

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

Coloured covers/
Couverture de couleur

Covers damaged/
Couverture endommagée

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

Cover title missing/
Le titre de couverture manque

Coloured maps/
Cartes géographiques en couleur

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

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

Bound with other material/
Relié avec d'autres documents

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

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

Additional comments:/
Commentaires supplémentaires:

Coloured pages/
Pages de couleur

Pages damaged/
Pages endommagées

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

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

Pages detached/
Pages détachées

Showthrough/
Transparence

Quality of print varies/
Qualité inégale de l'impression

Continuous pagination/
Pagination continue

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

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

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

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

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

C. C. CLEVELAND. G. F. CLEVELAND
J. L. GOODHUE & CO.,
 MANUFACTURERS OF
Leather Belting
 AND
Lace Leather.
 DANVILLE - - QUEBEC.

One of the Greatest Chances in America
 For a Lumber yard or a Profitable Wholesale Wood-working Industry. One of the best located plants in Tonawanda may be leased, covering seven hundred feet docked water front on the Harbor; with ground five hundred feet in depth; large factory building, two hundred by one hundred and twenty-five, with basement; brick boiler and fuel room detached, suitable for wash, doors, blinds boxes, and custom planing combined. Tonawanda although carrying three hundred millions of lumber in stock has yet no large industry such as proposed. Will sell or lease for a term of years. Moderate rent, cheap labor, low taxes, lowest insurance.
SMITH, FASSETT & CO., Tonawanda, N. Y.

RAILROAD, BANK & OFFICE
DESKS
TEES & CO.,
 300 ST. JAMES STREET, MONTREAL.

STORAGE OF LUMBER.
 We are prepared to receive any quantity of Lumber for storage. Freight and money will be advanced on same. Also, Warehouse Receipts issued, which can be hypothecated to banks and others. Storage charges easy. For further particulars apply to
W. LEAK & CO.
 Lumber, Coal and Wood.
DUNDAS STREET, - - TORONTO.

GOODDAY, BENSON & CO.
 QUEBEC, P. Q.
General Lumber & Timber Merchants.
 Correspondence is solicited from parties having choice stocks of Hardwood and Pine to offer, either in the log or in sawn lumber.

JOHN BERTRAM & SONS,
 CANADA • TOOL • WORKS
 DUNDAS, ONTARIO.
 MANUFACTURERS OF
WOOD-WORKING MACHINERY
 MACHINE TOOLS, ETC.
 Write for Prices and Catalogues

Packing Cases in Shooks.
 Any Saw mill in Canada able to undertake large orders for Case Boards is requested to communicate with
W. & C. PANTIN
 147 Upper Thames Street,
LONDON, - - - - - ENG.

GEO. CORMACK
 Wholesale and Retail Dealer in
All kinds of LUMBER.
 Lumber Shipped to all parts by Rail or Vessel.
WHITBY, - - - - - ONTARIO

William Hamilton, Water Works Department, Pumping House, Superintendent, Toronto, Jan. 6th, 1891
 ALONZO W. SPOONER, Port Hope.

Dear Sir,—I am pleased to say that after nearly three years constant use, day and night, on our largest engine your COPPERINE has stood its work well. I have not had to renew any of the heavy bearings yet, so I consider that speaks for itself. I am pleased to recommend it to any one in need of metal to stand heavy work.

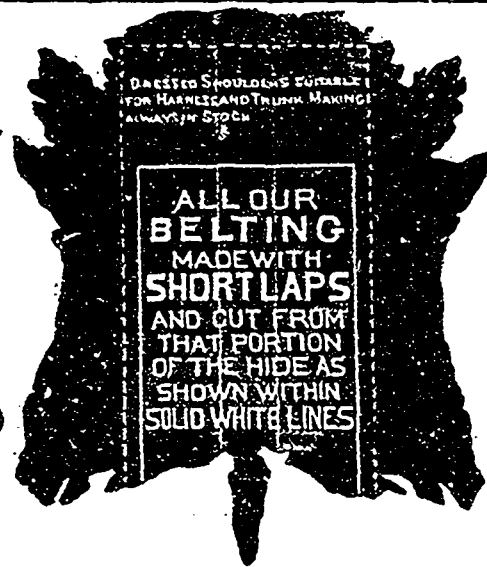
I remain, yours truly,
J. C. FERGUSON, Chief Engineer,
 Toronto Water Works.

A. T. ANDERSON & CO.,
 CONTRACTORS FOR
ELECTRICAL AND GENERAL MACHINERY.
 Complete installations of steam and Hydraulic Power, Electric Light and Power Plants, Wiring and Construction for Arc and Incandescent Lighting. Agents for the celebrated "C. & O." Electric Motors.
 75 Adelaide Street East, Toronto, Ont., Canada.
 Estimates furnished and every information cheerfully given to intending purchasers.
 N. B.—Only first-class work on which a full guarantee will be given.

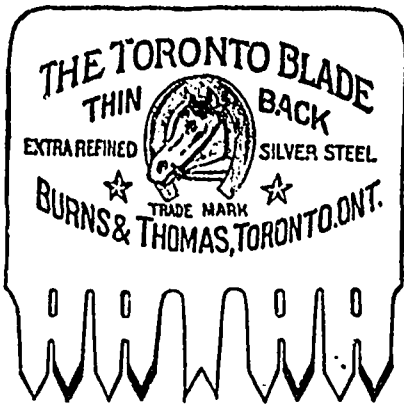
THE RATHBUN COMPANY,
 DESERONTO, - - - ONTARIO,
 MANUFACTURERS OF
Doors, Sash, Blinds, Stairs
 AND ALL KINDS OF WOODEN HOUSE FINISHING MATERIALS.
CEDAR OIL FOR PURGING BOILERS.
 CORRESPONDENCE SOLICITED

The American Lumber Yard
HAMBURG, GERMANY,
 Offers the best facilities for Yarding and Selling all kinds of
American Wood Goods.
 Address :
ROSENBACHER & CO., **CARL GARTNER, Agent,**
 BANKERS, Hamburg. **Hamburg.**

ROBIN & SADLER
 MANUFACTURERS OF
Leather Belting
 DEALERS IN
Lace Leather
 Cotton and
Gandy Belting
 2518, 2520 and 2522 Notre Dame St. MONTREAL.
 129 Bay Street, TORONTO.



TAPER TOOTH.



TELEPHONE 5120.

Burns

&

Thomas



TORONTO.

MANUFACTURERS OF

All Kinds of CIRCULAR AND LONG Saws

LANCE TOOTH.



WORKS AT PARKDALE.

TO MILL OWNERS, MANUFACTURERS

AND ALL WHO ARE USING

Leather * Belting

IF YOU WANT BELTING

Which will Run Straight on the Pulleys,
Which is Thoroughly Well Stretched,
Which will not Tear at the Lace Holes,
Which will give Complete Satisfaction,

— SEND TO —

F. E. DIXON & Co.

MANUFACTURERS OF

PATENT LAP-JOINT STAR RIVET

* LEATHER * BELTING *

70 King Street East, Toronto.

Sole Agents in Canada for the

CELEBRATED PHOENIX OIL

The Only Perfect Belt Dressing.

All our Belting is sold at the Canadian price list. Please compare before purchasing. Send for Discounts and our Pamphlet on Belting.

TORONTO AGENCY OF

The Rathbun Co.

ARE OPEN TO PURCHASE

OAK, ASH, BIRCH,
BASSWOOD

AND

GOOD PINE LUMBER

CEDAR AND PINE
SHINGLES

Manufacturers having such for sale are invited to communicate with

T. W. WALKER, Agent

TORONTO

Office, Cor. Spadina Ave. & Front St.



SCRIBNER'S LUMBER AND LOG BOOK

Over One Million Sold.

MOST complete book of its kind ever published. Gives measurement of all kinds of Lumber, Logs, Planks, Scantling; cubical contents of square and round Timber; hints to lumber dealers; wood measure; speed of circular saws; care of saws; cord-wood tables; felling trees; growth of trees; land measure; wages, rent, board, interest, stave and heading bolts, etc. Standard book throughout the United States and Canada. Get the now illustrated edition of 1882. Ask your book-seller for it. Send post-paid for 35 cents.

GEO. W. FISHER,
Box 238, Rochester, N. Y.

or A. G. MORTIMER,
Toronto, Ontario.

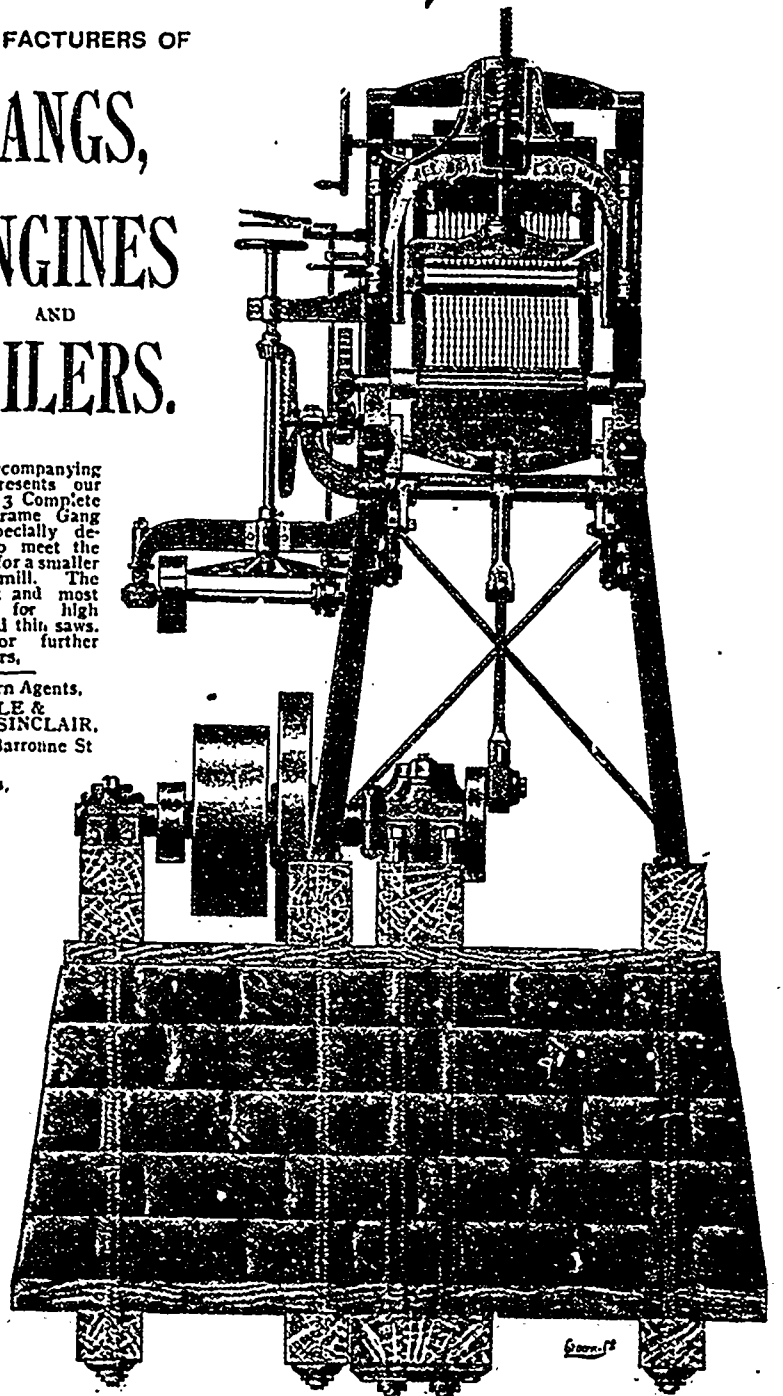
WICKES BROS., Saginaw, Mich.

MANUFACTURERS OF

GANGS, ENGINES AND BOILERS.

The accompanying cut represents our new No. 3 Complete Iron Frame Gang Mill especially designed to meet the demand for a smaller type of mill. The strongest and most durable for high speed and thin saws. Write for further particulars.

Southern Agents,
McARDLE & SINCLAIR,
50 & 52 Barronne St
New Orleans, La.



Fawcett & Co.

MERCHANT * TAILORS, - 269 Queen St. E., Opp. Seaton St., Toronto.

First-Class Goods and Trimmings. Workmanship and Fit Guaranteed.
All Orders Punctually Executed.

THE CANADA LUMBERMAN.

VOLUME XII }
NUMBER 4 }

TORONTO, ONT., APRIL, 1891.

TERMS, \$1.00 PER YEAR.
SINGLE COPIES, 10 CENTS.

CONTINENTAL WOODS.

THE shantyman as he felled beautiful specimens of forest pine growth this season, lopped off the limbs and cut the trees into logs; the teamster as he hauled them to the skids or the dump; the raftsmen as he accompanies the season's cut down stream; or the mill hands who manipulate the deals, all or nearly all, if questioned in their leisure moments about the article that supplies them indirectly with their daily bread and butter, would be able to give meagre information concerning it. Now and then a warehouseman or shipper comes across a box or a cask made of wood differing in appearance from the ordinary packages he is accustomed to handle, and occasionally he is unable to account for its peculiar behavior, when it resists his attempts to fill it full of nails, owing to its tendency to split the wood. He, like his fellow countryman, the shantyman or the raftsmen, might be able to state "it's pine" or "spruce" or a "kind of pine," but he would, as a rule, know little, if anything, about its growth, the elements in the soil necessary for its life, its perpetuation, its weight or specific gravity, its value as a commercial wood or its natural home, that is, the localities where it naturally grows. It is not within the province of this article to discuss the reasons why pine is found in North America from Hudson's Bay to the Gulf of Mexico, and from Newfoundland to California; neither is it intended to explain why the pine family exhibits such marked differences and at the same time such close resemblances. The object is to briefly tell where each variety can be found; to show some of the differences; and to give other scanty items of information. Our Canadian pine under tests of strain bearing, stands fourth. Like the testing of slabs of concrete, marble, sandstone or granite, specimens of a certain length and uniform thickness are placed upon supports and pressure applied midway between them. So that the weight of each would not interfere in measuring the deflection the specimens are placed horizontally and the pressure exerted latitudinally. Canadian, or eastern pine, under such operation is outclassed by the Douglas fir, the long-leaved pine and the short-leaved pine in strength in pounds, but it is first in deflection or bending qualities. Of the pine family proper it is the lightest, and only two woods of its class fall below it—the white spruce and red cedar of the Pacific slopes. Any one at all versed in geography of America can follow the districts, localities, provinces or states where the varieties of pine flourish or flourished; but if the same individual attempted to explain why certain woods had to change their names and identity before becoming of any value commercially, as for instance bundles of white cedar shingles from Michigan selling in Tennessee under the name of cypress, he would have to be an expert in forestry.

WHITE PINE.

Canadian pine, white pine, or eastern pine, a light, soft, close straight grained, easily worked, but not a strong wood, is found in Newfoundland, the St. Lawrence river basin and great lake region; stretches westward along the southern end of Lake Michigan and trends north-westerly to the valley of Winnipeg. On the eastern coast it follows the Alleghany mountains to Georgia. It must not be confounded with the white pine or cedar pine, or spruce pine, as it is sometimes called, found from South Carolina to Florida and westward on the Gulf of Mexico States to Louisiana. The latter is coarse grained, not durable and brittle, contains more ash and weighs more per cubic foot.

YELLOW PINE.

Yellow pine has a short leaf, is very heavy, hard, strong, coarse grained, compact, and full of resin, so

much so that it clogs in sawing. It is found on Staten Island and southward to Florida, and through the western part of that state; westward through the Gulf of Mexico states, Tennessee, Eastern Texas, Arkansas, Indian Territory, parts of Kansas and southern Missouri. It is a disputed point as to the value of this wood commercially. It is claimed by long-leaved pine handlers that it is inferior to their stock and on the other hand the producers of it claim it as good if not better.

LONG-LEAVED PINE.

The long-leaved pine, pitch pine, yellow pine, or as it is better known, Georgia pine, produces the commercial turpentine, pitch and resin. It is found in abundance from S. E. Virginia to central eastern Florida, and through the Gulf of Mexico states to the Red River of the south in Louisiana. It is the heaviest of all pine woods, weighing $43\frac{1}{2}$ lbs. per cubic foot, where Canadian pine weighs 24 lbs. It is very hard and strong, tough, coarse grained, durable and highly resinous.

Besides the above specimens there are two distinct varieties found in the United States, unknown in Canada—the bull pine of California and the yellow pine of Arizona. Both differ materially from each other, and though in some respects they resemble white pine yet the deviations from it are very marked when the two are compared.

The king of the forest in commercial woods is the Douglas fir, wrongly named for it belongs to the spruce family. Known as Puget Sound, Oregon or British Columbia pine, it is found on the Pacific coast ranges in such abundance that almost every other wood is excluded. It is tenacious, strong, hard, compact, durable and varies in color from light red to yellow. Lumbermen divided it into two varieties, red fir and yellow fir, the former being considered inferior to the yellow fir, on account of its coarse grained nature. The wood contains less ash than in any other pine, spruce or cedar, and in all tests of pressure, compression, transverse strain or other requirements of strength, the Douglas fir heads the list. As might be expected, other varieties of the same genera are found in the locality, the only one in great abundance being white spruce. The trees climb skyward 100 to 140 feet, and measure at the base $2\frac{1}{2}$ to 4 feet in diameter. It is not unlike its sister, white spruce found in Newfoundland, Eastern Canada, Michigan and Minnesota, Maine and Vermont. The latter in commerce is classed with black spruce found in the same latitude and follows the southern course of the Alleghany as far as Florida. All three are light weights, close, straight grained and compact. The white spruce of the Pacific weighs $21\frac{1}{2}$ lbs. per cubic foot; the white of the Atlantic $25\frac{1}{4}$ lbs. and the black spruce $28\frac{1}{2}$ lbs.

ANECDOTES OF SHANTY LIFE.

BY BARNEY.

IT frequently happens that the taking out of timber becomes necessary in the summer in some localities when the soil and other conditions do not require snow and ice. On one occasion when finishing a tie contract in the early heated term, when black flies and mosquitoes reign in the woods, a gang of shanty men, tired of horse play, were seated around a smudge fire smoking on Sunday afternoon. Some one hinted that a bottle of whiskey would not go badly, and suggested that lots be drawn and the unlucky one foot some nine miles for a supply. The usual squabble occurred as to the manner of drawing, when finally a big, dark com-

plexioned Frenchman bet a gallon and the carrying of it, that he could lie on his face, stark naked, for half an hour and never twitch a muscle from bites of flies or mosquitoes. He was taken up, then undressed himself, and on "time," got into shape. He stood the punishment without a flinch, although covered with the insects. When the challenger, after 27 minutes had expired, saw he was elected, he quietly with a chip picked up a coal and deposited it on the victim's back. It sizzled for a second; then with a spring like a salmon and an oath Mr. Frenchman jumped to his feet, dug his fingers into his back, yelled and danced. When told out of pure mischief that he had lost the bet, he roared: "Sacre! nugh! you bet! you dink ha mans ha geese? shes not bargain for ha wassup."

I was rafting square timber down the St. Lawrence one summer, and arrived at Lachine too late in the day to run the rapids. I ordered the raft to be moored or snubbed on the river side until daylight, and strolled along the main street of the village. Crossing the original canal at the first lock gate I sat down on a log near the swing bridge to watch the river and lake craft lock through. To my right sat a Frenchman, a perfect stranger, who evidently was anxious to form my acquaintance. He kept pointing out the various objects that attracted his attention to me and offered me his tobacco. Finally he said, "You know Yoseph Lator." I replied in the negative. "Not know Yoseph de raffsman; dat's he's raffs over der by de wood skow. He's wife shes keep a la Bon Se Cour in Moreal. Shes sell patak an' you call eet gardeng?" I still answered no. "Vell," he says, "Not know Yoseph, by jee he's de bess raffs man on de Ottawah, 'e coma down de Soo pass Carrillon, 'e roun' de St. Anne jump a Lachine a canal, a crack a two steamboat; by jee, Not know Yoseph, eh?"

THE Crooks act has done much towards doing away with shebeens which flourished on the roads between civilization and the bush, but in many sections, although frowned upon by boss lumbermen and all foremen with the interests of their firm at heart, they continued to vend whiskey *Blanc* and swamp whiskey a standing menace to peace and good will amongst crews who on their road to the shanties stopped for a meal or rested over night. On one occasion a crew under a strict foreman had reached the last stage but one of their overland journey. They put up for the night in a log building, constructed, furnished and stocked to meet the requirements of a shanty man, but unlicensed. In spite of the vigilance of the foreman some evidently were drinking, and as evening wore on some became drunk. The foreman remonstrated with the landlady and tried to frighten the landlord but without avail. He finally heard a rum-pus in a back room off the kitchen. The landlord was Highland Scotch and was serving a countryman. Two Frenchmen were endeavoring to force their way into the small room but were stopped. When the landlord emerged from the taproom, leaving his companion locked in, he was interrogated as follows: "Monsieur, we Frenchmans, eh? we be Scotchmans, eh, we get the liquor?" The landlord tried to explain that the foreman was raising a fuss, that he would get into trouble, and as a clincher he said in his best vernacular—"She'll no give to nobody an' last o' a' to a Frenchy". He had hardly finished speaking when, bang! one of the duett struck him in the eye and disappeared like a shot. Quick as a flash he let the remaining Frenchman have it in the jaw. The recipient on asking what he was thumped for was told: "Sho was hit richt on the e'e by yeer nepoor, she didna deservt—ye didna deservt, ga on' hit him".

THE STURTEVANT DRY-KILN APPARATUS.

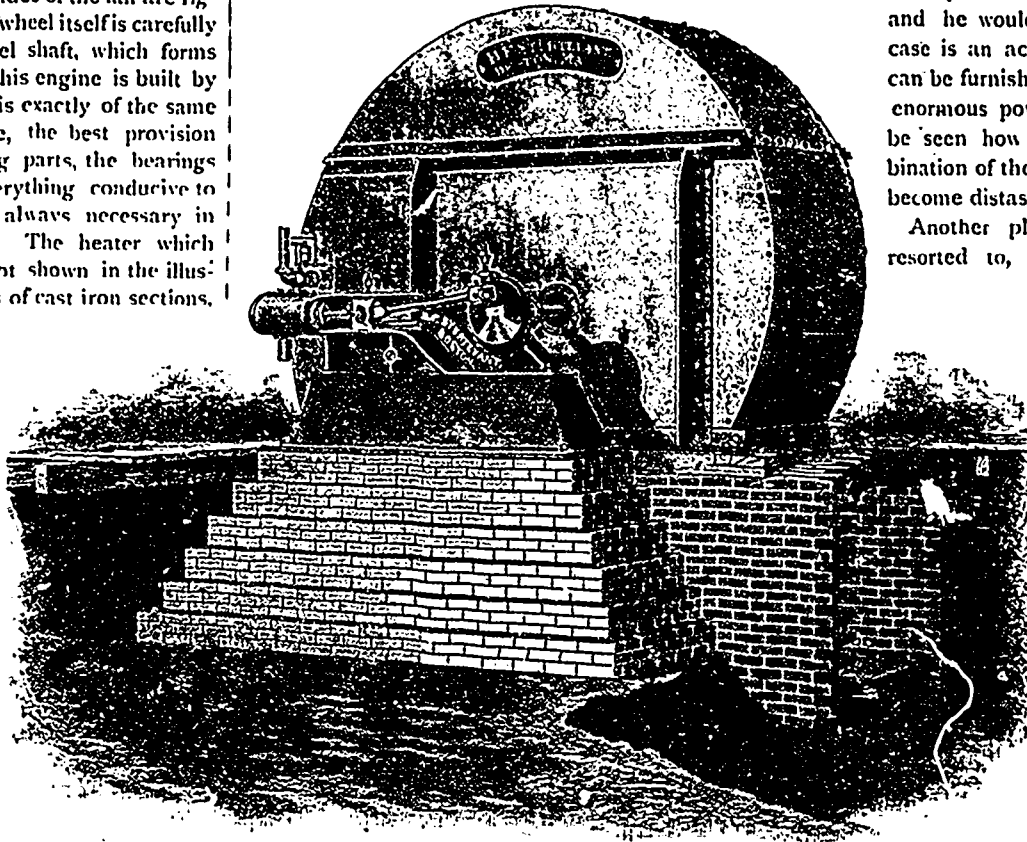
THE marked efficiency of the Sturtevant dry-kilns has always been attributed to the high grade of apparatus by which they are operated. Not content with a good thing, the attempt has always been to manufacture a better one, and the ever increasing trade in this line is the best evidence of the wisdom of this course. With the growth of the kiln business, the tendency has been toward the massing of kilns in single batteries, each operated by a single large apparatus. In large batteries the air ducts are of necessity usually underground, requiring the fan to be likewise placed if it is to discharge directly into the duct. To meet this requirement and at the same time reduce the cost of the fan, the B. F. Sturtevant Company, of Boston, Mass. several years ago introduced a type of fan with only three-quarters of the regular full housing, the lower portion being constructed of brick and forming at the same time the end of the duct. Such a type of fan, with engine connected directly thereto, is shown in the illustration herewith presented which represents the latest style of Sturtevant steel plate steam fan, with three-quarter steel plate housing. The arrangement is very compact, and as will be seen, when the room is floored over nothing appears above the surface but the engine and fan housing. The sides of the fan are rigidly stayed by angle irons; the fan wheel itself is carefully balanced and mounted on a steel shaft, which forms the main shaft of the engine. This engine is built by the above named company, and is exactly of the same grade as their automatic engine, the best provision being made for oiling all running parts, the bearings all being of large size, in fact everything conducive to the continued running which is always necessary in kiln plants, has been introduced. The heater which always accompanies this fan, is not shown in the illustration, but is made up of a series of cast iron sections, into which are screwed vertically rows of steel pipes, the upper portion of each section forming the steam and the lower the drip passage; the upper passage being divided midway so as to compel the steam to pass up, over and down the pipes. The entire heater is encased in a steel plate jacket connecting with the inlet of the fan. This jacket, as well as the heater sections, is supported on a substantial angle-iron frame foundation. Expansion of the heater sections is allowed for by the balls which are placed beneath one end. These sections are bolted together in groups by bolts extending entirely through the headers on one end, so that steam connections may be made with the end of the group and the drip may be removed at the same end, obviating the objection to other styles of heaters, having the inlet and drip upon different sides of the heater. Heaters of this class can be built in large groups of many sections, but their arrangement can only be determined by experience, as the greatest efficiency of the heating service can be best secured by a proper proportioning of the number of rows of pipe across which the air is drawn. These heaters are arranged to be operated by either live or exhaust steam, generally by exhaust steam from the mill engine during the day and by live steam during the night. The exhaust from the fan engine is always utilized in the heater, so that the motive power counts for nothing. The manner of application of this type of apparatus to the Sturtevant kiln is already well known, the air being forced in through inlets at one end of the kiln, and in its passage down through the kiln, coming in contact with every foot of lumber, and finally escaping at the opposite end of the kiln, the lumber being laid upon cars and pushed forward into the warm air. This gradual action results in thoroughly drying every part of the wet lumber. Lumber and stock of all descriptions, including staves, heading, kindling wood, shingles, spokes, woodenware, etc., can

easily be dried in the Sturtevant kiln when properly arranged. In many woodworking establishments, such as furniture and carriage manufactories, the same apparatus is used for heating the building and drying the lumber. Whenever the air escaping from the kiln is too moist it may be utilized in heating a portion of the building.

The Sturtevant system of heating has been extensively introduced and has proved a success in every way. Its peculiar advantage lies in the massing of the entire heating surface in a single heater, instead of stringing it all over the building as in the case of direct radiation. The amount of heating surface required is thereby reduced to about one third of that ordinarily provided. There is no opportunity for the freezing and leaking of exposed pipes with their consequent damage. Ventilation is provided with the heating, and owing to the pressure produced within the building all leakage is outward. The same system is applied to all classes of buildings, schools, houses, public buildings, etc., as well as manufactories.

A RAILWAY COMMISSION.

WHETHER we should have a railway commission or not is the question that every now and then seems to disturb the minds of our great army of shippers and



THE STURTEVANT DRY-KILN APPARATUS.

handlers, and it is the purpose of this journal to gather and give to its readers all the information and opinions available on the subject. A Railway Commission is a court just the same as any other court for the hearing and deciding of cases in dispute, with these differences, viz: its proceedings are of a summary nature; every facility is offered for the hearing and deciding of cases brought before it; no legal counsel need be employed, and hence it is much less expensive. Its powers would be much wider than any court now existent in that it would decide all matters of dispute between railway companies and corporations, which have now to be referred directly to the Legislative body as represented by the Railway committee at Ottawa. It would in all probability be made up of a capable legal gentleman, a business man, and a railroad expert, or engineer, so that all sides and shades of opinion would be fairly represented. The costs of this court would be very much smaller than those of our superior courts. It would give summary and final judgment upon all cases of alleged extortion or unfair discrimination on the part of public carriers. That there is a pressing need of such a court is already apparent to nearly all who are engaged in heavy freight handling, but for the benefit of the few let us suggest some good reasons for its establishment.

The present arrangement is so cumbersome and distant as to be practically beyond the reach of any but the largest corporations, or those who can afford to spend large sums of money to obtain a measure of justice. Now it is well known to every reader of this journal that our railways have been in the habit of giving discriminatory rates to large shippers or favorites, a practice which is very much to the disadvantage of the business of those not so favored, and it has been all but impossible for business men so placed to have this very apparent injustice remedied, notwithstanding the fact that it is contrary to law as well as right. They would either have to proceed in a court, which could not compel the production of the evidence necessary to make a good case, or go to the expense, trouble and loss of time necessary to carry the case to the railway committee at Ottawa. Then even should they join issues against the company their position would be a very unenviable one, because it is a well known fact that it is in the power of these monopolies to ruin the business of many of the people dependent upon them for shipping facilities. Take a case in point: Two men are buying wheat at G—; to one of them the company gives a rate of 12c. per cwt., to the more favored one 10c. per cwt. It is very plain that the second buyer can simply put the first off the market,

and he would be compelled to quit. The case is an actual one and names and dates can be furnished if necessary. Now with such enormous powers in their hands it can readily be seen how a railroad company, or a combination of them, could ruin any one who had become distasteful to them.

Another plan, which is not infrequently resorted to, is the granting of a ready supply of cars to the favored shipper and the withholding of the same from those whom they are not anxious to serve. That this act of tyranny has been perpetrated again and again, the testimonies given to the committee of the Toronto Board of Trade on shortage of cars more than proves, for it shows that our grain dealers, lumbermen and millers are annually made to suffer severely, and there does not now seem to be any means of abating this evil, save by placing the control of the matter in hands capable of dealing with it. That the matter of special and discriminating rates was amply proven by the sworn testi-

mony of the chief freight agents of both the G.T.R. and C.P.R., as given before the Royal Commission at Montreal, where they explicitly declared that they have general rates, special rates and "special" special rates. Then again they are hurting very seriously the shipping trade of this country with Great Britain and the continent, and the amount of which they rob the Canadian farmer annually foots up to something in the millions. In the testimony given at Montreal it is asserted that the Canadian roads have lost money upon the carriage of American freight, while in the same examination it transpires that the roads are making money. Now there is but one deduction which we can draw from this, and it is that the Canadian shipper and farmer is made to pay the losses which these roads have made in their unfair fight with their Yankee competitors. But we have other proof than that deducible from their own sworn testimony. We can adduce abundant evidence to show that the Canadian roads make a general practice of carrying flour, grain and other heavy freight, cheaper from Minneapolis or Chicago to the seaboard than from Toronto, not to mention Winnipeg or other points which would be entitled to the same rates at least. Now Toronto is at least 800 miles nearer the seaboard than Minneapolis, and 500 miles nearer than Chicago. While the C. P. R. were carrying wheat and flour from Winnipeg to Toronto at 47 cts. per cwt., they

charged but 15 cts. per cwt. from Minneapolis. The general freight agent of this road explains this very marked discrepancy by his statement that they made a practice of carrying foreign freight upon which there was a duty at such a reduction of rate as to set off the duty and create a foreign competition, and thus make carriage for the road. Thus it will be seen that while our government are using every endeavor to foster home industry, these roads by their unjust discrimination in favor of foreigners, are pulling down what is costing the country so much to build up. They are doing daily what the people of the United States would not suffer for twenty-four hours.

These monopolies, largely built up by the people's money, scout the very idea of the people having the slightest say in the fixing of the rates, and they tell us without hesitation that they know more about our business than we do, and that they, in their almighty beneficence, fit the burdens to the backs best able to bear them, meaning, we presume, the Canadian people as being better able to pay exorbitant rates than our neighbors to the south.

There are a great many other considerations which might be mentioned, such as the granting of rebates and special concessions, but space forbids us noticing them this month. Let us look, however, for a minute on a few reasons why a commission would largely do away with these evils. In the first place it would be independent of political influence. Now with all due deference to the powers that be there is not a doubt but the railways have an immense influence over the committee at Ottawa, and there is not a shadow of doubt but the placing of these roads in the hands of an impartial commission, which would be beyond the control of votes, would be a grand move in the right direction. In the next place this court would be held at different places throughout the country. It would be within the reach of every man who had a grievance, and it would no doubt become in a short time one of the most popular of our courts, and finally curb the rapacity of the railways to such an extent that they would cease to make cause for complaint. It would afford a quick and cheap means of obtaining justice at the hands of such a court, it would be a means of stopping all the discrimination in favor of foreigners at our expense; it would in fact place public carriers in the position of public servants, instead of being our masters as they now are. We would like to have the opinions of our readers upon this question, and would take it as a special favor if they would write their views concerning it. Such opinions will not be published if so desired.

DO YOU LACK STEAM?

WE here illustrate the Gordon Patent Hollow Blast Grate and apparatus, manufactured and sold by the Gordon Hollow Blast Grate Co., of Greenville, Mich.

The Blast Grate itself is a hollow cast section with suitable blast openings in its upper surface for the escape of compressed air to fan the furnace fires.

These blast openings, called valves, are about 7 inches in diameter, and are so designed that, though the compressed air may readily escape through them, the ashes and fine particles of fuel cannot drop through into the hollow space beneath. Each Blast Grate is supplied with from three to five of these valves, according to the length of the Grate. The Grates are uniformly eight inches wide by 4 to 6 feet long. Each valve is to all intents and purposes a "Tuyser iron" or "Duck's nest," such as is found in every blacksmith's forge, and the fire underneath a single boiler, fitted with these grates, will be quickened as though a dozen muscular blacksmiths were "pumping" with might and main upon a like number of bellowses, whose blast outlets were distributed about at regular intervals throughout the furnace. In this case, however, a fan or blower of suitable capacity supplies the place of the bellows, while the muscular arm of the blacksmith is supplanted by the steam engine.

As will be seen, the main blast pipe penetrates the side wall of the furnace at the floor line, extending thence across the ash pit under the back end of the Grates. As the blast pipe is at times subjected to considerable heat it is of cast iron, with heavy flanged

joints accurately fitted to make it air tight. From this pipe 4-inch vertical connections are made with the Blast Grates above. When in position for use this main blast pipe lies on the floor of the ash pit well back against the wall supporting the back end of the Grates. It is thus quite out of the way of the fireman when cleaning out underneath.



A HOLLOW BLAST GRATE.

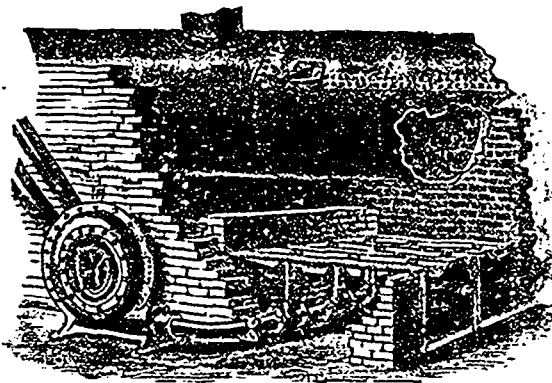
The cast pipe usually terminates at the outer line of the furnace wall. Here a Blast GATE is attached, which, as it is opened or closed at will gives the fireman absolute control of the blast and consequently of the fire. Light galvanized iron or tin pipe, is employed to make the blast connection between the outer, or gate end and the Blower.

As will be seen, the apparatus, which is simplicity itself, consists of Blast Grates, Blast pipe and Blower. As from 200 to 400 cubic feet of air is forced through each Blast Grate per minute, it is sufficiently protected from injury by heat, consequently the claim that barring accident, the Hollow Blast Grate will last for a lifetime, seems plausible.

The Hollow Blast Grate is the invention of Alonzo J. Gordon, of Greenville, Mich., who may be said to have had life-long experience as fireman, engineer and mill owner and operator. The problem Mr. Gordon set out to solve was this. A simple and durable contrivance that shall ensure the quick combustion of such fuels as, with the ordinary draft, burn so slowly as to be practically worthless for steaming purposes. Prominent among these may be named fine dust from the band saw, spent tan bark, together with the dust and mill waste from such slow burning woods as Hemlock, Cypress, Gum, Elm, Oak, Basswood, Redwood, Cottonwood, etc., etc.

Mr. Gordon claims he has successfully solved this problem, and his Company proudly boast that they have yet to learn what failure means. Though the Blast Grates have now been in constant use for upward of two years, we are informed they have not in a single instance failed to secure the hearty endorsement and approval of the users. And what is more, though they have been subjected to practical tests in nearly every state in the Union, and under all sorts of conditions, not one has needed repair, not one has shown the slightest evidence of warping or sagging, not one has failed to perform the work set for it, in a manner highly satisfactory to the user.

Their proposal with Guarantee tends to inspire confidence. Reduced to its simplest terms it is this "If you will give the Blast Grates a trial, we guarantee you shall be so well pleased with their work, that you will accept and pay for them at the expiration of the trial period."



FURNACE FITTED WITH HOLLOW BLAST GRATES AND APPARATUS.

When using the Hollow Blast Grates the fires are fed exactly as when using grates of the ordinary pattern, by carrier, or through the open doors, with dust, spalts, slabs, blocks, or other coarse and heavy fuel. It is further claimed for these grates "that they increase four-fold the life of the common grates used in conjunction with them." This claim is based upon the theory that as the Blast Grates do all the work, the intermediate grates are practically relieved from duty, and as a consequence do not get heated sufficiently to "burn out."

As the Blast Grates are usually placed 8 inches apart

throughout the furnace they occupy only one half of the Grate surface. The spaces between Blast Grates are filled in with common or saw-dust grates of any desired pattern, thus providing ample draft openings for steaming purposes, when the Blower or Fan is idle.

A LIVERPOOL AUCTION SALE OF TIMBER.

A FEW minutes before the hour of noon strikes out from the tower at the Alexandra Dock members of the timber trade may occasionally be seen converging to some spot upon the quay of the Canada or Brocklebank Docks, the chief seats of the timber trade of this port. A stranger asking for information upon this matter would probably be told that an auction sale of foreign timber was about to be held. His attention might also possibly be drawn to the fact that a flag was flying from an imposing staff at the office yard of the firm of brokers whose sale was the object of attraction. This ensign might be the red, the blue, or the white St. Andrew's cross, for nearly all the different firms of brokers have their distinguishing flags. A brief space of time may be spent in walking over the logs and examining the merits or demerits of the cargo or cargoes to be offered. But probably all, or nearly all, with the exception of the buyers from the country, have scrutinised it most carefully since the first portion of it has been landed from the ship in which it was imported. But time is passing, and as the last stroke of the clock is heard there is a general concentration of the scattered assembly towards the auctioneer who has taken up his position on one of the most prominent places upon the cargo that is to be offered by him. The conditions of sale are rapidly read through and the real business of the meeting begins. With a few preliminary remarks, careful and guarded from one auctioneer, genial and humorous from another, buoyant and optimistic almost to extravagance from another, each according to his particular humor descants for a brief space either upon the excellence of the goods to be sold or upon any other phantasy that seizes his imagination. These being closed a silence ensues and an onlooker begins to wonder why all these people took all the trouble to come all this way for the evident purpose of all doing nothing. And all this, too, if it be in winter amidst a bitter, biting frost, quays as well as timber covered with snow, or if in summer to broil for an hour or more under a scorching sun at noon-day, and all this with evidently no purpose at hand. "Who bids for lot one?" cries the auctioneer. The silence remains unbroken, but at last some careful buyer makes in an equally careful and hesitating voice, in a very careful and lower pitched voice a bid. It may possibly be near the value of the goods or it may be a long distance away from it. But if it serves no other purpose it serves that of breaking the silence and once this is done matters progress rapidly. Bid follows bid and lot after lot is quickly knocked down. The cargoes if not sold as we have endeavoured to describe are just as promptly withdrawn. Here we may say that provincial sales differ widely from those held in the metropolis. It has often been a matter for consideration why there should be such a wide divergence in the method of holding auction sales in the two great centres of the timber trade of this country. But the reasons are not far to seek. In London merchants conduct their business in the city and hold their stocks miles away at the docks. In Liverpool the very reverse is the rule. Here the merchants not only hold their stocks at the docks, but they hold them in the yards attached to their offices there, or in adjacent storage lands, and they have the further advantage of seeing their cargoes landing in many cases almost under their office windows. Under these widely divergent circumstances, there is no wonder that what should be found suitable for London should be found quite the opposite for Liverpool. Some years ago, efforts were made by various brokers to institute the London system here, but for the reasons set out above these did not succeed. It suited neither the merchants at the Canada Dock to leave their offices and waste many valuable hours of time in the city, nor did it suit buyers from the country to come down solely for the purpose of attending an auction sale and then afterwards to have to make a long journey, often late in the day, to find something at the docks they require to supply some want.—*Timber Trades Journal.*



PUBLISHED MONTHLY BY

ARTHUR G. MORTIMER,

OFFICE:

75 CANADA LIFE ASSURANCE BUILDING,
TORONTO, ONTARIO.

TERMS OF SUBSCRIPTION:

One Copy one Year, in Advance, \$1.00
One Copy six months, in Advance, 50

Advertising Rates Furnished on Application.

THE CANADA LUMBERMAN is published in the interest of the lumber trade and of allied industries throughout the Dominion being the only representative in Canada of this foremost branch of commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Special pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world so as to afford to the trade in Canada information upon which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way effecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN with its special class of readers is not only an exceptionally good medium for securing publicity but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent, if ordered for three successive issues or longer.

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.

TO VISITING LUMBERMEN.

LUMBERMEN visiting Toronto are invited to use the office of the LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way that they may desire.

THE DECREASE IN OUR TIMBER SUPPLY.

At the outset it is to be understood THE LUMBERMAN has not made the discovery, which annually or bi-annually looms up in journals published in the interests of the trade, that our timber supply is giving out, in fact, well nigh exhausted. It is intended to briefly sketch the demands, the enormous demands, made every year upon forests in America, and to show that as a consequence the necessity must soon arise for some methods of preservation akin to those in vogue in Great Britain, Germany and France, or that the example of Russia to plant new ones, must be followed. Before the current year expires, the theoretical lumberman will cover about the same acreage of paper with resolutions at forestry gatherings as the acreage of timber which will be cut by the practical lumberman, and the columns of newspapers will contain contributions giving elaborate Utopian schemes for forest reproduction and preservation, as wearisome to intellectually wade through as blazed logging roads are physically wearisome to plod over. Some forty years ago in South-western Ontario there were remnants of vast forests of walnut standing. To-day, in some sections, you can find old rail fences and decaying stumps of this expensive, and almost annihilated wood. The early settlers, with a ferocity equal to Attila, looked

upon a tree as a foe, and every known means was employed to exterminate the common enemy. The counties of Perth, Oxford, Waterloo, Wellington, Huron, Brant, the best fall wheat district of the west, were heavily timbered with maple, beech, oak and pine. The same unsparing, ruthless, tree-thirsty desire seized the settler. Axe, saw and fire were kept steadily exterminating, until many farmers were years ago compelled to buy coal for fuel. Saw logs, square timber and the saw mill completed the devastation, and in place of being able to export lumber, if the timber had been judiciously manipulated, hundreds of places have to import for local consumption.

The fringe of settled land along the north shore of Lake Ontario, sections of New Brunswick, Nova Scotia and Quebec, all bear testimony to this wholesale destruction. The "logger" has now to operate limits 400 miles up the Ottawa. The sources, in place of the beds of the Rouge, the Gaineau, the Du Nord, the Bonnechere, the Mississippi, the Madawaska and the Mattawa, are where the shanties are now built, and in many instances this season's cut of logs will not be sawn until the second summer.

Bush fires started by pioneer settlers, careless hunters, heedless campers and tourists; fires lit by accident and design, have destroyed as much, and probably more timber than man has cut. The logger knows this and uses it to his advantage. "Look at the income from the sale, and the stumpage I pay the government; fire pays none. Cut it!" This is his motto and when a limit is opened by a lumberman possessed with these ideas, the timber disappears rapidly, if the market price allows a margin.

Looking over the reports of the cut in the large sawn lumber sections of the United States for 1890, we notice that our nearest neighbor, Michigan, is gradually falling behind as a white pine producer. The price of lumber, or the state of trade, has had practically no influence on the output, yet Muskegon shows in 1884, 615,447,398 feet, in 1889, 417,177,824 feet, and in 1890, 301,875,227 feet. In 1882 the Tittabawassee Boom Co.'s log cut reached the enormous amount of 611,862,670 feet. A decrease annually has taken place. On the Saginaw, the output for 1889 was 333,925,130 feet, against 302,525,530 feet for 1890. Not only is there marked decrease in the output, but the average size of the logs is smaller. One example will suffice to show this. In 1864 the logs averaged 243 feet, in 1889 110 feet, 1890, 106 feet. Log supplies are now being taken from Canada to recoup the serious falling off in the supply in some districts, and in others the mills are either closing down or following the forests for logs to keep the saws going. What is taking place in Michigan timber limits is also taking place in Wisconsin and Minnesota—the white pine considered inexhaustible fifteen years ago, is quickly being exterminated. The supplies of the future cannot be cut from growing timber, they must come from old timber saved. The consumption of the pine in the States mentioned, proves that trees do not grow as fast as the logger fells them, and that, like walnut, the white pine of the North American Republic will dwindle to clumps and specimens. Its place will either be taken by white pine from northwestern Ontario, or yellow pine from the middle and southern states. This article is slowly pushing its way into the northern markets, and just as northern pine diminishes in quantity and increases in price, the yellow pine will be accepted as a substitute. Destruction began long ago in Georgia from the demand for turpentine, and it is estimated that 33 per cent. of the standing timber of that state has been killed within the last ten years. The acreage of yellow pine timber is not like the acreage of Canadian white pine, vague and indefinite; it has been measured. Allowing 4,000 feet of sawn lumber per acre, and the capacity of a mill 50,000 feet per day, in 25 years the single mill would denude 100,000 acres. Given, the acreage and the total yearly cut of the mills, the time when yellow pine will follow the fate of its northern sister can be approximately calculated.

The craze for quartered oak, antique oak, and reliefs found by panneling with plain red and white oak lumber, has forced the price of that wood away into the teens in Canada, and small mills whose yards a few

years ago contained unsaleable piles warping and rotting, are now taxed to their utmost capacity. It is not a plentiful wood in the Dominion, and its natural production differs from all other varieties of trees. It is only a question of time, a very short time, when it will be like the Buffalo, historical. The tan oak of California, once covering thousands of acres, can now almost be counted on the fingers in many counties, and steps have been taken for replacing it with an Australian variety of the eucalyptus. Oak in the United States is not so general or so inexhaustible that it can stand the inroads made upon it for the last three years. It must be nursed if it is to continue the leading wood for furniture. On the Pacific coast, in both Canada and the United States, the annual cut of standing timber without any attempt to conserve the forests must, in the course of time, denude that part of the continent. It is not in the felling of matured trees that objection can be made, for timber like the lower orders of vegetable matter and all animals arrives at maturity and dies. It is in the wholesale slaughter of un-matured trees the evil lies. Half grown specimens and acres of smaller ones cleared off with the axe simply means, if coming generations are to handle logs like their grandfather's handled them, some method apart from theorizing and visionary private ones must be applied by lumbermen themselves. Their main desire is to swell the bulk of the figures given on the enormous consumption of timber at last year's forestry meetings, and to skin their limits of everything saleable, leaving their successors to fish for timber as best they can.

THE INFLUENCE OF CANADA LUMBER IN THE UNITED STATES.

CONSIDERABLE discussion in papers and journals has been provoked by the utterances of Geo. P. Smith, a lumber dealer of Tonawanda, N. Y., in an interview reported by the *Detroit Free Press*. Much of the interview is foreign to the Canadian trade, but amongst the items the following is found:

"The effect of the reduction of the import duty on Canadian lumber from \$2 to \$1 a thousand has been to bring into the United States considerable quantities of the coarser grades of lumber, which before could not afford to pay the duty. The Canadian bill, removing wholly the export duty of \$2 a thousand on logs, was passed too late to be of any effect this winter, but the indications are that by another year large amounts of Canadian logs will be sawed in American mills." The influx of coarser grades of Canadian lumber in the eastern market, is quite likely to effect the American product in the east. An eastern Michigan manufacturer stated a day or two ago that the call there was largely for good lumber, while the coarse stocks dragged, and he attributed it to the Canadian stocks being placed by rail upon the American market. As the stocks now being manufactured in eastern Michigan, owing to closer cutting, are largely coarse grades, it looks to a man up a tree as if the Michigan coarse product would drag like the dickens before closing-down time comes next fall. This condition of things has been feared by Michigan manufacturers a long time, and largely influenced them in opposing a reduction in the import duty on lumber. "It is true," said one of them, "that there is still a duty of \$1 on Canadian lumber imported to the United States, but the difference in freight between Canada and the eastern market is fully \$1 a thousand in favor of the Canadians and I expect that coarse lumber will be sick. And it is these coarse stocks that have helped the Michigan manufacturer out. They have enabled him, by reason of placing them on the market at a fair profit, to cut his lands close, and thus even up the cost of stumpage, which has been higher in eastern Michigan than in any other part of the northwest. I am apprehensive that this coarse Canadian lumber thrown upon the eastern market will prove a serious affair to Michigan manufacturers."

The *Timberman*, of Chicago, in challenging the statement, clearly shows, by giving the prices obtained in *bona fide* sales, that at least in the cases quoted prices have not fallen, and winds up its proofs in the following language:

"It will be of interest to say by way of emphasis, that one Buffalo firm, a near neighbor of Mr. Smith's, has purchased at Menominee this year a stock of lumber from a firm from which they have bought during the past six years, (some 40,000,000 feet) at \$17.50. Hitherto the Buffalo firm has purchased this Menominee firm's stock of lumber by inspection. They will take the lump lot on a basis of \$17.50 this year, and in the six years they have bought this firm's lumber, they never paid a price approaching the above named figures, considering the inspection of matters, within \$1.50 per thousand feet as much as they pay this spring. Having said as much in refutation of the charge that prices have been constantly lessening during the past five years, we will say, that whereas some of the lower grade lumber has been reduced in price, such change is not permanent, and even with a reduction in the Canadian tariff during the past year, prices of good lumber as above indicated have advanced. Instead of saying, as Mr. Smith does, that the price of pine has been reduced

during the past five years, notwithstanding the growing scarcity of pine, we fail to hear of any lumbermen who hold pine, getting into the "financial cramps" of which Mr. Smith speaks, because of holding pine; and if he expects to see white pine stumpage decline in the ratio that his cordwood declined, as he narrates specifically, his expectations will never be realized.

The *Timberman*, we believe, is nearer the truth than Mr. Smith on the question of pine prices; but suppose a sudden demand arose and prices stiffened would the rush from the white pine states—and let us include Canada with the dollar duty against her—force the price down, or would the increased, or raised, price allow yellow pine holders to get their stocks worked off at the market quotations for that wood? This factor in the home market of the United States is now a prominent one with Canadian shippers of coarse grades, and when Canadian coarse grades meet in competition with yellow pine, planed or almost ready for domestic use, the keenest of competition follows. Clean stocks of white pine are not subjected to the same competition and we have no hesitation in saying that Michigan men have more cause to fear southern pine as a price lower than they have of Canadian culls.

RECIPROCITY.

UNDER the heading "Against Reciprocity," we republish the opinions of the *Northwestern Lumberman*, Chicago. We have never questioned the value of reciprocity in lumber to Canada, but we have in a variety of ways asked our contemporaries who clamor for it and blame the government for not obtaining it to show us the *open sesame*, to show us how it can be obtained. Before another issue of THE LUMBERMAN the representatives of the Privy Council of Canada will have opened negotiations of a reciprocal nature with the authorities at Washington. It is not known whether lumber will come under discussion or not. If so, the daily report of the proceedings will be doubly interesting; if not, the articles under discussion will, in a measure, include difficulties similar to or inherent to the lumber interest.

If no other product of Canada were involved, and lumber *per se* was the bone of contention, *i.e.*, if the commission under Sir Charles Tupper, who, as he puts it: "Themselves a branch of the Anglo Saxon race, thoughtful Americans need not be told that a sister branch of that remarkable stock may be won but cannot be coerced, and that if negotiations are entered on Mr. Blaine or his colleagues will not be actuated by any other thought than the making of such an arrangement as will accrue to the benefit of the American people." If this commission met to arrange free trade in lumber only it is the opinion of the most profound thinkers on the subject that it would never be granted.

We recognize the opposition from Michigan, Minnesota, the southern pine states, and to some extent on the Pacific coast. On the North-eastern slope of the Atlantic, and in the states directly south of what is known as old Canada, is situated a section of the American Republic that is compelled to buy from three outlying portions of the continent. From Canada on the N. E., N. and N. W. by W., from sister states to the S. S. W. and W. and from the N. W. White pine men in the states will find enough to do to attend to the cheap stumpage and nigger labor of yellow pine without being bothered with the products of the older provinces of Canada. One enemy in the front is sufficient to fight without an enemy on the flank. Yellow pine men are pushing their manufactured stuff against a common foe, the one crippled by geographical position slightly, the other handicapped by the duty.

The position cannot be altered, but it can scarcely be expected that an auxiliary in the fight, such as duty, will be thrown away without a strong effort being made to retain it. That white and yellow pine men would join hands, and that the interests of mill men in the N. E. States, who operate on the residuum of pine on the Alleghenies would go with them would be a certainty. If the question of reciprocity in lumber is discussed in conjunction with our other productions, the same influences will be brought to bear. It will not be from a mill man's standpoint, what is best for

the welfare of the manufacturing states of the N. E. Atlantic coast, it will be what is best for myself. We repeat that whatever shape the negotiations assume, the interest taken in them will be greater than in any friendly attempt at reciprocal relations since confederation. Almost a new nation sways the future of Canada since '67. Those old enough to recognize the significance of the event at the time, even the archin who fired off his squibs on our first Dominion day wondering what the fuss was all about, have now a vote, and take a deeper interest in their native land than could be expected from their fathers who adopted it. The school master has been abroad for the last quarter of a century, and every twist and turn of the proposed negotiations will be argued, self-construed, self-interpreted and willfully tortured to suit the political exigencies of the case.

EDITORIAL NOTES

WE want a few copies of the LUMBERMAN for March, will some of our friends kindly remail their copies to the office of publication, Canada Life Building, Toronto, we will look upon it as a great favor.

LIKE Homer's, the birth-place of the inventor of the circular saw is a doubtful quantity, and several places dispute the location of his graveyard. Now that mills are being opened for spring business many an employee will not be particular as to the inventor's graveyard, but it is quite possible they will wish that he never was born. Disciples of Esculapus and knights of the scissors owe considerable to the circular.

THE New York *Press* cartoon is very *apropos* to the discussions and attempts recently made to conserve the forests still remaining in the Adirondacks. The Adirondack Lumber Company appear in the foreground felling trees. George Washington, of hatchet and cherr, tree fame, sticks his head out of the zenith and is represented as remarking: "and to think I was primanded for cutting down one little tree."

CANADA on both seaboard has taken the lead in cultivating the lumber trade in South America. Foreign lumber markets are not any too active in Europe and stagnation describes the condition of South America. The Argentine Republic is in the throes of a cramped money market; Chili is engaged in war and political troubles are effecting Brazil. Until these are removed the demand will not improve.

THE scarcity of cars to remove lumber that was experienced last year on the G. T. R. will be somewhat lessened this summer. There will be little increase in rolling stock, but the release of a great many cars from work on the Sarnia tunnel, the very small quantity of square timber manufactured in the North and no ice to move will lessen the demand in their respective requirements. It is to be hoped a repetition of last season's experience will not be incurred.

THE McKinley Bill clause placing a duty of 20 per cent. *ad valorem* on cedar ties and posts went into force March 1st. Its effect on this trade in Canada is problematical as yet, but before long we will be in a position to report any lowering of prices as some anticipate. Last year the Province of Quebec marketed \$78,000 and the Province of New Brunswick \$77,000 worth.

"James Blair, of Ferguson's Falls, is home from the shanty with a full pocket, a fat team and a cheerful countenance."—*Ex*: James differs from a great many logging teamsters this winter. Many of them in the Ottawa valley returned leaving their horses at the bottom of a lake or river, or food for crows on the bank of a stream during the summer.

A STURGEON BAY man writes. "As the new season advances, the vast quantity of logs and other timber from the forest continue to augment and fill the streets." This is a sample of the new figures of speech styled "back-handed adjectiveness and the vagueness of seductiveness". How did the logs get there? Were they rolled, dumped, canted, hauled or felled? Does the "vast quantity" mean last year's logs left in the streets for lack of water to drive or what does it mean? Augment is good; try again.

BRITISH COLUMBIA is steadily pushing her way into the lumber markets of the world. Sample cars of assorted sawn lumber and samples freighted by water by the enterprising firms who operate her mills are doing much to advertise the productions of our youngest colony. The latest move is worthy of special notice. The full rigged ship *Titan* was chartered at Shanghai, China, to carry from B. C., *via* Cape Horn, for the G. W. Bush & Sons Lumber Co., of Wilmington, Delaware, 1,000,000 feet of sawn lumber.

AFTER all Canada is rather a fine country to lumber in. The heaviest snow fall of the season took place on the 8th ult. in North Michigan, Wisconsin and Minnesota, decreasing as it extended northward over Lake Superior and that district. Rivers in the southern parts of these States are full to the brim. In Ohio immense damage has been done to mill property and booms, while serious freshets have occurred in more than one eastern state. If the breaking up of Canadian waters takes place as gently and easily as reports state up to date no cause for grumbling can be found.

THE annual number of the *Timber Trades Journal*, of London, England, the leading British paper in its line, reached us last month. It contains 255 pages full of interesting and suggestive matter on the European as well as the foreign phases of the trade. Three supplements are also issued containing half tone portraits of the hardwood dealers of the metropolis, the representatives of the timber trade in Newcastle and Sunderland and a portrait of a Liverpool timber auction. Amongst the advertisements a fair sprinkling of United States manufacturers' names can be found, and several pages are given to the illustration and description of United States mills in the Puget Sound district.

THE general regulations for foreign exhibitors at the Chicago World's Fair has been received. It is issued in foolscap size, contains fifty four pages and the subject matter is divided into the usual departments, groups and classes. Class 99 to 118, inclusive, deals with forest productions and forestry. We have the authority of W. J. Buchanan, chief of the department of agriculture for the Fair, in stating that exhibits in this class will form one of the most complete departments. Already lumbermen in the Southern States of Georgia, Alabama, Texas and Missouri have appointed a special committee of eleven members to co-operate with the management. The Pacific coast U. S. men have also taken initiatory steps. What do Canadian lumbermen intend to do in the matter?

ANY one looking over a yearly list of fires and casualties in the lumber trade after sawing begins must be appalled at the fearful destruction of property, life and limb. Deducting from the aggregate all due to carelessness and design, the number is still vast enough to bring before millmen some of the improvements that will be forced upon them in a few years by the use of electricity. The main engine can be placed in any position in the yard with little regard to lining up. Wires can be carried in any direction; wire cables and shafting cannot. Applying motors separately to systems of shafting does away with cumbersome jacks, large pulleys, belting and economizing the space occupied by them. In the erection of new saw mills, planing mills and other factories, the separate motor to systems of shafting is worthy of serious consideration from a convenient and economic standpoint, as well as the minimising of accidents from automatic connection with the engine.

MANY of our readers have asked for a description of wood pulp making by the sulphite process. The wood is peeled, all decayed or off colored portions removed, and is then cut across the grain into thin strips. It is now ready for treating, and is placed in cylinders, or drums, capable of resisting a pressure of from 100 to 200 pounds to the square inch, and is covered with sulphuric and other acids in solution. The tissuey cotton like product is then pressed dry, mashed, mixed with water, rolled flat and cut for handling. It goes to the paper mill containing 60 per cent moisture and 40 per cent fibre. A cord of spruce yields 1,200 lbs. of graded fibre, worth from \$1.00 to \$1.50 a hundred pounds, and the plant to manipulate 8 to 15 cords in 24 hours is worth from \$6,000 to \$10,000.

Six of the forest rangers, under the supervision of Mr. J. B. Charleson who was appointed as chief in 1887, reported to that gentleman last month their statements of accounts between lumbermen and the Quebec Government. Prior to Mr. Charleson's appointment a tax of 22 cents per log measuring 17 inches and over, and 11 cents on all under, was imposed. The abuse made of certain privileges; the evasion of the rules or laws on measurement; and the inadequate staff of rangers, led to some radical changes. More rangers were appointed, their work was increased and they were empowered to obtain a sworn statement from lumbermen, his agent or culler, and instructed to measure logs themselves as often as possible. The stumpage charge of 11 and 22 cents was abolished, and in lieu thereof \$1.30 is exacted for every 1,000 feet of timber, board measure. The cut of 1888-89 under this system netted to the crown lands department of Quebec \$1,200,000. Under the abolished system a greater cut of logs yielded \$864,000, or a difference of \$400,000.

FOR the last three years attempts have been made by the Norman, Keewatin and Rat Portage mills to form an association, fix prices of lumber, and hold to the agreement. There was formed over two years ago the North-Western Ontario and Manitoba Lumber Association, with rules of government and fixed prices, but some of the members departed from the spirit and tenor of the regulations rendering the scheme abortive. The managers of the various mills have been discussing the situation lately and have devised a plan which will be submitted to all the original millmen in the North Western and Manitoba Lumber Association. Messrs. R. A. Mather, D. C. Cameron and J. M. Cameron, of Rat Portage, are the delegates who will confer with Messrs. Jno. Mather and W. R. Fuller, of the Keewatin Lumber Co., and Mr. J. F. McCrea, of the Western Lumber Co. If the scheme is adopted, the new arrangement provides for the retention of the mills by the owners, but the products must be pooled. A central office will be opened to manipulate the output and the profits and losses will be settled on the basis of business done by each mill in the past.

AN Ottawa paper before the election which continued Sir John Macdonald in power as premier of Canada, a position which he has occupied since 1878, said in favor of unrestricted reciprocity "that it would bring back the box shook factories which formerly employed hundreds of men, but had been compelled to move across the line, while it would also make Ottawa the great distributing point for the New England States, as all the lumber would be dressed there before shipment." According to this, Americans have cause to rejoice over the success of the conservatives.—*North-western Lumberman*.

The statements of hundreds of Canadian papers made during the late election, if published in pamphlet form, would exhaust in one issue the stock of quiet sarcasm our United States contemporary keeps in the sanctum. If some of them during a contest would say less about supposed results and give the means of putting their theories into practical usage the electors would thank them for being public benefactors. Our Ottawa contemporary has some extra pull on the Washington Senate, that the Canadian Legislature cannot be cognizant of, or else a seat in the house, say along side the Mace might be given it without the worry and expense of going to the polls. It will now be in order for the editor at the capital to open his bag of tricks.

IT is agreed amongst men of experience that hardwood logs which float a long distance in water and remain months immersed in it give better sawn results than dry land stock. It is claimed, apart from any other qualifications, soaked logs produce lumber that does not check or split so readily as the dry land article. One of the most difficult hardwoods to market in good shape after leaving the saw is the oak family. Many a promising yard full of green lumber has turned out the opposite of expectations, and the further splitting and checking when in the hands of the mill to cut and split up, has always been a source of loss and annoyance. From the day the plank or deal leaves the saw the trouble begins. Oak is a slow natural dryer. Stocked in a mill yard to dry it warps, twists, splits and checks, and when finally drawn from a dry kiln the resemblance to the original for soundness is wanting. Since oak became so popular for cabinet work and furniture a great deal of attention has been paid to handling it, and it is claimed that a kiln that steams the wood by strong currents and rapid condensation of moisture is much better treatment than the hot air process. It is argued that the reason why it checks and splits is because the outside becomes dry and case hardened, while the inside is green. Before the moisture escapes from the interior it forces the grain apart and causes the defects.

IT has become an accepted theory amongst the scientific world that geologically Australia is many centuries behind the rest of our planet. Her peculiar marine inhabitants, land animals, feathered tribes and her aborigines are the basis of the arguments, as well as the productions of the forest. They are almost as strange as the marsupials, and their description as given by Mr. J. Ednie Brown, of the forest department of Sydney, is decidedly interesting. Silky oak, a soft variety, grows to the height of 75 feet and is used for furniture. Forest Oak and Beefwood, so called from the streaks of color similar to the fat and lean of beef, are both classed in the old world's oak family from a supposed resemblance only. But it is not in the oak family alone that misnomers occur. So many odd specimens were found by the early settlers that names had to be invented to distinguish them, and the barkless peculiar fibred trees were christened as near as possible to counterparts in the old world or after some substance which they resembled, hence there are found satinwoods, blackwood whitewoods, rosewoods, sandalwoods, marblewood and the ash family, the latter looking very unlike the American specimen. Trees being found in great variety outlandish nomenclature had to be resorted to, and dogwood, stavewood, pigeonberry, union nut, myall and myrtle are in the forest vocabulary. Discrepancies occur in the nomenclature of the American continent woods. The Douglas fir is a spruce. Oak of commerce is divided in two classes, red and white, but there are thirty-seven varieties found. The true poplar is a willow. The gum tree of the Southern States is a hazel. Red cedar and our white cedar are not of the pine family; the former is a juniper and the latter a cypress. The yellow poplar of commerce imported into Canada under the name of whitewood is a tulip and the only one of its variety in America.

THE *Free Grant Gazette*, published at Bracebridge, directs the attention of its readers to offers made from United States firms for Black Ash, Basswood and Pine shingles, and cites amongst them a letter from G. Elias & Bro., of Buffalo, to Mr. A. Boyd, of Monck, as a sample case. The Buffalo firm offer \$22.00 for ash, and \$17.00 for basswood, The wood to be well manufactured and first class in every respect. The *Gazette* comments on the letter thus:

The prices offered above are about double as high as the Toronto dealers offered, and yet the duty is too high to admit of Mr. Boyd doing a profitable trade with the American dealers. But give us reciprocity, and then Mr. Boyd will make a pot of money in the timber trade with the Americans. So may other mill owners, who have the timber to cut, and farmers who have the hemlock, ash, birch and other timber to sell.

Waiving the hack cry "give us reciprocity," with out attempting to show us how to get it, we reply to the comparison drawn between Toronto and Buffalo prices

that the statement is not correct. Let us take the case of the quotation, F. O. B. at Buffalo \$22.00. Freight from Huntsville to Buffalo \$4.00, duty \$2.00, inspection and incidentals \$1.00, total \$7.00—balance \$15.00. Toronto price \$13.50 to \$15.00. On same grading and gid culling as Buffalo insists upon, any Toronto-dealer will give \$15.00 F. O. B. at the mill. Take the other case F. O. B. at the mill \$22.00. Duty \$2.00, freight \$4.00, inspection and incidentals, \$1.00—total \$29.00. The maximum price for picked in Buffalo is \$25.00 and grades sell as low as \$13.50. No one would ship at a loss of \$4.00 per M, not even our friend Elijah of the *Gazette*. These are hard cold figures to digest after publishing such siren and delusive clap trap as that contained in our clipping, but before an election a certain amount of license is allowed to party journals.

THE proverbial reputation of Scotchmen to get value for their money is not lessening; in fact the requirements contained in the specifications for the oak tender which we reproduce puts the desire beyond a proverb and stamps this particular Sawmie as a Scotchman amongst Scotchmen. In the Glasgow market recently there were tenders called for oak scantling, some 45,400 pieces, running from 6 ft. 6 in. to 18 ft. 6 in. in length; from 2 1/4 to 7 1/4 inches thick; and from 4 1/2 to 13 1/2 inches wide. Will our lumbermen read what is said regarding quality, then sit down quietly and ask themselves if in Canada with all her boasted forests could a mill be found that could fill the bill.

"The timber must be of the very best quality, thoroughly seasoned and free from rot; shakes, hearts, sapwood, wormholes, soft knots, large knots and all defects. The number of pieces required of each size is in the proportion shown in the list, and each piece must be sawn and cross cut exactly to the specified dimensions. Delivery is required in equal weekly quantities, beginning first week of April, 1891, and the whole must be delivered by the 30th of September. Each delivery must include a proportion of all the specified sizes in the list. No portion of the timber will be accepted as delivered to the company until it has been examined and approved by the company's inspector and found to be in all respects strictly in accordance with the specification and scantling. Should any portion of the timber which may be ordered not fulfill the conditions of contract, the company reserves the power to reject the whole, or any portion thereof. Please state in cubic feet the total which you undertake to supply, and quote net price per cubic foot, delivered free in wagons at this company's works."

AT one time salt sea salmon swarmed in the rivers flowing into Lake Ontario. Many old settlers have caught them in the Humber, the Trent, the Moira, other smaller streams and in those tributary to the St. Lawrence. The erection of mill dams had considerable to do with stopping migratory fish, but the Dominion Minister of marine and fisheries blames the pollution of the streams from sawdust, mill rubbish and the refuse of factories for the destruction of fish life, the lower orders of life on which they exist and vegetation of every kind. He deprecates the practice as a serious evil and confesses the difficulty in correcting it owing to the interference with a national industry. Speaking of the annual report a prominent mill man says: "Were it not for the serious impediments caused to navigation, and the probable sanitary evils that exist from the lodgment of sawdust in spots where the current cannot effect it, fish, like the buffalo, should go. You might as well expect to give up the mill and mill dam because the government devise schemes for the restoration of the Indian or the beaver." There is a grain of truth in the millman's contentions and a degree of comparison in his contrast. But much forbearance, if not long-suffering, has been exercised towards mill owners on the question of the disposal of waste, and the government can only describe the course that has been adopted as owing to the well known benefits of manufacturing interests. Enquiry on the probable cost of water power mills, and the destruction or utilization of waste, shows that it takes a small percentage of profits to provide against injurious effects.

THE official announcement of the opening of the Dominion Parliament for April 29th is made in an extra of the *Canada Gazette* dated the 17th March.

THE NEWS.

ONTARIO.

—Jos. James, a dealer in lumber, at Bridgewater, has assigned.

—The Meaford planing mill, recently destroyed by fire, is to be re-built.

—F. E. Barker's cut of logs at Northfield Centre, is over 500,000 feet.

—A new saw mill will be erected at Kingsville, by a Mr. Bradt, of Detroit.

—Field & Co's mill, at Staples, has been undergoing a thorough overhauling.

—Mr. J. R. Booth's mill at the Chaudiere will not begin sawing as soon as expected.

—Lassaline & Co. are rebuilding their furniture factory recently burned at Sandwich.

—Mr. Andrew Gordon is building a new saw mill at Minemoya, Manitoulin Island.

—The estimated outlay on Mr. J. R. Booth's improvements on his Chaudiere mill is \$100,000.

—At present there is barely enough snow on the Keppewa to haul logs from the shanties to the drive.

—Mr. Bromley, of Pembroke, is in the Muskoka district buying pulp wood for the New York market.

—The Rathbun Co., of Deseronto, have purchased all the logs offered this winter on the Salmon-River.

—The Toronto Hardwood Lumber Co. have removed from 83 Front st., west, to the Board of Trade buildings.

—At the Chaudiere and Hull large numbers of men are seeking employment on the drives and in the mills.

—Chalmers & Grant, of Kinlore, are about to dissolve partnership. Mr. Grant will run the saw and grist mill.

—The safe in the office of Lawrence & Son, lumber merchants, Sarnia, was broken open on Sunday 22nd ult.

—Navigation opened in the lumber trade on Georgian Bay by a schooner clearing for Windsor, loaded with deals.

—Mr. Blake Hill will run the old Fetterley saw mill at the Locks, Huntsville, for Rankin & Tennant of Toronto.

—Messrs. Wm. Fowlds & Son, of Hastings, will lose heavily by the breaking of their boom and escaped logs.

—Messrs. Perley & Pattee at the Chaudiere will have sufficient logs to run day and night shifts if occasion demands it.

—Duff & Stewart, of Bluevale, have cut a large quantity of logs and dumped them along the banks of the Maitland river.

—Geo. Lemerise, of Tilbury West, has invented a machine and applied for a patent for swaging, setting and filing saws.

—On 18th and 19th ult., snow fell so heavily in the Letewawa lumber camps that operations had to be suspended.

—A large quantity of cedar ties, paving and posts, have been cut around Providence Bay, Manitoulin Island, on speculation.

—Gall, Anderson & Co., J. Holbert and T. B. Tait, Burk's Falls, have secured sufficient timber to run their mills for the season.

—An unusual large quantity of poplar pulp wood has been cut this winter along the C. P. R. track at Chalk River and Cobden.

—The Vanstone property, Brussels, consisting of flour mill, saw mill, stores, land, etc., will be offered by public auction on April 2nd.

—E. Shaver, and Jos. Seeley, of Rowena, Dundas county, have the C. P. R. contract for ties for the eastern section in Ontario.

—McMillan's saw mill, at Blyth, has been undergoing repairs. A new boiler has been put in along with other improvements.

—The Cranbrook sawmill, under the management of Chas. Deames, will cut more lumber this coming season than in any year in the past.

—Mr. Wm. Niebergall, of Dunlop, who has operated the local saw mill for the past seven years, has gone to British Columbia to reside.

—Calder's mill, at East Wawanosh, has undergone a thorough repairing this winter. A new boiler has been added to the machinery.

—Mr. Hector McQuarrie, lumber merchant of Baysville, has been forced into assignment from heavy speculation in unproductive real estate.

—The Ridgetown saw mill, at one time owned by Moody & Sons, has been purchased by John A. Moody, who is fitting it up and will run it this spring.

—The South River Lumber Co. have finished operating on the South River, in Parry Sound, and are now engaged in hauling the cut to their mills.

—Mr. John Moran's limit, on the Coulange and Black Rivers, has been purchased by Messrs. W. Mackay, sr. and A. H. Hough, of Renfrew, Ont.

—The Canadian imports in wood and manufactures of, for the month of January, exclusive of British Columbia, were \$63,576.00, the duty on which was \$17,480.81.

—North of Deseronto, during the past winter logging has been very active. Along the banks of all the small streams enormous quantities of logs have been dumped.

—Logging is over in the Sudbury district. Up to the middle of last month it was feared the scanty supply of snow would interfere with driving, its depth not being half what it was last winter.

—The imports to Toronto for January, 1891, footed up to \$623,503, against \$628,560 for January, 1890. The exports for January, 1891, were \$229,799, for January, 1890, \$180,805.

—The last supply train of the season left Ottawa on the 24th for the Desert up the Gatineau road. The supplies were intended for various firms and were carried by fourteen teams.

—At the Toronto assizes on the 20th ult., the court held that there was no negligence on the part of Messrs. Firstbrook Bros. box makers, Toronto, who were sued by Alfred Reid for injuries received while working at a buzz saw.

—Messrs. Perley & Pattee, Mr. J. R. Booth, Messrs. Bronson & Weston, of the Chaudiere, and the Hawkesbury Lumber Co., running Hamiltons old mills at Hawkesbury, have sold their stocks of last year's deals.

—The increased duty on cedar has not affected the cut in the country around Brighton, Ont. As many ties, posts and poles have been taken out this season as in any previous. The weather could not have been better for operating.

—Mr. C. B. Powell, of Perley, Pattee & Powell, Ottawa, has returned from a ten days inspection trip to the firm's shanties, and reports work well advanced, most of the logs banked, and the roadways everywhere soft and bad.

—Mr. J. R. Booth has sold his timber limits surrounding North Bay, covering a territory of about twenty-two miles, to Mr. J. Bourke, Mayor of North Bay. A new saw mill and a sash and door factory are to be built as soon as possible.

—Messrs. McLaren & Co., of Ottawa, will rebuild on the site of their late fire. A portable mill will be used to cut the dimension timber for the new structure, and McClymont & Co's new Edinburgh mill will cut the logs manufactured this winter on the Gatineau limits.

—At a public meeting held at Emsdale, in the Parry Sound district, delegates were appointed to go to Toronto to interview the government for a money grant to build a slide over the portage to connect the waters of Trading and Peninsula lakes.

—Elma township, in the county of Perth, has a few trees standing yet even after an extra large season's cut of logs. The Monkton mill will cut this summer 1,000,000 feet of logs. Baechler's mill on the 16th concession has stocked over 4,000,000 besides a large quantity of lumber and posts. Lang's mill on the Stratford gravel road will saw 300,000 ft. of logs in addition to shingles. Wm. Atteg, of Donegal, has taken out over 800,000 feet of logs, the largest quantity since 1885.

—James A. Sharp, late of Inglewood, has removed his saw mill to Sudbury where he is doing a profitable local trade. The McCormack mill at the same place is turning out about 30,000 feet per day, the output being shipped to Ottawa principally. Ford & Co. are at present erecting a large planing mill and the prospects are that they will do a successful trade. Sudbury is growing rapidly and is likely to boom the present season on account of new and extensive mining enterprises.

QUEBEC.

—In the lake St. John district the snow has gone and almost all the ice.

—Louis Laundry, Becancour, Que., engaged in the manufacturing of matches, has failed.

—Owing to the depressed state of the lumber market last year, many of the smaller operators were unable to pay their dues and the entire revenue collectable was very small compared with former seasons.

—Tenders for the new Board of Trade building in Montreal will be called for shortly. The estimated cost is between \$275,000 and \$300,000. The property known as the Cuvillier block, on St. Peter street, has been selected as a site.

—A gang of shantymen returned to Ottawa on the 20th ult. from McLaren & Edward's shanties and say the snow is going very fast up the Gatineau. The drive will have to be rushed as early as possible this season.

—A veteran lumberman was buried at Gatineau Point on the 16th ult., in the person of Joe Berthiaume, who for over half a century in his lifetime acted as foreman for the concern of Hamilton Bros. He was ill for nearly two years previous to his death.

NEW BRUNSWICK.

The C. P. R. and the Furness line of steamers have arranged to carry to the U.K. Ottawa shipments of lumber via St. John, in place of the U.S. route via Portland, Me.

—The Maine Co., who own over 50,000 acres of land on the Keswick, are about to build a pulp mill on the C. P. R., about two miles from Zealand. It is also proposed to erect on the same railroad, at Cardigan, a saw mill and necessary buildings to manufacture fruit boxes, brushes, broom handles, lasts and small hardwood ware.

BRITISH COLUMBIA.

—A sample car of assorted lumber was shipped from the Royal City planing mills, of New Westminster, to Montreal on the 11th ult.

—All the mills in New Westminster are running.

—The Royal City planing mills, New Westminster, are building ten cars for the railroad at Mud Bay.

—The firm of McGarvey & Johnston, loggers, have a large force of men in the woods opposite Aliceville, taking out piles for the North Pacific Lumber Co.'s new dock.

—Clarence DeBeck, lately of the Brunette saw mills, New Westminster, is at the head of a company who will erect a mill with a capacity of 100,000 feet per day.

—The Provincial museum of British Columbia has been enriched by the gift of a book of samples of native woods from J. B. Kennedy, of the Brunette saw mills, New Westminster.

—At the Brunette saw mills in New Westminster, on the 10th ult., the circular saw crashed through a dynamite cartridge embedded in a log. Some time previous an axeman in trying to split it had carelessly left the charge unexploded. It did not take kindly to the saw's effort and the employees, it can be conjectured, are very well pleased.

MANITOBA.

—G. A. Fisher, of Saltcoats, has opened a lumber yard at Yorkton, with Mr. W. S. Gordon as manager.

—Chevrier & Co. attribute their failure to a loss of \$17,000 invested in the St. Catherines Mill and Lumber Co., who sunk a large sum in the disputed territory of Algoma. When the transfer of the territory was made to the Ontario Government the patents of the Dominion Government became null and void. Chevrier & Co.'s patent was obtained from the Dominion.

UNITED STATES.

—Austin Corkin's scheme of connecting Montank Point L. I. with Milford Haven, England, has been perfected and practically carried by the United States Congress granting a subsidy. Eight steamships are to be built of 12,000 tons each to carry passengers and light goods. The distance from point to point is 2781 nautical miles, and it is expected to be covered in less than five days.

—Over three thousand years ago a tiny shoot forced its way out of the ground, six thousand feet above the level of the Pacific in Tulare County, California. It gradually worked its way skyward until it reached the height of 312 ft. Its lowest limb was 172 ft. from the ground and its base resembled a huge water tank. After braving the storms and sunshine of thirty centuries, ten woodsmen hacked through it in three weeks, sawed off a section and hauled it thirty miles to the nearest station. Over four hundred ordinary sized trees had to be cut down and much blasting of rock before the brobdignagian block reached civilization. When hollowed, furnished, lighted with electricity and shown as a novelty at the World's Fair in Chicago in '93 the various ejaculations, meditations, remarks and contemplations made by the visitors who gazed upon the shell would form interesting reading if published in book form.

—The inconvenience caused to the tenants by the erection of the annex to the Lumber Exchange of Minneapolis, was of small importance compared with the disadvantages that attended the destruction of it by fire. For years almost the entire lumber brotherhood of the city met within its walls not only for the transaction of general business but the centralization of dealers rendered it the headquarters for sales and purchases. They are now scattered over the city in temporary offices awaiting for a reunion in the new structure.

HOME AND FOREIGN TRADE REVIEW.

Office of CANADA LUMBERMAN,
March 31st, 1891.

THE leading feature of the trade in March has been the large shipments of lumber going forward by rail to points in the United States. This trade, which is really so much "found" business, has been made possible only by the reduction in United States duties to \$1 per thousand feet, and the special winter rates offered by the C.T.R. From Gravenhurst, Longford, Wauhaushene, Collingwood, Midland and other points there has been a steady stream of shipments, and connections have been opened up with many points both in the east and in the south which Canadian lumber has hitherto been unable to reach. This very considerable movement of lumber during the winter must help to equalize the supply of cars required during the season, and it is to be hoped that the business created has been sufficiently remunerative to be an inducement to the G. T. R. Co to continue the rate for another season. Without this winter car trade manufacturers and wholesale dealers would have had little to do except financing and praying for better times.

The local trade, both in Toronto and western Ontario, has fallen far below that of last year in the same period. A good many building permits are being announced in the daily papers, but it is to be noted that most of these are for buildings in central localities. Suburban terrace building, the great consumer of lumber, is at a standstill, and is likely to stay so for another season. The population has not yet commenced to overtake the house supply. There are signs of activity around the wharves. Vessels are getting ready for the opening of navigation and lumber is moving down to the docks in anticipation. Freights cannot be said to be settled yet, though a good deal of dickering is going on. Prices are not materially changed and nothing further may be said on this point.

Considerable discussion has resulted from the proposal to appoint a Government Inspector for lumber. The summary of the advantages and disadvantages may be briefly cited as follows. The advantages of a government inspection are that there would be an absolute authority to which appeal could be made in cases of dispute, and as between parties dealing with each other by government inspection there would be no room for disagreement. On the other hand objections to a Government Inspector are numerous. (1) Appointments would have to be made by an examining board, as in the case of hides and leather. The trade is so extensive and spread over so much territory that several inspectors would be required. This would mean considerable expense. (2) The qualities and subdivisions of qualities in lumber are so numerous that an Inspector would require a large and very active experience in order to keep posted. (3) The tendency among manufacturers and dealers would be to avoid the expense of an Inspector's fee by agreeing upon the inspection of their own employees. This would permit harmony in the trade but the Inspectors might starve. (4) As trouble would be more likely to arise in connection with exported lumber than any other, how could foreign purchasers be compelled to decide by government Inspector's decisions?

Just as loggers are coming out of the woods, not because the weather compels them to do so but because they have manufactured all the logs they require, when driving and towing will engross their attention, and the hum of the saws will replace the ring of the axes, a general report of the Dominion's doings and intentions in the lumber trade would fill our journal. It is even impossible to treat the subject provincially, and our readers must be content with condensed reports from lumbering centres. At Midland and other Georgian Bay ports, complaints are rife from wage earners, saw mills and workmen in local lumber yards about the undoubted scarcity of work during the summer, owing to the sale of logs in place of sawn lumber to United States' millmen. This was anticipated before logging commenced, but more than one millman who started in to cut for himself has sold the result of his winter's operation in the log.

From Ottawa the reports show a complete clearance of deals, and every mill during the coming season will saw on new orders or fill up their yards on expectation. It is not expected that Mr J. R. Booth's new mill will be running before May the 15th, when the six large band saws will be in position. Logging has ceased in the central Ontario district. From nearly every western village and town comes the report that owing to the exceptionally fine weather and the depletion of local lumber yards requiring stock for their spring trade the quantity of logs cut for home consumption is greatly in excess of the quantity marketed for several years, and many mills that have existed on custom work will once more saw their own cut of logs.

In eastern Canada Messrs. Kingsmill, at Kingsville, N. B. and Messrs. Stetson, Cutler & Co.'s mill at Pleasant Point N. B., the mills of Messrs. Miller & Woodman, A. Cushing & Co., Stetson, Cutler & Co.'s Indian town mill, all in the vicinity of St. John, N. B.,

have commenced running on the remnant of 1890 cuts, the supply being sufficient to keep the saws going until this season's logs reach the mills.

UNITED STATES

Independent of Buffalo's wholesale trade to outside points her local trade this year in pine is very promising. The number of residential buildings to be erected this summer, as well as business blocks, will exceed last year's. The attempt to adjust the demands of the mill men and dealers on the question of wholesalers' prices, mentioned in our last issue, fell through. At the vessel owners meeting to stay chartering until May 1st or 15th the lumber fleet was not represented. The annual meeting of the Buffalo Lumber Exchange for the election of officers was held on March the 7th, and Albany N. Y. on the 12th. The Hudson River partially cleared of ice during the first week of the month. In anticipation of a total clearing, many dealers who had orders booked to ship the moment boats moved ordered on their stocks only to be disappointed by an ice jam, followed by a freshet which interfered with early shipments. The export trade, more marked in the hardwoods than in the soft varieties, is improving in New York city. Building operations are being pushed as fast as the weather will permit, and trade can be safely said to be fair but far from booming. The older cities such as New York, Boston, Philadelphia and Baltimore, are widening their borders and filling up vacant property with handsome structures. Everything looks favorable for a good volume of trade in the Northern and New England states. Spruce lumber is at present from \$1 to \$2 less than the same date of last year, due to our supplied markets. White pine is being purchased in the usual quantities this season, while yellow pine has a downward tendency.

FOREIGN.

We went exhaustively into the U. K. trade in our last issue, reviewed it for the year 1890, and gave copious extracts and comments. Since then there have been quite a few sales of timber and deals with no stiffening of prices. The *Timber Trades Journal* advises Canadian shippers of oak timber "To march with the times if they want to make that industry a success and to send it forward in specially sawn sizes. The United States' products in this form, have run the Canadian nearly out of the market."

AGAINST RECIPROCITY.

Were it to come to a vote not one lumber manufacturer in a hundred in the United States would vote for reciprocity with Canada. The political complexion of the voters would cut no figure. No party line would be drawn in the contest.

In the Saginaw valley, and possibly in some other sections of Michigan, there are a few mill men whose timber is nearly exhausted, and who want Canada logs to keep their mills running, but outside of these the manufacturers would be as a unit against reciprocity.

This opposition would be extremely logical. They believe that, considering the number of American saw mills, the amount of standing timber, and the money invested in their business, they are justly entitled to supply the American market. They do not want to compete with Canadian lumber made from cheaper stumpage than can be found in America, and by mill men and loggers who work year after year for smaller wages than men in like employment obtain on this side of the line. Their can be no exchange that would be beneficial to the American manufacturer; on the other hand, it would be detrimental to him. Canada wants some of our hardwoods but none of our pine. Where she buys in American markets one dollar's worth of lumber she has ten times that amount to sell in those markets. Reciprocity, so far as lumber is concerned, would be only in name.

The farther from the white pine district the stronger is the objection to reciprocity. Every southern lumberman would fight the movement to the bitter end. He knows that every foot of lumber that crosses the Canadian line southward pushes a foot of his product also southward. To suit him there is already enough white pine lumber in the northern markets which he would in part supply.

Opposition to reciprocity on the Pacific coast would also be bitter—possibly more so than in the south. What the Pacific slope manufacturers want to-day is a market. There is a world of timber, and mills are so plentiful that were they to run full capacity, nearly two feet of lumber would be cut where but one could be sold. These men would not welcome to San Fran-

cisco, and the nearer markets of the coast, lumber made in the British possessions.

The fact is, American lumber manufacturers in a most emphatic manner want the American markets for American lumber. *Northwestern Lumberman*

CORRESPONDENCE.

VANCOUVER, B.C., March 20th, 1891.

Editor Canada Lumberman.

DEAR SIR,—Your British Columbia correspondent, H. G. R., evidently does not calculate for himself the value of figures, either by themselves or in their relation to each other, before committing them to paper and through your columns to your readers, or he never would have published such a mass of bosh as he did in your March issue about Hastings mill.

This mill (poor old moss back that she was before the new firm got hold of it) never in its best days cut anything near 30 millions in one year, and it is doubtful if this amount has ever been reached by any mill in B. C., except on by the Moodyville mill three years ago or so. The 30 millions your correspondent credits the Royal City Planing Mills Co. with ought to have been put down as the cut of their three mills, for no one of them running day and night all the year round could do it.

To return to Hastings mill, your correspondent, not content with exaggerating the amount of the output, (by itself a magnificent stretch of imagination,) he strives to out-do even that by the value he gives it, viz. \$1,750,000, which for 30 millions of Fir lumber is a price big enough to unsettle the brains of any millman who is not fortunate enough to own stock in such a bonanza as Hastings mill must be. Fancy \$58.33 per M for lumber and logs. The very thought of the sum of a million and a half of dollars for milling 30 million feet of logs is enough to cause even the most conscientious of christians to make a bad rupture of the tenth commandment just as soon as its magnitude was realized, and as often as the thought of it entered his head. Not satisfied yet, but apparently burning with a desire to furnish your readers with information, no matter whether valuable or not, he proceeds to itemize his little account as follows:

Rough lumber.....	13,059,000
Dressed "	955,000

Total.....	14,014,000
------------	------------

besides a few laths and pickets.

Great Caesar! There's nearly sixteen millions gone already! But where did they go and who got them? Apparently, however, the disappearance of over 50 per cent. of his original amount does not seem to have daunted him in the least; perhaps he never missed them, so he proceeds to again itemize what he has left with the following effect, viz:

Lumber shipped, foreign }	2,245,000
rough and dressed }	
Lumber by rail.....	430,000
Home consumption.....	2,341,000

Total.....	5,014,000
------------	-----------

out of the grand array of 30 millions which he marshalled for our gaze at the out-set, his figures dwindle down to a little over 5,000,000. It is a matter of regret that the talented compiler of the item in question has been precluded from following the lumber any further than he has done, for not only are we, (your readers) deprived of a magnificent lesson in reduction *ad infinitum*, but the gap which the entire disappearance of the 30 millions would have caused would not but have the effect of bettering the lumber trade on this coast at least.

I enclose my name, not for publication. A glance at a B. C. directory will show it there.

I have the honor to be

Yours truly,
A. P.

IN Franover, Germany, a plan is conducted worthy of imitation by the patrons of industry in Canada who have during their winter meetings given considerable attention to forest preservation and tree planting. Municipalities, and even individuals, who are inclined to establish forest grounds receive loans at 2 per cent. interest, and even cheaper, from the provincial Government, to be reimbursed yearly by small instalments. The provincial Government also employs vagrants and criminals in forest culture. Within the years 1876 to 1878 they planted 9,000 acres by this means.

THE "DEFIANCE" PLANER, MATCHER AND MOULDER.

THE Cant Bros. Co., (Ltd.) of Galt, are the builders of the "Defiance" Planer, Matcher and Moulder shown herewith. This machine is of new and improved design, and can be used for rapid matching, surfacing or fine panel work on either hard or soft wood. The feed rolls are 4 inches in diameter, and all are driven by heavy gearing, thus ensuring a sure and reliable feed. The cylinder and side head spindles are made of the best machinery steel. "Shimer" matcher heads are supplied with this machine. It will plane 24 inches wide, and from 1-16 to 7 inches thick, and will match 12 inches wide. There is also a moulding attachment with a 7 inch brass slotted head and adjustable heads.

This company have also just brought out a new double rip and cut-off saw, which is specially designed for cutting to accurate uniform lengths all kinds of material used in furniture factories, etc. It has two tables, each four feet in length, which can be rapidly adjusted to suit any length of material from eight inches up to 6 ft. 6 in. long, after which the operator can cut off both ends of the material at one operation absolutely square. The tables, which are of iron remain level but the arbors carrying the saws can be raised or lowered by means of a hand wheel. The machine has a sliding cross-cut guage which can be readily adjusted for different lengths, and which can be instantly removed or replaced. One table has a ripping guage which can be bevelled to varying angles. No sliding carriages are necessary as the arrangement of the guages is such that one operator can work with a ripping saw and the other can cut both ends off the material at once, any length from 22 inches to 5 feet.

FELLING FIR TREES.

AN Eastern man, who has within a few years started a saw mill in Oregon, gives the following as his way of felling fir trees: "We are on the mountains, and use cattle for logging. The timber is all around us, and is very fine. Some of our tall timber will measure 6 to 12 feet in diameter, and run up to 300 feet. The way we get them down, perhaps, will be interesting to some of your readers. When a tree is too large to saw down, we bore an inch auger hole straight into the body of the tree about 2 feet from the ground 18 to 24 inches deep, then we bore another hole about 20 inches in a line above, and let the auger range down so as to strike the inner end of the first hole bored. The points where they join must be near to the centre of the trees. Then we put in some maple coals that are aglow with heat, and they fall down to the junction of the two holes. Then we blow them into a blaze with a hand-bellows, and our work is done. They will come down themselves, and once down the fire goes out. The upper hole forms a stove pipe and the lower hole forms the draft. Trees up to 6 feet in diameter we saw down. We cut a small notch, say from 8 to 10 inches deep, so it will be square; then we take a 7 foot cross-cut saw, and go to the opposite side and saw straight into the notch; we follow up with iron wedges to keep the tree from going back until we saw clear through, lacking three or four inches. Then it comes down and does not spoil your timber.

A SUNKEN FOREST.

THERE is a sunken forest of white cedar in New Jersey which has been continuously "mined" for its valuable timber for over eighty years. The curious industry

of digging for the sunken logs has been carried on by the people of Dennisville, Cape May county, a village which was brought into existence solely through the wealth of the buried timber in its vicinity. Over the sunken forest, trees of large size are growing, and in many instances these are cut away in order to get at the more valuable timber, which lies only 3 or 4 feet below the surface. The exact age in which they lived is a matter of curious conjecture. It is probable that they were buried many centuries ago by the action of an earthquake.

THE CARRYING TRADE.

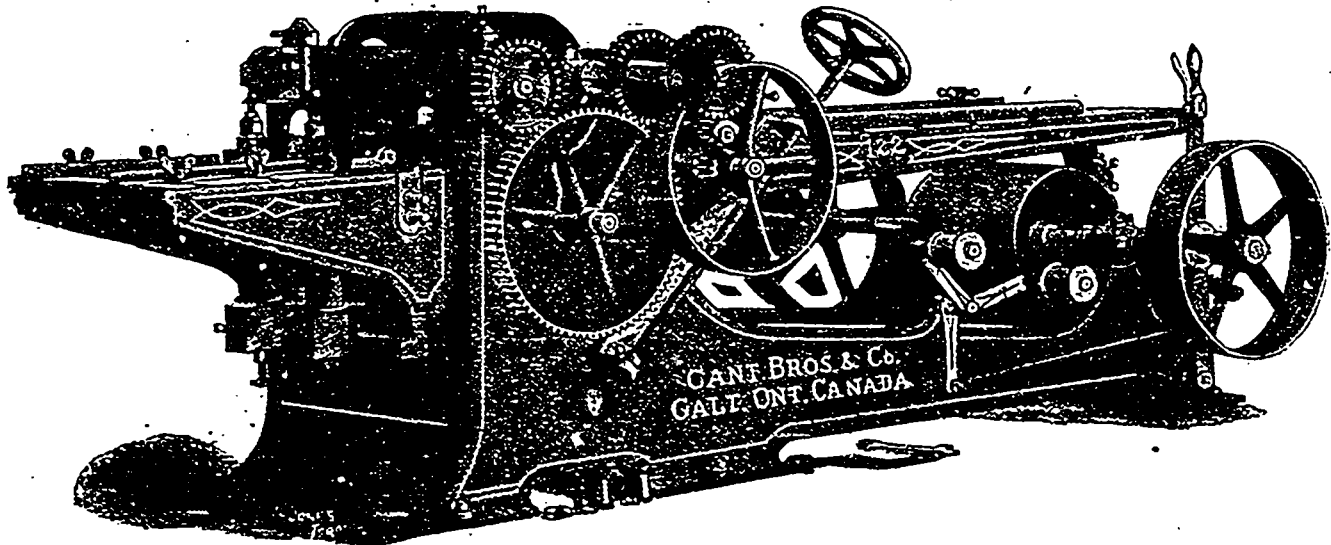
IT should be distinctly borne in mind in considering the carrying question that the lake rates effect charges generally, whether the freight is carried by vessel or rail. We have referred to the necessity for open free waterways of not less than 20 feet draught to keep down rates, and now proceed to consider the projected plans.

Beginning at the south-east end of lake Michigan it is proposed to cut a ship canal to Toledo from near Michigan City, a distance of 160 miles, at an estimated cost of \$138,405,432. There would be 65 locks and 19 railway crossings. This immense expenditure would chiefly accommodate Chicago, as it is not likely that any of the Milwaukee ships would pass through it, as they would have slack water by way of the straits of Mackinac, and the increased distance would only be about 250 miles, and the time required to pass the canal would greatly exceed the time necessary to pass through the straits. Chicago, as well as Milwaukee, had better

Barrie, then to the Nottawasaga river and down it to the Georgian Bay, at a cost of about \$25,000,000. It is now proposed to construct a ship railway directly from Toronto to the Georgian Bay at a cost of about \$15,500,000. The road at the above cost would have a carrying capacity of not less than 8,000,000 tons during the season. Vessels of a gross weight, with their cargoes of 5,000 tons, would be lifted from the water and carried across from the mouth of the Nottawasaga river to the mouth of the Humber, 66 miles in ten hours.

The last work contemplated and still advocated is the Ottawa valley canal. Leaving the St. Lawrence at Lachine this canal would proceed up the Ottawa river to the Mattawa, up that river to Trout lake, across the water shed into lake Nipissing, and down the French river to Georgian Bay. This route was surveyed by Walter Shanly and T. C. Clarke. Both of these eminent engineers contemplated raising lake Nipissing to the level of Trout lake, 23 feet. This could not now be done on account of the towns, villages and settlements on its shores, and a new survey would be required to enable fairly approximate estimates to be made out. To make the necessary cut between Trout lake and lake Nipissing would cost for the five miles of granite rock cutting about \$20,000,000. An estimate on the imperfect data available places the cost of this work at \$83,000,000. It would seem then on a careful examination of the whole subject that the construction of the Hurontario Ship Railway would better meet all the required conditions of the carrying trade than any of the other projected schemes above referred to. It would cost

much less; greatly shorten the distance; reduce by days the period of transit; carry much cheaper, and afford a connecting link between the trade of all the great lakes. We need hardly say that if this work were constructed it would give an immense impetus to the commercial and general importance of Ontario's metro-



"DEFIANCE" PLANER, MATCHER AND MOULDER.

pass by the straits. This canal will never be constructed. It was contemplated, if the canal were completed, to run to Buffalo through lake Erie, and then to pass as now to New York or into lake Ontario. To enlarge the Erie canal to 20 feet of water, the same capacity as the projected Peninsular Canal, would cost not less than \$250,000,000. A ship railroad has also been projected across the peninsula at a cost of about \$40,000,000. This too would be chiefly for the Chicago trade—certainly none of the vessels in the northern part of lake Michigan bound east would go by it. Then to bring the freight into lake Ontario a canal on the United States side of the Niagara river would cost \$35,000,000, or a ship railway about \$11,000,000. If canals were cut the cost would be about \$173,000,000. If ship railways were built the cost would be over \$50,000,000, \$40,000,000 of which would be of no service to any of the lake ports except Chicago. Proceeding northward the next route is that used at the present time—lake Michigan through the straits of Mackinac down lake Huron, the river and lake St. Clair, through lake Erie, and as before onward to the east. In this case the chief expense would be enlarging the Welland canal, at a cost of not less than \$25,000,000, besides the constant labor and expense of keeping the channel open on the St. Clair flats. The chief objections to this route are the long distances and intricate navigation. To lessen the distance and avoid the intricate navigation there was formerly projected the Georgian Bay canal. It was to leave lake Ontario, pass up the Humber, cross the ridges to the Holland marsh, through lake Simcoe to

polis.—*Canadian Miller.*

TO REMEDY SWAYING AND OSCILLATION.

FREQUENTLY the oscillations of the main belt in a mill come in unison with the beat of the engine, and a pretty perceptible slapping about of the belt is noticeable, says the *Artisan*. The beat of an engine will often come in sympathy with the rhythmic sway of of the building, and so increase it as to be very perceptible. If this were continually going on in exact time it would become so great in time as to be dangerous; but one or the other gets ahead and mixes the movement, so that it gradually ceases until they are again in unison. If the speed of the engine is changed in either case the swaying will be kept mixed all the time instead of occasionally. On long lines of shafting this will appear also, the pull on the belt at the commencement of the stroke being in unison with the spring of the shaft, thus causing a marked oscillation. The same remedy is applied here, to mix the two movements purposely, and the trouble is partly removed, if not entirely.

PINE-TREE SOAP.

AN American inventor has brought out a process for making soap from the resinous matter in the needles of the pine tree. The resin is extracted by means of alkali, and the woody fibre is removed from the product, which, on condition of fat, yields an ordinary soap containing resinous and fatty acids.

—Mr. R. Crawford, of Oro Centre, has commenced the manufacture of shingles.

TRADE REVIEW.

Toronto, Ont.

TORONTO, Mar. 28, 1891.

CAR OR CARGO LOTS.

Table listing various lumber products and their prices, including 1 & 1 1/2 in. cut up and better, 1x10 & 12 dressing and better, etc.

YARD QUOTATIONS.

Table listing yard quotations for mill cull boards, dressing stocks, and various sizes of lumber.

Hamilton, Ont.

HAMILTON, Mar. 26, 1891.

Table listing lumber prices in Hamilton, including mill cull boards, shipping cull boards, and various sizes of lumber.

Ottawa, Ont.

OTTAWA, Mar. 28, 1891.

Table listing lumber prices in Ottawa, including pine, spruce, hemlock, and ash.

Montreal, Que.

MONTREAL, Mar. 28, 1891.

Table listing lumber prices in Montreal, including pine, spruce, hemlock, and ash.

St. John, N. B.

ST. JOHN, Feb. 24, 1891.

Table listing lumber prices in St. John, including spruce deals, pine, deal ends, and various sizes of lumber.

Vancouver and New Westminster, B.C.

NEW WESTMINSTER, Feb. 17, 1891.

Table listing lumber prices in Vancouver and New Westminster, including carload and ship rates, bridge and wharf plank, and various sizes of lumber.

Albany, N. Y.

ALBANY, N. Y., Mar. 28, 1891.

Table listing lumber prices in Albany, including boards, joists, pickings, and shingles.

Buffalo and Tonawanda, N. Y.

BUFFALO, Mar. 26, 1891.

Table listing lumber prices in Buffalo and Tonawanda, including clear, dressing, and various sizes of lumber.

Saginaw, Mich.

EAST SAGINAW, Mar. 28, 1891.

Table listing lumber prices in Saginaw, including cargo lots, yard quotations, and various sizes of lumber.

New York City

NEW YORK, Mar. 17, 1891.

Table listing lumber prices in New York City, including black walnut, poplar, and various sizes of lumber.

Boston, Mass.

BOSTON, Mar. 28, 1891.

Table listing lumber prices in Boston, including western pine, eastern pine, and various sizes of lumber.

Oswego, N. Y.

OSWEGO, Mar. 28, 1891.

Table listing lumber prices in Oswego, including three uppers, pickings, and various sizes of lumber.

A. M. DODGE & CO.
MANUFACTURERS of and Wholesale dealers in all kinds of Lumber, Lath and Shingles. Tonawanda, N. Y.

COWPER & GREGORY.
RECEIVERS and Forwarders of Lumber, Lath, Shingles, &c. Unexcelled facilities for shipping by canal or rail. Tonawanda, N. Y.

CHEESMAN DODGE
TIMBER and Lumber Merchants. Ship and Boat stock, Railroad Ties, &c. Office, 16 West Seneca Street, Buffalo.

EMMET FLEMING
INSPECTOR and Commission dealer in Lumber. Office, 251 Louisiana Street, Buffalo, N. Y.

LAYCOCK LUMBER CO.
MANUFACTURERS of Pine, Hemlock and Oak Timber up to 35 feet in length. Saw Mills: Ackley, Pa., Black Rock, N. Y., Gravenhurst, Ont. Office, corner Main and Seneca Sts, Buffalo, N. Y.

J. & T. CHARLTON
WHOLESALE dealers in Masts and Spars. Canada Round Pine, &c. Tonawanda, N. Y.

WILLARD W. BROWN.
202 Main Street, Buffalo, handles all kinds of Hard Woods.

A. P. & W. E. KELLEY CO.
WHOLESALE Lumber dealers. Yards at Tonawanda and Chicago. Correspondence invited.

C. P. HAZARD.
WHOLESALE dealer in Lumber, Shingles, Lath and Fence Posts. Correspondence invited from the Canadian trade. No 92 River Street, Buffalo, N. Y.

L. A. KELSEY LUMBER CO., (Ltd.)
MANUFACTURERS and dealers in Hardwood Lumber of all kinds. Describe stock and write for prices. Office Tonawanda, N. Y.

BOVEE & HOWDEN
MANUFACTURERS and Wholesale dealers in Hard and Soft Wood Lumber. Holders of Canadian stocks are invited to write for quotations. Offices at Tonawanda and Le Roy, N. Y.

THE TONAWANDA LUMBER CO.
MILLS at East Tawas, Mich.; office 106 Main Street, opposite N. Y. C. and H. R. R. R. Station, North Tonawanda, N. Y.

Cash for Lumber

W. N. McEachren & Co.
Wholesale dealers in all kinds of

HARDWOOD LUMBER

**NO. 3 DOCK
TORONTO**

WRITE US FOR PRICES AND SIZES TO CUT.
WE PAY CASH WHEN LOADED ON CARS.

HERBERT G. ROSS. Box 278. REGINALD C. BLAKER.

H. G. ROSS & CO.

Real Estate, Fire and Life Insurance, Shipping and General Commission Agents.

Timber Limits and Farming Lands a Specialty.

A.B.C. Code, Cable address, "Ross."

NEW WESTMINSTER, - - - B. C.

CORRESPONDENCE SOLICITED.

LUMBER

TRUCK * WHEELS.

The Montreal *

*** Car Wheel Co.**

MANUFACTURERS OF

**CHARCOAL IRON CHILLED
RAILROAD WHEELS**

Offices: New York Life insurance Building, Montreal.

Works: Lachine, Quebec.

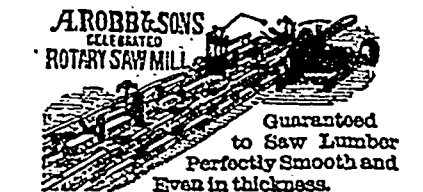
WE make a Specialty of Wheels suitable for the requirements of Lumbermen and Street Car Service, and can supply them Bored, Finished and Balanced.

CORRESPONDENCE SOLICITED



Menasha Hickory Pulleys
We make the only hardwood bent rim spoke arm split pulley, only small split pulley, only wooden hangers in the market. Send for discounts & circulars.
Menasha Wood Split Pulley Co. MENASHA, WISCONSIN.

THE MONARCH BOILER AND HERCULES ENGINE.



Guaranteed to Saw Lumber Perfectly Smooth and Even in thickness.

Portable from 6 to 70 horse power. Surpass portable steam power heretofore produced for strength, durability, compactness, and the ease with which they can be moved.
The 70 horse power can be taken over thorough-est roads, or into the forest, and set up as easily and quickly as an ordinary 20 horse power portable engine, and as firm as a brick-set stationary engine. Engines and boilers of every size and description. Rotary Saw Mills, Shingle and Lath machines, Lath Grinders, Planers, etc. Mill machinery and supplies of every description. Every boiler insured against explosion by the Boiler Insurance & Inspection Co. of Canada. Write for circulars.
A. ROBB & SONS, Amherst Foundry and Amherst, N.S. Machine works.
ESTABLISHED OVER 40 YEARS.

DALTON McCARTHY, President. A. ECKARDT, Secretary. JOHN MCGREGOR, Manager.

Toronto and Midland Mfg Co.

(INCORPORATED.)

Wholesale * Lumber * Dealers

AND MANUFACTURERS OF

DRESSED LUMBER, FLOORING

Ceiling, Sheeting, Siding, Shelving, Mouldings of all Descriptions.

Office and Yard:

FOOT OF SPADINA AVE., - TORONTO.

Planing Mills: MIDLAND, ONT.

PORTER, ROBERTSON & CO.

STOCKS WHOLESALE HARDWOODS
STRIPS LUMBER HEMLOCK
SIDINGS DEALERS SHINGLES
BILLSTUFF

Millchamp's Buildings,

**35 * Adelaide * Street * East,
TORONTO.**

YARD: NORTHERN DOCK, FOOT OF BATHURST STREET.

NAPANEE CEMENT COMPANY
(LIMITED.)
- MANUFACTURERS OF -

Hydraulic Cement

PARTICULARLY adapted for Dams, Smoke Stacks, Foundations, Culverts, Cisterns, Cellars, etc.

ENDORSED BY LEADING RAILWAYS AND CONTRACTORS.

ROACH * LIME,

For Building, Plastering, Gas Purifying, Paper Making, &c.

THE RATHBUN COMPANY,
DESERONTO, ONT.,

MANUFACTURERS OF

*** TERRA * COTTA * FIRE-PROOFING ***

For Use in Old and New Buildings.

Endorsed by Leading Architects. Absolutely Fire-proof. About as Cheap as Wood or Brick. Weight One-Third that of Brick. Does not Crack on application of Heat or Water.

Deadens Noise. Gives Warmth in Winter; Coolness in Summer.

Galt * Machine * Knife * Works.



MACHINE KNIVES
OF EVERY DESCRIPTION FOR
Planing, Moulding & Stave Cutting.
SEND FOR PRICE LIST

PETER HAY, - - - GALT, ONT.

TRADE NOTES.

The Cant Bros. Co., of Galt, have just put on the market a new double rip and cut off saw, designed to cut accurate uniform lengths of lumber used by furniture and cabinet factories.

The latest pamphlet issued by J. L. Goodhue & Co., Danville, Que., gives some interesting information on the relative values of rubber, canvas, and leather belting, and of the merits and demands of oak tanned and hemlock tanned leather. Besides instructive information on the use of belting there is added a telegraph cipher code and other features.

MR. CARL GARTNER of the American Lumber Yards, Hamburg, Germany, writes us under date of Feb. 10th stating that he is open for any quantity of Canadian red birch in boards 1 in., 1 1/2 in., 2 in., 2 1/2 in., and 3 in. of usual lengths or to be cut to special lengths on order. He wants to know if this stuff can be procured at all from Canada and to whom could he apply. Millmen will please make a note of this.

Messrs. Robin & Sadler, leather belting manufacturers, of Montreal and Toronto, are amongst the Canadian exhibitors at Kingston, Jamaica. The Toronto Branch at the Industrial yearly holds its own with competitors in quality, variety and display. The head office attends to the exhibits at the Dominion exhibition, and in this case made a special effort to secure foreign trade with the West Indies. Their space is filled with samples, embracing the largest of drivers to rolls of inch belting used for straw carriers on threshing machines, in addition to Dynamo belts made by their new process. The local papers speak highly of the goods, and in several instances sample orders have been secured.

An article that every user speaks well of must be worthy of commendation. We have on several occasions referred to such an article in these columns and strongly recommended the same to all users of machinery. We refer to Spooner's "Copperine," undoubtedly one of the best babbit metals on the market. It has been used by the best practical men, in the largest shops, and on the finest machinery in the Dominion, and in no instance has it proved a failure. It is a high class metal at a moderate price; a time saver; an economizer of oil; and a saving medium in the wearing parts of machinery. Mr. A. W. Spooner, of Port Hope, Ont., is the patentee and sole manufacturer, to whom all communications should be addressed.

The Dodge Wood Split Pulley Co. advise us of a steadily increasing demand for their pulley from all branches of power users throughout the Dominion. They have lately filled large orders from Northern Pacific Ry Co.'s shops, Winnipeg; Berlin Piano Co., Berlin, Ont.; Boynton Wall Plaster & Cement Co., Kingston; Toronto Electric Light Co., Toronto; Ross & Taylor, Exeter; St. John Gas and Electric Light Co., St. John, N.B.; R. Thackray, Ottawa; Jencks Machine

Co. Sherbrooke, &c. They invite all users of power, mill men, etc., who have not yet investigated the merits of this pulley to do so without cost to themselves, as they furnish any pulley for thirty days trial, and if not satisfactory to be returned without charge. They mail free on application, a handsome illustrated catalogue and price list, and solicit correspondence.

PERSONAL.

W. F. Vansione, flour and saw mill owner, is leaving Brussels and will remove to Manitoba.

Mr. Wm. Foster, sr., father of Wm. Foster, jr., lumber merchant, of Owen Sound, died at the ripe age of 83.

Mr. Beckett, of the London, England, firm of Dobell, Beckett & Co., left Quebec for England the first week in March.

Mr. Wm. Niebergall, of Dunlop, Ont., manager for the last seven years of his father's saw mill, has gone to British Columbia.

Dugald Neil McMillan, lumber merchant, Morden, Man., was recently married to Miss Mary Augusta McKenzie, daughter of Rev. Mr. McKenzie, of Morden.

Mr. C. H. Davison, of the lumber firm of E. D. Davison & Sons, Bridgewater, N.S., is visiting the Pacific coast in both Washington Territory and British Columbia.

Mr. Alex. Pope, of Quebec, an old employee of Messrs. Hamilton Bros., Hawkesbury, Ont., and representing Messrs. Bryant, Powis & Bryant, London, Eng., died March 9th in New York.

At the Metropole, London, Eng., were registered on the 7th of March, Mr. John Staples, Mr. A. Staples, Mr. Edson Fitch, Mr. Stewart Dunn and Mr. Harold Kennedy, all lumber merchants of Quebec.

Mr. Malcolm McCaskill, head foreman in the Royal City planing mills, New Westminster, B.C., fell off the steamer Stella on the 10th of March, unnoticed, and almost lost his life from the involuntary and dangerous bath.

FIRES AND CASUALTIES.

Geo. Laconabe was killed at the Snow Road, north of Kingston, on the 10th ult., while skidding logs.

H. Mack, Jno. Thieme and J. Miller, three loggers, were upset in Alert Bay, B.C., and rescued after being almost chilled to death.

Walter Lewis, employed in Dewar's stove and saw mill, at Kingscourt, near Watford, Ont., cut his throat with a pen knife on the 18th ult.

A workman named James Hovey, in the employ of Mr. Gibson, of Marysville, N.B., while skidding logs into the Nashwaak, was overtaken by one and horribly crushed.

David Robert, a young man working at the shanties of Mr. Francois Marcoux, on the Montmorency, sustained internal injuries by being thrown beneath a number of logs.

Isaac Cameron, son of William Cameron, of Mt. Forest, Ont., was working in the lumber woods in Wisconsin and was struck by a log while unloading a car and instantly killed. The remains were brought home.

Injured by falling trees or limbs during March: J. Anderson, working in J. Johnston's shanty, near Young's Point, Ont.; Albert Kisson, Coulson, Ont.; Earnest Eagle, of Perry, Muskoka; J. Rose, Matilda, Ont.

The following received lacerated fingers during March: Geo. Ruby, of Dashwood, Ont., working in Cook's saw mill; J. Young, of Dashwood, Ont.; Geo. Bourrette, of Morrisburg, Ont.; Alfred Moss, Deseronto, Ont.; R. Emerson, of Manitou, Man.; Alex. Thompson, Stanley, Ont.

Amongst the fatalities for the month are: J. Demers, killed in Bronson's shanty on the Petewawa; Eli. Bogrand, killed in Ainslie's mill, near Staples, Ont., from being entangled in a belt; John Ireland, of South Dorchester, in the County of Elgin, killed by a falling tree; Geo. Ditch, 14 years of age, killed in Walkerton, in Kerr & Harcourt's bobbin factory; M. Anderson, Shelburne, impaled by a pointed limb.

VISITORS from the mother country, or emigrants who are conversant with the manner in which timber changes first hands, both in the shape of local standing trees or in imported cargoes of logs or deals, are struck with the different methods employed in the United Kingdom to those in vogue in Canada or the United States. A comparison might be drawn of the two distinct plans, showing advantages in both as well as disadvantages. We reproduce in another column a description of a Liverpool lumber auction sale. The average Canadian, versed in our millmen's disposition of timber, would be very apt to wonder as much at the kind of sale as his cousin wonders when he is introduced for the first time to the plans adopted in Canada.

-D. J. Spaulding, a leading lumberman of Black River Falls, Wis., U.S., has failed liabilities \$210,000; assets \$700,000.

WANTED AND FOR SALE.

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line, and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

HARDWOOD lumber, bought, sold or received on consignment, TUCKER DAVID, lumber commission merchant, 202 Eleventh Ave., N.Y.

WANTED—TO BUY.

GOOD Canadian Timber Limits and Georgian Bay saw logs. Address, BEN BIRDSALL, Whitney Building, Detroit, Mich.

FOR SALE.

PAIR TWIN ENGINES, 6x6, with link motion suitable for rope feed, in order, J. HADDEN, Foxmead, Ont.

WANTED IN 1891:

ANY QUANTITY OF CEDAR TELEGRAPH POLES at shipping points. Terms cash. Apply to J. HARRISON HARVEY, Cobocok, Ont., purchaser for H. D. McCAFFREY, Engineer and Contractor of Telegraph lines, Oswego, N.Y.

RAILS AND CARS FOR SALE.

Light Steel Rails for Tramways; good order. Cars for lumber, cheap.

JOHN J. GARTSHORE,

49 Front St. West, Toronto.

WANTED.

QUEBEC BIRCH—Those who can furnish choice lumber are invited to correspond with

JOHN S. MASON & CO.

240 Eleventh Avenue, New York City.

PARTNERSHIP WANTED in paying wholesale or manufacturing business. Advertiser has large experience: will invest three to five thousand dollars cash. Only parties of strictest integrity need answer. "SASH," care CANADA LUMBERMAN.

EMPLOYMENT WANTED by an experienced Lumber Inspector and shipper, acquainted with American and English markets. Can bring small but increasing business. References produced on application. Address, H. M. W., LUMBERMAN office.

WANTED.

A thoroughly competent

BAND SAWYER

Who can file, fit, braze and care for saws and take first class care of a band saw mill. Address, with copy of references and salary required.

THE RATHBUN COMPANY, Deseronto, Ont.

T. SHORTISS,

DEALER IN

PNE & MINERAL LANDS

9 Toronto Street, TORONTO, ONT.

CORRESPONDENCE SOLICITED.

WILLIAM FOSTER

Lumber & Commission Merchant

Receiver and forwarder of

LUMBER, LATH & SHINGLES

Correspondence Solicited.

OWEN SOUND, ONT.

A. E. Ames & Co.

Lumber Commission Correspondence solicited from Canadian manufacturers.

Room 3, Lumber Exchange, Chicago, Ill.

TIMBER LANDS FOR SALE

5000 Acres of Timber Lands on the Manitoulin Island,

Patented and unpatented, are offered at the Low Price of

\$5.00 PER ACRE.

Some of the lots have timber on them worth \$20 per acre, and the land is of fair quality for farming when cleared.

The Dominion Government having recently taken off the Export Duty on Telegraph Poles, Railway Ties, Shingle Bolts and Saw Logs, the value of the timber on the Island is doubled, owing to its great facilities for shipment to Detroit, Chicago, Toledo, Buffalo, Cleveland and all Lake ports. The late owners, Messrs. Wm. and Robert Henry, are both deceased, and there being no one to carry on their business, these lands will be sold low, in block to close out the estate. Tenders solicited and purchases liberally dealt with. All necessary information can be obtained from the trustee and Solicitors.

Messrs. FRANCIS'S WARDROP, Barristers, &c., Toronto.

JAMES McGEE, Trustee, Toronto.

J. J. TURNER, Sail, Tent and Awning Maker.

251 GEORGE AND 154 KING STREETS, PETERBOROUGH.

Canoe, Yacht and Boat Sails made to order. Perfect Fits guaranteed. Every description of Lumbermen's Supplies and Waterproof Clothing.

CHICAGO, MILWAUKEE AND ST. PAUL RAILWAY.

Electric Lighted and Steam Heated Vestibuled Trains, with Westinghouse Air Signals, between Chicago, St. Paul and Minneapolis, daily.

Electric Lighted and Steam Heated Vestibuled Trains between Chicago, Council Bluffs and Omaha, daily.

Through Vestibuled Sleeping Cars, daily, between Chicago, Butte, Tacoma, Seattle, and Portland, Oregon.

Solid Trains between Chicago and principal points in Northern Wisconsin and the Peninsula of Michigan.

Daily Trains between St. Paul, Minneapolis and Kansas City via the Hedrick Route.

Through Sleeping Cars, daily, between St. Louis, St. Paul and Minneapolis.

The finest Dining Cars in the World.

The best Sleeping Cars. Electric Reading Lamps in Berths

6,700 miles of road in Illinois, Wisconsin, Northern Michigan, Iowa, Minnesota, Missouri, South Dakota and North Dakota.

Everything First-Class.

First-Class People patronize First-Class Lines.

Ticket Agents everywhere sell Tickets over the Chicago, Milwaukee and St. Paul Railway.



A. ALLAN, Pres.

J. O. GRAVEL, Sec-Treas.

F. SCHOLLES, Man. Director.

Canadian Rubber Company

OF MONTREAL.

SOLE AGENTS AND MANUFACTURERS

— OF THE —

Forsyth (Boston Belting Co.,)

Patent Seamless

RUBBER BELTING

For the Dominion of Canada



----- Capital \$2,000,000. -----

Our Rubber Belting is Unequaled in America.

All kinds of Rubber Packings, Rubber Engine, Hydrant, Suction, Steam, Brewers' and Fire Hose; Rubber Valves, Car Springs, &c., &c.

Mould Goods of Every Description.

Superior Quality Rubber Goods.

Head Office and Factory, Montreal, J. J. McGILL, Manager.

Western Branch, Corner Yonge and Front Sts., Toronto, J. H. WALKER, Manager.

The Casselman Lumber Co.

CASSELMAN, ONT. Successors to FLATT & BRADLEY.

SPECIAL GOOD FACILITIES FOR SHIPPING.
HEMLOCK BILL STUFF OF EXCELLENT QUALITY.

ALSO MANUFACTURERS OF
PINE, SPRUCE, ASH, MAPLE AND OTHER HARDWOODS.
CORRESPONDENCE SOLICITED.

J. W. MAITLAND
H. RIXON

J. G. AINSLIE
W. STODART

Maitland, Rixon & Co.,

Owen Sound, Ont.

Saw Millers and Lumber Dealers

All kinds of Building Material kept in stock.

WE MAKE A SPECIALTY OF
LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK
QUOTATIONS FURNISHED ON APPLICATION.

GEO. HASTINGS. JOHN GRAY. H. HANCOCK.

GEO. HASTINGS & CO.

Lumber Merchants

TRUST BUILDING CHAMBERS,
Cor. Yonge and Colborne Streets. TORONTO.

All Kinds of Pine and Hardwood Lumber.

BILL STUFF CUT TO ORDER A SPECIALTY.

DONOGH & OLIVER,

Wholesale Dealers in

LUMBER

OFFICE:

Nos. 213, 214 and 215, Board of Trade Building,

COR. YONGE AND FRONT STS.

TORONTO, ONT.

THE "LEADER"

The Finest Tempered, Fastest Cutting
and Best Saw made on the Continent.



Manufactured of Triple Refined Silver Steel,
Rolled specially for us from Superior Ingots.

THE KING OF CROSS-CUT SAWS.

R. H. SMITH COMPANY, LTD., ST. CATHARINES, ONT.

Sole Manufacturers.

The Gold Medal,
Toronto, 1883

WOOD WORKING MACHINERY

The Gold Medal,
London, 1883

For Door, Sash, Blind and Furniture Factories

PLANERS.
MOULDERS.
TENONERS.

SHAPERS.
RIP SAWS.
SAND PAPERERS.

BAND SAWS.
BAND RE-SAWS.
PANEL RAISERS.
DOVETAILERS.
JOINTERS.
DOUBLE SPINDLE BORER.

BUZZ PLANERS.
MORTICERS.
BLIND MACHINERY.
BAND SAW FILER.
BAND SAW SETTER.
ETC., ETC.

The Galt Bros. Co., Limited, GALT, ONTARIO.

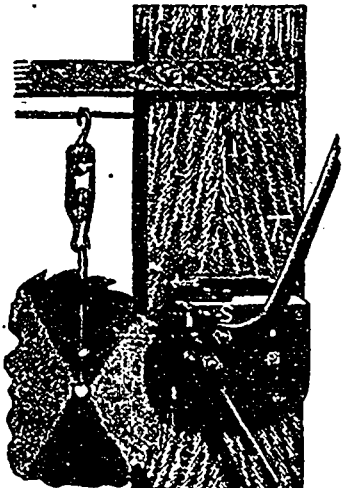
Write for Circulars
and Prices.

Correspondence
Solicited.

Rhodes' Improved Swage for Circular and Gang Saws.

PATENTED JULY 2, 1889.

THE MOST PERFECT MACHINE FOR THE PURPOSE EVER INTRODUCED.



SWAGE IN OPERATION.

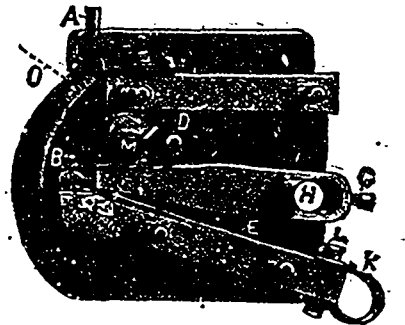
It will swage the hardest as well as the softest saws. Never pulls the points of the teeth off, as the swaging is done by direct and steady pressure, and not by rolling pressure. Swaging done with this machine will stand longer than when swaged with any other machine or by hand. It makes the swage the heaviest on the under side of the tooth, and leaves the face of the tooth perfectly straight. It does not shorten the tooth as done by upsetting. It has a positive clamp so a saw cannot slip while being swaged, therefore every tooth is an exact duplicate of the other. Corners never drop off if swaged with this machine, as it does not injure the steel, therefore the teeth can all be kept of a length. It is very simply constructed; nothing to break or wear out. Easily adjusted. Any ordinary man can swage a circular saw in from 10 to 12 minutes. Is thoroughly constructed of the best material, all the parts requiring it are made of steel of the best quality. Every swage is thoroughly tested before leaving the shop. We positively guarantee the swage to do all we claim for it in this circular. Full and complete instructions for adjusting and operating accompany the swage.

SEND FOR PRICE LIST OF

RHODES' IMPROVED

Automatic Band Saw Swages, Circular Saw Swages, Gang Saw Swages, Shingle Saw Swages.

—MANUFACTURED EXCLUSIVELY BY—



SECTIONAL VIEW.

P. O. BOX 430.

Palmiter, Empey & Co., Galt, Ont.

Established 1849.

Incorporated 1884.



We use nothing but W. J. & Sons' English Steel in our saws and the name speaks for itself.

Detroit Saw Works

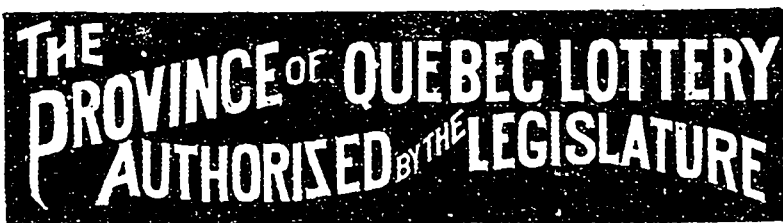
MANUFACTURERS OF

Circular, Gang, Mulay, Drag and Cross-Cut Saws.

MOLDING AND PLANING KNIVES,

French Band Saws, Emery Wheels and General Mill Supplies.

66, 68, 70 and 72 Fort St. East, DETROIT, MICH.



MONTHLY DRAWINGS ON

2nd Wednesday of Every Month

S. E. LEFEBVRE, Manager.

Head Office—91 ST. JAMES STREET, - MONTREAL.

PATENTED 5TH MARCH, 1877.

PARKER & EVANS,

Sole Proprietors of the

FAMOUS INTERNATIONAL

BOILER - FLUID - COMPOUND.

This compound will save its cost many times in one year by saving fuel.

It eradicates scale, and when the Boiler is once Clean a very small quantity keeps it clean and free from all incrustation. One fourth the dose will prevent a new Boiler from scaling so long as it is used regularly.

Contains no Caustic Soda, and is the only matter yet known that will not injure metals in any way, and emits a clear pure steam.

30 WILLIAM STREET, - MONTREAL.

Friction Pulley Board.

The Best Materials ever used
for Frictions of all
* kinds *

MANUFACTURED BY

Asbestos
Mill
Board.

The **DOMINION LEATHER BOARD COMPANY,**
Montreal, Quebec.

Steam
Packing.

SAMPLES FURNISHED.

PLEASE MENTION THIS PAPER.

CORRESPONDENCE SOLICITED.

THE DODGE PATENT WOOD SPLIT PULLEY CO.

MAUFACTURERS OF

Patent Split Belt Pulleys

Pulleys of every description and style in stock and made to order.

Prices lower than any other first-class Pulley.

Every pully guaranteed strong enough for heaviest Mill Work, and to give more power with same belt than any other pulley made. Send for Catalogue and discounts.

Dodge Wood Split Pulley Co.,

City Office, 83 King St., W.

TORONTO.

B. F. Sturtevant's Patent Progressive Lumber Dry Kiln.

RELIABLE RAPID! CHEAP!

GUARANTEED TO DRY

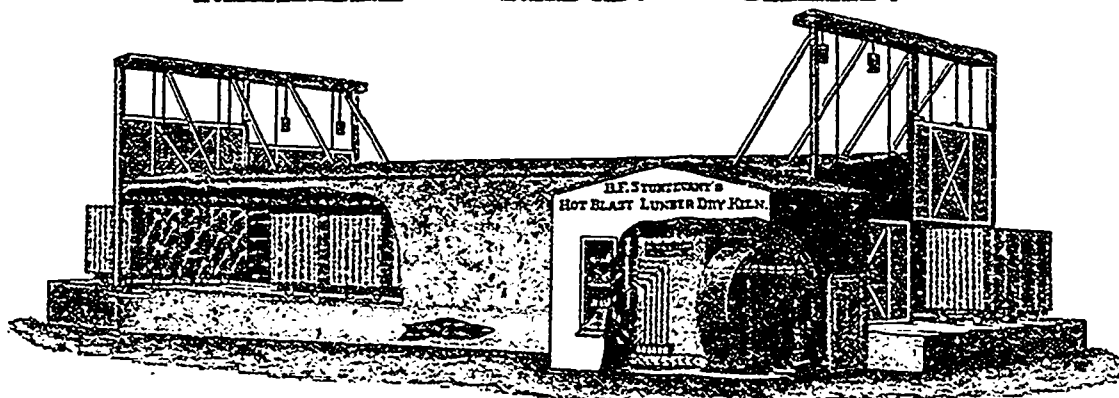
-IN-

Best Manner Possible

ALL KINDS OF
HARD and SOFT
WOOD LUMBER.

WRITE FOR CATALOGUE.

91 LIBERTY STREET
NEW YORK.



NO WARPING
CHECKING
AND BLUEING
-WITH THE-
STURTEVANT
Patent Hot Blast
Steam Heating
Apparatus.

31 N. CANAL STREET
CHICAGO.

B. F. STURTEVANT, Patentee and Sole Manufacturer, 34 Oliver Street, (corner of Franklin street) BOSTON, MASS., U. S. A
A. R. Williams, Soho Machine Works, Toronto, General Agent for the Dominion.

"DO YOU LACK STEAM? WE CAN HELP YOU!"

THE GORDON PATENT HOLLOW BLAST GRATE.



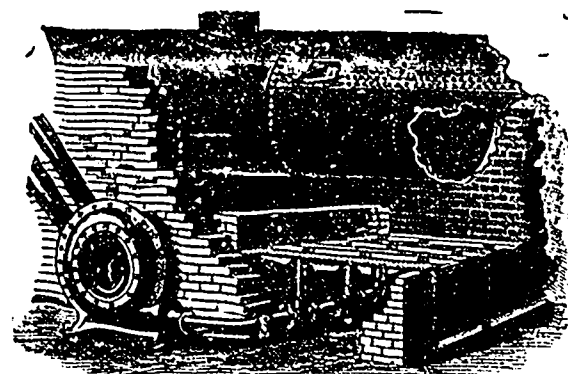
A HOLLOW BLAST GRATE.

A new and novel application of a principle centuries old. Step into the nearest blacksmith shop and see

it in operation, on a small scale.

The Hollow Blast Grate supplies the furnace fire with a blast of Hot Air sufficient at all times to insure the rapid and perfect combustion of fuel of every sort.

It is the only successful appliance for generating steam from such fuel as the SAWDUST and refuse from hemlock, cypress and hard wood timber or from spent tan bark.



FURNACE FITTED WITH HOLLOW BLAST GRATES AND APPARATUS

N. B.—Regardless of the character of your fuel, we can greatly increase the volume of steam generated by your boilers. It costs you nothing to try them. We guarantee satisfaction or no sale.

RECENT TESTIMONIALS

JOHN ORM, Pres. S. H. LANGSTAFF, Vice-Pres. GEO. LANGSTAFF, Sec'y. H. W. HANEIN, Treas.

LANGSTAFF-ORM MAN'G CO.

Manufacturers of Lumber, Sash, Doors, Blinds, Etc. Long Steamboat Lumber a Specialty.

PADUCAH, KY., March 7th, 1891.

The Gordon Hollow Blast Grate Co., Greenville, Mich.

DEAR SIRS,—Enclosed find our cheque to cover amount due you for the Hollow Blast Grate Bars purchased from you some time ago. We have given the Bars a thorough test and are very much pleased with them; we find them to be all you claim.

Yours truly, LANGSTAFF-ORM MFG CO

JNO. N. PHARR.

F. B. WILLIAMS.

PHARR & WILLIAMS.

Band Sawn Cypress Lumber. Daily capacity, 100,000 feet. Extra Wide Lumber and Tank Stock a Specialty. 50 Million of Logs on hand. 6 Million Feet of Lumber in stock. W. U. Telegraph in office.

C. S. BURT, Esq.,
Baton Rouge, La.

PATTERSON, LA., March 9th, 1891.

Dear Sir—Our Grate Bars (Hollow Blast Grates) are now making us all the steam we wish. We had some doubt as to our boilers having sufficient capacity to furnish steam for our engine as they have only 100 horse power while our engine has 250; but we are now making more steam than we can use with cypress saw dust and refuse from our mill. Any one can figure the capacity of the boilers for themselves. There are four of them 32 feet long by 42 inches diameter, each with two flues 15 inches diameter. Our engine is 24x30. Anyone who is short of steam can not do better than to put in the Blast Grate bars. Yours very truly,

PHARR & WILLIAMS.

J. T. LITTLE LUMBER CO.

Lumber. Merchandise. One Mile from Mississippi City, L. & N. Railroad.

HANDBORO, MISS., March 9th, 1891.

To THE GORDON HOLLOW BLAST GRATE CO., Greenville, Mich.

GENTS.—We are now running our mill with the Hollow Blast Grates and instead of requiring two mule carts to haul away the saw dust, we now consume nearly all, giving us much better steam than we were forced to make it with wood and the small quantity of saw dust we could burn. We are satisfied that every mill man burning wood alone, or wishing to utilize the dust, bark, etc., for fuel will find by test, that the Blast Grates will reduce the labor and expense of steaming by one half.

Respectfully yours, J. T. LITTLE LUMBER CO.

BRINKLEY CAR WORKS AND MANUFACTURING CO.

Yellow Pine and Oak Lumber.

BRINKLEY, ARK., Feb. 7th, 1891.

To THE GORDON HOLLOW BLAST GRATE CO., Greenville, Mich.

GENTLEMEN.—We have your favor of the 5th, and beg to say in reply thereto, that the Hollow Blast Grates you put in for us are a splendid success, and we are more than pleased with them; by using them we are able to make enough steam to run our plant without having to put in another large boiler. We recommend them very highly. Enclosed find acceptance in settlement of account.

BRINKLEY CAR WORKS & MFG CO.

H. H. MYERS, Sec. and Treas.

THE WOLVERINE LUMBER CO.,

CAIRO, ILL., Feb. 8th, 1891.

To THE GORDON HOLLOW BLAST GRATE CO., Greenville, Mich.

GENTLEMEN:—Yours of the 14th ult. at hand. In reply will say that we had grates placed and ready for use about the middle of December last, and by January 1st were

fully convinced that they were exactly what we needed. We could not think of trying to run without them for ten times their cost. We are running two band mills in green oak right out of the water, and are burning all our saw dust, leaving none to be carted away. The burning of the saw dust, with your grates, makes a very hot fire and keeps up steam splendidly without the use of any other fuel, excepting a very few slabs. We consider your grates to be what any saw mill requires. As for us, we would not think of trying to run without them. Yours truly, THE WOLVERINE LUMBER CO.

A. E. STEVENSON, Supt.

SILAS KILBOURN & CO.,

Fish and Syrup Packages, Cider Kegs and Jelly Pails.

GRAND HAVEN, MICH., Feb. 20th, 1891.

To THE GORDON HOLLOW BLAST GRATE CO., Greenville, Mich.

GENTLEMEN:—Enclosed find check in payment for bill of Grates, etc. Please acknowledge receipt of same and oblige. The Grates are doing all you claimed, and more. Will save amount of your bill in better power and fuel in a short time. Before we put them in we had to buy a great many cords of dry slabs each year; we now burn nothing but saw dust and waste from factory, and have much better steam than before. We drive blower with a small "Dake" engine, which we think an improvement over connection with factory power.

Yours truly, SILAS KILBOURN & CO.

DECATUR LUMBER CO.,

All Kinds of Rough and Dressed Lumber.

DECATUR, ALA., Feb. 12th, 1891.

To THE GORDON HOLLOW BLAST GRATE CO., Greenville, Mich.

GENTLEMEN:—Your Blast Grates are all that you claimed for them, and are very satisfactory.

DECATUR LUMBER CO.

A. W. LEE & CO.,

Oak, Pine and Hemlock Lumber.

BELSENA MILLS, PA., Feb. 12th, 1891.

THE GORDON HOLLOW BLAST GRATE CO., Greenville, Mich.

GENTLEMEN:—Enclosed find our check in settlement of account. The apparatus is in and does its work well. It is a decided improvement over the old. We recommend its use.

Yours truly, A. W. LEE & Co.

C. C. MENDEL, JR., Pres,
Louisville, Ky.

A. W. WRIGHT, Vice-Pres.,
Alma, Mich.

C. R. MENDEL, Sec.-Treas.
Louisville, Ky.

C. C. MENDEL JR. & BRO. CO.

Louisville, Ky.

Manufacturers of Poplar and Hardwood Lumber.

Mills: Trimble, Tenn.

Oakton, Ky.

Tipton, Tenn.

Boston, Ky.

Office of

Jas. R. DELVECCHIO, Supt.

Trimble Mill.

The Trimble & Kenton Railway

is owned and operated

by this Company.

TRIMBLE TENN., March 3rd, 1891.

GORDON HOLLOW BLAST GRATE CO., Greenville, Mich.

DEAR SIRS.—Please find enclosed check in payment of our account. Your grate bars have given us perfect satisfaction, and a reference to our records shows that in one month previous to the time we put them in, we had 21 stops for steam, aggregating 6 hours and 9 minutes, or an average of 17 minutes to the stop. Since putting in your bars, on the same fuel in one month, we have had only 6 stops for steam, aggregating 1 hour and 22 minutes, or an average of 13 minutes to the stop. Before introducing your system steam was very seldom up to the limit and the machinery would be continually dragging; since your bars have been put in, if steam gets low the cause is in the fireman alone.

Yours truly,

C. C. MENDEL JR. & BRO. CO.

JAMES R. DELVECCHIO, Supt.

The Gordon Hollow Blast Grate Co., Greenville, Mich.

Sole Proprietors of the Gordon Patents for the United States and Canada.

Detachable Link Belting.

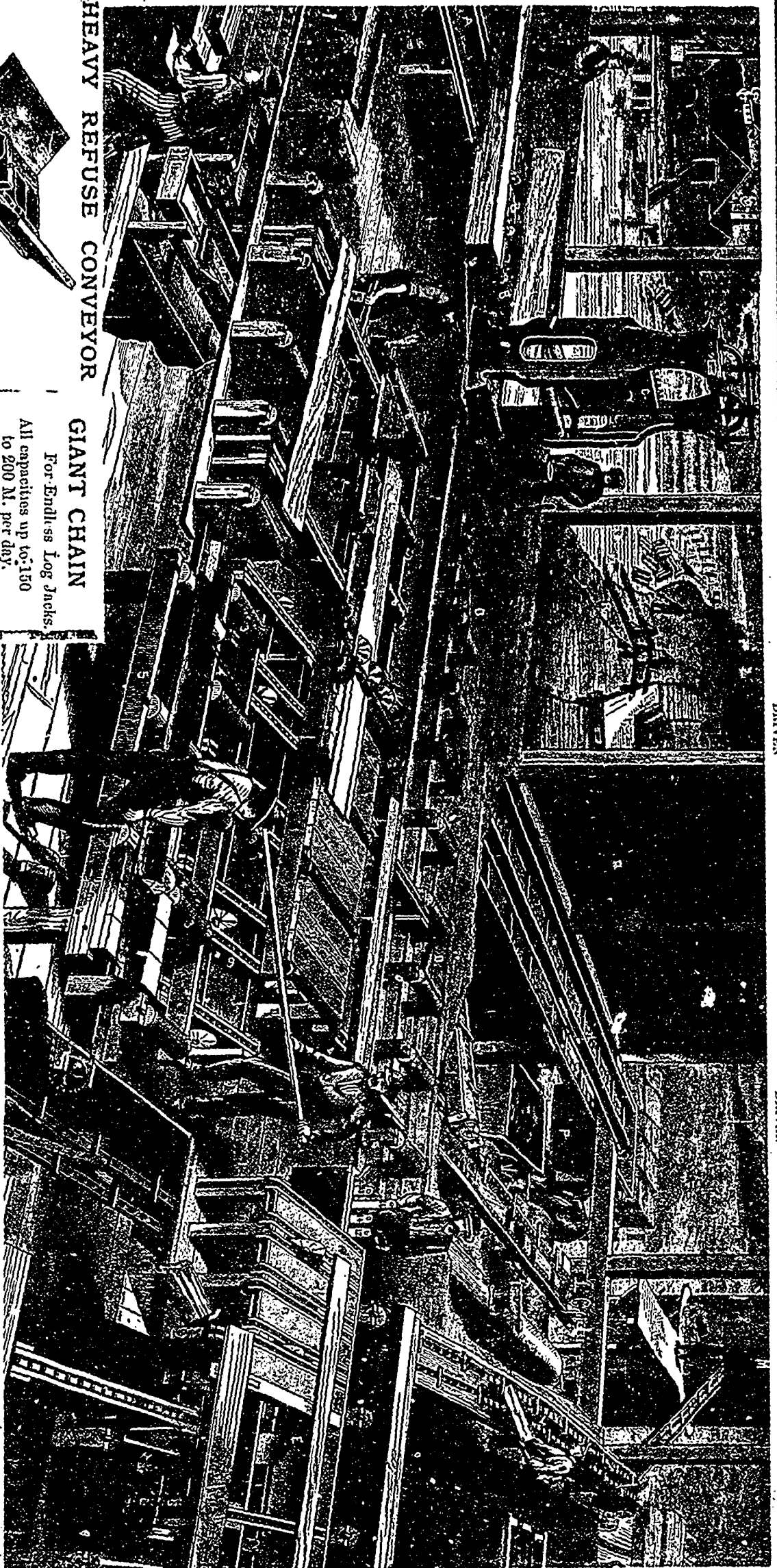


AS POSITIVE
AS GEARING



AS PLIABLE
AS BELTING

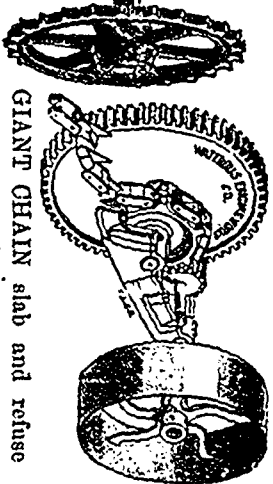
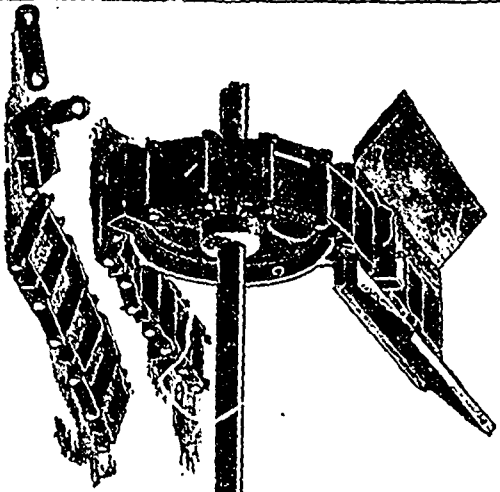
For Conveying
and Elevating.



HEAVY REFUSE CONVEYOR

GIANT CHAIN

For Endless Log Jacks.
All capacities up to 150
to 200 M. per day.

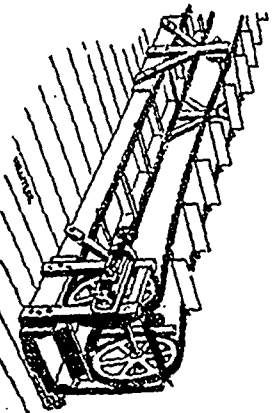


GIANT CHAIN slab and refuse carrier.

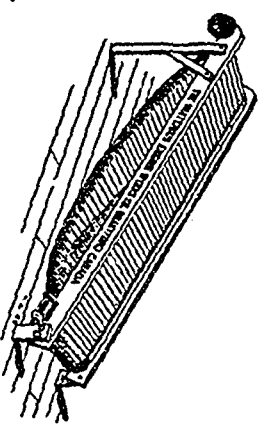
Automatic Sawdust feed to boilers.

SPRING MILL REPAIRING IS INCOMPLETE

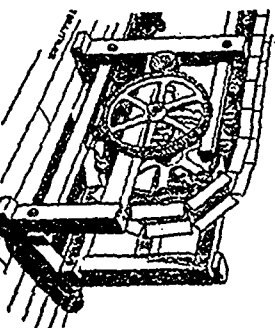
Without a full line of this Labor Saving device for Conveyors, Elevators, Live Rolls, Transfer, Lumber Sorters, Slash Tables, Trimmers, &c.



Drop Flight Conveyor
For Coal, &c.



Endless Apron Conveyor
For Clay, &c.



Endless Pan Conveyor
For Coal, Sand, Clay, &c.

All kinds of Mill Furnishings supplied at reasonable prices.

WATEROUS ENGINE WORKS CO.

BRANTFORD,
CANADA.

Send for Special Prices on Circular Saws during April. |

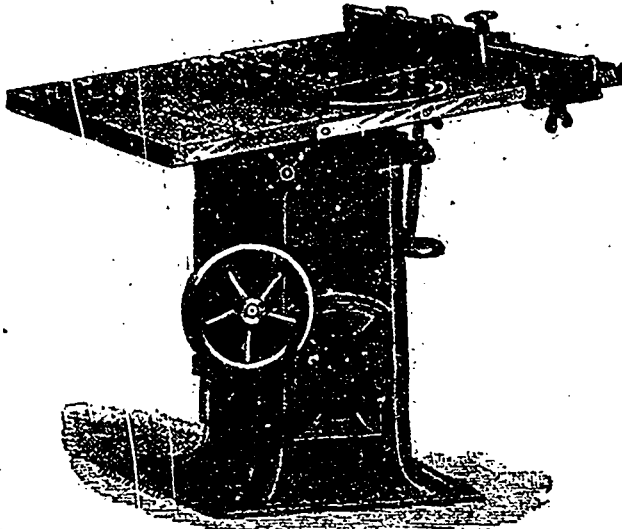


PETRIE'S MACHINERY DEPOT.

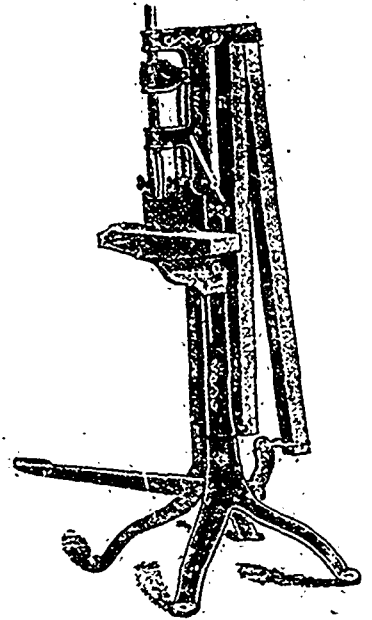
*Special Bargains
This Month.*

*Send for our Illustrated Catalogue
New and Second Hand
Machinery.*

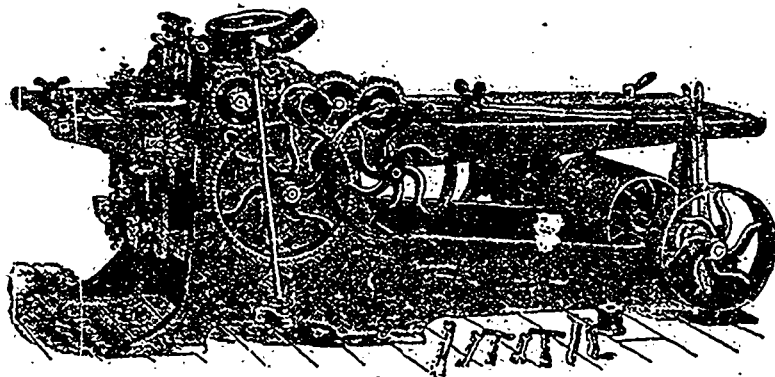
One New Eclipse planer and Masher, Galt make.
 Champion Planer, Masher and Moulder, nearly new.
 Little Giant Planer, Masher and Moulder, price \$200.
 24-inch Planer and Masher, Dundas make.
 New Pony Planers and Mashers, only \$1.75.
 24-inch Pony Planer, Frank & Co. make.
 27-inch Double Surfacers, revolving bed—Cowan & Co. make.
 No. 3 Revolving Bed planer, Cowan & Co. make.
 24-inch Pony planer, Foss make, Buffalo.
 No. 4 Pony planer, McKeehle & Bertram, builders.
 Economist planer, masher and moulder, Frank & Co. make.
 24-inch wood frame planer, Kennedy & Sons make.
 1 planing machine knife grinder.
 24-inch wood frame surface planer, cheap.
 24-inch surface planer, Rogers make, Norwich, Conn.
 23-inch surface planer, American build.
 21-inch wood frame planer, Kennedy & Sons build.
 22-inch surface planer, McKeehle & Bertram build.
 22-inch wood frame planer, in good order.
 20-inch wood frame planer in good order.
 12-inch diagonal buzz planer, new, Galt make.
 Daniels planer, R. Ball & Co. make.
 Masher, Kennedy & Sons' make, Owen Sound.
 Beading and moulding attachment for planer, Ross make, Buffalo.
 No. 2 Three-sided moulding machine, Galt make.
 3 Sided Moulder, made by Rogers, Connecticut.
 New power morticers—Galt make.
 One chair or upright boring machine.
 Iron top shaper—Goldie & McCulloch make Galt.
 Centennial top jig saw—Goldie & McCulloch builders.
 Double cope, tenoning machine—Dundas make.
 New 36-inch resaw—Galt make—also band resaw machines.
 Tenoning machine—without copes—price only \$60.
 Wood turning lathes—several sizes.
 New combination saw table—all iron and steel.
 Improved power rod feed machine—MacGregor, Gourlay & Co., Galt, builders.
 No. 1 shaper—all iron—Goldie & McCulloch build.
 Improved saw arbore—all sizes—Galt make; large stock.
 One improved iron frame swing saw—new, Buffalo make.
 Sash parters—new and second hand.
 New dovetailing machine—Tyrell's patent.
 New 30 and 36 inch band saws—Galt make.
 New 24-inch band saw, Cant Bros. & Co. make, Galt.
 Four pair scroll saws and three foot power; good order.
 Three blind flat turners, all Galt make.
 Dodge wood split pulleys at maker's prices; quick delivery.
 Foot and hand mitring machines, latest design.
 Foot and hand wiring machine, Galt make.



SAW TABLES—ALL KINDS.



FOOT POWER MORTICING MACHINES



PLANERS AND MASHERS
ALL STYLES.

H. W. PETRIE PROPRIETOR
 141 TO 145 FRONT ST. WEST.
TORONTO, ONT.