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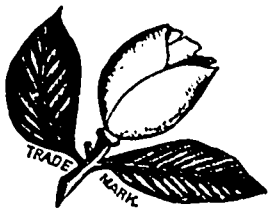
# CANADA LUMBERMAN

WOODWORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVII. }  
NUMBER 9.

TORONTO, ONT., SEPTEMBER, 1896

TERMS, \$1.00 PER YEAR  
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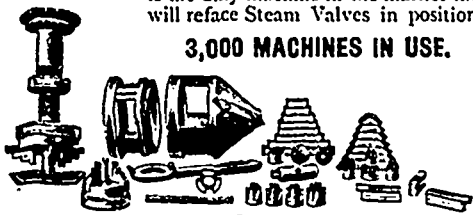
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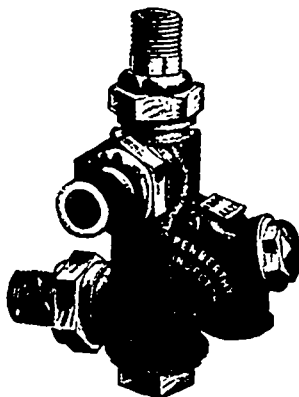
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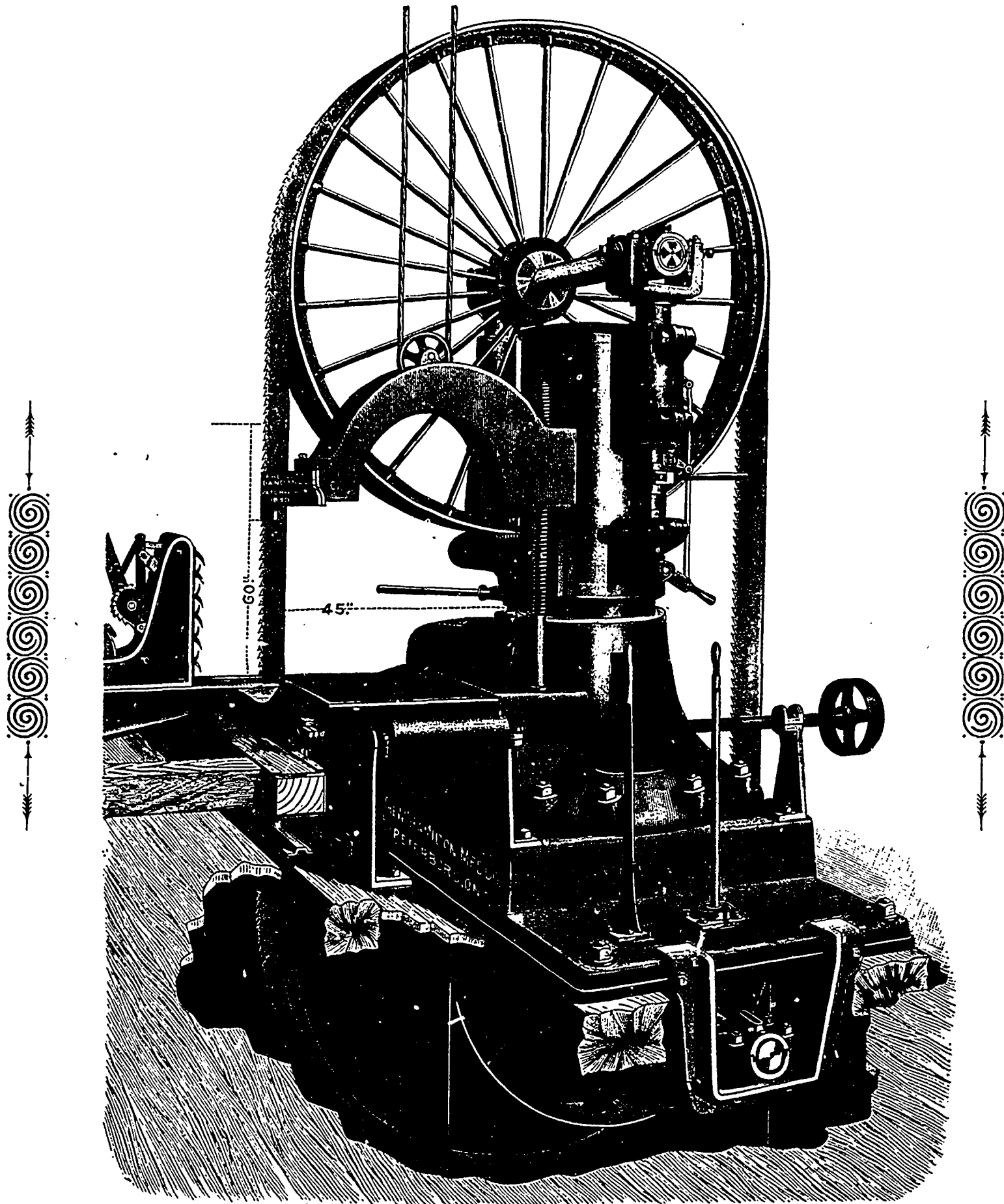


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# THE CANADA LUMBERMAN

VOLUME XVII. }  
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## WOOD PULP IN GREAT BRITAIN.

FROM the report of the High Commissioner of Canada for 1895, the following extracts are taken relative to the imports of and demand for Canadian pulp wood in Great Britain, which, in view of the desirability of the further extension of the trade, should be of interest to manufacturers :

"The use of wood pulp continues steadily to expand, the imports for 1895, 297,094 tons, valued at £1,574,400, showing an increase of nearly £150,000 over 1894. Although apparently the present large local consumption somewhat retards the export trade, I have no doubt that with the completion of the large mills at present under construction in advantageous positions, Canada will definitely enter the market as a powerful competitor with present sources of supply to a much larger extent than at present.

That the scope of the market is large is shown by the returns of the details of the total imports of 1894, the latest available, being 279,766 tons, valued at £1,432,400, of which Canada supplied £82,841. Norway held the first position with £694,919, Sweden coming next with £344,021, Germany supplying £76,287, Holland, £66,563, Russia (Finland), £50,880, the United States, £48,489 (mainly of Canadian origin), and Austria, £25,960.

I see it stated that prominent French importers of wood pulp are investigating the Canadian sources of supply. Of equal interest to Canada is the continued growth in the British imports of foreign paper, which may be summarized as follows :--

	Cwt.	£.
1893 .....	2,036,086	2,367,204
1894 .....	3,381,732	2,654,070
1895 .....	3,691,019	2,815,402

The details of the imports in 1895 are as follows :--

	Cwt.	£.
Unprinted paper .....	2,034,784	2,046,106
Printed paper .....	76,895	254,042
Straw boards, mill boards, and wood pulp boards .....	1,527,340	545,254

Transatlantic news and printings are already known on this side, and more than one London daily paper is using this product. With our cheap supplies of raw material, the trade generally regards the outlook for Canadian export of

paper to the United Kingdom as encouraging. In connection with the manufacture of paper, I should draw attention to the market that exists for certain classes of minerals found in Canada, which are used for fillings, etc., such as asbestos, talc, asbestine pulp, magnesite, powdered plaster, satinite, etc."

Messrs. Kennedy & Sons, of Glasgow, write of pulp wood as follows :

wagons used in railing it to mills. The consequence is that it arrives at the mills in a very dirty condition. This is an important point which Canadian mills should look to if they wish to do business in Scotland.

"Chemical pulp should also come in bales. Hitherto it has come in rolls, which are difficult to handle. Space being lost in packing on board ship, there is a waste of room ; consequently a higher freight is demanded than for bales."

Messrs. Steinhoff, Sons & Muir, Limited, London, E.C., write : "We may state that as regards Canadian mechanical wood pulp, as far as we are concerned, there has been a considerable increase in the imports to this country during 1895, and we have been successful in introducing this material in several quarters where it had hitherto not been used. As regards the total quantities imported, we can say nothing, the official statistics only distinguishing between pulp from Norway and that from other countries.

"The quality we may safely assert to be, generally speaking, superior to Scandinavian makes. We have found this opinion endorsed by consumers, whom we find willing to pay higher prices than for other grades.

"The greatest obstacle to the development of trade here is found in the high rates of freights charged by the regular lines, on which shippers are bound to depend, as compared with the low rates from Scandinavian ports. Another drawback is the poor manner in which Canadian pulp is baled, many consumers objecting

to the dirty state it arrives in, owing to insufficient protection.

"The Scandinavian product is infinitely superior in this respect, and it is a matter well worthy of the attention of Canadian makers who wish to cultivate a regular trade with Great Britain, which in normal years is certainly the legitimate outlet for Canada, especially the maritime provinces."

During the past fifty years Saginaw, Mich., has furnished fully 40,000,000,000 feet of white pine lumber.

## CANADA'S AMBITION.



YOUNG CANADA : "I'm going to have a Larger Slice of that Water-melon !"

"We have to state that very little came into Scotland last year, owing to Scandinavian makes being offered at prices which Canadian mills would not entertain.

"Outside of price, buyers here have a strong objection to the manner in which Canadian pulp reaches this country - ground pulp with 50 per cent. moisture, instead of being packed in canvas like Scandinavian pulp, comes in loose bundles without any covering at all, and so licks up all the dust and dirt of the landing sheds at ports of discharge, besides all the loose coal dust in

## CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

## PROSPECTS FOR CANADIAN LUMBER IN SOUTH AFRICA.

CAPE TOWN, SOUTH AFRICA, July 1st, 1896.

To the Editor of the CANADA LUMBERMAN:

SIR:—I have received from your office the February and April numbers of your valuable journal, which have afforded me very interesting reading. I can assure you it would be in the interest of the Canadian lumber trade in particular and commerce in general if your journal were more widely circulated in Great Britain and the colonies. I have often wondered why it is that Canada, with its boundless resources, is content to remain so poorly advertised—in fact not advertised at all, for although I have done all that lay in my power since I took up my residence in South Africa to let it be known that the great Dominion is in existence, the fact is that in matters of commerce I found her almost unknown apart from the United States.

I have now succeeded to some extent by writing to the press and otherwise in letting it be known that similar lumber as that heretofore brought from the United States can be brought from Canada, and so also in regard to the hundreds of different manufactures which find their way here almost weekly from New York.

It may interest some of your readers and advertisers to be informed that three steamers arrive here monthly from New York direct. It would benefit us, however, and Canadian trade as well would be advanced if there was a direct line of transportation between Montreal and Cape Town.

In regard to the extension of the Canadian lumber trade, I have read with pleasure and approval the observations of your journal and its correspondents, and I have no hesitation in saying that the lumbermen, or the Dominion or Ontario Governments, or all combined for that matter, should appoint a suitable person in each market to look into and report to them on the conditions of trade. Samples of all woods should be supplied such persons and an effort put forth toward the extension of foreign relations.

I can in this letter only write generally as to the trade in this colony, and in order to get an insight into the trade of the Transvaal Republic, the Orange Free State and Natal, which take large quantities of lumber, it would be necessary to visit those sections of South Africa and East London and Delagoa Bay in particular. The total imports of unmanufactured and planed and grooved wood into this colony during the year 1895 amounted to \$1,475,369.64, and of this amount pine is represented by the sum of \$721,258.02, staves by \$48,322.98, and hardwoods grown in Canada by the sum of \$28,625.40. The consumption of hardwoods in this colony for this and succeeding years will largely increase, as the furniture and other industries requiring them are fast developing.

By a return which I have before me I notice that the total exports of lumber of all kinds from Canada to British South Africa during the fiscal year 1894-'95 amounted to the sum of \$29,263, so that there appears to be room for extension of trade in this direction. No mention is made of a single stave having found its way here direct from Canada. I might also state that during the fiscal year mentioned, doors, sashes and blinds to the value of \$6,050, came here from Canada, which is a very small fractional part of the value of those items brought from the United States.

There is always a good market here for spruce deals and scantling of good quality, and pine, and the conditions keep getting better. Good stock is essential and good prices are paid, and occasional cargoes could be supplemented by quantities of red pine and elm logs, ash and oak logs and planks, cheap pine boards for roofing, and clear—strictly clear and planed pine, qualities guaranteed, and to be shipped on the certificate of one of the supervisors of cutters that the cargo is in good order, with draft against documents.

Our customers here will take consignments of Canadian lumber (and other products and manufactures either by steamer from New York or sailing vessel from Canadian ports) and will send along letters of credit and directions as to how to draw, and I take this opportunity of bringing

the matter to the attention of the Canadian mill-owner and dealer. Intending exporters are invited to correspond and send form of invoice of goods which they are able to supply. I might add that in deals 16 feet is the average length for this market.

The CANADA LUMBERMAN is much appreciated by the trade here.

Thanking you, Mr. Editor, in anticipation of being allowed so much space in which only partially to express my views on a subject of so great importance.

Yours truly,

THOMAS MOFFAT.

## TWO COLLINGWOOD PLANING MILLS.

AMONG the industries of the town of Collingwood, Ont., are two of the best equipped and most prosperous planing mills to be found in Ontario. With its two railroads and two lines of palatial steamers, that town possesses the best of facilities for reaching distant markets, affording means for quick transportation, which accounts to some extent for the success of many of its industries. The two planing mills referred to are those of the Bryan Mfg. Co. and Wilson Bros., both of which manufacture builders' supplies, sashes, doors, mouldings, dressed lumber, mantels, counters, etc., besides carrying on a general contracting business. Their goods are shipped to all parts of Canada, although the chief trade, of course, is done in Ontario. By the two industries about 100 men are given constant employment.

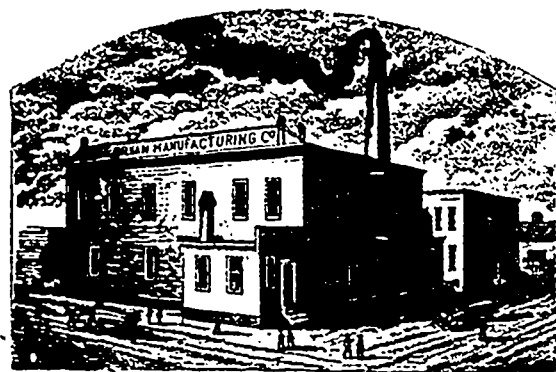
## THE BRYAN MFG. COMPANY

is composed of young men of energy and progressiveness. These qualities have enabled them to build up an extensive trade, and many of the best residences in the town have been supplied by this company. They make a specialty of office, school and church work and bank fixtures, and also manufacture boxes. Their present factory was erected in 1892, is 56x80 feet in size, and two storeys high, with boiler and engine rooms of 18x34 ft. and 16x36 ft. respectively. The office is in front and is nicely finished in hardwood.

The ground floor is taken up with a planer and matcher, surface planer, resaw, rip-saw, sticker, two cut-off saws, swing saw, band saw, box matcher, lathe, and an emery grinder. On the top floor is a mortiser, tenoning machine, sticker, band saw, shaper, buzz planer, pony planer, borer, cut-off saw, rip-saw, sand-paperer, door cramp, and a sash dove-tailer.

Exhaust fans, operated by a Sturtevant blower, draw the shavings from the machines to the boiler. The blower is also used for the dry kiln, 20x36 ft. Exhaust and live steam heats the building, which is lighted by electricity.

In the engine room is a 50 h.p. engine built by the A. R. Williams Machinery Co., supplied by a 65 h.p. boiler



of the same manufacture. A heater and a Northey feed pump are also in use.

Besides a large yard there are three store houses, one for mouldings, 24x50 ft.; one for boxes and box shooks, 15x40 ft.; and the other for flooring and siding, 20x40 ft., with two floors.

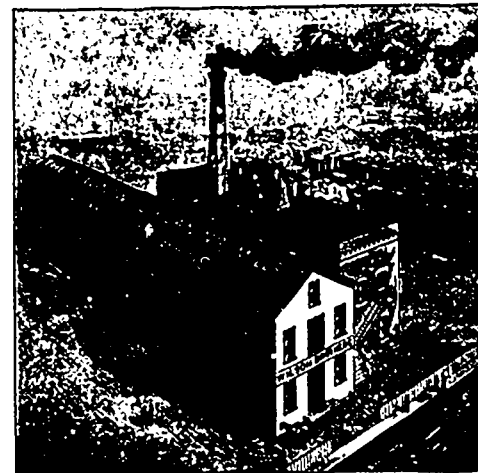
Nearly all the machinery was manufactured by McGregor, Gourlay & Co. and the Goldie & McCulloch Co., of Galt.

## WILSON BROS.

have been established in business for a somewhat longer period. Starting in a small way a number of years ago, indomitable pluck and strict attention to business secured for them an extensive connection. A specialty is made of the better class of interior hardwood finish. Their works consist of two buildings, the front one on Hurontario street being 110x30 ft., two storeys, with a side

annex, 66x14 ft., containing the boiler and engine room, with dry kiln and office above. The rear building is 40x56 ft. and three storeys high.

In the front building on the ground floor is all the heavy machinery similar to the Bryan Mfg. Co. Above is the sash, door and blind machinery in full complement. The office of this company is neatly finished, and protected by fireproof doors. The dry kiln is 12x33 ft. A first-class engine and boiler supply the power. The rear building lately erected has a drive-way on the ground floor, where the matched and planed lumber is stored. The second floor is used for the fine work, such as finishing, panels,



mantels, stair railings, etc. The top floor is taken up as a store room.

The premises are heated by exhaust steam and lighted by electricity. The machinery therein is from the Galt firms of Cowan & Co., McGregor, Gourlay & Co., and The Goldie & McCulloch Company. Complete fire protection is afforded by hydrants in the yard and hose throughout the buildings.

## THE PARAGON OF EXHIBITIONS.

THE major part of the entries having now been made for Toronto's big exhibition, which is to be held from August 31st to September 12th, it is possible to state definitely that the scale of the exhibition will really be greater than ever. Never before did exhibits cover such a wide range as they will this year. It almost looks as if every province had striven to do its best to make the exhibition worthy of the country. At the forthcoming exhibition in Toronto there will be seen food products of Prince Edward Island; food products, manufactures, fruit and live stock, of Nova Scotia and New Brunswick; an extensive display of horses and cattle, manufactures and minerals, from Quebec; the products of forests, waters, mines, gardens, farms, studs, workshops and art studios of Ontario; the grain, minerals and horses of Manitoba; the grain and minerals of the North-West; and cereals, fish and minerals of British Columbia. The governments of Ontario, the Dominion and British Columbia will make special exhibits of the wealth of the earth, while the Canadian Pacific Railway will supplement these displays by showing cereals, vegetables and minerals from many points on their lines, to the extent of double what the company has shown in other years. In art especially will the exhibition be strong, with the three pictures painted by F. M. Bell-Smith, illustrating incidents connected with the death of Sir John Thompson, at Windsor Castle, for one of which pictures Her Majesty the Queen, Princess Beatrice and members of the Royal household gave special sittings. There will be Edison's wonderful Eidoloscope, an electric theatre; Ontario Trotting Horse Breeders' stake races; Lockhart's performing elephants; the magnificent historical spectacle, entitled the "Feast of Nations" and commemorating the "Taking of the Bastille," and a thousand and one other things; while in consideration of the cattle being on show the first week the railways have agreed to grant one fare for the round trip for the entire exhibition from all points in Canada, and to run a special cheap excursion the first week, on Sept. 3rd, and two the second week.

It is reported that Messrs. Cant Bros. & Co. have completed arrangements for the removal of their works from Galt to Lancaster, N. Y.

## CANADA'S EARLY TIMBER TRADE.

The following interesting account of the origin of the Canadian timber trade was given by the lecturer on Trade and Commerce at the British American Business College, Toronto:

During the French regime little or nothing was done towards the utilization of the forest wealth of this country. The French recognized the grand possibilities in the forests of the new colony, and in their dreams of naval greatness, saw material for building and equipping fleets for commercial and military purposes. Regulations were issued to protect the trees from fire, but the forests of New France were considered as a future rather than a present source of wealth.

After Canada was ceded to England but little attention was paid for many years to its forest wealth. Northern Europe supplied the manufacturing world with wood, and as this trade was carried on almost exclusively in British ships, Englishmen were content to let well enough alone. Norway, Sweden, Denmark, Russia, were all consumers of British goods, and lumber afforded the exporter a convenient cargo for the return voyage. But in the wars which England waged during the latter part of the eighteenth century with several countries of Europe, inspired by Napoleon, the Baltic trade came abruptly to a close. Napoleon, in a gigantic project, known as the "Continental System," sought to strike a death blow at British trade by closing the ports of Europe against her ships. The politics of Europe at that time favored an alliance of Russia, Denmark and Sweden with France and Spain, against Great Britain.

Although the "Continental System" soon came to grief in face of the aggressive policy of Great Britain, the project served to impress upon her rulers the importance of developing trade between the different parts of the Empire. The North American colonies were looked to as the source of raw material, with the result that in 1800, 2,000 tons, and in 1810, 125,300 tons of Canadian timber were shipped to the ports of England. At this time England taxed the importation of timber, and in the new policy of colonial development, a preferential tax favoring the colonies was established. In 1809 heavier duties were levied upon the timber of the Baltic, while the duties upon Canadian timber were almost entirely repealed. The following year, in 1810, the duties upon the timber of Northern Europe were doubled, while in 1813, after navigation in the Baltic was again free, an addition of 25 per cent. was added to the already heavy duties. When the various duties on European timber were consolidated by the Act 59 Geo. III., c. 5, they amounted to £3 5s. per load in British ships, and £3 8s. when carried in foreign bottoms. These excessive duties, as might have been expected, gave rise to many complaints in England. The tax was almost prohibitive, and shippers, it is found, found it profitable to load timber in the Baltic, carry it to a Canadian port, and from there send it as Canadian timber to its destination in the United Kingdom.

The complaint was made that not only were English consumers compelled to pay more for their timber in assisting Canada, but English producers had lost valuable markets. The value of the exports to Sweden under this system of taxation declined in five years from £511,000 to

£46,000 in value. This extraordinary falling off in commerce was due to the advance in shipping charges consequent upon the decreased number of vessels visiting the Baltic. The tonnage of British vessels arriving in the United Kingdom from the Baltic, which had reached 428,000 tons in 1809, fell to 242,000 tons in 1814. As a result of an investigation before the committees of the Lords and Commons on the foreign trade of the country, the duties were reduced from £3 5s. to £2 15s., while a duty of 10s. was laid upon the timber of North America. But this reduction was not sufficient to offset the difference between the cost of Baltic and Canadian timber. In 1845 the shipments from the Baltic was nearly one-third less than in 1809.

## HON. R. R. DOBELL,

TIMBER MERCHANT AND STATESMAN.

It must be a source of gratification to lumbermen that one of the members of the council appointed to administer the affairs of our fair Dominion should have been chosen from among



HON. R. R. DOBELL.

their number, in the person of Hon. Richard Reid Dobell, whose portrait is herewith presented.

In lumber circles the name of R. R. Dobell is familiar throughout Canada and Great Britain, the subject of our sketch being the senior partner of the large exporting firm of Dobell, Beckett & Co., of Quebec, with branch house in Montreal. The business across the Atlantic is carried on at London, under the firm name of Richard R. Dobell & Co.

Mr. Dobell is an Englishman by birth, having been born in Liverpool in 1837, and is therefore 59 years of age. His father, George Dobell, was a successful tradesman in that city. Receiving his education at Liverpool College, he came to Canada when twenty years of age and settled in the city of Quebec, where he has resided ever since. For many years he successfully carried on business as a timber merchant under the name of Richard Dobell & Co. In 1885 a change of partnership took place, and the firm has since been known as Dobell, Beckett & Co.

Mr. Dobell has been associated in politics for many years, but on the occasion of the by-election in Quebec West in April, 1895, he signalized his defection from the Conservative party by standing as an independent candidate against the Con-

servative nominee, Mr. Thomas McGreevy. This contest was very close, the returns giving Mr. McGreevy a very small majority. At the late Dominion election, however, he again offered himself for public honors, this time being returned by a substantial majority. Mr. Dobell has always sought to promote the prosperity of the city in which he lives. He served as President of the Board of Trade, and was delegated by the Dominion Board of Trade to organize a conference in London to consider the advisability of a closer fiscal policy between Great Britain and her colonies. He was a member of the Executive Council of the Imperial Federation League in London. Since the re-organization of the Quebec Harbor Commission by the Government he has been a member of that body, and was largely instrumental in forwarding the construction of the Louise basin and docks.

In religion he is a member of the Church of England. He married Miss Elizabeth Frances, eldest daughter of the late Sir David Macpherson.

## THE VALUE OF ADVERTISING.

ONE of the largest advertisers in London says: "We once hit upon a novel expedient for ascertaining over what area our advertisements were read. We published a couple of half-column ads, in which we purposely misstated half a dozen historical facts. In less than a week we received between 300 and 400 letters from all parts of the country, from people wishing to know why on earth we kept such a coarsumate idiot, who knew so little about English history. The letters kept pouring in for three or four weeks. It was one of the best paying ads. we ever printed, but we did not repeat our experiment, because the one I refer to served its purpose. Our letters came from school-boys, girls, professors, clergymen, school-teachers and, in two instances, from eminent men who have a world-wide reputation. I was more impressed with the value of advertising from those two advertisements than I should have been by volumes of theories."—Exchange.

When adjusting the piston, put it exactly in the center of the cylinder. If but the thickness of a piece of writing paper out of the center, do not call it good enough, but have it just right.

After you have taken a piece out of the main belt, or any other belt that you may have charge of, watch the bearings next to it closely for half a day, as the belt being tighter may cause them to heat.

The production of Argentine hardwoods has increased from a value of \$21,071 in 1875 to \$1,603,203 in nine months of 1895. That country abounds in a vast amount of hardwoods suitable for cabinet work and other purposes, but it requires capital and enterprise to develop the full timber resources of the region. Much of the timber is far back in the Chaco regions of the Parana and Paraguay rivers, which renders the cost of getting the product to market greater than capital has yet been able to undertake on an extensive scale.

In Harbor Springs, Mich., there is a large and flourishing wood toothpick industry. White birch is exclusively used in the manufacture of the toothpicks, and about 7,500,000 are turned out daily. The logs are sawed up into bolts each 28 inches in length, then thoroughly steamed and cut up into veneers. The veneer is cut into long ribbons three inches in width, and these ribbons, eight or ten at a time, are run through the toothpick machinery, coming out at the other end, the perfect pieces falling into one basket, the broken pieces and refuse falling into another.





MONTHLY AND WEEKLY EDITIONS

C. H. MORTIMER  
PUBLISHER

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BRANCH OFFICE

NEW YORK LIFE INSURANCE BUILDING, MONTREAL

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the 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 on 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 affecting 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 25 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four 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 CANADA 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 they may desire.

LUMBER IN ONTARIO.

Just at the present time there is considerable speculation indulged in as to what extent improvement will come to the lumber trade of Ontario in the near future. There are to be found those who freely assert their belief that the bottom has been reached, and that from this time on an upward tendency will pervade the trade. The more pessimistic can see nothing that is encouraging in the future. It would seem strange that opinions entirely at variance with each other should be held by persons actively engaged in the trade, yet the cause thereof is not far to seek.

The course which the market for lumber in Ontario will take is largely dependent upon the result of the financial questions at issue in the United States, the extent of operations in the woods during the approaching season, and the attitude assumed by lumbermen themselves.

More than any of the other provinces is Ontario affected by the conditions which prevail in the lumber trade of the United States. The revival of business activity across the line, in which lumber would share, would bring to the Ontario lumber trade

at least some proportion of relief. But on the result of the Presidential election this will to some extent depend, and at the present time the situation is one of uncertainty.

There are some features of the United States trade, however, which are indicative of improvement. In view of the accumulation of stocks and the limited demand for lumber, many of the mills are closing down much earlier than usual. In some cases this has been rendered necessary by lack of piling ground. Thus it is hoped that before the next winter's cut is placed upon the market the stocks will have been well cleared out, and manufacturers will have sufficient confidence in the future to advance prices to a point which would leave a fair margin of profit. The announcement is further made that there will be a general restriction in the input of logs next winter of twenty-five per cent. as compared with late years.

In Ontario the situation is much the same with respect to the quantity of lumber in the hands of manufacturers, particularly of white pine. During the present season manufacturing has been carried on to a much greater extent than the demand would warrant. The extent of operations in the woods during the season of 1896-97 cannot be fairly estimated as yet, but from reports received at this office it is evident that a curtailment will be made. We learn that several firms who have heretofore been heavy operators have decided to abandon operations next winter, in the hope of disposing of their present supply of lumber. It is quite probable that the smaller manufacturers will operate upon much the same scale as last year, the restriction in the input being with the larger concerns, which will prove the most inducive to an improvement in the market. Very little is heard of the contemplated movements of Michigan dealers who obtain their log supply from the Georgian Bay district, but the recent financial troubles of several of these firms will undoubtedly be followed by a limitation of their business.

Never was there a time, perhaps, in the history of the trade when an indication of confidence on the part of lumbermen was of greater necessity. The situation is to some extent in their hands, and one of the chief requirements in order to secure an improvement is a restriction in the output. It must be expected that revival will not be immediate, but we predict that the spring of 1897 will bring to the lumber trade of Ontario some extent of renewed activity.

THE FORESTRY PROBLEM.

ELSEWHERE in this number will be found extracts from the annual report of the Clerk of Forestry for Ontario. In dealing with the question of forestry, Mr. Southworth has presented strong arguments in favor of the systematic preservation of our timber lands, and has earned the thanks of all who have the welfare of the country at heart. The position of the science of forestry to-day as compared with that of a few years ago, and the increased attention which has been given the subject by the governments throughout the whole world, are strong indications of advancement. Yet so far as the United States and Canada are concerned, the problem is yet in its infancy, as no well-defined policy has been adopted.

The timber resources of Canada being a source

of great wealth to the country, it behooves both the Dominion and Provincial governments to take steps to preserve, if possible, the forest lands. As pointed out in Mr. Southworth's report, here is no reason why this form of capital, like others, should not perpetually reproduce itself and yield ample interest from year to year. The cost of protection is small compared with the extent of damage done by forest fires, which is the main cause of destruction. Reports from forty-nine timber limits in Ontario where fire rangers were employed show that the quantity of timber destroyed in a certain year was valued at \$41,600, which is a very small amount, especially as the season was an unusually dry one. Ninety-three fires were reported, and it is safe to say that had there been no system of protection in vogue, millions of dollars worth of property would have been destroyed. The employment of these rangers necessitated an expenditure of \$26,253, half of which was borne by the Ontario Government and half by the limit-holders.

In the United States a Government Forestry Commission has been appointed to make an investigation of various forestry problems and outline an administrative policy on the subject. This commission will present a report in the autumn which will, no doubt, contain much valuable information. Two bills have also been introduced in the House of Representatives at Washington looking to the conservation of the forests. One provides that the Secretary of the Interior shall have avenues, about 1,000 feet in width, surveyed and marked through the forests on the public domain which are liable to destruction by fire, at intervals of from five to ten miles apart, in such directions as, when cleared, may be deemed most effective to prevent the spreading of fire, and that the timber thus parceled may be offered for sale at public auction, with the condition that the purchaser shall clear the entire width of that timber which he has purchased; and for those parts of the way which may not be so cleared, bids may be asked for the clearing of same. The other bill provides that any person who wilfully sets fire any timber, underbrush or grass, or shall allow or suffer fire to burn upon the public domain, shall be liable to a fine of \$5,000, or imprisonment for two years. The former bill has been approved by the American Forestry Association, and will probably be passed by Congress. While the clearing of wide avenues through the forests would no doubt largely prevent the spread of fires, the permanent sacrifice of such a large portion of forest land is of considerable moment, and we doubt if the system would prove satisfactory in Canada.

In the New Forest, in England, which contains seventy-six thousand acres, we are told the land is kept free from underbrush, which is frequently the cause of fires, by simply authorizing the people who live in the forest to help themselves to the brushwood. Of course this system could not be put in successful operation in Canada, as large tracts of timber lands are entirely uninhabited.

In some parts of Europe the methods of lumbering are entirely different from those in vogue in this country. In Germany and France the trees are felled in such a manner as to protect as far as possible the growing crop of young trees, while in some instances the trees to be

cut by the lumbermen are marked by the government authorities.

In connection with the subject of forest protection in Ontario, it is pleasing to observe that the antipathy held by lumbermen against the movement has been largely overcome. Information has been freely given to the Bureau of Forestry along the lines requested, while improvement is also reported in the methods of lumbering. The necessity of such legislation as would ensure the perpetual reforestation of our timbered lands has, in fact, become recognized by all. The question to be solved is the most comprehensive and advantageous system to be adopted.

#### EDITORIAL NOTES.

We predict ere long the quite general use of electricity for the operation of saw mills, and manufacturers contemplating the erection of new mills would do well to give the matter some consideration. A western exchange says: "At Folsom, California, the American River, Land and Lumber Company are now erecting a saw mill to be driven by electric power furnished by the Sacramento Power Company from the same plant that furnishes the city of Sacramento with its electric power and light."

It is learned that there is an increasing demand in Canada for "Excelsior," or "woodwool," for packing purposes; in fact, we have heard it stated that the supply is not equal to the requirements. There is also a considerable foreign demand for this article, particularly from Great Britain, and its manufacture would seem to present an opening for profitable investment by some enterprising person. "Excelsior" is usually made from basswood, and put up in bales weighing about 80 lbs.

THE last quarterly report of the Department of Trade and Commerce of the Dominion contains the unrevised returns of the exports and imports for the year ending June 30th. It is pleasing to observe, as an evidence of advancement, that the value of exports for the past year was \$3,300,000 in excess of the previous year, and nearly \$2,000,000 above the record since confederation. The total exports of the product of the forest show an increased value in favor of 1896 of \$3,054,135, the figures being \$24,201,285 in 1895 and \$27,255,420 in 1896.

OUR contemporary, Timber, of London, Eng., in a lengthy editorial, complains of the quantity of poor manufactured and improperly graded stock which finds its way to the British market from the United States. In the article a compliment is paid to Canadian manufacturers in the following words: "We speak without the slightest prejudice when we say that in the manufacture of lumber our American friends could learn a good deal from the Canadian millmen, whose sawing of third and even fourth quality stuff is beautifully done."

BEFORE this issue of THE LUMBERMAN will have reached its readers, the great Industrial Exhibition at Toronto will have commenced. The suggestion has been made by a lumber merchant that a building be secured at the Exhibition for the use of lumbermen, in which they could meet together for social conversation and the discussion of trade questions. Time will not per-

mit of any steps being taken in that direction this year, but the proposition is worthy of consideration in future. As in former years, a large number of lumbermen and manufacturers will visit the Exhibition, and THE LUMBERMAN extends to all such a hearty invitation to call at our offices in the Confederation Life Building, where they will be afforded facilities for answering correspondence, and by so doing will confer a favor upon the publisher.

ON another page will be found an interesting letter from a correspondent in South Africa relative to the extension of Canadian lumber trade with that country. It is strange indeed that, as pointed out by our correspondent, Canada should be almost unknown in South Africa in matters of commerce apart from the United States. If our lumbermen desire to secure a greater portion of this trade, it is necessary that some such steps as suggested in the letter referred to should be taken. With respect to the trade in staves, of which mention is made, white oak staves are required for that market, and as the supply of white oak in Canada is well nigh exhausted, we cannot expect any development in that line at present. When they start to manufacture their own flour in South Africa there will be an opening for Canadian staves, or for any barrels that do not require to hold liquids.

OUR British Columbia correspondent informs us that there is some dissatisfaction among the members of the lumber combine resident in that province, which may result in their withdrawal from membership at the close of the present year. Should the report prove to be correct, the fact is to be regretted. One of the objects of the formation of the trust was, we understand, to advance prices to a point where the manufacturer could make a living profit, and if the efforts put forth to attain that end are to be met with opposition by manufacturers themselves, the hopes for improvement in the trade of the coast are not very encouraging. As is the case with all organizations, particularly when in their infancy, many points will require to be adjusted. Instead of withdrawing, as contemplated, those who have grievance should bring the questions before the association at the earliest possible moment, and endeavor to arrive at an agreement which will be most satisfactory to all and in the interest of the trade in general. The manufacturers of shingles on the western coast are suffering from lack of organization. While there is a fair demand for the output of the mills, the price at which Washington shingles are placed upon the market has made it impossible for British Columbia dealers to dispose of their product at a figure which would leave any margin of profit, and several manufacturers have resolved upon shutting down their mills rather than running them at a loss. In this fact is found an argument for the continuation of the lumber combine.

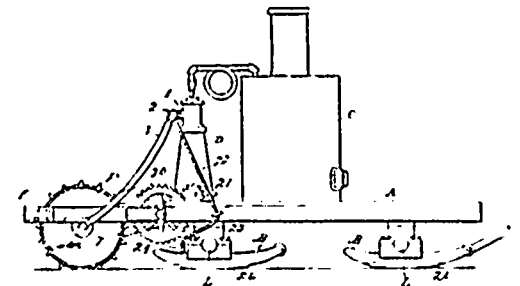
Doubling the length of a board of timber reduces the stiffness eightfold and the strength one-half. Doubling the width of a board doubles the stiffness and strength. Doubling the thickness of a board or the depth of a timber increases the stiffness about eightfold and the strength fourfold. If it is desired to double the length and retain the same stiffness, it is necessary to double the thickness or depth.

#### THE CIRCULAR SAW.

THE inventor of the circular saw now in use was Benjamin Cummings, and in a lonely, secluded spot in the north-west corner of the cemetery near the little village of Richmond, Kalamazoo county, Mich., the visitor will find on a white marble slab, nearly concealed from view by a large cluster of lilac bushes, engraved the simple inscription: "Benjamin Cummings, born 1772, died A. D. 1843." Nearly sixty years ago, at Burtonville, New York, and Amsterdam, this man hammered out at his own blacksmith's anvil the first circular saw known to mankind. According to an American contemporary, he was a noted pioneer in Richmond; a first cousin of one of the Presidents of the United States; a slave owner in New York State; a vessel owner on the North river before the days of steamboats; a captain in the war of 1812, where, after having three horses shot from under him, with one stroke of his sword he brought his superior officer to the ground for insult, and because he was a traitor and a coward; and, after being court-martialed, instead of being shot, he was appointed colonel in his place. The same man, nearly ninety years ago, at Albany, N. Y., took up and moved bodily large brick buildings, and, to the wonder and astonishment of the world, constructed a mile and a half of the Erie Canal, through a bed of rock, and he also built the first low bridges over the same. He also aided in the construction of the first ten miles of railway in the United States, and founded both the villages of Esperense and Bostonville, on the old Schoharrie, near Amsterdam.

#### STEAM LOGGING MACHINE.

MR. George T. Glover, of Chicago, has been granted a Canadian patent for an improved steam logging machine, as shown by the accompanying cut. The claim therefor is as follows: A hollow traction wheel or roller having teeth provided with heating chambers communicating with the interior of the wheel or roller, and means suitable for supplying steam to the interior of same, said wheel arranged upon a



hollow axle having its passage connected with the interior of the wheel or roller, and chambered teeth arranged upon the wheel and having three chambers connected with the interior of same. The combination as above, with boxes in which the ends of the axle are journalled, and a steam coupling 7 having a swivel connection with the axle and connected with a suitable steam supply. The runner provided with a groove 28 and a shoe 29 fitted to the runner so as to close over the groove, which latter forms a heating chamber which is supplied with steam, substantially as set forth.

The Gardner Tool Co., of Sherbrooke, Que., are expending a considerable sum on improvements to their factory.



## FORESTRY IN ONTARIO.

### COMPREHENSIVE REPORT ON THE PRESERVATION OF OUR TIMBER LANDS.

THE question of practical forestry is one which is receiving considerable attention at the present time by all civilized countries, and yet, perhaps, its importance is not recognized to the extent desired. True it is that rapid advancement has been made in this direction within the past few years, and the public are gradually becoming convinced of the necessity of the systematic preservation of forest lands.

In the province of Ontario the subject received recognition at the hands of the Provincial Government some years ago. In the year 1883 the Department of Forestry was created, the late R. W. Phipps becoming chief clerk. Mr. Phipps was an ardent student of forestry, and held the position up to the time of his death in February, 1894. A considerable interval elapsed between the time of his death and the appointment of a successor in the person of the late Hon. C. F. Fraser, who held the position for only a few months previous to his death in the fall of 1894. He was succeeded by the present incumbent, Mr. Thomas Southworth, and upon his appointment the office was transferred to the Crown Lands Department, where it is believed the work can be more advantageously carried on.

#### MR. THOMAS SOUTHWORTH.

Mr. Southworth is a thorough Canadian, a native of the soil. He was born in 1855 in the



MR. THOMAS SOUTHWORTH.

County of Leeds, Ontario, and was a continuous resident of that county until his removal to Toronto to assume the duties of Clerk of Forestry. Mr. Southworth's mother, Diantha Stoddard, was born in the same county, her parents, who migrated from Connecticut, having been among the pioneer settlers of Leeds. His father, Stephen J. Southworth, of Brockville, was a native of Vermont, but came to Canada over sixty years ago.

Mr. Southworth was educated at the country school in Kitley and the high school at Athens. Removing to Brockville, he was employed as local reporter on the Brockville Recorder, and afterwards as editorial writer. In 1879 he was married to Miss Mary Taylor, of Gananoque, sister of George Taylor, M. P. for South Leeds, and in the following year embarked in business as a job printer. In 1881 his business was amalgamated with the Recorder, a partnership being formed between him and the late Col. David Wylie, and from that time until he accepted his present position the business and most of the time the editorial management of the paper was in his hands.

#### ANNUAL REPORT.

The annual report of Mr. Southworth, which has just been issued, proves conclusively his qualifications for the position. In the introduction it is stated that the transfer of the position to the Crown Lands Department contemplates the establishment of a bureau under the direct control of the Department, with a well-defined sphere in the work of administration. Though the policy of the government in this regard has not been fully developed, the character of the work accomplished during the last few months will indicate in a measure the enlarged scope of the operations of the bureau.

From the report the following extracts are taken:

#### FOREST SUPPLY.

The object of forestry is two-fold. Hitherto, so far as this continent, at least, is concerned, it has usually been considered merely as a means of ensuring favorable agricultural conditions and preventing the deterioration of soil and climate. We have been so habituated to regard the forest wealth of America as practically inexhaustible, that while the disastrous effects of forest destruction upon agriculture forced themselves upon the attention of the public, and procured a receptive hearing for forestry proposals as a remedy for these very obvious evils, the other, and more important aspect of the subject, has hardly been accorded its due weight. Apart altogether from the influence of the forests in distributing moisture, regulating temperature, and in other ways maintaining favorable conditions for cultivation, the industrial interests of the country imperatively require their preservation as a perpetual source of timber supply. The forests of America, as a matter of fact, are very far from being inexhaustible, so far, at least, as the finest and most useful kinds of timber are concerned.

With the development of the country, moreover, the home demand for timber and wood products of all kinds is proportionately increasing, and as our United States neighbors are using up their forest supplies much more rapidly than ourselves, increased requirements for shipment across the line will soon enhance the value of our timber products. How extensive that demand is likely to be in the near future, and what inroads it will make upon our supplies, may be in a measure estimated from the report of Prof. B. E. Fernow, Chief of Forestry Division at Washington for 1893, in which he states that the consumption of wood in the United States is more than fifty per cent. over what their forest area could produce as an annual yield, and that the demand for wood material increases at the rate of over twenty-five per cent. every ten years. It requires, therefore, no great foresight to understand that in the course of the next generation the price of wood, especially of the more valuable kinds, is certain to rise enormously. As our staple manufacturing and mechanical industries are largely dependent upon an adequate and cheap timber supply, the preservation of this prominent factor in our national wealth is an equally important aim of forestry with the coincident benefit to agriculture.

#### FORESTS AS CAPITAL.

Owing to the lavishness of nature beyond all immediate requirements, and the earlier necessity of rapid clearance of the woods to provide for cultivation, Canadians have become habituated

to wasteful methods of lumbering. Under the influence of the old associations and conditions we are accustomed to regard the axe as the precursor of the plough and to look upon forest utilization as synonymous with the forest destruction. Current discussion respecting the timber policy of the Dominion and Provincial Governments illustrates this habit of thought. The timber resources belonging to the public are correctly enough spoken of as "capital," but when it is sought to turn these resources to practical account it is often charged that in so doing the Government are "drawing upon their capital." There is no reason why this form of capital, like others, should not perpetually reproduce itself and yield ample interest from year to year without diminishing or impairing the original endowment. Judicious forest management involves no waste of capital. To preserve the forests, in the sense of leaving them untouched, is a waste from year to year of their natural increase, as the trees pass through the stage of maturity to decay and death. Without the interference of man there is a constant consumption of the forest products by the decomposition of the trees which have reached their term of existence, the only difference being, that under a regime of practical forestry, such trees, when they had reached their prime, would be selected for removal, while under natural conditions their decadence is gradual. To allow the forest trees to mature and decay under the erroneous idea that thereby timber resources were being rebanded for the future would be a waste.

#### ANNUAL GROWTH OF TIMBER.

The United States Department of Agriculture, through its forestry branch, has for some years been preparing returns of "timber physics," and among other things, something like close figures have been obtained of the actual annual growth of timber on an acre of forest land under ordinary forest conditions. These figures were derived from a very extensive series of actual measurement over a term of years on different lots in Maine and New Hampshire forests. The conclusions reached by the United States authorities differ materially from the estimate given by Brown and Nisbet, eminent English authorities in the matter of annual growth. While "Brown's Forester" estimates the annual growth on an acre of Scots pines at 100 to 150 cubic feet, the United States Division of Forestry places the annual growth in a New Hampshire spruce forest at only fifty-nine and a half cubic feet. In comparing these two estimates it must be borne in mind that Brown's estimate is for a Scotch plantation in which the trees have been carefully tended, and in which, because of this, the growth would be greatly in excess of that in an ordinary American forest, where overcrowding and other causes retard the growth. For the purpose of estimating the annual growth in Ontario, where the conditions are much the same as in the states mentioned, we will take the United States figures fifty-nine and a half cubic feet, or for facility computing, sixty cubic feet per acre as the average annual growth in the Crown forests under ordinary conditions.

The area of the timber-bearing lands still belonging to the Crown in Ontario can only be approximately estimated. According to a return to the House in 1893, there are about 21,000 square miles of pine lands under license, and

24,410 square miles of pine lands still unsold. These areas are exclusive of a territory of 89,000 square miles that is more or less timbered, but as it is not supposed to have large quantities of pine upon it, no account has been taken of it by the Department of Crown Lands. It is known, however, that much of it is well timbered, and where pine is not present there are large quantities of spruce and other woods. Assuming this territory to be fairly covered with timber, we will take half of it for the purpose of this calculation, which will give the total forest area of the Crown in Ontario as 89,910 square miles. As lumbering operations are being carried on to a greater or less extent in parts of the licensed area, we will allow for this and take 80,000 square miles as the timber area of the Province, certainly a very low estimate, having regard to not white pine alone, but to other timber as well. Eighty thousand square miles is equivalent to 51,200,000 acres. Estimating the annual addition of timber over this area at sixty cubic feet per acre, we have a total addition to the amount of timber each year amounting to 3,072,000,000 cubic feet. This estimate is of timber exclusive of tops and branches.

According to the report of the Commissioner of Crown lands for 1894 the amount of timber cut on the Crown lands, of all kinds in lumbering operations, amounted to 60,695,250 cubic feet for that year. Deducting this amount from the annual growth, there would be 3,011,304,750 cubic feet in excess of the cut of timber each year, as may be more clearly shown by the following table :

	Cubic Feet.
Saw logs, boom timber, dimension stuff . . . . .	53,200,555
Square timber, pine and other than pine . . . . .	1,185,529
Cordwood . . . . .	1,879,936
Pulp wood . . . . .	1,381,504
Posts and shingle bolts (estimated) . . . . .	767,872
Piles and head blocks . . . . .	279,854
Railway ties and telegraph poles (estimated) . . . . .	2,000,000
Total . . . . .	<u>60,695,250</u>

Estimated annual growth per acre of ordinary forest land adopted by the U. S. Forestry Bureau, 60 cubic feet; total area of Ontario Crown Lands licensed and otherwise, pine-bearing and other forest land, say 80,000 square miles; 80,000 square miles, or 51,200,000 acres, will produce per year according to this estimate, 3,011,304,750 cubic feet in excess of the annual cut of timber, or	
Annual growth . . . . .	Cubic Feet. 3,072,000,000
Annual cut . . . . .	60,695,250
Annual growth in excess of annual cut . . . . .	<u>3,011,304,750</u>

This is assuming that the lumberman's axe is the only cause of the removal of timber. Unfortunately, however, this is not the case. The amount of timber destroyed by fire from one year to another is an unknown quantity. That the amount far exceeds what falls before the axe of the lumberman is probable, and in any scheme of forest perpetuation protection from fire must occupy the most prominent place. Notwithstanding the efforts of the Government fire rangers for the past few years the loss to the province through forest fires has been considerable, though vastly less than would have been the case had the protective measures employed not been used. If fires could be prevented or even very much lessened the present rate of cutting on the Crown lands could be continued indefinitely, for the annual increment of growth far exceeds the annual cut. These figures are of course theoretical for the

reason that in much of the primeval forest the decay of over-ripe trees may be said to equal the growth of the others. This is not the case generally though, and more particularly where through lumbering operations the larger timber has been taken out, enabling the smaller trees to grow so much faster. Besides, the enormous difference of three billions of cubic feet will allow for considerable latitude in this respect.

FIRE PROTECTION.

In 1886 Mr. Aubrey White, now Assistant Commissioner of Crown lands, addressed a report to the Commissioner, strongly advocating the adoption of a system of fire-ranging. Acting upon this recommendation the present system, substantially embodying the plan submitted by Mr. White, was adopted with highly satisfactory results. The following are the leading provisions:—A number of men are placed upon the Crown Lands during the dangerous season, which lasts from May until about the close of September, in localities specially exposed to fire by reason of settlement, railway constructing, lumbering or any other cause. Where the land is under license, the co-operation of the limit-holders is requisite, it being optional with them to take advantage of the system. The number of men necessary to give adequate protection is decided by the owners of the limit, as being familiar with the country and the direction from which danger is likely to come. The selection of the men to be employed on the staff is also in their hands, the Department reserving the right to reject or remove any man whom they consider unfit for the position. The fire rangers are constituted officers for the enforcement of the Fire Act by section 14, and act under the instruction of the Department. They make the public acquainted with its provisions by putting up posters in conspicuous places and circulating copies of it among settlers and others. In case fires break out they are authorized to engage assistance for suppressing them, and should they become extensive it is their duty to notify both the limit-holder and the Department. Half of the expense incurred in maintaining the staff and suppressing fires is borne by the Crown Lands Department and the remainder by the owners of the limits. The pay of the fire rangers is fixed at \$2 per day without board or other extras. They report at the end of the season as to the duties performed and number and extent of the fires which may have occurred.

The good effects of the system were specially manifested last year. Though the summer of 1895 was the driest for many years, the temperature being unusually high in addition to the light rainfall, the destruction of timber by fire was remarkably small. In consequence of the danger the staff was strengthened in specially exposed places and closer vigilance maintained.

Reports from forty-nine timber limits where the system was in operation in 1895 show that as closely as can be estimated the quantity of timber damaged by fire amounted to 57,556,000 feet, valued at \$41,600. The number of fires specifically reported was ninety-three, in addition to which there were many others, principally small ones not enumerated. Any one at all familiar with backwoods life and conversant with the conditions which prevailed prior to the introduction of the system can easily realize the enormous saving which has been effected by pro-

viding this safeguard against forest devastation. When the dry character of the season and the number of fires actually started but suppressed before they had made headway is taken into account, it can readily be seen that but for the presence of the fire rangers at the most exposed points, areas amounting to hundreds of square miles would probably have been ravaged and the losses to timber licensees and the public would have been immense. This saving has been effected by the employment of 114 men for a few months in the year, at a total cost of \$26,253, shared between the public treasury and limit-owners.

WHAT TREES SHALL WE PLANT?

Recent observations lead to the conclusion that white pine will make merchantable timber much sooner than is generally believed, and instances are not wanting to show that under favorable circumstances trees of this variety thirty years old have yielded good marketable timber. In fact the white pine is a rapid-growing tree and a valuable tree to plant, the principal drawback to its merits in this respect being the amount of care required in the earlier stages of its growth.

The shellbark hickory is among the most desirable trees to plant for profit for the reason that it can be harvested when comparatively young and its nuts are marketable. If planted close together the young trees taken out in thinning have a value for carriage work. One cut of a hickory tree six inches in diameter will make about twelve or fourteen spokes. In small trees of say four inches diameter, the first two cuts are used for spokes, the rest for head-blocks and other parts of carriages. Prof. Budd, of Iowa, advises planting the nuts of the hickory where the trees are intended to remain. If planted for forest trees and not for nut-bearing purposes alone, the same authority advises planting the nuts eight feet apart each way with plenty of larch or tamarack seedlings between to act as nurse trees to the hickory. As they grow up the larch may be cut away and sold. The price paid by the makers of carriage wheels for hickory—which is now all imported from the United States—is such as to afford a return equal to from twelve to fifteen dollars per cord. The hickory grows best on a rich deep fertile soil, and while it will succeed on ordinary land should not be planted upon sandy or sterile soil.

Among other valuable trees to plant in view of the increasing demand for their timber for manufacturing purposes are the black ash, rock elm and black cherry.

Black walnut is also extremely valuable, but it takes a long time to mature. Prof. Sargent estimates that a hundred years of growth would be necessary to make it merchantable timber, as the young wood has not that rich, dark color that gives it its great value, although it seems to us this is an outside estimate.

The hard maple, although principally appreciated for its sugar product and as fuel, is also a valuable timber tree. It is used almost exclusively in the manufacture of shoe lasts, and is exported largely to Britain, where it is manufactured into mangle rollers and other articles. One firm in Ontario exported 100,000 maple blocks for mangle rollers in a year. It is also a tree of fairly rapid growth, and if planted close will make good timber that will not be materially injured by several seasons of tapping for sugar,

while for fuel it is among the very best of our native woods. The soft maple, while favored by bee-keepers on account of its flowers, is not so valuable as a timber tree, and is shorter lived.

Of the evergreens, next to the white pine in value for planting is the Norway spruce.

The basswood or linden is another of our most suitable trees for planting. It is a rapid grower, its wood is much prized by carriage, cabinet, piano and organ makers, while its flowers furnish our bees with the choicest honey. Principally because of this latter feature one of our most prominent apiarists, Mr. Allan Pringle, of Selby, has planted this tree quite extensively, as has also Mr. Thos. Conant, of Oshawa, who, however, regards the black walnut as the more valuable tree to plant.

The white elm, or rock elm, one of our most graceful and best shade trees for streets, is becoming yearly more valuable. The demand for the best quality of timber for the rims of bicycle wheels has assumed large proportions and makes it a valuable tree to plant. It is also used largely for wagon hubs.

#### USES FOR FOREST PRODUCTS.

The substitution of steel and iron to a large extent in the construction of ships and buildings has lessened the demand for oak for these purposes, but the scarcity of black walnut and rosewood helped to cause a change in the fashion in furniture. Oak became the popular material and in consequence this wood is in greater demand than ever. Hickory is also another wood that is also becoming more valuable. Where it was formerly used only for handles for axes and other tools, its present consumption in the manufacture of carriages has reached enormous dimensions. A new use for this timber is in the handle-bars for bicycles, which are likely to be made in future from hickory instead of steel tubing. The bicycle, which seems to be effecting a revolution in business in many ways, has furthermore created a heavy demand for rock elm, which is required for the manufacture of rims. As only a small percentage of the timber is good enough for the purpose, the increase in the total cut caused by this new demand is very large.

By far the most significant and far-reaching change, however, arises from the rapid and extensive growth of the wood pulp and paper making industry. The great expansion of daily journalism in Canada and the United States has created an enormous demand for white paper, various kinds of wood being brought into requisition as the invention of new processes rendered them available for the purpose.

While poplar, basswood and jack pine are used in the manufacture of paper pulp by the chemical process, for the cheaper mechanical process by which most of the pulp used in newspaper making is produced, spruce is almost exclusively employed. The spruce forests of Ontario are of vast extent and stretch to the far north surrounding Hudson's Bay. Many of these northern forests are composed exclusively of spruce trees, growing so densely that, although very old, they do not in some sections attain a diameter that would make them available for lumber. Until the rapid strides of the pulp industry drew attention to this raw material awaiting the future demand these forests were not largely taken into account in the

stock-taking of the province. This is now changed, however, and spruce rivals the great white pine in its value to the state. It is now pretty generally conceded that Canada has the largest supply of spruce, the great paper-making material, in the world. As the supply in the United States becomes exhausted there can be no doubt that the spruce forests of Ontario will prove a source of wealth to the province, the extent of which it is difficult to estimate.

#### ANNUAL GROWTH OF TIMBER.

OTTAWA, 24th August, 1896.

To the Editor of the CANADA LUMBERMAN:

In sending me a copy of the annual report of Mr. Southworth, the Clerk of Forestry for the Province of Ontario, you ask my views as to the correctness of his remarks relating to the annual growth of timber, as found on pages 33 to 36 of his report.

I must frankly confess that at first sight I was staggered by Mr. Southworth's statement that on the Crown lands of Ontario the annual growth of the forest is fifty times greater than the annual cut; for this is the unexpected conclusion to which we are unavoidably led by Mr. Southworth's figures (see page 35 of his report), which give the annual cut at 60,695,250 cubic feet, and the annual growth at 3,072,000,000 that is to say fifty times more. But after testing, by such means as I will explain in a moment, the correctness of Mr. Southworth's statement, I must admit that he is theoretically right, on the assumption that each of the 51,200,000 acres of Crown lands, on which he founds his calculations, is capable of yielding an average growth of sixty cubic feet, and in justice to Mr. Southworth, I must here remark that he makes a liberal allowance for regions poorly timbered, for in giving the area of the Crown lands on which he founds his calculations he leaves out a good deal more than one-third of the total area of 134,000 square miles, as he deducts out of that 54,410 square miles, and founds his calculations on only 80,000 square miles, equivalent to his 51,200,000 square acres.

Now, this is the test by which I come to the conclusion that Mr. Southworth is theoretically correct. For many years past I have studied the rate of annual growth of some of our forest trees by measuring their annual rings. I am aware that it has been stated, on the strength of Charnay's observations in tropical regions, that these rings cannot be taken as indications of yearly growth everywhere, but I think that can apply only to tropical regions where the vegetation continues all the year round. With us, where the vegetation is abruptly interrupted in the autumn, to start again the next spring, I consider that each ring indicates the growth of one year, and I have found it so by experiments continued during the last eighteen years, cutting down trees sown by myself, so that I knew their exact age on counting the rings at the stump, which agreed with the number of years elapsed since the seed out of which the tree grew had been planted by me in the ground.

Over and over again, by measuring these yearly rings, I have tested, on the butt end of saw-logs, the rate of growth of the white spruce tree in our part of the country, Quebec, and found that it takes about ten years to add two

inches to the diameter of the tree. At this rate of growth I find that a white spruce twelve inches in diameter will gain, in ten years, eight cubic feet, which would give four-fifths of a cubic foot every year, and if you allow 75 spruce trees to the acre, it will give you 60 cubic feet for the yearly growth. Perhaps there are not many acres on which will be found 75 good-sized spruce, but, on moderately well timbered land, the equivalent in bulk of the timber represented by 75 spruce trees, of say 14 inches at the stump, will be found in other trees, and it can be easily ascertained by comparing the yearly rings of the white spruce with those of the black walnut, butternut, pine, oak, ash, poplar, elm, and some others, that the growth of the white spruce is slower than that of the above mentioned trees, so that I feel justified, like Mr. Southworth, in adopting the United States figures of 59½ cubic feet (which he assumes at 60 feet for facility of computation), the more so that we have the statement of eminent authorities in England, who estimate the annual growth of one acre of Scotch pines at 100 to 120 cubic feet nearly double the rate allowed by Mr. Southworth.

So that, in answer to your inquiry, I consider that he is right in his conclusions, provided always that his 51,200,000 acres be sufficiently well timbered to yield the yearly increase of 60 cubic feet per acre.

But because there are sufficiently good grounds for Mr. Southworth's conclusion that the rate of growth of our forest trees is so much greater than the rate at which they are cut down, we must not abandon ourselves to a feeling of false security and run away with the idea that our supply of valuable timber is inexhaustible, nor must we relax our efforts towards such a rational working of the Crown forests as will insure their preservation and improvement.

However, Mr. Southworth's statement (that the yearly growth of trees is so much in excess of the yearly cut) may apply to the general yearly increase in the growth of trees of all kinds, but it must be admitted that in all the forests comparatively easy of access, where pine and spruce used to be abundant, the cut of these two species of trees has been far in excess of their yearly growth, so that the lumbermen are compelled to go farther and farther every year for their supply of timber, and that the quality of what reaches the market is not such as it used to be. The question of interfering with the lumbermen, by limiting the proportion of trees to be felled yearly on each square mile of their limits, presents what appears insurmountable difficulties, for the present at least, in the absence of a regular system of management of our Crown lands, such as prevails in some of the countries of Europe, placed in such different circumstances from ours. However, sooner or later we shall have to open our eyes to the necessity of protecting our forests more effectively than we do now, if we wish to hand to those who will come after us the valuable inheritance which without any exertion on our part we now so fully enjoy, and we ought to be grateful to those who, like Mr. Southworth, give us food for serious thought, and make us feel it our solemn duty to watch over the life of our forests with more care than we have ever done.

Yours truly,

H. G. JOLY DE LOTBINIERE.



DURING the four or five years of business depression through which we have been passing, all classes have been on the lookout for indications of returning prosperity. As a rule they have seen little of an encouraging character, while with some things have been going from bad to worse. I met a man thus situated recently, to whom I propounded the oft-put question: "What is the business outlook?" The answer I received is worthy of preservation. Said he: "Two or three years ago you and I were living on our Faith that the times would improve. Last year we thought we could discern signs of promise and lived on Hope. This year I am living on Charity."

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Although the practise of assisting your friends by endorsing notes has fallen somewhat into disrepute and is not carried on to the extent it was in the days of our forefathers, it is as yet too prevalent. Many an enterprising and industries business man has been forced to seek the forbearance of his creditors as the result of a too liberal use of his signature in an effort to assist his friends, while others have been forced into insolvency. A striking instance of this was pointed out to me by a friend who is closely allied with the lumber business. Speaking of the recent financial disturbances of the trade, he remarked that only three years ago a certain Michigan manufacturer was reputed to be a millionaire. "In addition," he said, "to having his extensive plant and stock all paid for, he held government bonds for \$300,000. But the endorsing of notes for his friends, together with the depression in the lumber industry and depreciation in values, has now necessitated his assignment, and it is reported that creditors will not receive twenty-five cents on the dollar." This is simply one instance of how rapid is the descent when the reins of business are not tightly grasped in your hands. So long as you are willing to sign accommodation notes, you will not be lacking in friends, but when your name is about to suffer financial stigma, how many will come forward with a helping hand.

\* \* \*

The evolution which is taking place in business circles from day to day is not regarded with much significance, but when one looks back even a very few years, many changes are discernable. As I sat in the office of Messrs. Delaplante & Bowden, lumber merchants, Toronto, Mr. Bowden related something of the history of the lumber business in Toronto since the existence of his firm. "Looking back over the sixteen years of our business life in Toronto," he said, "we can see great changes. When we commenced business in 1880 there were about twenty wholesale dealers, but those who are left can be counted on the fingers of your one hand. At that time Christie, Kerr & Co. were the dealers of Toronto, while S. C. Kanady & Co. were also quite prominent. Then there were the Tennants, S. S.

Mutton & Co., Donogh, McCool & Oliver, A. H. Campbell & Co., McArthur Bros., Hillock & Kent, Wm. Latch, Muskoka Mill & Lumber Co., and a number of others, only a few of whom are still with us. Some have gone out of the business entirely, their places in the trade being filled by new dealers, while others have removed to new fields." Mr. Bowden's remarks brought to me a feeling of remorse that the trade had lost so many prominent and honorable dealers, yet I could not but feel reconciled by the knowledge that we have to-day a fair representation of equally good standing.

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Few men are more closely in touch with lumber matters in general than Mr. John Scully, of John Scully & Co., Toronto, who are dealers in timber limits and contractors' supplies. Mr. Scully is also a keen observer, and is possessed with the faculty of sizing up the situation at a glance. As his firm supply a large number of men for the woods each year, I inquired of him what the outlook was for the approaching winter. "I must admit," he said, "that there is nothing very encouraging as yet. We have had only a few inquiries for men, and in view of the large quantity of lumber at present in stock and the limited demand, activity is scarcely expected. We have been established for eighteen years, and this is one of the quietest seasons we have had so far as the lumber business is concerned. I know of several lumbermen who will not operate next winter; they prefer to leave the lumber in the tree rather than add to their already large stock in the yards. However, this is one of the factors which will materially assist in bringing about an improvement." Mr. Scully incidentally drew my attention to a piece of soft coal in his window, which, he said, came from West Virginia. The mine was owned by Canadians, who proposed placing it upon the market here.

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"The advent of the bicycle is said to have proved disastrous to a number of industries, but to the lumber trade it has brought increased business. An authority in the United States says: "It is estimated this year that fully 800,000 wheels have been manufactured. Practically all of these have been equipped with wood rims. Each wood rim requires two and one-half feet board measure, and allowing one-third for waste that would mean a consumption of 6,000,000 feet, almost exclusively rock-elm. This does not include guards and handle-bars. The consumption of 6,000,000 feet of rock elm may not look large in a business which is accustomed to handle hundreds of millions of feet of lumber, but then it must be remembered that only about 15 per cent. of hard maple is available for the purpose, and that such a large amount of one of the minor hardwoods is almost significant. One of the next improvements which is scheduled to make its appearance in 1897 at the cycle show is the wood handle bar. Like the wood rim a year or two ago, it had been ridiculed, but its good points are beginning to be recognized. Wood, principally hickory, perhaps a little ash, is to be used instead of steel tubing, not because of any decrease in weight, for that will remain about the same, but because of the superior elasticity of the wood making the wheels easier to ride and less fatiguing to the hands and arms."

#### RUSSIAN TIMBER RESOURCES.

THE attention of some American lumbermen has been attracted recently by the offer of the Russian government to make contracts for the output of mills along the new Siberian railway and to issue ninety-nine-year leases for timber at a few cents an acre per year, says the Times-Democrat. In view of this, perhaps some facts regarding the forest resources of this great empire may be of interest.

According to Mulhall, the well-known English statistician, Russia has 423,000,000 acres of forest, while the United States has 466,000,000. In our own country, of course, the forest resources are being worked to a far greater extent than are those of Russia. This fact is shown in a general way by the annual product of Russia, which is about 6,200,000 cubic feet, valued at \$200,000,000, while the annual product of the United States is estimated at 9,300,000 cubic feet, valued at \$560,000,000. Hence, taking the forest resources not yet utilized, Russia is by far the most important timber country in the world. The forest area of European Russia is about 37 per cent. of the total area.

When we consider that the next largest timber exporting country in Europe, Sweden, has a forest area of only about 44,000,000 acres, and that the forests of the latter country are much depleted, we realize how great is the forest wealth of the Russian empire, and what an important part she will play in the future of timber supplies when Sweden's export trade shall have diminished largely and when the vast American continent will need all of the timber she grows for home consumption.

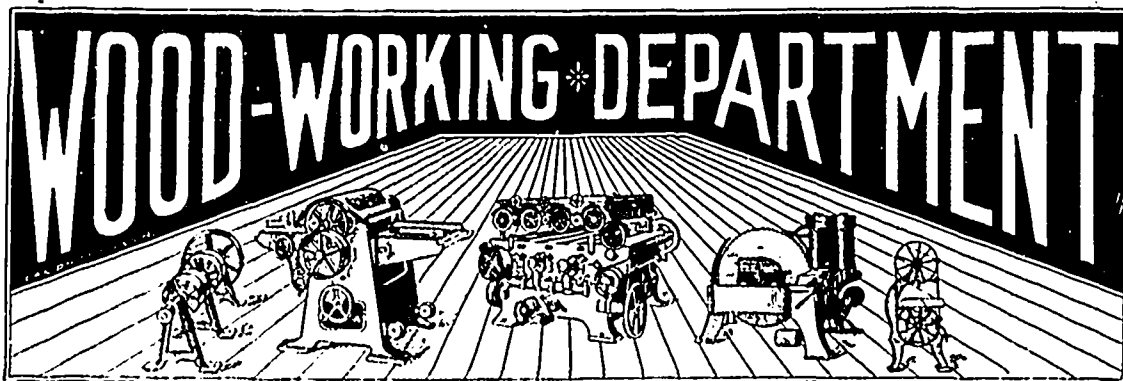
No nation on earth figures so large an annual consumption of lumber per capita as does the United States, averaging 150 cubic feet a year for each inhabitant. Canada shows a consumption of 100 cubic feet, Russia 70 cubic feet, and Great Britain only 14 cubic feet. It is evident that the forests of the United States will not suffice for its home consumption for many more years without importing timber from other sources.

Mulhall gives the crown forest of Russia as 330,000,000 acres in 1860. Timber, the London lumber paper, states in a recent issue that about 300,000,000 acres of Russia's forest lands are state or crown lands, and are an important source of revenue to the imperial exchequer. Wood and grain are Russia's principal exports, the two main products from which she derives her wealth. Thus the government of Archangle alone yields a revenue of \$800,000 a year from its crown forests, while eighty-eight provinces of Russia yield together a revenue of about \$10,000,000 a year.

It is said that the average yield of timber for each 1,000 acres of forest area in Russia is greater than the same in Canada. Russia has a great wealth of water-ways also, while her proximity to the great wood consuming or importing countries, such as Great Britain, France, Germany, Holland, Spain, Belgium, Portugal and Denmark, adds greatly to the demand for her forest products as well as to their value. The only other wood importing countries are the British colonies, such as the Cape of Good Hope, Australia and others.

The Washington Forestry Association has been formed in Seattle for the purpose of preventing forest fires and the protection of the forests.





### CUTTING VENEER.

EXPERIENCE proves that, while the finer and thinner veneers are sliced tangentially from the side of the logs, there are woods that cannot be cut this way, no amount of boiling or steaming rendering it possible to cut them without breaking down the tissues to such an extent as to destroy their surfaces in polishing, while others become discolored from steaming or boiling and, being too hard to cut otherwise, have to be sawed. The fine-toothed, thin-gauge circular with flanged centre is the favorite for cutting all ordinary veneers thicker than thirty to the inch; twenty to the inch is the thickness most commonly used for cabinet work and finishing, but much thinner is used in the case of rare and costly woods, or rare abnormal or accidental figures, as in case of burls. Some woods have to be cut much thicker, being unable to bear handling when too thin. Genuine ebony, the only fine, really jet-black wood known and large enough to be of any use, will not stand saving much below one-fourth of an inch in thickness, owing to its extreme brittleness or want of cohesion, but there are other woods that may be cut as thin as writing paper and still be handled in large sheets. Other woods will lose their fine color on exposure to the atmosphere, especially a smoky one; these are cut only when immediately wanted, and they are kept covered until the finishers can put on a protective coat of some preparation.

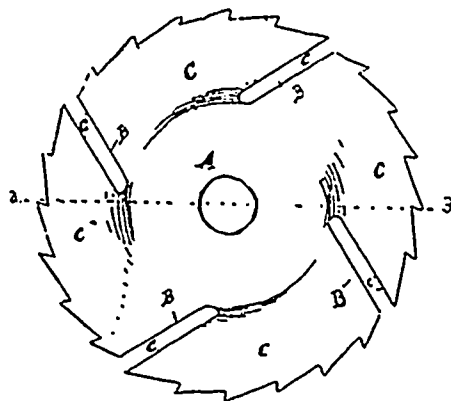
### CEMENT SPLICES IN BELTS.

THE first requisite towards making a good cement splice in a leather belt is a cement which will stick. A good substitute for belt-makers' cement consists of two parts common and one part of isinglass or fish glue. Most well-known belt makers manufacture a form of cement, and each one claims that his cement is the best in the world, etc. Most of these cements are good, and there is very little, if any, choice between them. Most of them may be purchased in quantities to suit, at a price ranging from 60 to 70 cents per pound, and a pound of this cement will go a long way in making up the splices. Scarf the belt to a length equal to the width; in double belts make a long and a short lap, both edges being placed so as to follow the run of the belt. In other words, the fag end of the lap should run with the pulleys, not against them. When the belt is placed wrong end to and the thin edge of the lap goes first to the pulley, the splice is sure to suffer, and frequently will be torn in two by the rolling up of the thin edge of the scarf. Let the short lap be one-quarter of the long lap one whole width in length. These laps had better be planed down with an ordinary carpenter's plane. To do this, the belt may be pegged with ordinary shoe pegs upon a board so

that the end of the belt coincides with the extreme edge or side of the board. The vigorous application of the floor plane soon reduces the end of the belt, and if a good deal of care is taken to keep the scarf of even lengths a good job may be done in a very short time. The scarf being perfected, place a board over the belt, and clamp rods so that the belt may lie upon it. Then apply the cement according to directions, and when the ends of the belt are placed together hammer them lightly, but thoroughly, and if the belt must be had for immediate use drive pegs enough through the leather to hold the splice while the cement is setting. If possible leave the clamps on the belt for one hour or more before starting up. Such a splice should run a year at least, and if there is no stretch to the belt, and the power expected of it is not too great, it may be two or even three years before further attention is required of that belt.

### PATENTS FOR WOOD-WORKING MACHINERY.

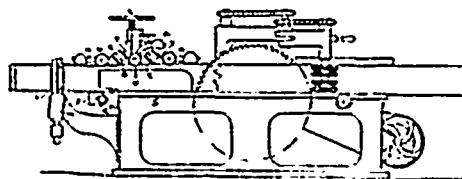
THE following patents of interest to wood-workers have been granted for Canada:



GROOVING SAW.

Patentee: Charles Baar, Grand Rapids, Mich., granted 10th June, 1896; 6 years.

Claim.—A circular grooving saw, having a flat central portion and a series of deep openings extending from its periphery to said central portion, thereby forming toothed segments, detached from each other at their adjacent ends, said segments being turned or twisted out of the plane of the central portion of the saw, and formed with a series of cutting teeth, and turned or twisted in opposite directions, substantially as described.

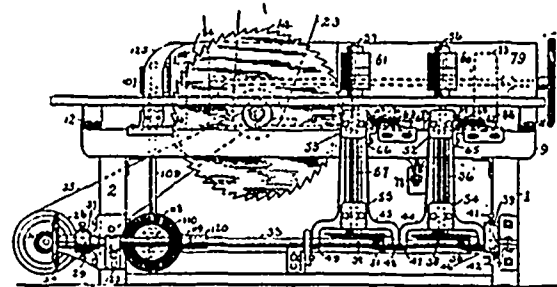


WOOD-WORKING MACHINE.

Patentee: William Tickle, Liverpool, Eng., granted 7th May, 1896; 6 years.

Claim. In a saw frame or bench providing in

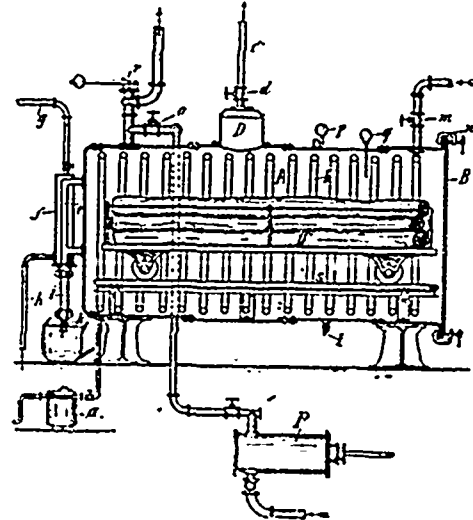
combination therewith a series of cutters at the back of the saw or of the saw teeth, whereby boards are not merely sawn from the timber, but can be either on top or bottom or both tongued, grooved, moulded, planed, rabbeted, or the burred or frayed edges smoothed off in one operation, substantially as described. The combination with a saw frame, a cutter arranged at one side or both sides of the board or plank being cut, whereby at the same time that the boards are being sawn, they can be planed or moulded as desired. In combination with a saw bench, one or more cutters C, C', and a side cutter X, substantially as described. In combination with a saw bench, the cutters C and weighted rolls U, substantially as and for the purpose described.



SLAB-SAWING MACHINE.

Patentee: A. W. Goodell, Philadelphia, Pa., granted 22nd June, 1896; 6 years.

Claim. In a slab-sawing machine, a saw attached thereto, a movable fence thereon, means to move the fence simultaneously at each end from a single operative point, upright feed-rolls therefor seated upon a rectangular shaft, the rolls being in longitudinal and removable sections, and carried in a yoke upon a shaft normally upright but having means for side adjustment. In a saw, a table, a frame, a movable fence and a driven delivery-roll thereto attached, feed shafts, feed-roll shafts swingingly attached thereto, means to press the feed-rolls automatically and by hand against the material being operated upon, and stops secured to the framing to limit the movement of the equalizing lever, substantially as specified.



PROCESS OF PRESERVING TIMBER.

Patentee: Frederick M. Grumbacher, Berlin, Germany, granted 23rd June, 1896; 6 years.

Claim.—The hereinbefore described process for preserving and hardening wood, consisting in first subjecting the wood to a preliminary drying at a comparatively low temperature and then to complete preserving and hardening under pressure at a higher temperature, substantially as hereinbefore described.



THE NEWS.

—The Portneuf Pulp Mill Co., Portneuf, Que., has been dissolved.

—P. Hamm has started in the lumber business at Rosefeld, Man.

—Mr. Edwards, of Colborne, has started a cooper shop at Port Hope.

—Joseph G. Halfpenny's saw mill, Beaver Creek, B. C., was recently burned.

James McKinlay is erecting a spool factory at Black River, Kent County, N. B.

—A. J. Smith, lumber merchant, Woodville, Ont., has opened a business at Thornbury.

—James McKinlay, of Quebec, will operate a spool factory at Kouchibouguac, N. B.

—J. McMartin has purchased an interest in the Klemes & Curry saw mill at Sandon, B. C.

—Edward Parsons, of Sand Point, will cut 10,000 ft. of logs for the Pembroke Lumber Co.

—J. T. Simpson, of Moose Jaw, N. W. T., is putting a saw mill in operation at that place.

D. A. Jonah, of Petitcodiac, N. B., has made extensive improvements to his furniture factory.

—H. A. Manwaring, of Birtle, Man., has disposed of his lumber mill to Mr. Peden, of Rosssburn.

—At Nakusp, B. C., there is a large saw mill owned by Genellie & Co. Mr. J. E. Poupre is manager.

—An electric light plant has been placed in the saw mill of Mickle, Dymont & Son, at Severn, Ont.

—F. W. Upham, of Chicago, recently shipped fifteen car loads of cottonwood for Holland and Germany.

—E. A. Simpson & Co., lumber and planing mill, Moose Jaw, N. W. T., have sold out their lumber stock to H. McDougall.

—The Kootenay Lumber Co. is erecting a saw mill at Lardeau, B. C. The mill will have a capacity of 20,000 feet per day.

—Toner & Gregory's mill at Collingwood, Ont., was recently closed down for a couple of weeks owing to a scarcity of logs. A raft went to pieces just as it was nearing the port.

—The water power and property of the Buckingham Pulp Co., at Buckingham, Que., has been purchased by Walter Williams for \$15,000. The pulp mills were destroyed by fire a few years ago.

—The Menominee Iron Works, of Menominee, Mich., are said to have received a request through the Japanese consul at Tacoma to bid on the machinery for establishing a complete modern saw mill in Japan.

—A new match manufacturing concern has been established at Buckingham, Que., to be known as the McLaren Match Co. The company will be composed of the five sons of the late James McLaren, lumberman.

—It is stated that the site of the saw mills of Ross Bros., at Buckingham, Que., will be occupied in the near future by large pulp and paper mills, while a steam saw mill will be erected at some point further north.

An agreement has been entered into between the town of Midland, Ont., and the Manitou Wood and Pulp Co., by which the company will erect a pulp mill in consideration of tax exemption and other privileges granted by the town.

—An American syndicate will, it is said, purchase a site at Three Rivers, Que., on which to erect large pulp and paper mills, the products of which will be exported to Europe. The concern will have a capitalization of \$2,000,000.

—J. O. Gilbert & Son, Bishop's Crossing, Que., are placing a new 100 h.p. engine and boiler in their water mill, six miles from that place, preparatory to cutting about two million feet of lumber for Cross & Ewing the coming winter.

—Alex. Ross, of Wingham, has in his possession a chip of oak taken from a log that was cut down over 65 years ago. The oak was felled when logging a roadway in the vicinity of Brucefield in 1831, and lay on the roadside until three years ago.

—Moses Knight, of Burk's Falls, is seeking to recover from several insurance companies and Mr. J. C. Thomson, of Hamilton, the sum of \$6,000, the amount of insurance on some lumber destroyed by fire in the yard of the Katrine Lumber Co. at Katrine, Ont.

—Mr. Burrill, of the Drummond Lumber Co., Forest Dale, Que., has invented an ingenious device for lighting a country road. Having to travel through dark forest roads, he constructed a storage battery in his wagon, and ran fine flexible wires along the reins to the head of each horse, where an incandescent light of small candle power was fixed to the head piece of the bridle.

—Incorporation has been announced of the Rat Portage Lumber Co., composed of D. C. Cameron, Walter Ross, William R. Dick, Hugh W. Kennedy and Matthew Brown, of Rat Portage, and J. A. McRae, of Niagara Falls. This is a reorganization of the Ontario & Western Lumber Co., of Rat Portage, which formerly worked under a Dominion charter, but has now been organized under Provincial rights.

—Alex. McEwen, of Calumet, Que., has patented an invention for the floating of hardwood timber down the rough streams from the lumber districts. Heretofore it has been the practise to fasten with withes a hard and softwood log together and so start them down the stream. Mr. McEwan's invention consists of bolting the light and heavy logs together, a light iron bolt with a coil spring at one end being used. The main advantage is in the spring, which, when the logs strike a rock or other obstacle, lessens the jar. The system is said to work satisfactorily and to be less expensive than the old-fashioned method.

CASUALTIES.

—Robt. Wilson, an employe in Cushing's mill at Union Point, N. B., had three fingers taken off one of his hands by a lifting saw.

—Duncan Hayes, employed in the McLaren mills at Buckingham, was seriously injured recently. While shutting off the water to stop the mill, the crank struck him in the face, horribly lacerating it.

—An employe in J. R. Booth's mill at Ottawa, named Emile Bedard, while oiling the machinery in the lower portion of the mill, is supposed to have fallen into one of tail races and been swept into the falls.

—A man named Beauplant was seriously injured in Booth's mill at Ottawa. He was caught in the shafting by the arms and carried between the machinery and a beam, a width of not more than eight inches. His clothing was completely torn off.

—James Mackey, a lumberman of Arnprior, 56 years of age, while in a state of somnambulism, walked out of a third story window at the Buller House, Ottawa, and received injuries which resulted in his death. Deceased had just returned from taking a raft of square timber to Quebec.

—A. W. Gillingham's saw mill at the North Forks of the Old Man's River, 60 miles from MacLeod, N. W. T., was recently the scene of a fatal accident. A boiler exploded, killing three men, named Smith, May and Edsall, and injuring Messrs. Gillingham and Nelson. The mill was completely wrecked.

PERSONAL.

Mr. J. B. Klock, M. P., is spending a few weeks at Le Quinze.

Mr. John Yuill has resigned his position with the Pembroke Lumber Co., and will remove to Calabogie.

Mr. Joseph Shirley, a lumber culler in the employ of J. R. Booth, Ottawa, died from the effects of the excessive heat.

Ald. Scott, of the Georgian Bay Lumber Company, returned a fortnight ago from his European trip, much benefited by the holiday.

Mr. Beland, of the firm of Beland & Martineau, lumber dealers, Quebec, has been appointed to the position of clerk of the Federal public works for the city.

Mr. Charles H. Day, private secretary of Mr. E. W. Rathbun, of the Rathbun Company, Deseronto, died in the general hospital at Kingston on the 17th August from an attack of typhoid fever.

Sympathy is expressed with Mr. Donald Fraser, of the lumber firm of Donald Fraser & Sons, Fredericton, N. B., in the death of his wife, which took place on the 4th of August. Deceased was 54 years of age.

Mr. J. H. Brumwell, of Bridgenorth, Ont., gave THE LUMBERMAN a pleasant call last week on his return from a visit to Buffalo. Mr. Brumwell operates a saw mill in Peterboro' county, and reports a fair trade. He states that timber in his locality is becoming scarce.

TRADE NOTES.

A. A. Benson, the maritime province representative of the Waterous Engine Works Co., has returned recently from a business trip through Nova Scotia.

The Waterous Company, of Brantford, shipped last month a large portable saw mill to Australia which weighed 80,000 lbs., with 72" lower and 40" upper, "Hoe" chisel tooth saw.

H. Murphy, of Ottawa, recently shipped a complete friction feed to A. Lumsden, for his saw mill on the Upper Ottawa, and a complete outfit, including engine, boiler, and other machinery, for Gehan Bros.' mill at Bearbrook, Ont.

The William Hamilton Manufacturing Co., of Peterboro', are manufacturing eighteen sets of gearings for the Sault Ste. Marie Pulp & Paper Co. The same company are also building a complete saw mill for British Columbia, and one for Mania, N. B.

The following is a copy of a letter received by the Emerson Company, which speaks for itself:

CHARLESTON, W. VA., May 27th, 1896.

THE EMERSON CO., Baltimore, Md.

GENTLEMEN,—We herewith hand you settlement in full for the 100 ft. "Automatic Compression" dry kiln which we purchased from you under a guarantee that it would dry 50,000 ft. per week of oak lumber in a manner satisfactory to us. The lumber, as you know, is used by us in the manufacture of the furniture, and the requirements are very exacting. After a test of the kiln we find that it comes fully up to what you promised in the quality of the drying, and in quantity of output it far exceeds your guaranteed capacity. The basis of the contract we made with you was for one inch lumber (oak), and it comes from the kiln in an elegant condition and bone dry. We are sure we can dry fully twenty thousand feet per week more than you guaranteed. We have also taken up some oak, six quarters thick, which was in the kiln the same length of time as the one inch, and it was bone dry and uninjured; also some half-inch quarter sawn oak, green from the saw, with the same results. We have dried poplar squares, 5x5, and also 2 inch poplar plank, both coming out absolutely perfect, being neither warped, checked or case hardened. The kiln is economical in the use of steam and the equipment is very complete and of the highest order, just as you promised it would be. We have been using metal side condensing kilns and have had a great deal of trouble in getting dry lumber, although we had three of these kilns. It took them from 18 to 25 days to dry the same lumber that your kiln dries in a week, and the lumber from your kiln works splendidly in our machines, not being case hardened in the least. We cheerfully accept the kiln, and are satisfied that your system is the only one suitable for drying hardwoods, and are fully convinced that the "Automatic Compression" system is "the thing."

Yours very truly,

ROY FURNITURE CO., by J. C. Roy, Pres.

PUBLICATIONS.

Cassier's Magazine for September contains, among other valuable engineering articles, the following: "Milling Machine Practice," by H. B. Binsse; "When it is Economical to Use a Condenser," by Wm. H. Wightman; "The Steam Turbine," by Prof. John H. Barr; "Filtering Water for Steam Boilers," by Wm. H. Odell.

One of the neatest catalogues which has reached our desk is that of the Emerson Company, of Baltimore, Md., descriptive of their well-known automatic "Compression" dry-kilns. It is bound in a handsome morocco cover, and contains about one hundred pages of nicely printed letterpress, with numerous illustrations, together with testimonials from customers using the kilns.

We have received a pamphlet containing a copy of the act passed on the 12th of January, 1895, establishing the Laurentides National Park in Quebec, also full information concerning the management of the same. The park was set apart by the local legislature for the preservation of the forest, fish and game, is 2,531 square miles in size, and is situated in the counties of Montmorency, Quebec and Charlevoix.

Owing to the increasing attention being directed to British Columbia and the rapidly growing interest in its mineral, forest, and other resources, Mr. R. E. Gosnell, Librarian of the Legislative Assembly and Secretary of the Bureau of Statistics, has decided to issue a Year-Book, which will contain statistical information of much value to those desirous of being informed concerning the province. It will contain concise information covering the whole period since confederation. The size will be of ordinary octavo, containing between 300 and 400 pages of closely-printed matter. The price will probably be \$1.50. The work is now in course of preparation.

## OTTAWA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

Many of the lumbermen in the Ottawa Valley have already dispatched men to the woods, and in all probability the winter's cut will be an average one. Operators have been encouraged by the strong position of the British market both with respect to deals and thin lumber.

Mr. Brisbois, foreman for the Hawkesbury Lumber Company, has taken about fifty men to the Des Moine district, and Wm. Mason & Sons have sent up the same number to their limits. Buell, Hurdman & Co. propose putting in seven camps, two on the Quinze river and five at Lake Ostoboing. Mr. John Ryan, agent for J. R. Booth, has taken a large corps to the Temiscamingue limits. The Shepherd & Morse Co. and the E. B. Eddy Co. have also sent gangs away. Mr. Thomas Carpenter has dispatched two gangs to McLaughlin Bros.' limits on the Winawa in charge of Mr. William Calder, the popular clerk. Last winter the McLaughlins had five camps and nearly three hundred men employed.

By the destruction by fire of Ross Bros.' mills at Buckingham about 150 men are thrown out of employment. The mills were the oldest in the Ottawa Valley, having been first built about seventy years ago. This is the third time they have suffered from fire, the last one being about 40 years ago. It is proposed to erect a temporary structure at present, and during the coming winter a permanent building will be constructed.

Mr. Monte Gendron, of Ottawa, has been appointed manager for the David Moore Lumber Co.'s estate at Garden River, Ont.

An unusually large and fine raft of square timber arrived at the foot of Parliament Hill a fortnight ago, where it was banded in charge of Ephraim Lalonde, pilot. It comprised 257 cribs, and was taken out of the Fraser river at Coulonge.

The W. C. Edwards Co. are erecting an immense shed in their lumberyards in New Edinburgh for storing seasoned lumber.

Wm. Mason & Sons are opening a retail lumber yard in Hintonburg.

Bailey's mills at Aylmer are running night and day in order to get the logs which they have on hand cut up.

J. M. McLaurin, of East Templeton, who for many years has carried on an extensive business in connection with lumbering and mining operations, is about to dispose of his property and stock to accept a situation with the well-known lumber firm of Skillings, Whitney & Barnes, Burlington, Vt.

OTTAWA, Ont., August 24, 1896.

## BRITISH COLUMBIA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

The Pacific Coast Lumber Co. review the situation in the province as follows: "Trade for the past two months has been very slow and unsatisfactory, still the first half year shows considerable improvement over the same period last year. Prices are not what they should be by a good deal. So far as the shingle trade is concerned, it is generally conceded here that until good, well-made 6 by 2 shingles will bring about \$1.40 at the mills the Washington mills may have the trade. After they have given away all their accessible timber we will be glad to have them come up here and buy up British Columbia timber at big prices and make money out of it, the same as the Michigan men did in the eastern part of Canada when their timber ran out."

The Victoria Lumber & Manufacturing Co.'s mill at Chemainus is running to its full capacity day and night. A large part of this season's product is destined for China. This mill is one of the finest in the province, the equipment being of the most modern character. The capacity is about 350,000 feet per day. A complete electric light plant has recently been installed, including 500 incandescent lights and a number of 300 moguls placed on the wharves to permit of loading the ship.

From present indications it will not be all smooth sailing for the British Columbia lumber combine. The members in this province have, it is said, threatened to secede from the organization on January 1st next, at which date the membership is to determine the future existence of the trust, and if sufficiently large, its permanent organization for five years is to be effected. The Chemainus mill, owned by eastern capitalists, is securing the bulk of the foreign trade, and is taxed to its full capacity to fill orders, while the combination mills have only few orders. This is accounted for to some extent by the fact that foreign lumber dealers have a natural aversion for trusts. It is also stated that several Puget Sound manufacturers entertain similar views with respect to withdrawal from the trust, and future developments are awaited with interest.

## COAST CHIPS.

The Sayward Mill & Timber Co., Ltd., Victoria, B. C., is winding up its business.

McNair Bros' shingle mill, Hastings, has again resumed operations after the recent fire.

A. H. Harmon has been appointed liquidator of the Burrard Inlet Red Cedar Lumber Co., of Port Moody.

NEW WESTMINSTER, B. C., August 19, 1896.

## NEW BRUNSWICK LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

The Dominion line of steamers will give a fortnightly service between St. John and Glasgow next winter. Mr. Robert Reford was here some days ago in that company's interest. From present indications the transatlantic business next winter will be conducted on a much more extensive scale than it was last year, and no industry will profit to a greater extent than that of lumber.

The shingle mills at Restigouche are running to their full capacity day and night. Some of the owners are of the opinion that... duty will be again placed upon shingles by the American government.

Hon. A. T. Dunn, the new surveyor, has been elected to the provincial government by acclamation. It is believed that he will prove to have strong capabilities for the position for which he has been chosen. He has recently returned from a trip up north, where he made the acquaintance of the prominent lumbermen.

Mr. S. H. White, of the firm of S. H. White & Co., Sussex, who have purchased the well-known mill and lumber property of the Alma Lumber Company in Albert county, recently paid a visit of inspection to the mills and other buildings. Mr. White was accompanied by W. H. Wallace, of Wallace Bros., builders, and it is probable that extensive alterations and improvements will be made preparatory to commencing the winter's operations.

## BITS OF LUMBER.

Swim Bros. have completed their saw mill at Doaktown.

The new Purves mill at Carleton is operating day and night.

The Collins mill at Woodstock has been rebuilt by G. H. Collins.

Some Maine lumber manufacturers have been cruising the wood lands of Messrs. Rourke, at St. Martins, with a view, it is said, of purchasing the property. The cut of Rourke Bros. this season will be about three and a half millions.

St. JOHN, N. B., August 23, 1896.

## WOOD-PULP INDUSTRY.

Colonel Bailey, Lecturer in Forestry in the University of Edinburgh, Scotland, writes as follows on the subject of the wood-pulp industry:—

"For the manufacture of wood pulp, poles of from 4in. to 8in. or 12in. in diameter, or even larger sizes are used. They are treated in either of two ways. Under the mechanical process the poles are cut into billets, and ground into pulp by a rotating grindstone, with a continuous flow of water; under the chemical process they are converted into cellulose by the action of sulphurous acid or of caustic soda, or in some other way. The mechanical is the cheaper method. The following species of trees are used, viz., spruce, aspen and other poplars, lime, beech, birch.

"Before the manufacturing process is commenced, the billets are barked and all knots and unsound defects are bored out of them. The extra work involved in doing this adds considerably to the cost of production; and if knots and other defects are numerous, their removal greatly reduces the bulk of wood-substance available for making pulp. Manufacturers, therefore, prefer to buy straight-grown, clean-stemmed poles; and if they could obtain a sufficient supply of such raw material at a reasonable price in this country, it is hardly conceivable that they would insist on importing it. In a commercial undertaking the manufacturer will buy in the best market, and will feel no prejudice against 'home-grown' wood if it will answer his purpose as well, and if it be cheaper or as cheap as the wood he can obtain from abroad.

"Artificial silk has been spun from cellulose, and ropes have been made from spruce wood by a process which separates out the wood fibres, after which they are twisted together. The same class of wood is required for these industries as for the manufacture of wood pulp.

"Such wood cannot be produced under the system of wide planting and severe early thinning which is so generally followed in this country. To grow poles suitable for the manufacture of wood pulp or wood silk, the plant should be

put in not more than 3in. or 3½in. apart, and the wood should not be thinned. The advantage derivable from thus growing the trees are that the stems will be tall and straight, that the substance of the wood will be of the best kind for the purpose, and that the side branches will die young; the stems will be comparatively free from large knots and unsound defects. But in addition to these advantages, the number of stems to the acre will largely exceed that which would be grown under the system of wide planting and heavy thinning; so that not only will the material produced be of a quality more suitable to the purpose in view, but the crop will be a much heavier one than could be grown under that system.

"A dense crop of this kind, realised every 15 to 25 years, should pay extremely well, and it would be exposed to very much less risk than if it had to stand long enough to produce timber for sawing; while, if any accident did befall it, the loss would not be so great as if the crop represented the accumulation of 50 to 100 years' growth."

## KIND WORDS.

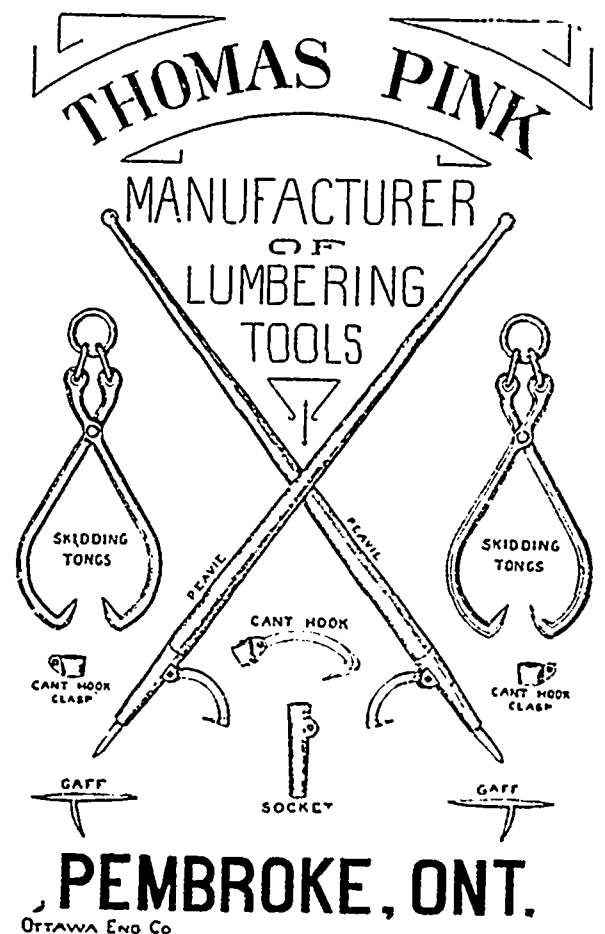
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"The LUMBERMAN comes regularly, and I would not like to be without it."—J. Krupp, Metcalfe, Ont.

"I consider the LUMBERMAN indispensable to the trade."—R. Carrol, Clarksburg, Ont.

The annual value of timber imports into Great Britain and Ireland is nearly £18,000,000 sterling, besides a further £8,000,000 a year for "minor forest produce." In addition to these amounts, the import of wood pulp for the manufacture of paper represents an annual value of nearly £1,500,000.

An oak tree which stands in the middle of the high road leading from Leamington to Warwick is said to mark the centre of England. How long ago it was planted is not known, except by computation from its girth, which is about 12 feet, and shows the tree to be between three and four hundred years old. There is no geometrical centre of England, but tradition has warranty for the importance it gives to this ancient oak. The bole would be cut from Berwick-on-Tweed to Southampton, Carlisle to Selsea Bill, Birkenhead to Eastbourne, Holyhead to Deal, St. David's Head to Lowestoft, Land's End to Ingoldmell's Point, Devonport to Saltfleet, Bridport to Hornsea, Portland Bill to Scarborough, Bournemouth to Saltburn, the Needles to Sunderland, Brighton to Lytham, Hastings to the mouth of the Dee, Greenwich to Abergele, Hythe to Conway, Dovercourt to Bangor, and Harwich to Aberdovey. These are all places on or near the coast, and they do not exhaust the list.



**CUTTING MAHOGANY IN HONDURAS.**

While the camp is being made the "hunter" is off exploring. The precious swietenia mahogani does not grow in clumps and groves like our pine and walnut, but each monarch stands alone in solitary state, amidst a dense growth of other huge trees, its trunk concealed by a wild tangle of vines, orchids and underbrush, requiring the closest attention of the experienced woodsman to detect it. In a tropical wilderness where the trees are so thick that one can hardly force his way between them, the whole hung with an impenetrable mass of verdure as with a curtain, their mingled tops a solid wall which makes eternal twilight below, and every trunk twined round and round with creepers—it is not an easy matter to distinguish species. The hunter climbs the tallest tree that he can find comparatively clear, and from its top his practised eyes detect the foliage of the coveted mahogany. He then counts the trees in line, notes carefully the direction, distance and every landmark, slides down from his leafy observatory and proceeds to blaze a trail to his "find." This done he marks the trees with his machete and returns to camp.

Each man in a company is assigned his particular work—some to fell the trees, others to cut truck-roads through the jungle, others to collect and haul the wood and water, etc. The cutters turn out from camp as soon as it is light enough to see which in the tall, dense woods means a much later hour than in the regions where the sun has a better chance to show itself; and generally by noon tree cutting for the day is finished. All work is done by the task system, which is said to be the only way of handling native labor; that is, one man's "stent" is to cut two trees, from 8 to 10 feet in circumference; two men are given three large trees to bring down, or four men are detailed to lay low some forest giant, perhaps 25 feet in circumference.

To the tenderfoot that seems a task impossible of accomplishment. Owing to its enormous buttresses the trunk can not be cut near the ground, so the axemen are obliged to rig up a platform, 10, 15, 20 or as many feet high as the buttress extends. These platforms are called "barbecues," though how that word applies nobody but an Englishman who prides himself on correct use of the language can say. The "barbecue" is made of slim poles, one on

each side of the tree, on supports, and two other poles laid across them; also, one on each side of the tree. The axman mounts this platform, with one foot on each pole, two men to a tree, on opposite sides, and rapidly fell the tree. It is a marvel how men can stand on these slender poles and chop down enormous trees; but they do it, and quickly, too. In an incredibly short time the stately monarch of centuries totters and falls, crashing its way through the crowd of smaller trees. The trunks and branches are then squared, and are ready for transportation. In felling a valuable tree every precaution is taken against breaking or splitting it, and thus spoiling the lumber. This manner of cutting on a platform seems very wasteful, as it leaves in the stump an average of 400 feet of the best part of the tree, so far as beauty of grain is concerned to say nothing of the gnarled and twisted roots, which bear the same proportionate additional value that our walnut roots do to the rest of the tree; but no better way has yet been devised. Three hundred trees are considered a good season's work for one camp, each tree yielding 2,000 feet of timber, on a modest estimate of the average. Quebec Chronicle.

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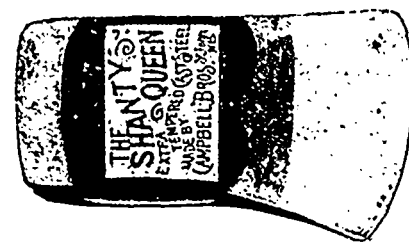
Japan tea, good style and cup quality @..... 11c. lb.	Prunes, large bright fruit in cases 4 1/2c. lb.
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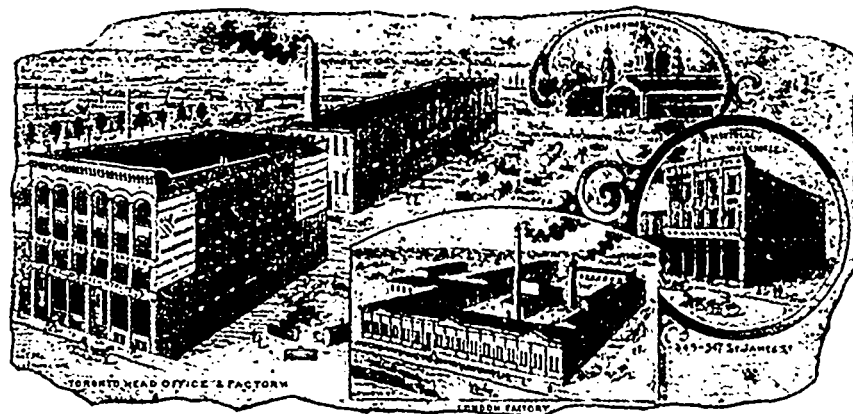
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**MAKING LUMBER IN JAPAN.**

A writer from Japan says: Lumber is worth about twice as much in Japan as it is in the United States and Canada. Common lumber, which is sold for \$10 and \$12 a 1,000 feet, will bring 40 yen—that is, \$20 gold—in Japan. This is due to the scarcity of timber and the great labor required to work it up by their primitive processes. They have been cutting timber off their mountains in Japan for 2,500 years, and although the forests have been reproduced again and again during that period, it is difficult and expensive to get logs down from the mountain sides in the absence of the necessary facilities. The Japs usually go into the woods and cut one log at a time, which they haul out

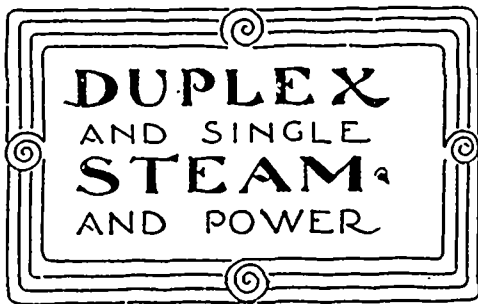
by hand or by oxen for many miles. When streams are convenient they use them; but they have no saw mills in the mountains, although there is an abundance of water power everywhere. I understand, continues the writer, they have tried them, but have not been successful. They cut all their lumber by hand with a wide and thin saw during a time of the year when they have nothing else to do, and each man that is engaged in business that requires lumber usually buys his own logs and cuts them up himself at odd times. Women and men both work at it. One man or woman will work on the top of the log while another works underneath, but usually not with the same saw. I have seen four or five men working on the same log, each sawing off his own board. They raise

the log at an incline of 45°, with one end on the ground and a rest about the middle, and when the work is down to the rest they tie it up and begin at the other end again. All the lumber is dressed by hand. I have found but one planing mill in the country; that is in Yokohama. It employs about 150 hands and, curiously enough, its entire product is made into boxes and shipped to India. It does no business in the local market. The machinery is all from Boston. The manager tells me that the company is thinking of enlarging the plant by adding a sash factory and machinery for making blinds and doors, also for the India market. I do not know why they do not sell their goods in the local market, but I presume there is a good reason for it; perhaps they get better prices for it in India.

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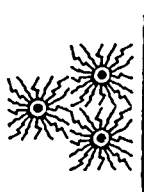


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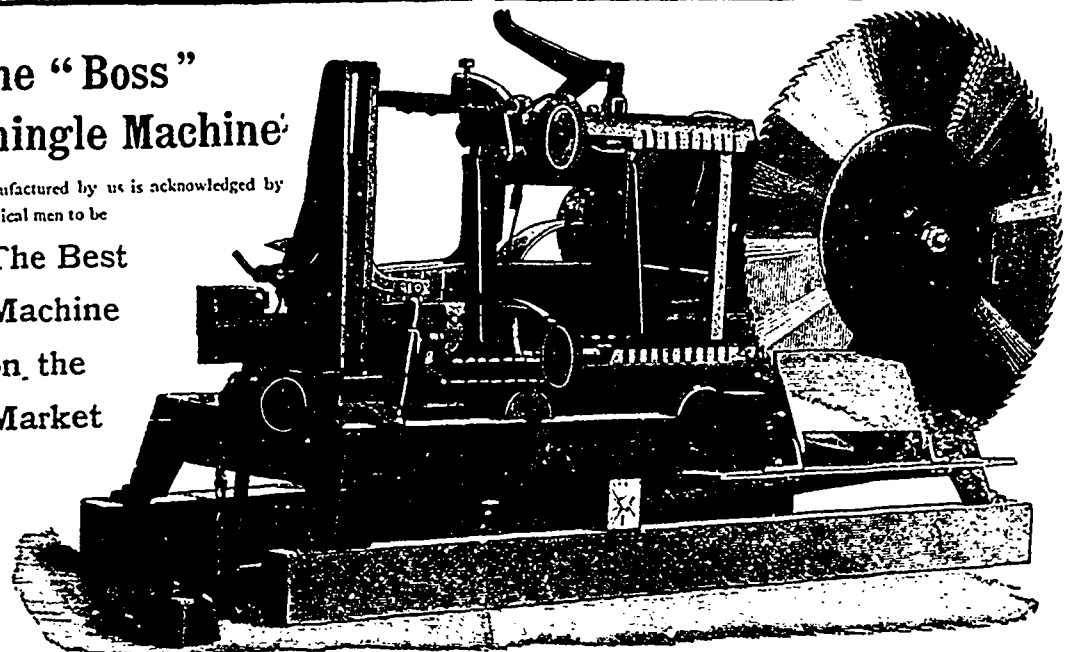
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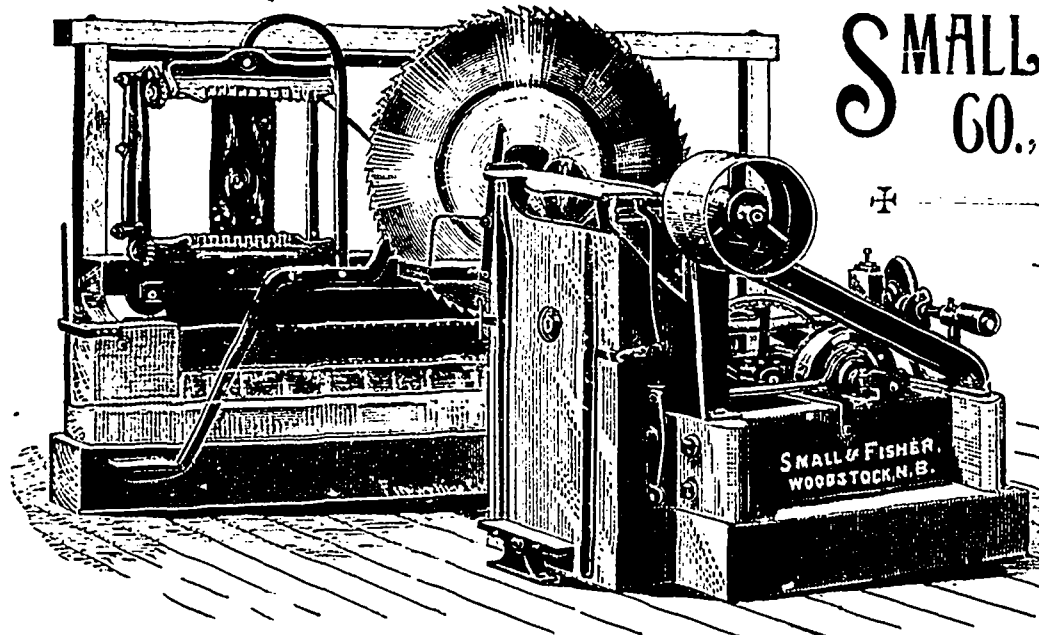
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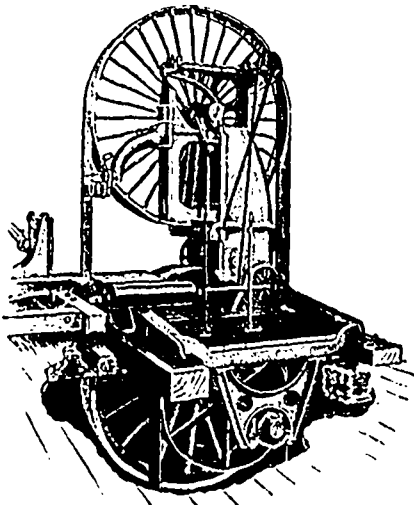
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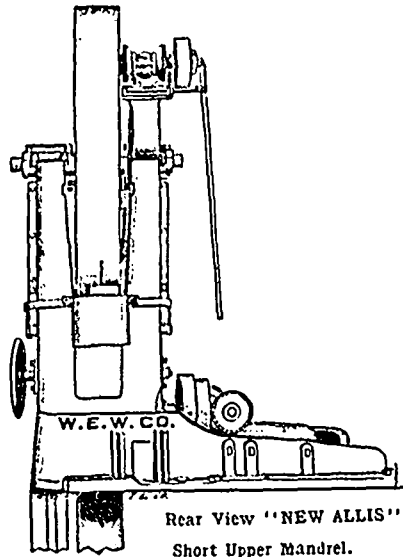


# Lumber Machinery

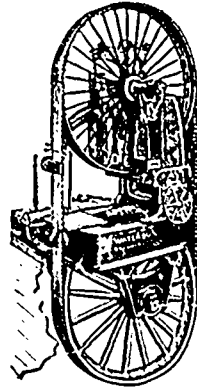
## The Most Modern



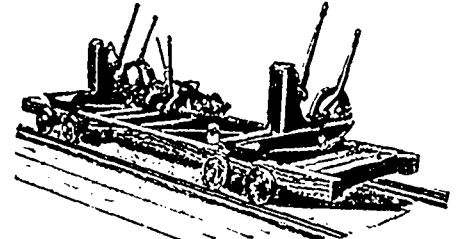
Right Hand Front View.  
"NEW ALLIS"  
It surpasses all others in many points.



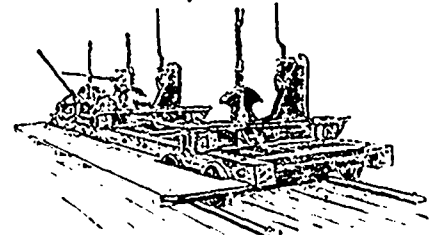
Rear View "NEW ALLIS"  
W.E.W.CO.  
Short Upper Mandrel.  
Wheel Centrally Hung.  
Lower Wheel Inside Frame.



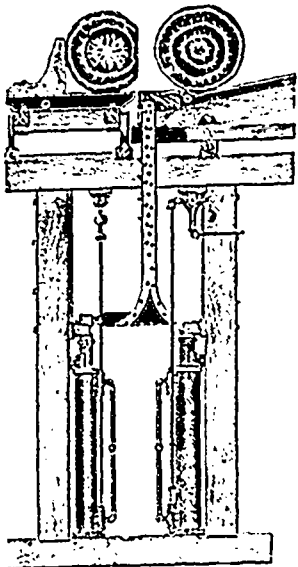
34 NEW ALLIS BANDS  
Sold in Canada since  
Jan., 1894.



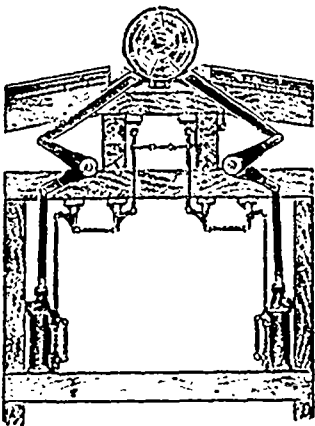
Reliance 2-Block Carriage.



Unbreakable Steel Girder Carriage.

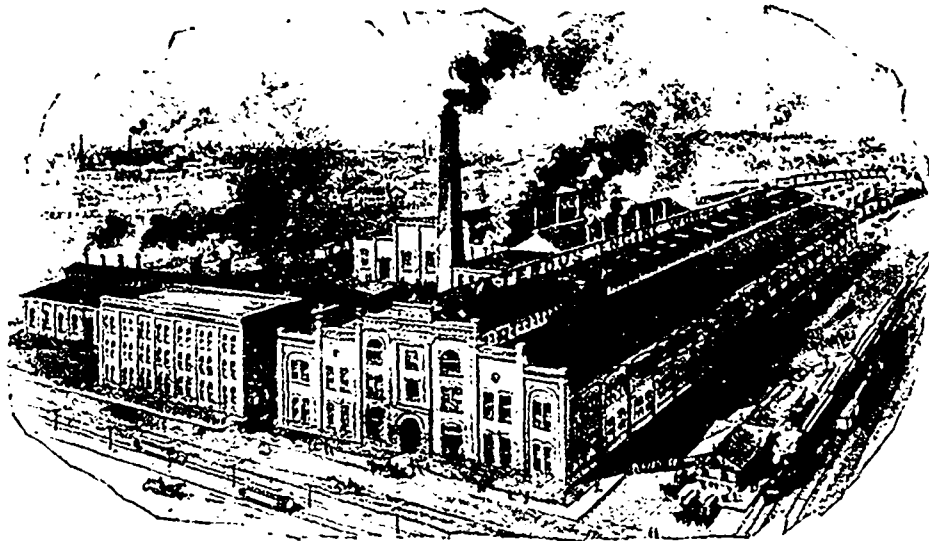


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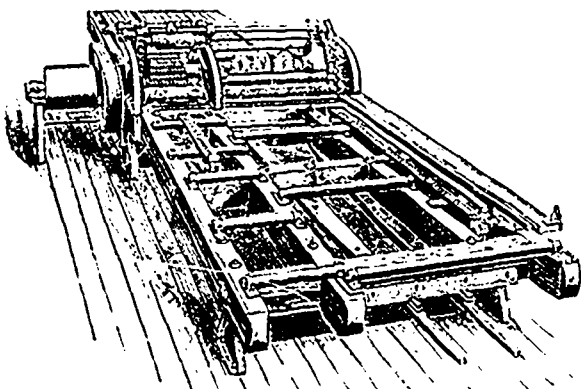
# 1844

INCORPORATED

# 1874

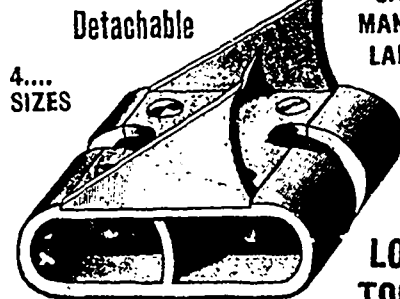
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4....  
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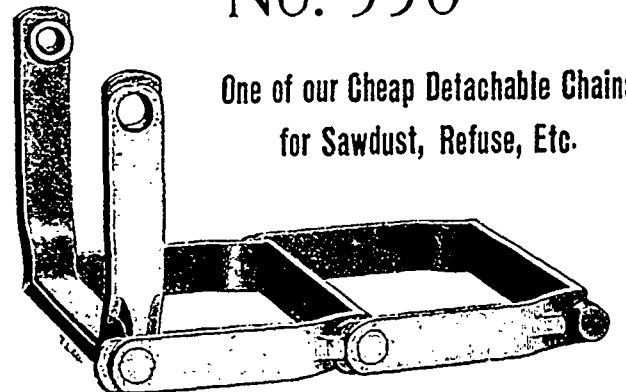
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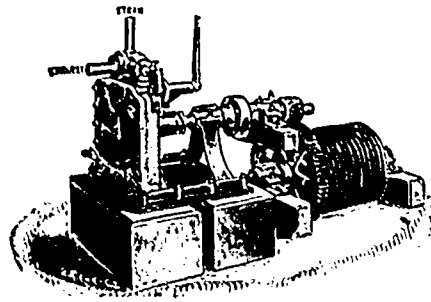
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C. H. MORTIMER, Publisher  
1895

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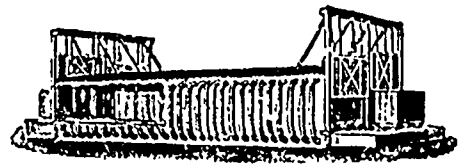
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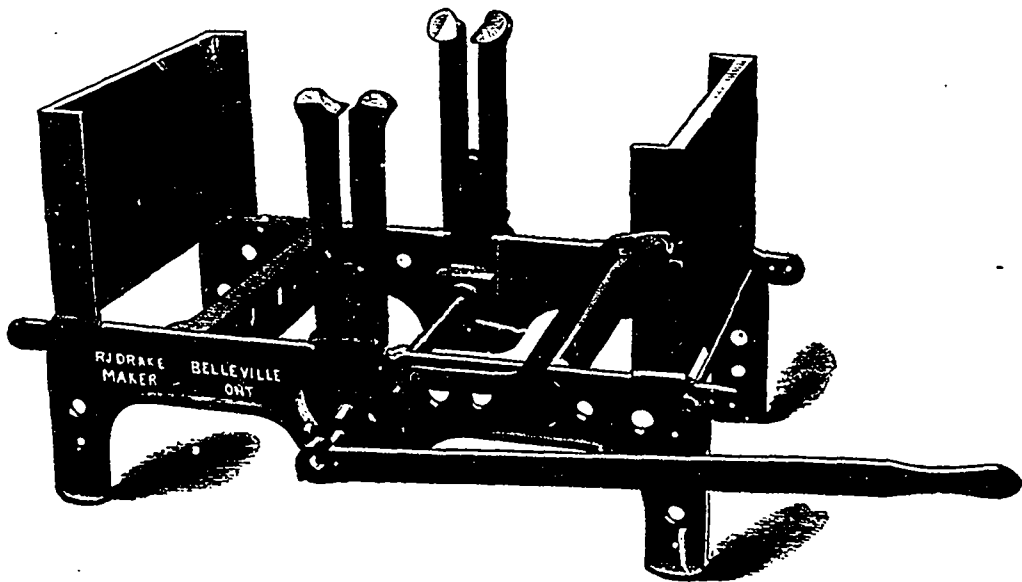
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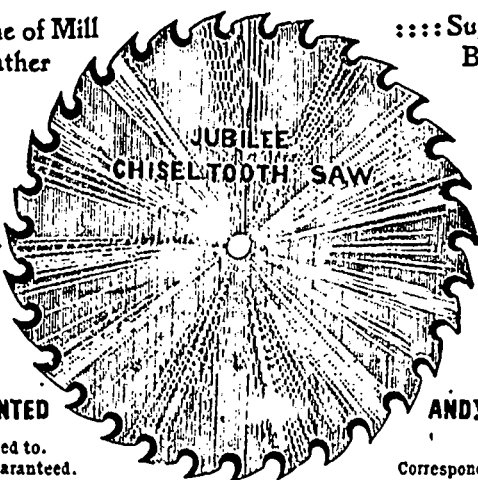
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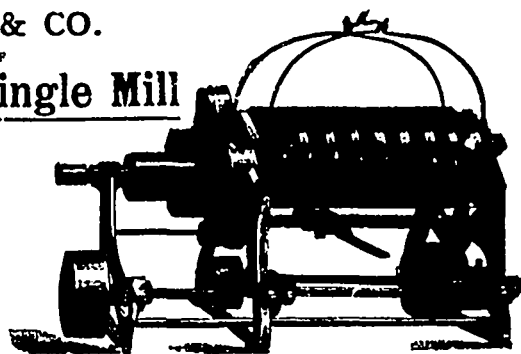
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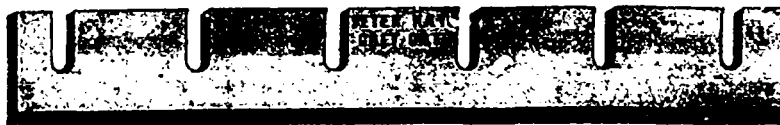
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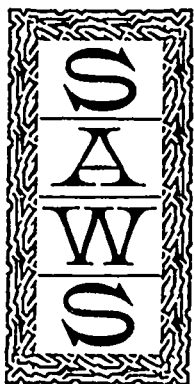
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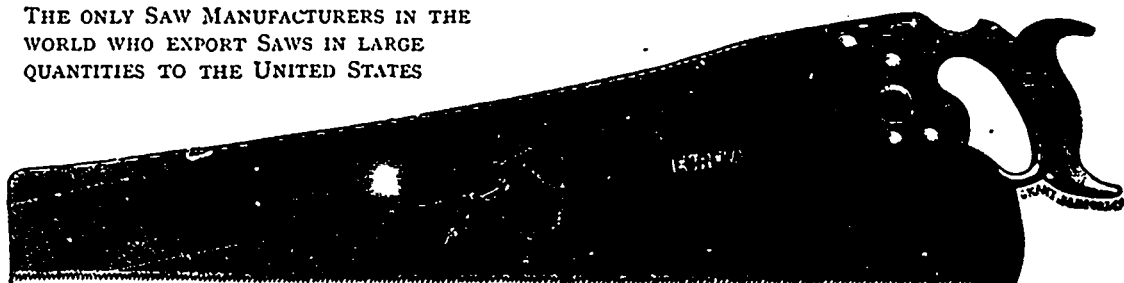


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