and Engine Machinery, and all kinds of Marine Machinery.

PENETANGUENUE, ONT



Sole Canadian Agents :-: Prices Reduced  
**WATEROUS BRANTFORD, CANADA.**

**The THORNBURY GASOLINE ENGINE & FOUNDRY CO., Ltd.**

Our New Works now being in full running order we are prepared to fill all orders for **Gasoline Engines, Special Machinery** and all kinds of rough or finished Iron or Brass Castings. Get our quotations on **Grate Bars, Boiler Fronts, etc., etc.** Wholesale and Retail. Head Office, THORNBURY, ONT.

**The THORNBURY GASOLINE ENGINE & FOUNDRY CO., Ltd.**

**TENTS, OIL CLOTHING, and TARPAULINS, HORSE and WAGON COVERS**  
 FOR LUMBERMEN'S USE A SPECIALTY.

EVERYTHING IN CANVAS MANUFACTURED.

**The Montreal Tent, Awning and Tarpaulin Company.**

Samples and Prices on Application 23 & 25 Youville Place, MONTREAL

No agents.  
 All business  
 transacted  
 direct.

**FIRE INSURANCE  
 ON LUMBER ONLY . .**

20%  
 reduction  
 off tariff  
 rates.

We accept lines ranging from \$10,000 to \$40,000 on lumber piled 100 ft. or more from mill. Describe conditions and rates will be quoted promptly.

**Lumber Underwriters, 66 BROADWAY, NEW YORK**

## LUMBERING AND FORESTRY IN SWEDEN.

BY ALEXANDER MACLACHLIN.

I visited Sweden during the month of February, 1903; my idea in going over there was to see how they manufactured the lumber, how the mills were built, what kind of machinery was used and how they managed their forests.

The timber lands extend from the north of Sweden to within a few miles of Stockholm, the capital of the country.

There are only two kinds of timber there, viz., white wood, which resembles our white spruce in this province, and red wood, which is something like our red pine, but a little closer in the grain. There is an abundant supply of these two woods, but of small size; the average runs from 6 to 9 inches at the top end, 20 to 28 feet long for winter sawing. The large logs will average 8 to 11 inches diameter. These are sawed in summer; there is comparatively no 12 or 13 inches diameter timber.

Every farmer grows timber and markets a few trees every winter, just the same as a farmer here would market his oats and hay. Wood is a regular commodity of trade amongst the farmers; every farmer preserves a portion of his farm which is adapted only to the raising of timber for this purpose, and a Swedish farmer will never attempt to clear or cultivate land which is stoney, reserving it for forest culture. The hills are all covered with timber. I only saw one hill which was denuded of forest, and that was caused by a fire. Fires are of rare occurrence. I saw no land of any consequence which had been run over and destroyed by fire. I was informed that there had only been one fire during the past year in the whole of Sweden. It was an insignificant fire and was put out very quickly. Inasmuch as under the system of fire protection in Sweden, fire rangers may enforce the attendance of the militia, and all able bodied citizens may be compelled by the fire ranger to assist in the extinction of forest fires, the consequence is that a fire has no chance of extending very far under this system. There is a heavy fine upon any person refusing to assist at a forest fire. There was one thing which struck me very forcibly going up the country—that the railway ran through miles of forest, and I did not see a particle of land destroyed by fire along the tracks for a distance of 400 miles which I travelled on that railway, which runs up into the north of Sweden. I asked one of the largest lumbermen how they managed to keep the forest so close to the railway track from catching fire. The railway company is obliged to keep watchmen along the track during the dry season, in fact, they were living along the track this winter when I was there. Their houses were situated about a mile apart along the railway track. These men are railway employees, and their duty is to take all precautions against fire. The railways in Sweden are owned by the government, and in consequence these men are also government employees.

I travelled through the woods across country in a sleigh, through wood roads nearly all the way for about 30 miles, for the purpose of seeing the condition in which the forests were. I took particular notice of the forest floor in

various parts, and where, on the private lots owned by the farmers, they cut their own firewood. The forest floor was cleaned up completely and no debris left. I saw a few tree tops in the bush, where they were manufacturing small square timber, chiefly four inches square, for the German market. I asked them what they were doing with such stuff as that. They told me it was for the German market. Everywhere I went the forest floor was clean, there was no underbrush such as we have in our country. It is about the closest cutting that I have ever seen; nowhere in Canada have I seen any such close cutting. The tops of some of the trees, which were too rough, were cut off and piled in with the slabs and edgings for charcoal. Every available piece of wood, which is not otherwise merchantable, is worked up into charcoal, so that the whole tree is utilized into merchantable stuff.

The government forest lands are for the most part situated at the headwaters of the rivers.

The forests are divided into sections. The sections are simply blazed out. When the government decides to sell any of the timber or trees of a certain size, that is to say, merchantable trees, they are marked by the government ranger. The sale of the sections is made by auction, the lumbermen purchase the trees only that are marked. The government in offering the trees at auction gives an approximate estimate of the quantity of timber on each section, they give you the exact number of trees and an approximate average of the size, and what they will produce when cut down—this for the information of the purchaser. The government, however, is not bound by this estimate, only so far as the number of trees is concerned—the approximate estimate is given as a guide to the purchasers. The purchasers, of course, examine the sections which are to be sold, the government giving ample notice of the sales of these sections, and the purchasers examine for themselves the limits; in many cases where the purchaser has confidence in the skill of the explorer, they place explicit reliance upon the government report. They seem to rely on the honesty of each other. I never saw a people who placed such confidence in one another as do the Swedish people. This convinces me that their dealings are distinguished by great honesty.

There is no effort to cheat the government, and there is nothing done on the part of the government to lessen the confidence of the purchasers in the honesty and fidelity of the system. The fact is, the government, the farmers, and the lumbermen work hand in hand, inasmuch as the timber revenue forms a very important item in the budget of the country. The government seems to realize that it is their duty to facilitate in every way the production of the article and its sale in such a way that the lumbermen can make a profit out of the business and all parties are satisfied.

I visited one of the largest lumbering concerns in Sweden. They were engaged in the manufacture of lumber since the year 1643; they have conducted the lumbering business through their ancestors in the same place, on the same river, since the year 1643. I saw the

original deed granting a limit of 500 miles to the firm who established the business in 1643; of course the establishment has changed hands a number of times since the original grant but the limits are operated still, and are valuable at the present day. The reason for this state of things is easily explained by the fact that the proper system of forest preservation has existed from the first, on these limits, and that this system is still in force at the present day.

The cut of the establishment is about eighty millions a year. I saw many thousands of logs within 10 miles of the mill, put out on the ice of the river this winter. The average was from 4 to 9 inches.

I investigated the question of the expense of getting timber out of the woods, and found that the cost of this department of lumbering differed very slightly from our own. The cost of manufacturing at the mills is much lower than ours. This is due, largely, first to cheaper labor, and secondly, the rate of insurance on mill properties and lumber yards. These two items reduced the cost of manufacture about one-half what it costs here.

From what I have seen in regard to Sweden, I think that the system there will result in a permanent supply of timber, and I am also of opinion that the same result can be produced in the Province of Quebec if the government would take hold of the question seriously and intelligently. To do this the farmers and colonists must be taken into the confidence of the government and educated, and no better method can be devised than to enlist the good offices of the country curates in the instruction of their parishoners in the principle which governs the perpetual production of forest products. Unfortunately, in some instances, the curate who has great influence in a parish becomes unconsciously an instrument in the hands of speculating jobbers. The government revenue suffers accordingly.

The large establishment of which I have spoken is situated on the River Angermann, in Sweden. This river is similar to the Gatineau, and about as long. There are twenty-five lumbering establishments on this river, whereas on the Gatineau to-day there remains only two establishments. As a matter of fact the Gatineau river and Valley is far superior as a timber producer to the Swedish river both in size and possible quantities and variety of timber. Where the Swedish country only produces two varieties the Gatineau country furnishes white and red pine, spruce, cedar, birch, not to speak of the hardwoods, which are of considerable value. If the Gatineau Valley had been treated in the same way as the country tributary to the Angermann it would supply fully as great a number of milling establishments as the Swedish river.

At the headwaters of the Angermann the timber becomes very small, which is not the case with the Gatineau river. I am familiar with the country tributary to the Gatineau river, and have seen thousands of pines in the burnt district destroyed. In fact, in the Ottawa country there is more brule than standing forest. In Sweden they do not re-plant, they trust to natural reproduction, that is to say, the seeding from the standing trees. There

are always trees left sufficient to produce fresh seed and to re-seed the forest naturally.

The system of cutting in sections serves the purpose of reproduction by lapse of time. It is a well-known fact that for every tree of 12 inches diameter cut in the forest there has got to be a sapling growing to fill its place; it becomes a question then of preserving the sections sufficiently long so that that sapling will become a 12 inch tree before the forest section is again lumbered over.

There is a record kept by the government of every section cut, and the date of cut. Time is given for the reproduction of the forest. It is under this system alone that the perpetual supply of forest products can be obtained and perpetuated. There is no middle course. No system of preservation will be perfect unless

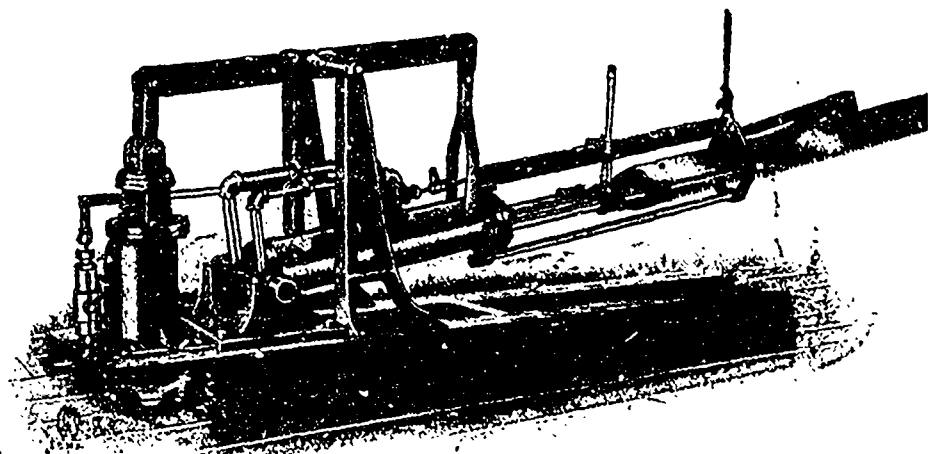
an eyesore and a reflection on the system which produces it.

As a consequence of this forest culture, in all my travels in Sweden I never saw a house which was uninhabited, however isolated it may have been in the forest. I found the houses inhabited by seemingly comfortable families.— Rod and Gun.

**THE HILL DIRECT ACTING DRAG SAW.**

The places where a drag saw can be used to advantage are so numerous and its advantages over any other kind of cross cutting are so great that any improvement in this class of machinery is sure to interest every reader of this paper. This being the case, we take pleasure in illustrating the latest model of the famous Hill patent direct steam drag saw, with auxiliary steam hoisting cylinder.

The construction of this machine, here illustrated, is radically different from that of any other drag saw, and is by far the most simple and compact. The machine



DIRECT ACTING DRAG SAW, MANUFACTURED BY WM. E. HILL & CO., KALAMAZOO, MICH.

some such regulation is adopted and effectively enforced.

Timber does not grow as fast in Sweden as it does with us. It is estimated in Sweden that between 15 to 20 years are required to get a re-cut of 11 or 12 inches on the stump. From observation and experience I am of the opinion that from the sapling to the 12 inch spruce tree it will be about 30 years. The average growth pine from the sapling in propitious ground would be about two feet high for each year. A 12 inch pine would be at least 40 feet high.

I noticed in the northern part of Sweden farm after farm consisting of only four acres, or thereabout, of good land under cultivation. The balance of the farm was entirely in forest trees. These farmers supplement their agricultural products by the profits which they make out of forest culture, in fact, one might say that the greater part of a Swedish farm in this section of the country is a wood or timber farm, and the natives pay as much attention to the culture of the forest as our people do to their farms. If this practice had been followed by the colons in the Province of Quebec, where similar circumstances exist, they would have a large forest on the farm, instead of a desolate, burnt-up and valueless piece of ground with hills completely denuded of soil.

This forest farm would be a constant source of revenue to the farmer, and we would retain our population. The abandoned farm, as we know it now, would be a thing of the past and a source of wealth to the province. Now it is

occupies very little space, and is really a self-contained steam engine with the saw fastened to the piston rod. It has few parts, consisting mainly of base, cylinder, valve and connections, cross-head which is attached directly to piston and to which saw is secured suitable guides for crossheads, saw guide and a steam cylinder for raising and lowering saw and feeding it while it is in the cut. The cylinder is provided with a positive steam cushion at each end of stroke so that even at maximum speed it is impossible to knock out cylinder heads. This perfect cushion also serves to obviate the jarring of foundation and end play so common in many other types of drag saws. The machine can be placed in the upper storey of a mill or factory without inconvenience. The valve is radically different from anything used heretofore, and is so simple in construction that it cannot get out of order. It is operated from crosshead and allows a very high piston speed. The main part of the machine hinges on trunions which work in a heavy base.

The mechanism for counterbalancing the machine and regulating the feed of the saw is very simple. The machine is partially balanced by a weight which is fastened to a rope passing over the sheaves and attaching to yoke of drag saw. By taking out or adding to the weight in the box the feed can be increased or decreased. In addition to this the operator is given control of the feed and provided with a simple hoisting device in the auxiliary steam cylinder. This cylinder gives a rapid, powerful and positive hoist, which without doubt is superior to any other. The machines are built in three sizes and are also arranged to be used on a raft for sawing logs in the water.

These drag saws are extensively used all over the United States, in Europe, Africa, Mexico, South America and the Philippines, which gives some idea of their wide popularity.

They are used to cut shingle bolts, stave bolts, heading stock; to cut up logs in the pond to length on the log deck; to cut cord wood, pulp wood blocks, and for a thousand other purposes; in fact one of these machines was shipped to Newfoundland to cut up

whales—others having been made to cut ice and stone. They can be mounted on skids and taken from place to place to be used with portable boiler to cut up logs in the woods.

They are claimed to be the fastest cutting machine on the market and the most economical to run. As to the wearing qualities, the following letter from Lowell M. Palmer, President of the Brooklyn Coopers Company, is sufficient testimony as to that:

*Lowell M. Palmer*  
*Brooklyn Coopers Co.*  
 110 West 11th Street  
 New York July 6th, 1903.

The Walker Veneer and Panel Works,  
 Alpena, Mich.

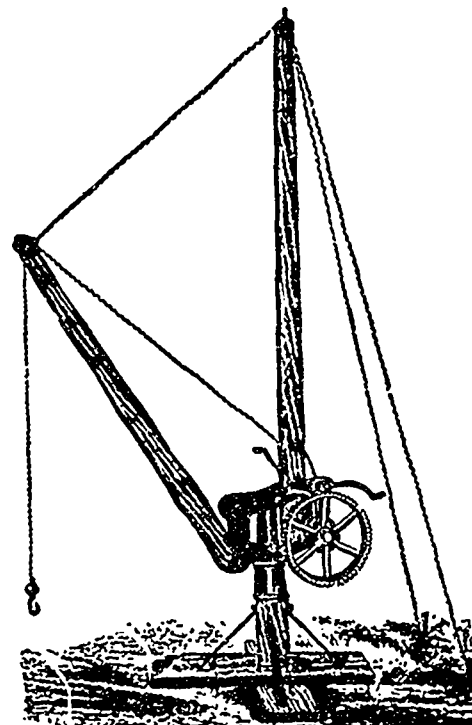
Gentlemen:-  
 In reply to your favor of the 1st inst. I beg to say that we have the W. E. Hill & Co. Steam Drag Saw in use at all our plants and have no hesitation in saying that they are the best Drag Saw in the market. They will do more and better work than any Drag Saw made. They are well and strongly made and in an experience of over three years with some six or seven of these Drag Saws we have, I think, never lost a day with one of them.

Yours truly,  
*Lowell M. Palmer*  
 President.

Parties who contemplate purchasing a drag saw will do well to write Wm. E. Hill & Co., 415 North Rose street, Kalamazoo, Michigan, for their catalog B and prices before placing their order.

**A TIMBER DERRICK.**

The National Hoist & Machine Company, of Chicago, Ill., manufacture a special derrick for handling timbers, in yards and at mills. Two men can operate them and easily handle heavy timbers, on and off cars, or piles built on flat cars with flat wheels for yard use, or with flanged wheels for tracks. These are the only practical hand power derricks made for this purpose. The special features of this derrick are in setting up and taking down, to allow it to pass through doors and



TIMBER DERRICK.

under wires, etc. Two men can take it apart and reset it quickly and easily.

The manufacturers will be pleased to send further particulars, prices, etc., to any reader of the LUMBERMAN who may write them mentioning their advertisement now appearing in this journal.



### THE HOUSE OF HOO-HOO.

A special meeting of the Supreme Nine was held at Chicago on Saturday, November 7, one of the most important things discussed being the House of Hoo-Hoo at the St. Louis World's Fair. It was reported that about \$30,000 in subscriptions had been received. While this amount is sufficient to build a house, it is not sufficient to build the sort of house desired, nor to finish and maintain it during the seven months of the Exposition.

The Board of Governors of the House of Hoo-Hoo held a meeting at St. Louis early last month and suggested the appointment of December 9 next as a sort of universal House of Hoo-Hoo Day, on which day every member of Hoo-Hoo will consider the question: "Am I going to contribute to this undertaking or not? If so, I am going to do it to-day." This suggestion was discussed by the Supreme Nine at Chicago, and the following resolution was unanimously adopted:

"Resolved, that the Supreme Nine in special called session assembled, heartily endorses the action of the Board of Governors of the House of Hoo in naming December 9th as a special day on which to make a thorough and concerted canvass of the membership for subscription to that great undertaking, and promise cordial support."

Every Canadian Hoo-Hoo should make it a point to contribute on December 9 to the building of what will be a world renowned structure at St. Louis. If you have already contributed, consider whether you cannot increase your subscription.

### INSURANCE FOR THE LUMBER TRADE.

#### SOME PROPHECY AS TO FUTURE OF INSURANCE COMPANIES—STRENGTH OF THE STANDARD LUMBER MUTUALS—FINANCIAL SHOWING OF THE LUMBER MUTUAL OF BOSTON.

Following the boom period comes the inevitable reaction; inflation is followed by depression. Bouds decrease in value, many good stocks fall 20 per cent. to 30 per cent. in the market, and of those which have been well watered, having the water squeezed out, nothing remains.

"Investment securities in many instances become permanent investments in a double sense.

Insurance companies having large capital and surplus to invest naturally buy such bonds and stocks as they think easily convertible into cash on the market.

In flush times they buy freely and, assuming a profitable underwriting business done and their investments profitable, declare and pay large dividends.

As many of the officially recognized companies (nearly one-quarter of the whole number) lost money on their underwriting the past ten years and have only the income on their investment to offset their losses, the cutting off or reduction of this income and the fall in value of their securities will leave many of them without a surplus this coming December 31, when their reports are made to the insurance departments of the several states in which they are located.

Come to mark down their securities to the present market value, so much less than one year before, added to their previous loss record on underwriting, they will find their capital impaired 10 to 25 per cent.

The laws of the several states require the impairment of capital to be made up by an assessment on the stockholders. The stockholders, rather than put in more money to support a losing business, will reinsure their risks, close up their companies and retire from business.

The chance to advance the "market value" of their

securities two years ago was an extended lease of life for many companies after the excessive losses of the previous two or three years. Marking the securities down at the close of this year will close their careers, unless an excessive underwriting profit has been made by the 25 per cent. advance in rates in 1902 and the advance has been strictly adhered to on all risks.

The Argus Insurance Chart gave the names of twelve stock companies and nine mutual companies failed or retired from business in 1902, including only those companies doing an honorable and above board business and excluding all "undergrounders" or "wild cat" companies whose names change at least as often as their signs need repainting.

The failures for 1903 will certainly equal those of 1902. In 1901, when the stockholders begin to study over the January 1, 1903, reports, they will make short work of voting their companies out of business, and the failures be doubled.

With a decreasing number of companies seeking insurance the lumber trade will naturally turn its business and orders more to those companies organized and managed exclusively by the members of the trade.

The trade mutuals, organized in 1895, with eight years' experience back of them as a guide for present and future business, and having demonstrated their ability gradually to increase their dividends up to 20 per cent. and 30 per cent, while at the same time accumulating a net cash surplus equal to the total of all dividends paid for eight years, claim they should have the preference on all orders for insurance.

The Lumber Mutual of Boston, in support of that claim, publishes the following:—

#### FINANCIAL STATEMENT.

THE LUMBER MUTUAL FIRE INSURANCE COMPANY, 53 STATE STREET, BOSTON, MASS.

50 per cent. reserve. October 31, 1903.

#### ASSETS.

Mortgages, 6 per cent.....	\$ 1,800.00
Notes, 5 per cent.....	10,000.00
Municipal bonds, 4 per cent.....	10,000.00
U.S. government bonds (coupon), 3 per cent	2,160.00
U.S. government bonds (old coupon), 4 per cent.....	555.00
Cash in banks on interest, 20 per cent.....	96,292.74
Cash in office.....	52.74
Premiums due, not more than three months	9,718.60
	<u>\$130,589.08</u>

#### LIABILITIES.

Unearned premiums.....	\$ 55,609.07
Inspections.....	88.81
Loss resisted.....	1,000.00
Loss reported (estimated).....	600.00
Net cash surplus.....	73,291.20

Contingent assets.....	\$130,589.08
	<u>333,654.42</u>
Total assets.....	\$464,243.50

Insurance in force.....	Amount \$4,155,264.20	Premium \$111,218.14
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Dividends paid on 1902 policies (since Jan. 1, 1903).....	\$ 22,334.56
Paid for losses and adjusting (since Jan. 1, 1903).....	37,239.28
Total dividends paid to date.....	73,591.59
Total losses paid to date.....	163,147.05
Dividends on policies issued in 1902, 50 per cent.	

This statement includes in its assets:

- 1st. Mortgage, 6 per cent., \$1,900, on property worth \$4,000.
- 2nd. Notes, 5 per cent., \$10,000, being two of \$5,000 each, given by Massachusetts corporations, each rated over \$500,000.
- 3rd. Municipal bonds, 4 per cent., \$10,000 are water bonds of a Massachusetts city.
- 4th. Government bonds, need no comment.
- 5th. Cash in banks on interest, 2 per cent. to 5 per cent. \$96,292.74. The best comment on that is to publish in full the company's

#### BANK BALANCES.

THE LUMBER MUTUAL FIRE INSURANCE COMPANY, OF BOSTON, MASSACHUSETTS, OCTOBER 31, 1903.

On interest at rates stated, the rates of savings and co-operative banks being the annual percentage based on semi-annual rates last paid.

	Per cent.
People's National Bank of Boston, "Regular Acc't".....	2 \$11,046.77
People's National Bank of Boston, "Special Acc't".....	3 5,000.00
International Trust Company, "Regular Acc't".....	2 792.09
International Trust Company, "Special Acc't".....	3 5,000.00
Safety Fund National Bank of Fitchburg, "Special Acc't".....	3 5,000.00
Wachusett National Bank of Fitchburg, "Special Acc't".....	3 5,000.00
Westminster National Bank of Gardner, "Special Acc't".....	3 5,000.00
Abington Savings Bank.....	3½ 1,008.75

Atliol Savings Bank.....	4 1,000.00
Barre Savings Bank.....	3½ 1,000.00
Berkshire County Savings Bank of Pittsburg.....	3½ 1,000.00
Brockton Savings Bank.....	3½ 1,000.00
Brighton Savings Bank.....	3½ 1,000.00
Cambridgeport Savings Bank.....	3½ 1,000.00
Chelsea Savings Bank.....	3½ 1,000.00
Citizens' Savings Bank, of Fall River.....	4 1,000.00
City Inst. for Savings of Lowell.....	4 1,000.00
Clinton Savings Bank.....	3½ 1,000.00
Cobasset Savings Bank.....	4 1,000.00
County Savings Bank of Chelsea.....	4 1,000.00
Crocker Inst. for Savings of Turners Falls.....	4 500.00
Danvers Savings bank.....	4 500.00
Elliot Five Cents Savings bank of Roxbury.....	3½ 1,100.00
Fall River Five Cents Savings bank.....	4 1,100.00
Fall River Savings bank.....	4 1,100.00
Fitchburg Savings bank.....	3½ 1,100.00
Gardner Savings bank.....	4 1,100.00
Hoosac Savings bank of North Adams.....	4 1,100.00
Inst. for Savings in Roxbury and vicinity.....	4 1,100.00
Leominster Savings bank.....	4 1,100.00
Marlborough Savings bank.....	3½ 1,000.00
Mechanics Savings bank of Holyoke.....	3½ 1,000.00
Middleborough Savings bank.....	3 1,000.00
Milford Savings bank.....	3½ 1,000.00
Monson Savings bank.....	4 1,000.00
New Bedford Inst. for Savings.....	4 1,000.00
North Adams Savings bank.....	4 1,148.66
North Middlesex Savings bank of Ayer.....	3½ 1,000.00
Orange Savings bank.....	4 574.40
Pentucket Savings bank.....	3½ 1,109.66
Peoples' bank of Worcester.....	4 1,000.00
Quincy Savings bank.....	4 1,000.00
Rockland Savings bank.....	3½ 500.00
Salem Five Cents Savings bank.....	3½ 1,000.00
South Adams Savings bank.....	4 1,000.00
Southbridge Savings bank.....	4 500.00
Springfield Five Cents Savings bank.....	3½ 1,195.17
Springfield Inst. for Savings.....	3½ 1,198.16
Taunton Savings bank.....	4 1,122.11
Union Savings bank of Fall River.....	4 1,148.66
Wakefield Savings bank.....	3½ 505.91
Watertown Savings bank.....	3½ 1,123.52
Webster Five Cents Savings bank.....	4 500.00
Westfield Savings bank.....	4 1,195.04
West Newton Savings bank.....	3½ 1,134.64
Williamstown Savings bank.....	4 1,126.14
Worcester Mech. Savings bank.....	4 1,000.00
Worcester North Savings Inst. Fitchburg.....	4 1,218.94
Woronoco Savings bank of Westfield.....	4 1,195.04
Fidelity Co-operative bank, 25 shares—16th series.....	5 2,973.75
Fitchburg Co-operative bank, 9 shares—1 35th series, 8 39th series.....	5 907.11
Leominster Co-operative bank, 25 shares—10 9th series, 15 11th series.....	5 4,217.85
Needham Co-operative bank, 25 shares—23rd series.....	6 150.00
Sandwich Co-operative bank, 25 shares—36th series.....	6 150.00
Cash in office.....	52.74

Lumber Mutual cash book balance.. \$96,345.48

Massachusetts savings banks and trust companies being under the control and yearly examination of a state commission, the members of which must not be interested in any business or securities, and the banks compelled to set aside a guaranty fund of a certain percentage of the profits before each distribution of profits to the depositors, the deposits are absolutely safe.

The five special deposits of \$5,000 each in national banks, on call, are intended as an emergency fund to cover the largest possible loss of the Lumber Mutual in any lumber district. The fund has never been called on up to this date.

The officers and directors of the Lumber Mutual Fire Insurance Company congratulate the policy holders that not one dollar of the company's funds is placed where there is any apparent possibility of the smallest loss or shrinking of value.

The question of the ability of the company to continue its present 30 per cent. dividends may be answered by referring to the above financial statement.

Profits divided, cash dividends paid.....\$73,591.59

Profits undivided, net cash surplus..... 73,291.20

The profits undivided equaling the dividends paid for past nine years, any lumberman can make a safe bet that the "plan of business" that has been steadily followed since the company first started will continue the present 30 per cent. dividend. To prove a winner, all that is necessary to do is to forward his next expiring policy for transfer to the Lumber Mutual Fire Insurance Company, of Boston, Mass.

W. C. JOHNSON, President.

The Rat Portage Lumber Company, who recently purchased the property of the Harrison River Mills, Timber & Trading Company at Harrison River, B. C., have commenced the erection of a saw mill which will be much larger than the one destroyed by fire.

**THE NEWS**

... Bros., of Bath, N. B., are building a new saw mill at Kilfoil.

... Dickson has sold his lumber yard at Atwood, Ont. to John Fisher.

... Canadian Elevator Company are building a planing mill at Morris, Man.

... Coates has commenced the erection of a stove and planing mill at Dutton, Ont.

... usden & Blowett have purchased the planing mill of R. Cole at St. Thomas, Ont.

... McKellar has disposed of his lumber business at Perth, Man., to William Shanks.

... Button has leased the saw mills at Terranova, Ont., owned by J. Thompson and S. Ireland.

... T. Peuch, who has operated the planing mill at Penola, N. W. T., is removing to Wetaskiwin.

... The dissolution is announced of Beaumont & Gauvin, lumber merchants, Ancienne Lorette, Que.

... The Boissevain Lumber Company has opened at Boissevain, Man., with G. H. Carman as manager.

... Vigars & Company, of Port Arthur, Ont., have asked the council for a lease of certain land for a mill site.

... W. C. Duffus, of Detroit, is considering the establishment of a turned wooden goods factory at Woodstock, Ont.

... Nelson Mowers has sold his interest in the Olds Lumber & Hardware Company, of Olds, N. W. T., to W. L. Fisher.

... Jos. M. Champigny has registered as proprietor of the Enterprise Wood Manufacturing Company, Lawrenceville, Que.

... A new lumber company has been formed at Mayook Siding, B. C. James Ryan is president and C. D. McNab general manager.

... The Cranbrook Sash & Door Company, Limited, has been incorporated at Cranbrook, B. C., with a capital of \$40,000.

... A. S. Rosenroll & Company, lumber dealers, Wetaskiwin, N. W. T., are to be succeeded by the Rosenroll Lumber Company, Limited.

... McKellar & Jackson, who have carried on business as lumber merchants at Rapid City, Man., have dissolved, C. E. Jackson continuing.

... A new saw mill is to be built at New Westminster, B. C., by Small & Buckler, who have secured timber limits tributary to the Fraser river.

... Murray & Gregory are installing the machinery in their new saw mill at St. John, N. B., which will be ready for operations early next season.

... The name of the Laurie Lumber Company, Limited, a British Columbia concern, has been changed to the St. Mary's River Lumber Company, Limited.

... J. A. Sayward & Company have completed their new planing mill and sash and door factory at Victoria, B. C., which is 50 x 100 feet, two storeys high.

... McClellan Bros., of Hopewell Hill, N. B., have sold their portable steam saw mill to Herbert Wilbur and William Smith and purpose buying a larger one.

... The Baie Chaleur Lumber Company have completed a new saw mill at Mission Point, Que. They will manufacture all kinds of lumber, including pulp wood.

... The new saw mill of J. P. Newman, of Warton, Ont., has a daily capacity of 20,000 feet of lumber and 20,000 shingles. It is equipped with modern machinery.

... The British Columbia Box Factory, of Vancouver, B. C., have placed in their mill a double cutting band mill, the first of the kind to be installed in British Columbia.

... The Croft Lumber Company has recently been formed at Huntsville, Ont., the directors being George Paget, A. E. Paget, Charles E. Paget and James Rae. The capital is \$40,000.

... Mathias Joannis, A. Roy and others have purchased the Como Estate at Maniwaki, Que., on which there is a large saw mill. It is the intention to operate the mill to its full capacity.

... Letters of incorporation have been granted to the Scott Lumber Company, of Fredericton, N. B., with a capital stock of \$99,000. New machinery is being installed in the Victoria mill at that place.

... The St. Catharines Box & Lumber Company has been organized at St. Catharines, Ont., with a capital of \$75,000. The provisional directors are M. J. Murphy, W. S. Duffin, H. H. Wilson, and Martha Wilson.

... Wilson & Company, the American firm which has bought up large quantities of timber in the vicinity of Nanaimo, B. C., have begun active operations at French Creek. Donkey engines are being employed in their woods operations.

... The Cutler & Savidge Lumber Company, of Spring Lake, Mich., write us that they have disposed of all their Canadian holdings and are winding up the affairs of the company, after a continuous existence of nearly fifty years in the timber business.

... Frank D. Wilsiey, of New York, and C. E. Taschereau, L. A. Taschereau and Ferdinand Roy, of Quebec, have been incorporated under the title of the Mill Stream Lumber Company, with a capital of \$200,000. It is proposed to construct and operate pulp and saw mills.

... A party of surveyors have been sent out by the Quebec & Lake St. John Railway to locate a line of railway recently subsidized to run from River Jeanette, on the line of the Lake St. John Railway, to La Teque, the head of steamboat navigation on the St. Maurice river. This line will open up a large lumbering district.

... The Farrell mill situated on False Creek, at Vancouver, B. C., has been purchased by J. Sinclair, of Wapella, N. W. T. Mr. Sinclair has a number of yards throughout the North West Territories, and has been a large buyer of British Columbia shingles. It is his intention to increase the mill to more than double its present capacity.

... The business of Keenan Bros., lumber manufacturers and dealers, Owen Sound, Ont., will hereafter

be controlled by a joint stock company, to be known as the Keenan Bros. Company, Limited. The capital stock is placed at \$50,000 and the provisional directors are J. E. Keenan, J. C. Keenan and R. T. Keenan, all of whom have heretofore been identified with the business.

... Ayton Cromwell, F. R. Cromwell, James Cromwell, Hugh Riddell and Joseph Riddell, of Cookshire, Que., have acquired 3,200 acres of timber land, which comprises the Dudswell mountains, from the British American Land Company. They have formed the Dudswell Lumber Company and are building a steam saw mill on the Kingsley Brook.

... Breckenridge & Lund have recently completed a large saw mill and planing mill at Wardner, B. C., said to have cost about \$200,000. The saw mill has a capacity of 75,000 feet of lumber per day and is so constructed that its capacity may be doubled by the building of an addition. It is extended to market the output in Manitoba and the Territories.

... The Van Buren Lumber Company, Limited, of Edmundston, N. B., is applying for incorporation, to conduct a general lumbering business, with power to acquire the rights and franchises of the Van Buren Lumber Company, a corporation existing under the laws of the State of Maine. The applicants are T. J. Cochran, J. M. Stevens and Erin Lawson, of Edmundston, and Allan Hammond and J. W. Hammond, of Van Buren, Me.

... The twenty miles of rails and rolling stock used by McLean Bros. in their dyking operations on the Fraser river, in British Columbia, have been transferred to the scene of Robert McNair's logging operations on the Capilano river, opposite Vancouver. The rails will be laid up the mountain side to the cedar limits and the cars will be used in hauling the logs down to deep water in Vancouver harbor. The old engine purchased has a history. It hauled Brigham Young in the early days of its career on a train which ran into Salt Lake City. It was subsequently bought by the Columbia and Western Railway of British Columbia—their first engine—and when sold to McLean Bros. was known as "Old No. 1." It is in a good state of repair and will probably end its days hauling logs up and down the mountain side.

... The Board of Trade at New Westminster, B. C., have petitioned the Dominion Government to proceed at an early date with the improvement of the Fraser river channel. The memorial states: "It may be pointed out that your Government has here a large revenue interest at stake. There are 170,000 acres of timber berths now under license immediately tributary to the Fraser River, which will on an authoritative estimate produce not less than 5,100,000,000 feet of logs, paying a sum of \$255,000 stumpage into the Dominion Treasury. The total available quantity of timber and amount of revenue locked up in this section reaches probably 50 per cent. more than these figures, and it is desirable that this wealth should be realized, as it is constantly liable to destruction by fire. It will be seen, therefore, that this one industry will pay many times over the cost of opening up and maintaining the river channels. Additional to this are the needs of general commerce, which cannot be belittled or overlooked."

**CRAIG MINE CRYSTAL CORUNDUM WHEELS**

**Our Pure Crystal Corundum Saw Gummars have no equal for their rapid, cool, cutting properties.**



Read the following from Bulletin 180 of the United States Geological Survey, which says:  
 "Often a distinction is made between emery and corundum, many persons not recognizing emery as a variety of corundum.  
 Emery is a mechanical admixture of corundum and magnetite or hematite. It is, of course, the presence of corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain."

Emery is imported, mined by Greeks and Turks and contains only about 25% corundum. Our Crystal Corundum is guaranteed to be 98% pure alumina, a Canadian product, mined and manufactured by Canadians for Canadians.

**HART CORUNDUM WHEEL COMPANY, Limited, Hamilton, Ont., Can.**



# WOOD PULP DEPARTMENT

## PROTEST AGAINST A COUNTERVAILING DUTY.

A hearing on the protests of a number of Canadian pulp companies against a countervailing duty on pulp imported into the United States was held before the Board of General Appraisers in New York city on November 11th. The additional duty objected to was imposed by the Treasury Department early last year. The ruling provides for the collection of 25 cents per ton on all pulp brought into the United States made from wood cut on Crown lands in those provinces of Canada which allow a rebate of 25 cents per cord on the Crown land wood when it is ground into pulp in Canada. The countervailing duty is, therefore, restricted to the province of Quebec, which is the only province which gives a rebate of 25 cents a cord for home manufacture.

The protests taken up at the last hearing were those of the Riordon Paper Mills, Limited, of Merritton and Hawkesbury, Ontario; Laurentide Pulp Company, of Grand Mere, Quebec; Belgo-Canadian Pulp and Paper Company, of Shawinigan Falls, Quebec; James MacLaren Company, Limited, of Buckingham, Que.; the Brompton Pulp and Paper Company, of Brompton Falls, Quebec, and the Jacques Cartier Pulp and Paper Company, of Pont Rouge, Quebec.

The object of the hearing was to ascertain the percentages of wood cut on Crown lands and on private lands used by the protesting companies. Affidavits covering this point were filed by all the companies, and the figures given in these affidavits were the subject of the inquiry made by the government.

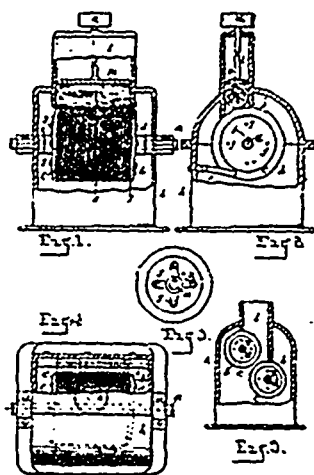
It appeared that of the wood used by the Laurentide Pulp Company, of Grand Mere, during the year ending June 30, 1903, 82.6 per cent. came from Crown lands and 17.4 per cent. from private lands. The Belgo Pulp & Paper Company, of Shawinigan Falls, used in the year ending June 30, 1903, 30,888 cords of Crown land timber and 7,021 cords of timber cut from private lands, and about one-half of the product of the mill was shipped to the United States. In the year ended June 30, 1902, the MacLaren Company, of Buckingham, used 3,967 cords of Crown timber and 14,105 cords cut on private lands, while during the past year the supply from Crown lands was increased to 9,805 cords and that from private lands decreased to 11,834 cords. The Riordon Paper Mills, Limited, used in the Hawkesbury mill in the year ended June 30 last 517,652 pieces of wood cut on Crown land and 50,976 pieces which came from private lands. The Hawkesbury mill produces about 80 tons of pulp per day, of which 80 per cent. is shipped to the United States. It was shown that the Jacques Cartier Pulp Company, of Pont Rouge, Que., and the Brompton Pulp &

Paper Company, of Brompton Falls, Que., had not used any wood cut on Crown lands, but the latter company had bought 500 cords of Crown land wood that had not yet been manufactured into pulp.

It was decided to postpone further proceedings until December 4. The decision of the Board of Appraisers, however, will not be final, as in any event the case will be appealed.

## PATENT FOR PULP MACHINE.

A Canadian patent has been granted to Elias Hazleton, of Lansing, Mich., for a pulp machine, designed as shown in the accompanying drawings. The claim made is for a machine for the reduction of wood to pulp or powder, a



PULP MACHINE.

rotatable cylinder constructed of discs of different diameters, set alternately at an angle to a plane at a right angle to the shaft, leaving a space between the larger discs, and a cleaning device constructed of flexible strips extending into the spaces between said larger discs; two rotatable cylinders, toothed on their peripheries, the one located above the other, and a feeding chamber or chute above said cylinder leading into the interior of the case and having its pressure side in a plane central to the shaft of the lower cylinder; the combination of a rotatable shaft, toothed discs located upon said shaft at an angle to a plane at right angles to the shaft, heads mounted upon said shaft outside said discs having their inner faces extended at an angle to a plane at right angles to the shaft, spacing discs intermediate the toothed discs and heads, said toothed and spacing discs keyed to the shaft, and rods extending through said discs and heads lengthwise of the shaft, a housing, and feed chute leading into the interior of the housing.

The Cornwall Paper & Manufacturing Company, of Cornwall, Ont., will proceed next spring with the erection of their mill, which will be located at Sheik's Island, about four miles from Cornwall. Mr. M. P. Davis, of Cornwall and Ottawa, is one of the directors.

## BALSAM TIMBER FOR PULP MAKING.

The importance of finding a satisfactory substitute for spruce for the manufacture of paper pulp led to a commercial study of the balsam fir, which Mr. Raphael G. Zon, of the U. S. Bureau of Forestry, has just concluded.

The rapid disappearance of spruce, the best tree in the north woods for the manufacture of pulp, has forced pulp makers to use more and more balsam, and has brought that tree, once despised and neglected, into a very important place. Four years ago practically no balsam was used by pulp manufacturers, many of whom are now using from 25 to 50 per cent. of it. The amount of balsam used depends entirely on the spruce supply near where the different mills are located. The smaller the amount of spruce available the greater is the amount of balsam used.

Pulp manufacturers find balsam the best substitute for spruce which can be found in the north woods. Other trees there are which might serve well for paper pulp, but they are not native to the country where the mills are located. Pulp mills are enormously heavy and expensive, and the wood must be brought to them—they cannot be taken to the wood. The pulp man, therefore, in his choice of a substitute for his diminishing supply of spruce, is confined to the very few species that grow in association with spruce, and of these species balsam is at once the most abundant and the most promising.

The present method of making pulp out of balsam is to grind it or treat it with chemicals along with spruce. The results are not satisfactory. Balsam mixed with spruce produces an inferior grade of pulp. Mr. Zon suggests that it would be much better if balsam were handled independently of spruce. The balsam fibres are not nearly so tough and strong as those of spruce, and the pressure of the grinders, which are adjusted for spruce fibres, is too powerful for the fibres of balsam and they are torn and weakened. For the same reason the chemicals used in the treatment of spruce fibres weaken and dissolve the fibres of balsam when used in the same strength. Examples of what can be done with balsam in the manufacture of paper are found in France, where the tree is made to produce good book papers.

The silvicultural features of the balsam are related by Mr. Zon, who has studied the tree carefully throughout its range, but particularly in Maine and the Adirondacks. Spruce has been cut for many years, while balsam has scarcely been cut at all; hence balsam has taken the place of and is crowding out the spruce. This change in species in the north woods is hastened by the great superiority of balsam as a seed tree, for balsam bears seeds every year, while the spruce seeds only once in seven years. These conditions make it apparent how very desirable it is that pulp manufacturers should use balsam wherever possible, for in doing so they not only lessen the drain on the limited amount of spruce left, but they give the tree a chance to grow and reproduce itself. This point Mr. Zon brings out forcefully. The results of Mr. Zon's work will appear this winter in the form of a bulletin published by the Bureau.

**PULP-MILL LITIGATION ENDED.**

After having been in litigation for over two years, the case of the Maritime Sulphite Pulp Company with the Royal Trust Company, Hugh Robertson, and the Bank of Montreal, was finally settled at St. John, N. B., on October 27th. A settlement was made by which the liquidators, in consideration of \$15,000 in cash, handed over all their interest in the real and personal property of the pulp mill and consented to a decree of foreclosure and sale of the mortgaged premises. In addition to \$15,000, the Bank of Montreal agreed with Messrs. Stewart, Lee and Bruce, who had large claims against the company, not to rank against the estate as creditors.

Judge McLeod, judge in the liquidation proceedings, on the application of the liquidators, agreed to this settlement and later the liquidators and counsel of each party appeared before Judge Barker, judge in equity, and had a decree of foreclosure consented to. Under the settlement each party pays its own costs.

It will be remembered that lumbermen doing business in Northumberland county, who had furnished lumber and pulp wood to

the mill up to the time of the suspension, filed a protest against an assignment of the Crown timber licenses which were held by the company, and which were alleged to have been assigned to the Royal Trust Company and Hugh Robertson some months before the suspension of the concern, but of which no notice was given to the Crown Lands Department. It is understood that under the agreement of settlement the sum of \$10,565 has been paid to the lumbermen on account of their claims, and their protest has been withdrawn from the Crown Lands office.

The licenses of these lands will issue to the assignees of the Maritime Sulphite Fibre Company. The money mentioned has been deposited to the credit of the liquidators and the solicitors of the lumbermen in the Bank of Montreal at Chatham. Nothing now stands in the way of the present owners of the mill operating it, or of their disposing of it to any person or company who may desire to run it.

**PULP NOTES.**

The pulp mill at Peribonca, Que., has commenced the manufacture of cardboard.

The Belgo-Canadian Pulp Company, of Shawinigan Falls, Que., have commenced the erection of a paper

mill. The operation of the pulp mill has not been found profitable, but it is thought that in conjunction with the manufacture of paper the results in the future will be more satisfactory.

A deputation consisting of Messrs. J. T. Lord, of Nashua, and W. T. Clothier and E. Rop, of Lewiston, Me., representing the Self-Closing Bag and Paper Company, recently made an inspection of the district around Shawinigan Falls, Que., for the purpose of selecting a site for a pulp and paper manufacturing plant. They were accompanied by representatives of the Quebec Government.

The Baie St. Paul Lumber Company has been incorporated with the Secretary of State at Albany, N.Y. The capital stock is \$100,000, and the principal office is to be at Syracuse, N. Y., with Canadian headquarters at Baie St. Paul, Que. The company own extensive timber limits in Quebec and will engage in the pulp industry. The directors are H. A. Moyer, C. M. Skiff and George T. Skiff, of Syracuse; E. G. Latte, of Friendship; Daniel K. Condon and F. R. Brown, of Wilcox, Pa.

The last report of the St. John Sulphite Pulp Company, of St. John, N. B., expresses regret that the improvement which the directors expected towards the end of the last year did not take place. Prices still remain unprecedentedly low, while the cost of the raw material has increased. At the date of the formation of the company the price per ton of pulp was \$46, while at the present time it is only \$34, or a difference of \$12 per ton. On the other hand, the cost of the raw material has advanced about \$5 per ton. It was stated that it would be necessary to provide additional capital in order to continue the operation of the plant.

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**MILL AND HYDRAULIC ENGINEER**

**PULP MILLS AND WATER POWER**

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SPECIALTIES.—Paper, Pulp and Sulphite Fibre Mills, Electric Plants, Surveys and Improvements of Water Power.



**...BUGKEYE SAW M'FG. CO...**

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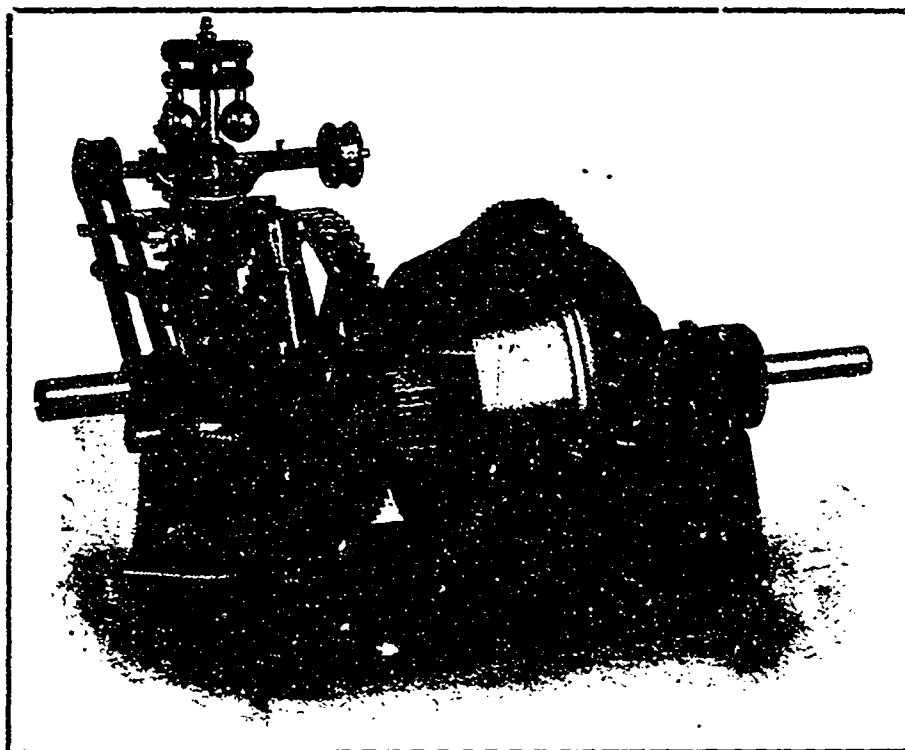
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Quick and careful work on Repairing.  
All kinds of Mill Supplies.

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**The Woodward  
Water-Wheel Governor**



This governor has given such satisfaction wherever we have installed it that we have made it one of our regular lines, and are prepared to supply the different sizes on short notice.

Our Catalog of The Crocker Patent Turbine and a Catalog of The Woodward Governor, illustrating and describing the various types, will be sent on request.

A list of references will also be sent on application.

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### THE THORNBURY GASOLINE ENGINE AND FOUNDRY COMPANY, LIMITED.

The Thornbury Gasoline Engine & Foundry Company, Ltd., Thornbury, manufacturers of gasoline engines and other varieties of light machinery, have a fine two-storey brick fireproof building, 75 x 40 feet, situated in close proximity to the Grand Trunk Railway lines and overlooking the bay, which affords good shipping facilities.

Their motive power at present indirectly is steam and directly a gasoline engine of twelve horse-power. A much larger engine is in course of construction. The machines used are of the latest Canadian and American types.

The moulding room is very modern with a present capacity of nearly 10 tons per day.

The shareholders of the company, with J. H. Carmichael as president, are mostly mechanics, which is an assurance that the work turned out will be satisfactory. While the company's present daily output is large, they are not yet in complete operation, but expect to be by 1st of December, at which time they will employ twenty men for a start. They are at present completing a large order for boiler gratings and other castings of this style.

Peter Thompson, of Mildmay, Ont., has purchased a timber limit on the Peninsula and is making arrangements to build a saw mill there.

### AN IMPROVED SAW MILL.

The Enterprise Manufacturing Co., of Columbiana, Ohio, make a new improved 1903 Buckeye saw mill in four sizes, Standard, Medium, Heavy and Class E No. 5. They guarantee it to be modern and up-to-date. It is fitted with Hempy's Patent Variable Feed. This feed is simple and one of the best variable feeds made. Mill men having used other variable feeds should not condemn this feed without examining its merits. It will feed from 3/4 in. to 5 inches to every revolution of saw, and gig back 9 inches. It can be changed in an instant at any time, and will pull the largest log under any circumstances.

The wear on this feed does not affect its proper working, and no part of feed is running except when feeding or giggering back, thus insuring long life to the works. The shafts do not wear out of line as in other variable feeds. They use one friction wheel for the feed and one for the gig back. The feed is changed by a separate lever which regulates the log that feeds into the saw, while the feed and gig are operated by the same lever.

Those interested should send for illustrated catalogue and price list.

Lammers & Goldrick, who have recently purchased forty square miles of timber limits on the Duncan river, in British Columbia, purpose building a large saw mill at Nelson.

### "SOO" MILLS RESUME OPERATIONS.

The saw mill of the International Lumber Company at Sault Ste. Marie, Ont., which is one of the industries of the Consolidated Lake Superior Company, resumed operations on November 17th, employing 125 men, and it is said that it will be operated to its full capacity throughout the winter. J. S. Fackenthal has also given orders to the superintendent of the veneer mill to commence work as soon as the necessary men can be secured. The pulp mill resumed work on November 10th, and at time of writing the impression is that the charcoal plant is to be started very shortly.

### RAILROAD FACILITIES.

The old Michigan lumber line, the Flint & Pere Marquette R.R., are now in Canada, having taken over the Lake Erie and Detroit River Railway. The Pere Marquette in its day carried an immense amount of Michigan pine lumber, and still retains the trade of lumber dealers in that state. The company's lake ferries from Ludington to Manitowoc brought over train load after train load of Wisconsin's pine lumber to the eastern states. Now that the Pere Marquette is in Canada with its fine equipment and up-to-date rolling stock our lumbermen will find increased facilities for the import or export of lumber across the line. From a pioneer logging road the Pere Marquette has jumped into a leading position as one of the foremost of the great railroad systems on this continent.



### The Passing of Back Woods Methods

#### UP-TO-DATE LUMBER DRYING

Means the use of the

#### Morton Moist Air Down Draft Dry Kiln

Not cheap, yet inexpensive.

It is being adopted by all experienced lumber driers. It will pay you to investigate. CATALOGUE FREE.

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\$76,203.67

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\$163,151.50

MAIL YOUR EXPIRING POLICIES WITH ORDER.

**THE CANADIAN FORESTRY ASSOCIATION.**

A meeting of the Board of Directors of the Canadian Forestry Association was held at the office of Mr. E. Stewart, Dominion Superintendent of Forestry, Ottawa, November 13th. The Treasurer reported the receipt of a grant of \$300 from the Government of Ontario to assist the work of the Association and that the Governments of Quebec and British Columbia had also promised assistance, and a special vote of thanks to these Governments was passed.

The membership of the Association is steadily increasing, having now reached the number of 420, and with the improved financial position in which the Association finds itself, it is proposed greatly to extend the sphere of its activities. The establishment of a journal devoted specially to forestry interests was discussed, and it was decided to report favorably to the annual meeting. The publication will, if started, be managed by the association and will probably be at first in the form of a quarterly with the expectation of being finally issued as a monthly. It is hoped in this way to call public attention more distinctively to the work of the Association and to the importance of proper forest management.

Preliminary arrangements were made for the annual meeting to be held in Toronto on the 10th and 11th of March next. Several of the leading foresters of the United States are to be

invited and papers will be read by prominent Canadian lumbermen and scientific experts. A public banquet at the King Edward will be one of the features of the meeting.

It was proposed to invite the American Forestry Association to hold their summer meeting in Canada, but as that association will likely hold their meeting in St. Louis this year the Canadian Association may join with them and visit the Exposition also.

**ENCROACHMENT UPON RIGHTS OF WHOLESALEERS.**

The following resolution was adopted at a joint meeting of the Tonawanda, Buffalo, Cleveland, Toledo, Saginaw and Bay City lumbermen, held at the Russell House, Detroit, Friday, November 20th. The resolution explains itself:

"Whereas it is reported that certain manufacturers of white pine, norway, hemlock, etc., who have been selling the wholesalers in the lake markets, have also been active in soliciting and selling a class of trade which properly belongs to the wholesalers, and

Whereas such action is against the interests of the wholesale dealers;

Therefore, be it resolved, that said manufacturers be requested to consider the rights of the wholesalers and avoid future transactions that are detrimental to our mutual interests;

And be it further resolved, that in case manufacturers persist in selling trade that properly belongs to the wholesalers, that as soon as such sales are known, a report of the same be made to our respective associations and the secretaries be instructed to notify all other wholesale markets;

And be it further resolved, that a copy of this resolution be sent by the secretary of this meeting to all the trade journals so that the attention of the manufacturers be called to this resolution."

**A WELCOME VISITOR.**

In remitting subscription for THE CANADA LUMBERMAN, Mr. F. J. Snider, of Bruce Mines, Ont., writes: Your paper is quite a convenience to persons interested in the timber trade, up in this locality especially. It is a very welcome weekly visitor.

**A BARGAIN**

in Modern  
Saw Mill  
Machinery

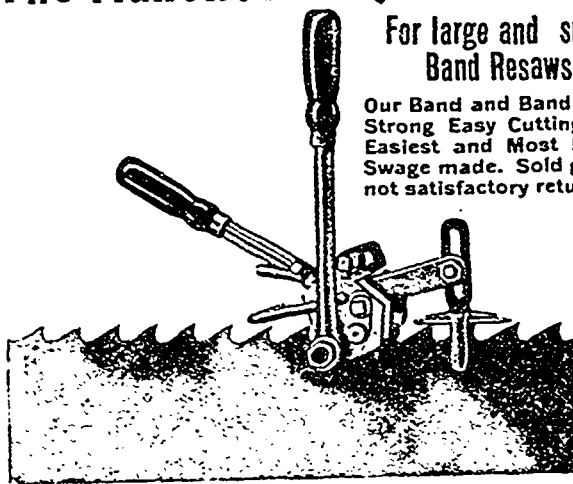
<p style="text-align: center;"><b>2</b></p> <p style="text-align: center;"><b>8-foot</b></p> <p style="text-align: center;"><b>Double</b></p> <p style="text-align: center;"><b>Cutting</b></p> <p style="text-align: center;"><b>Bands</b></p> <p>Tools, Saws</p> <p>2 Cast Steel Saw Carriages</p> <p>4 and 3 Block</p>	<p>2 Kickers</p> <p>2 Loaders</p> <p>2 Niggers</p> <p>2 Steam Feed</p> <p>2 Edgers</p>
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2 Seasons.

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Changing to Pulp.  
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**The Hanchett Adjustable Saw Swage**



For large and small Circulars, Bands,  
Band Resaws and Gang Saws

Our Band and Band Resaw Swages make a  
Strong Easy Cutting Tooth. They are the  
Easiest and Most Rapid to Operate of any  
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**THE BERTRAM ENGINE  
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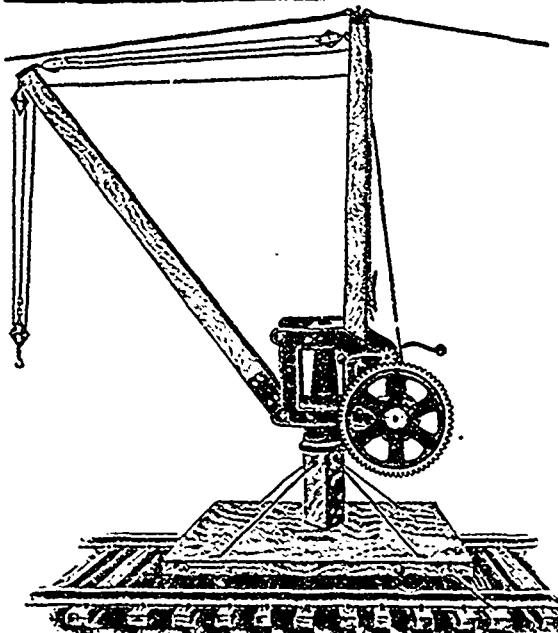
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of all descriptions  
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Special Derricks  
for Handling  
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for Hand and  
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MACHINE CO.**  
463 W. 42nd St.,  
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**BLEST BE THE TIB THAT BINDS.**

It was most assuredly a "good year" for the lumbermen of the country who have occasion to transport their lumber by wagon either in the log or manufatured, when the manufacturers of the Goodyear load binder placed their device on the market. The driver of the army mule has from time immemorial, and it may be conceded, will continue to do so until the crack of doom, "borne the palm alone" for fracturing the fourth commandment. The "mule skinner" and "bull puncher" of the lumber camp, and their co-laborer, the teamster of the city, were nearly dethroning the military man, and might have succeeded had the introduction of the Goodyear load binder been longer delayed.

In the lumbering district of North-western Ohio, a few years ago, there lived a man named Rogers who owned a sawmill and who was, incidentally, a blacksmith. He was hauling logs one day, and after breaking two or three poles and doing himself injury, bodily

as well as morally, in trying to bind a load, started for the shop resolved to make a substitute for a boom pole. The result was the load binder. The invention was soon in the hands of the trade and it is now in use all over the world. Like all inventions so simple in construction and so effective in application, comment has been general as to why it was not earlier evolved.

In the yards, as well as in the woods, the average teamster spends from ten minutes to half an hour trying to bind his load of lumber or logs safely with a piece of two by four, a crooked pole or an iron bar, and it is a matter of conjecture just how far the load will get before a spill. Again, in the tugging and straining necessary in the old-fashioned method many a valuable piece of lumber has been culled or rejected on account of being mashed by the chain pressing into it. In the Goodyear method you can tell by the eye how much slack has to be taken up and you simply have to insert each of the grab hooks of the binder into the chain and close

it. This takes up the slack and the load is firmly locked. The handle, clevis and hooks of the Goodyear binder are made of the best malleable iron. It is very easily adjusted and has a powerful leverage. The binder when open has a spread of twenty-two and a half inches and closes up to eighteen inches, taking up a slack of four and a half inches. A pair of them weigh only twenty-one pounds. Eugene C. Stacey, Bloomdale, Ohio, is general sales agent, and further details concerning this binder can be obtained by communicating with him. His advertisement appears on page 30.

**REMOVING A GREAT EVIL.**

If you are ever short of steam, or if you have refuse you would like to use for fuel, but cannot burn, why not write to the Gordon Hollow Blast Grate Co., Greenville, Michigan, whose well known grate keeps steam blowing off all the time, and burns wet, green or frozen sawdust or other refuse readily?

**RAILS** For Logging Trampwys, Switches Etc. New and Second-hand.  
**YARD LOCOMOTIVES**  
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**Commercial Oil Co.,**  
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**NEW BUCKEYE 1903 IMPROVED SAW MILL.**



Five sizes, Stationary and Portable. Has the essential points of a portable mill. Built on scientific principles. Quickly taken up and reset. Easy running. Feed changed in an instant while going through the log, from 1/2 inch to 5 inch. No feed belts to slip and wear out. Sold on its merits. Also Portable Engines. Write for particulars to

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**"THE REEVES"**

For Saw or Planing Mill work "The Reeves" Wood Split Pulley is the favorite. A good, strong, durable pulley made honestly and made right.

**Reeves Pulley Manufacturing Company, Limited**

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**NO. 25 IMPROVED POWER MORTISING MACHINE**

With Tilting Table, Automatic Chisel Reverser, and Adjustable Treadle

OUR new designed No. 25 Improved Power Mortiser is worthy of the attention of all wood workers interested in the improvement of machinery of this class. It is adapted for furniture cabinet, sash door and blind work. It is a tool we cannot recommend too highly to users of this class of machinery. It is simple in construction easy to manipulate, and rapid in operation. It is made in one piece and is strong, making it very stiff and strong, and it has a large base thus freeing the machine from vibration. It is long and compound, and is adjustable to and from the chisel to suit the position of the mortise. Can also be adjusted for angle mortising. Will chop to receive 12" stock, and mortise to the centre of 6". The table is brought up to the chisel by foot treadle, thus reducing the strain on the chisel spindle. The treadle is so compounded that the strain is very light on the operator's foot. This machine runs with less jar than any other similar mortiser on the market. It is supplied with our Improved Automatic Spindle Guide and Chisel Reverser, which holds the spindle in position without the use of keys or set screws and will reverse the chisel by the action of the table in its downward travel.

The No. 25 is made of steel, with brass bushings and steel crank pin.

No. 25 does not get: No friction belt to get loose or run off which has caused so much trouble and waste of time repairing in the past. The chisel can be reversed as well when the machine is standing as when in motion.

Each machine is furnished with six chisels, namely, 5-16", 3", 7-16", 1-2", 4-8", 3-4". Tight and loose pulleys run between bearings and are 12" x 3/4", and should run 550 revolutions per minute.

Bearings and loose pulleys are all self oiling.

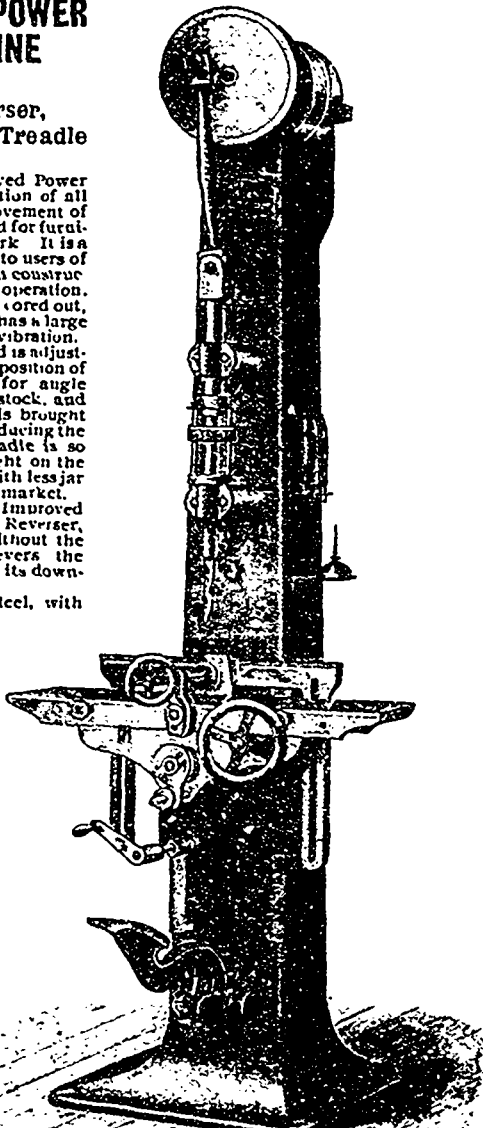
Weight of machine 1400 lbs.

No. 25 Machine is the same as No. 20, only it has boring attachment, and is furnished with 6 Borer Bits to suit the above size chisels, which spindle is in a line with the chisel spindle. The work can first be bored, then fed under the chisel and mortised without being taken from the table.

Weight of machine 1500 lbs. Cut 60's. We use Cut Gearing on all our machinery.

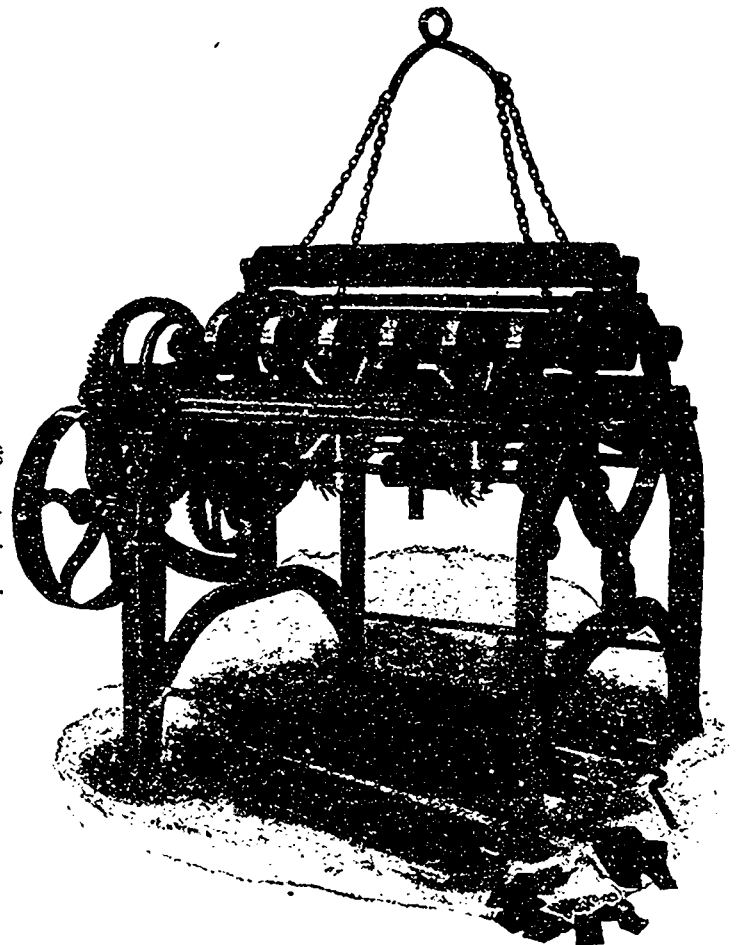
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**CLARK & O'EMILL,**  
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**OUR 2, 3 and 4 SAW EDGERS**

Are Daisies. Capacity up to 35 thousand.



Direct Acting Steam Feeds, with D Valve, acknowledged the best. Trimmers and Slash Tables Improved design.

Double and Single Geared Log Jack Works with chain complete.

All other kinds of Mill Machinery, with prices and terms on application.

Clipper Shingle Machine, capacity 35 to 50 thousand in ten hours.

Improved Double Tooth or Boss Dogs with cast steel inserted teeth.

Lockport Swing Shingle Heading Machine Complete S. mill Outfits

Descriptive circulars and catalogue

**THE E. LONG MFG. CO., ORILLIA, ONT.**

**MISCELLANEOUS SUGGESTIONS ON EMBRY WHEELS.**

An emery wheel is a circular file; if on some particular work a wheel does not run well, it may often be made satisfactory by changing the speed.

If a wheel fills or glazes it suggests that it is speeded too high, or is too hard for the work.

Start new wheels on slow speed cone. Endeavor to maintain the rim speed as the wheels wear down, or, in other words, increase the speed of the spindle as the diameter of wheel decreases. Keep the wheels perfectly balanced and true by use of emery wheel dresser.

Keep the boxes well oiled and free from dust. Look out for heating and expansion of arbors.

Don't leave your machine running if the bearings are not well oiled, as your arbor may get hot and expand and burst the wheel.

Don't run a machine if the arbor is loose, as it will jump and not do good work, and may break the wheel.

Don't put a wheel on the floor when you take it off

the machine; have a shelf to put it on. Take good care of the wheel if you want it to do good work.

Avoid heavy contact of wheels with work, as this causes a wheel to glaze and fill up much more rapidly than a light contact.

Never hack wheels, as they are liable to be broken or cracked so badly that they will break in use. Wheels should be run toward the operator.

The working strain is as the square of the velocity. If the revolutions be doubled the working strain will be increased four times.

Never crowd a wheel upon an arbor. Don't mount it unless an easy fit. Use good sized concaved flanges. Never mount wheels without flanges.

If a wheel shows soft toward the center, it suggests that it has not been speeded up as it wore down, so that the rim speed has become slower, which causes the wheel to wear away faster and to appear softer.

Have your emery wheel equipped with dust pipe and exhauster where possible.

Remember that wheels do not often break from inherent weakness or defects. Most accidents arising in the use of wheels are due to carelessness or ignorance.

Common causes of accidents are: Catching of work between the wheel and the rest; heating and expansion of arbors; using too small or too light flanges, and not having them properly concaved; not using any flanges, but simply screwing on a nut against the wheel; allowing arbors to become loose in the boxes from cutting and wear; running wheels on shaky machines; allowing the emery wheel to descend on the saw tooth, or feed finger to push against the wheel when in throat.— Packages.

The enterprising firm of Macpherson & Schell at Alexandria, Ont., operate a large saw mill, veneer mill, sash and door factory and machine shop. For many years they have been large users of iron castings and now propose to extend their business by the erection of a foundry for turning out castings.

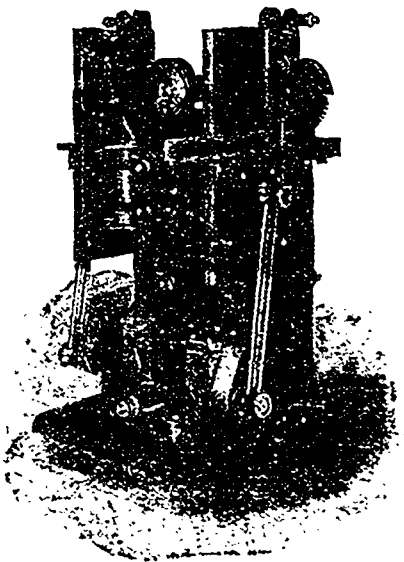
**ALWAYS SOMETHING NEW.**

The lumber manufacturer or logging operator who does not read carefully his trade journal is sure to miss many ideas which would be found useful to him in his business. The pages of the CANADA LUMBERMAN contain the advertisements of the most wide-awake manufacturers of saw-mill and wood-working machinery, logging appliances, etc. Every month some new and improved appliance is placed on the market. Keep up with the procession by investigating the adaptability of these appliances to your own particular case, and when the opportunity is presented tell the advertiser how interested you are in his announcements in THE LUMBERMAN.

**SHERMAN**

**FLOORING MACHINES**

Patented.



The above cut shows our End Matcher, the best machine in the market for end matching flooring strips. They do their work quick and slick, that's why so many them are in use.

WE MAKE THE

**Sherman Side Boring Machines,**

To bore flooring run face up for face down, and the

**Sherman Face Boring Machines,**

To bore jointed flooring.

Our Boring Machines are for attachment to any matcher. Send for circular with list of users; you can then inquire about our machines.

**W. S. SHERMAN CO.**  
729 North Water St., MILWAUKEE, WIS.



We call your special attention to

**STEEL STAMPS**

Our product is first-class in every particular, and prices are satisfactory.

**HAMILTON STAMP & STENCIL WORKS,**  
Hamilton, Ont. H. Barnard, Prop.

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**BRADSTREET'S**

Capital and Surplus, \$1,500,000.

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**Engines in successful operation from Halifax to Vancouver.**



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OUR EXTRA HAND-MADE AXE

This Axe stands better in frosty weather than any axe made. Send for sample. Can supply any pattern.

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The . . . **QUEEN CITY OIL CO.** LIMITED

Head Office: TORONTO.

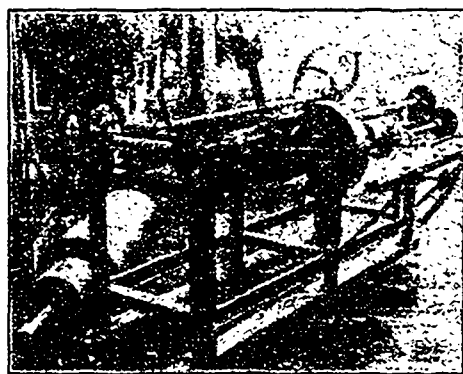
HIGHEST GRADES OF

**Refined Oils  
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AND ALL

**Petroleum Products**

**Saw Grinders**



The Kennedy Island Mill Co., Ltd., Riviere du Loup, Que., says—

"I might say to you that this Grinder is all right and has paid for itself twice over since I bought it. No Shingle Mill of any account should be without one."

**TRIMMERS**

If the Board does not reach the quadrant the Saw stays down and trims, see cut. To cut off more than two feet, bad ends, etc., pull the cord, see dotted lines. The whole Board can be cut into two foot lengths or trimmed in any manner. The Saw frame is balanced, the Arbor pulleys are 8 in. x 8 in. We build several styles of Trimmers, also all kinds of Saw and Shingle Mill Machinery

Our "Boss" Shingle Machine is second to none in Canada. Our sales will prove it. We make Saw Jointers and Knife Jointers, also Packing Boxes. Send for Catalogue.

**B. R. Mowry & Sons, CRAVENHURST, ONTARIO**

PERSONAL.

The death occurred recently of Mr. Thomas Brincombe, who conducted a saw mill at Hayden, Ont.

Mr. W. H. Egei, for several years foreman in the saw mill of the Rat Portage Lumber Company, Rat Portage, Ont., has accepted a similar position in the company's new mill at Winnipeg.

Mr. John Hendry, manager of the British Columbia Mills, Timber & Trading Company, Vancouver, is the vice-president for British Columbia of the Canadian Manufacturers' Association for the year 1903-4.

Mr. Frank Harrison, of the lumber firm of Frank Harrison & Company, Liverpool, England, was a recent visitor to Canada in the interest of his lumber importing business. Mr. F. E. Neale, of Chatham, N. B., is the Canadian representative of the firm.

On November 9th Mr. Alex. McQueen died at Guelph, Ont., at the age of 88 years and 4 months. He came

to Canada when eighteen years old and settled at Oakville, later renting a saw mill at Everton and teaming lumber to Fergus, when there were only a few houses in the hamlet. His late life was devoted to farming.

Mr. J. H. Walker, formerly manager at Toronto for the Canadian Rubber Company, has been appointed sales manager for the Dominion Belting Company, of Hamilton, Ont., and will enter upon his duties at once. Mr. Walker's intimate knowledge of this branch of the trade, gained during a long practical experience, should prove beneficial to the interests of the company with which he is now identified.

TIMBER FOR RAILROADS.

It is announced that the Pennsylvania Railroad has decided to plant 50,000 locust trees along its line, the timber when sufficiently large to be used for ties. The movement has been rendered imperative, it is said, by

the shortage in the supply of wooden ties, and the problem has become so serious of late that several companies have discussed the matter in their annual reports. It is thought that other railroad companies will pursue the policy adopted by the Pennsylvania Railroad.

The Bertram Engine Works Co., of Toronto, announce on page 27 of this number of THE LUMBERMAN that they manufacture all kinds of engines and boilers, both stationary and marine, also make composite ships and do repair and jobbing work. The company wish to emphasize the fact that their business is not confined to marine work. Correspondence from lumbermen will have careful attention.

Williams Craddock, who established a wood-turning plant at Upper Woodstock, N. B., last year, is understood to have sold out to an English company. Mr. Craddock will remain as manager and will remove the plant to Woodstock, where a new building will be erected. It is stated that the establishment of a veneer plant in connection with the enterprise is under consideration.

SEND IT BACK

if you do not like it. Unless you are fully satisfied with

The Goodyear Load Binder

we do not want your money.



Stop Cutting Saplings

One Goodyear will outlast a forest of them.

If you had known—

HOW MUCH BETTER  
HOW MUCH EASIER  
HOW MUCH MORE QUICKLY

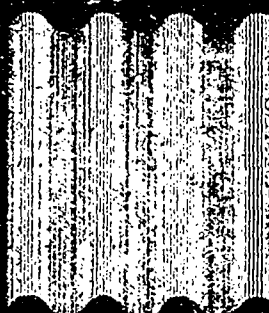
a load of lumber or logs can be bound you would not have waited so long.

TRY ONE—\$2.00 EACH.

EUGENE C. STACY - Bloomdale, Ohio

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Good Reasons

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CORRUGATED IRON

Is preferred by those who know.

We use only best Apollo or English sheets.

The corrugations are pressed one at a time—not rolled—fitting perfectly, both at ends and sides without waste.

No scale, pin holes or other defects are ever found in our goods.

The galvanized sheets are coated on both sides with all the galvanizing material that can adhere to them.

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We furnish any size or gauge required—either curved or straight.

If you desire durable quality and certain economical satisfaction, send us your specifications or write for further information.

STAR SAW GUMMER

THE MOST DURABLE

Has stood the Test of Twenty-five Years

Only Gummer that is Reversible

SIMPLEST

Cuts from Bottom up, or Top Down

Used on Large or Small Circular Saws and Cross-Cuts

Weights only 12 Lbs.



MOST QUICKLY ADJUSTED

Cuts off the Backs of Teeth, as well as the Gullet

TESTIMONIALS

No mill can afford to do without it

It is just what you say it is. My youngest boy operates it

I found another make of Gummer before I bought & met in 1901

1 My 100-year-old Friend Lake, Ind.

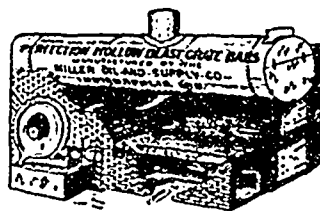
MILLER OIL & SUPPLY CO. INDIANAPOLIS, IND.

FOR SALE—MACHINERY AND SAWS GOOD AS NEW  
Saws from 48 to 60 inches. Let us know what sizes you have to trade. One Detroit Self Feed Hand Rip Saw; One Smith Heavy Planer and Matcher; One Fay Old Style Endless Bed Surfer; Two Fay Hand Saws; One 24 in Fay Double Drum Sander; Two Fay Tenoners; One Cordeman 24 in. Pony Planer; One Fay 18 in. Pony Planer; One Goodell & Waters Pony Planer; Two Boulds Single Spindle Shapers; One Dovetailer; One Postborer; Three Wood Lathes; Three Rip Sawing Machines; Two Cut-off Saws; Tables; Three Swing Saws; One Heavy 24 in. Double Surfer; Two Variety Saws; One Fay 4 Spindle Horizontal Horing Machine; One Fay Heavy Double Cut-off saw; One Foot Power Mortiser; One Fay Rod Machine; Two Single Saw Mills; One Heavy Double Saw Mill; One 36 in. Nordyke Corn Mill; Two Upright Engines; Three Center Crank Engines 15 to 20 H. P.; Ten Boilers 15 to 20 H. P.; One 15 H. P. Detached Engine and 18 H. P. Portable Boiler; One 10 H. P. Portable Boiler on Wheels; One Iron Column 20 in. Drill; Two Iron Lathes; One Milling Machine; Two 8 ft. Bolters with 48 in. Saws; One Bailey Handle Lathe; Wood and Iron Pulleys, Shafting, Hangers and Belting.



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Also Dealers in New and Second-Hand Woodworking and Saw-Mill Machinery

# Drake's Improved "Swing" Shingle and Heading Machine

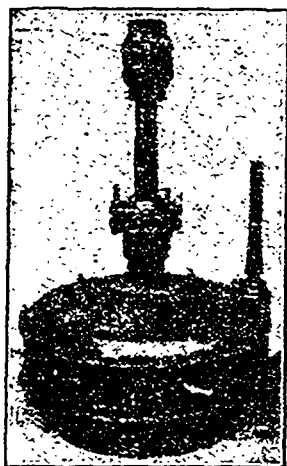
The "swing" or carriage frame is made of steel angle bars, light and strong—will take in blocks 16 inches wide. Set works are easily adjusted for thick or thin shingles or heading. Jointer may be driven from saw arbor if desired. Send for catalogue of saw mill and shingle mill machinery. Prices on application.

**F. J. DRAKE**  
 BELLEVILLE, - ONT.

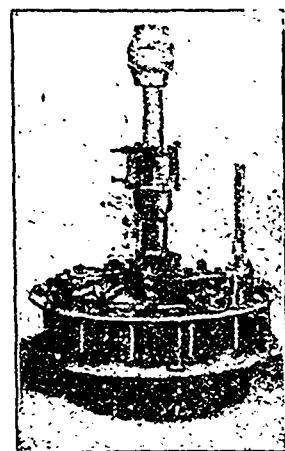


**The Cheapest  
 Good Shingle  
 Machine  
 in the Market**

## Do You Need a Turbine?



Now is the best possible time for replacing your old, worn-out wheel with a new Turbine that will save Worry, save Time, and make Money for you. If you want a well built wheel, a wheel that will give you steady reliable power every day, a wheel that will save water, a wheel that will last you a lifetime, and that is sold at a reasonable price, then write us for catalogue and prices on the



### **Standard Leffel and Vulcan Turbines.**

They are better developers to-day than ever before, and are growing in popularity, as our order books show.

We have now for distribution our new **SAW** and **SHINGLE MILL MACHINERY CATALOGUES**, with engravings and descriptions of our machines with their latest improvements. We will be glad to send you one on receipt of your address. You cannot buy a better Portable Mill than the "Lane Improved".

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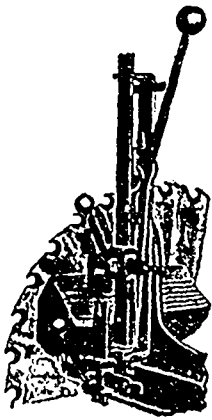
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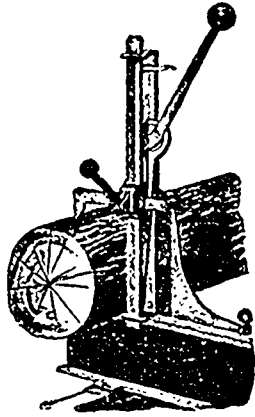
### Glass Patent Duplex Mill Dogs

These dogs have no springs, no ratchet, no pawls, nothing to get out of order, but have a positive grip so that no log can become loose or turn while being



Right Hand Duplex Dog

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Dogs made either right or left hand as required.

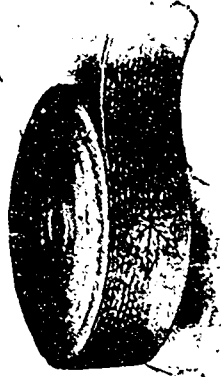
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Manufacturers of Saws, Saw Mill Dogs and Supplies.

South Rex Street, CANTON, OHIO

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### STITCHED COTTON DUCK BELTING



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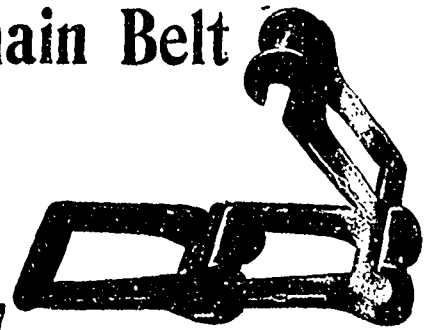
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### Detachable Chain Belt

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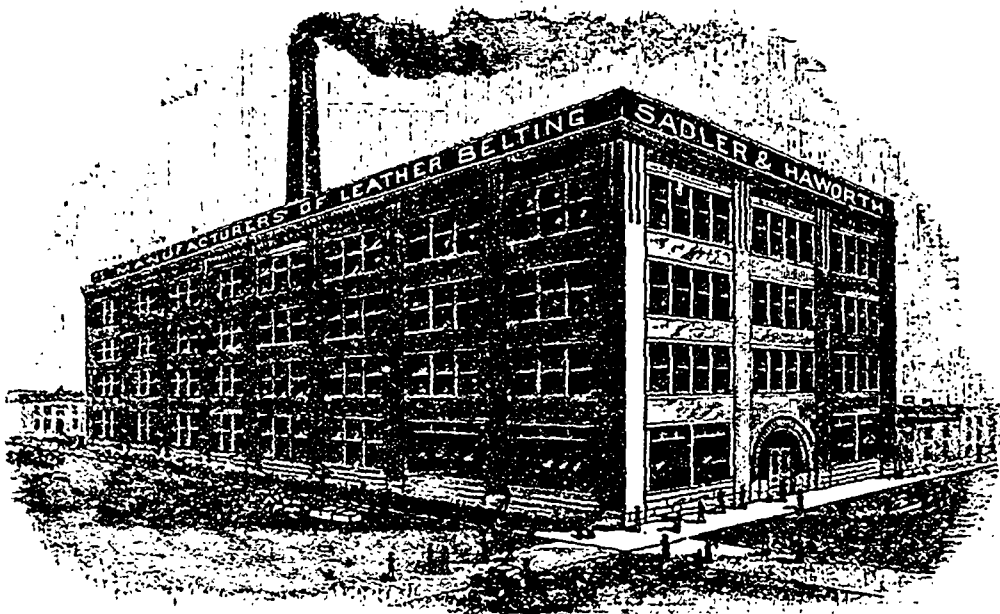
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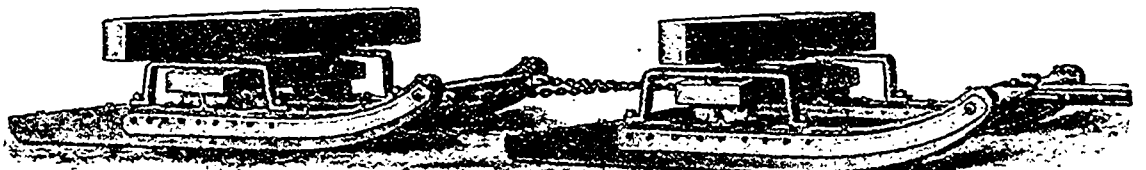
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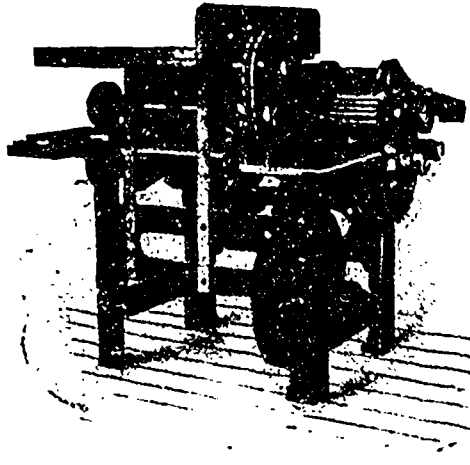
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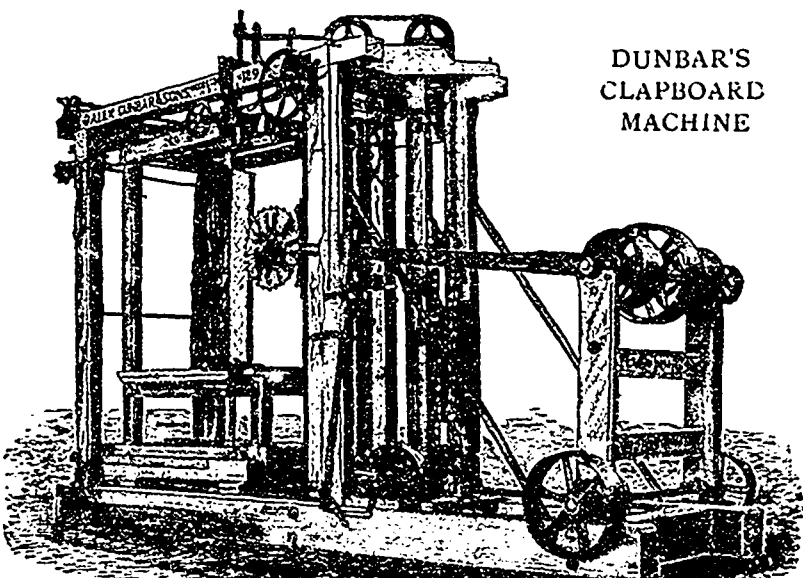
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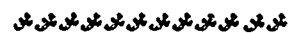


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OF ALL KINDS

Including ROTARY SAW MILLS (3 sizes), CLAPBOARD SAWING  
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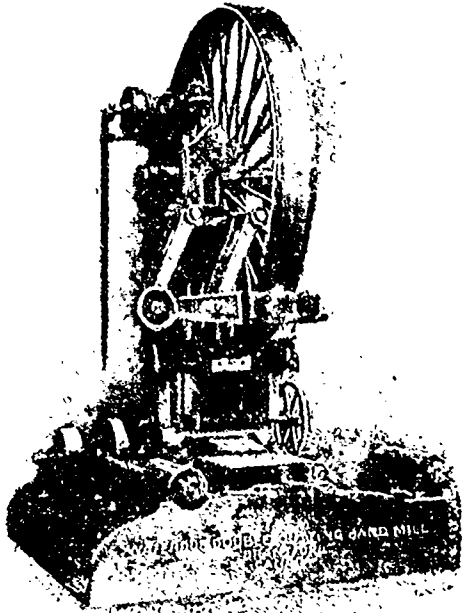
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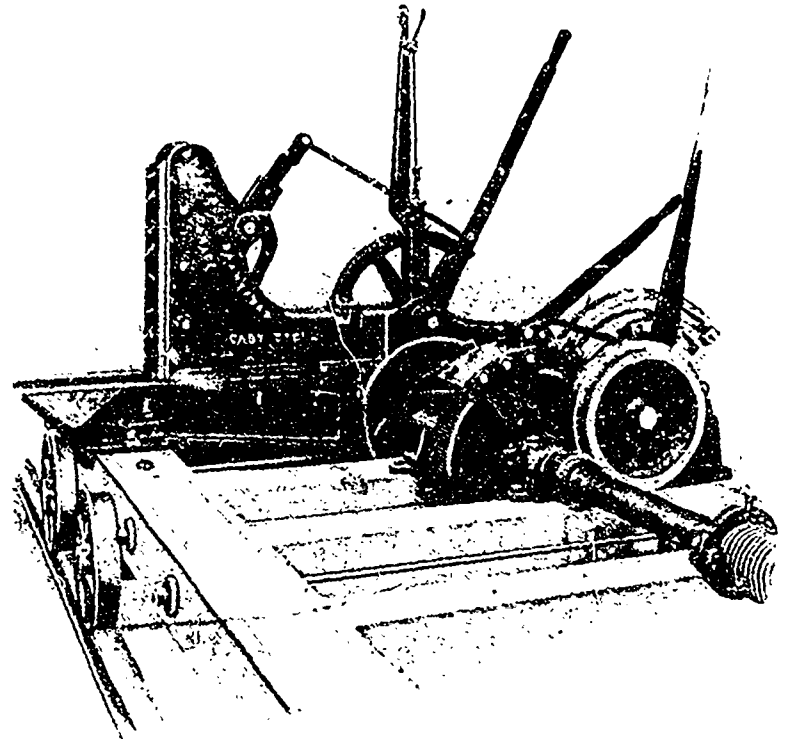
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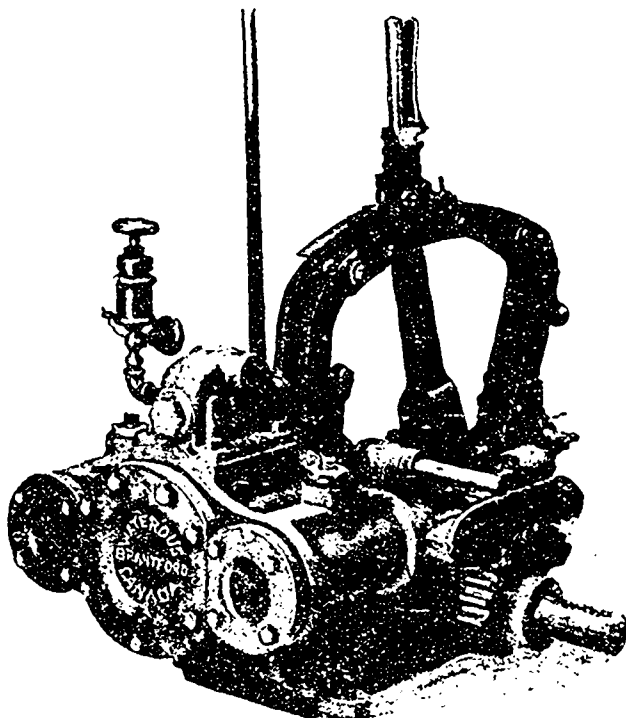
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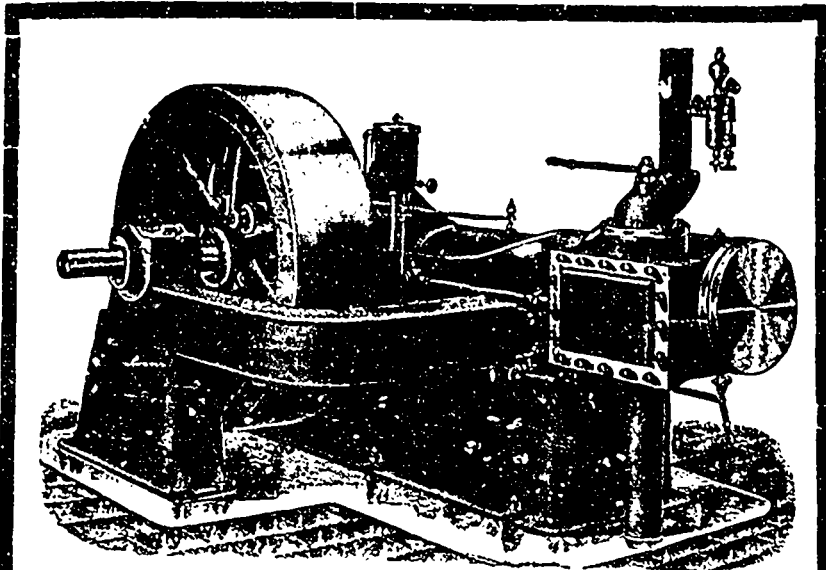
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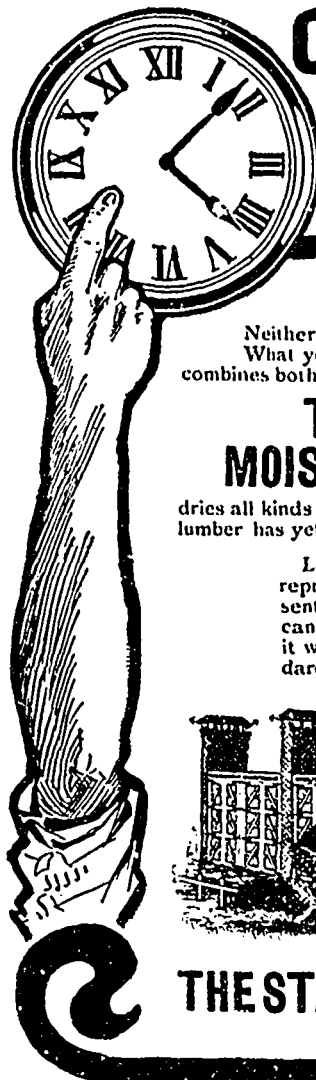
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The out-board bearing on the Robb-Armstrong Engine, up to 100 horse power, is connected to the bed by a wing as shown in cut, keeping the bearing perfectly in line. This is a great advantage, particularly for portable saw-mill purposes.

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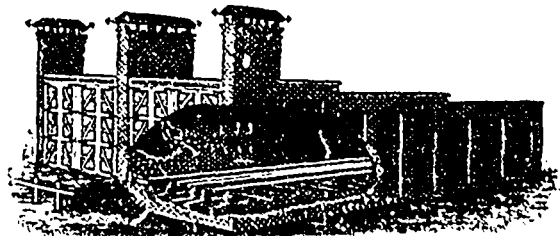
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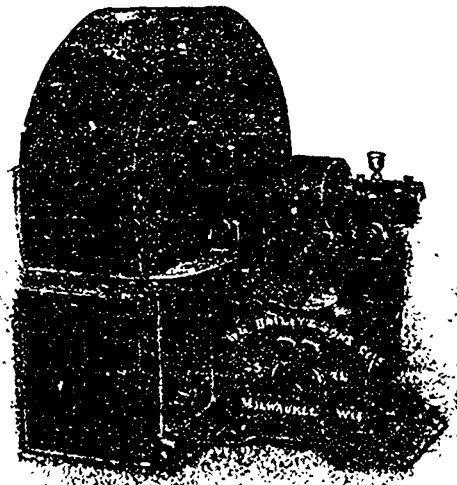
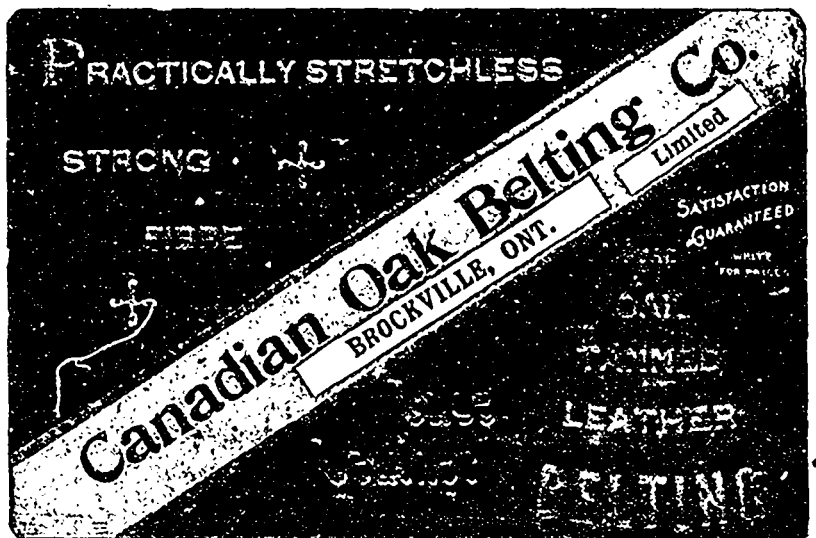
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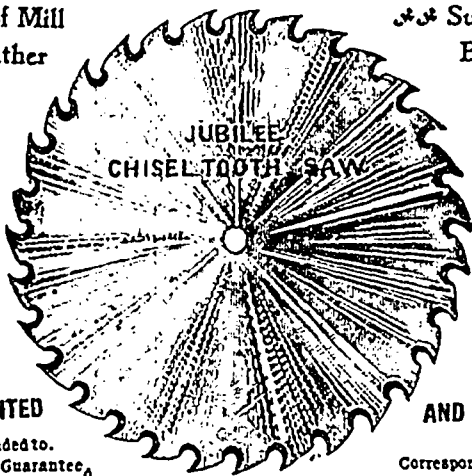
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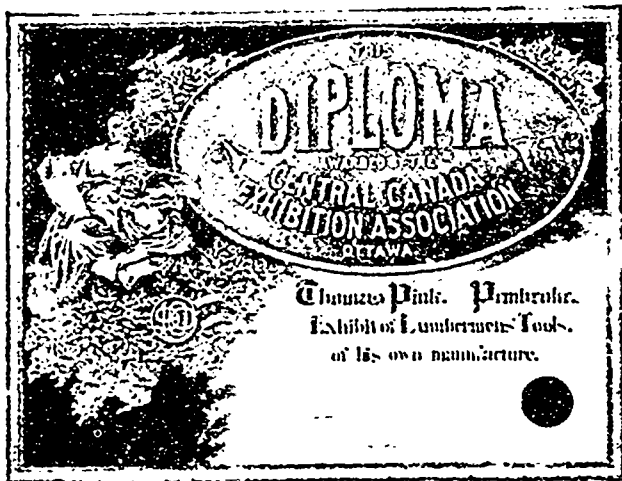
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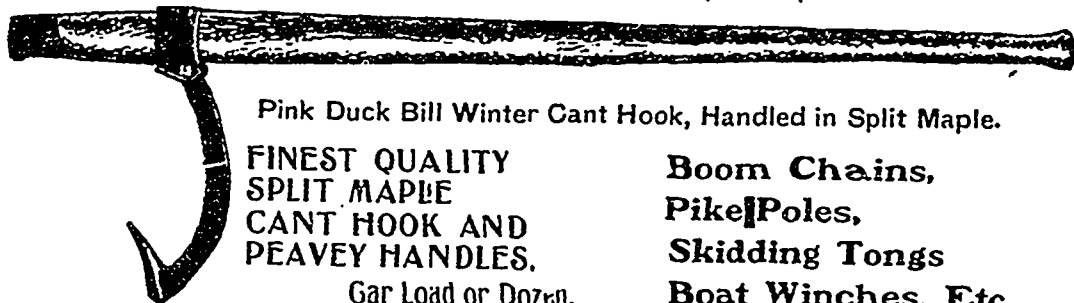
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