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THE CANADA LUMBERMAN

Wood-Workers', Manufacturers' and Millers' Gazette

XII. | TORONTO, CANADA, AUGUST, 1901 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

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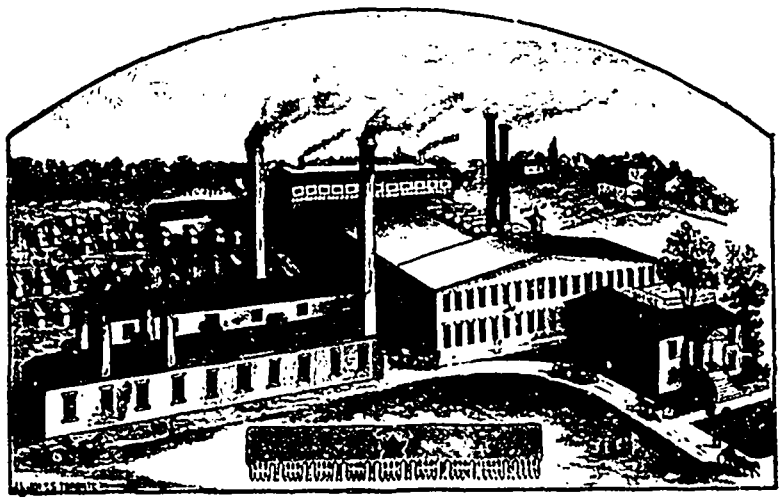

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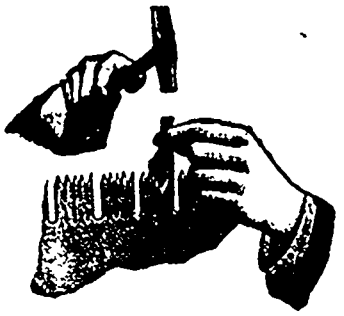

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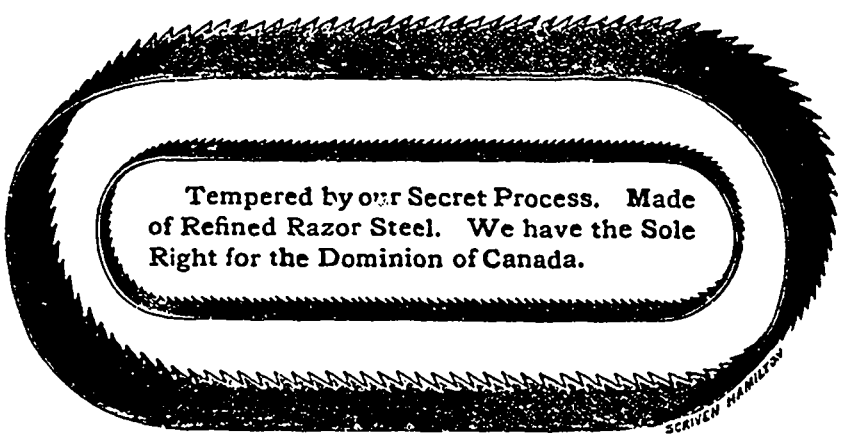

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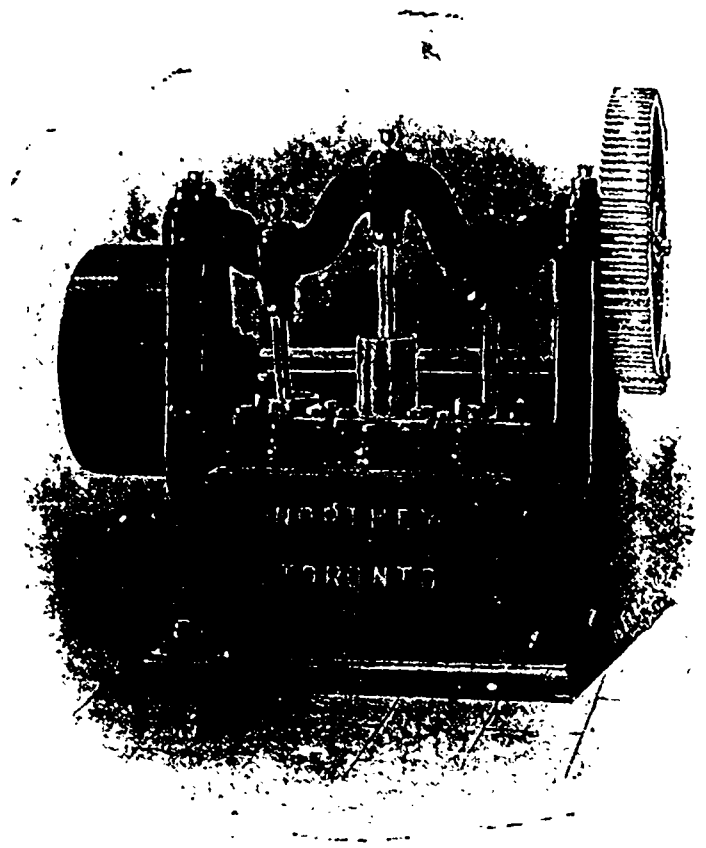

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THE CANADA LUMBERMAN

VOLUME XXI. NUMBER 8

TORONTO, CANADA, AUGUST, 1901

TERMS, $1 00 PER YEAR
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MR. GEORGE H. PERLEY.

One of the best known and most successful of Ottawa's lumber merchants is Mr. George H. Perley, head of the firm G. H. Perley & Company, now consisting of the same partners as the Hull Lumber Company. This firm's center of industry is at Calumet, a town at the juncture of the Ottawa and Rouge Rivers and situated on the North Shore line of the Canadian Pacific Railway midway between Ottawa and Montreal. Mr. Perley's home and head office are, however, in Ottawa.

This is the third season the mill has been operated by the present owners, who secured it from the Ottawa Lumber Company, as it was then called. It is an old fashioned mill fitted with five upright gates. A lath mill is also operated, as well as machines for the manufacture of studding and furring for the building trade. The mill is run by steam, and work is continued night and day. The yard and mill are illuminated by electricity, power for the plant being furnished at the mill. About 250 men are employed in and about the mill. Last year's cut amounted to 21,000,000 feet. It is expected that fully 25,000,000 feet will be cut this season.

The lumber sawn consists of spruce deals for the English market and smaller sizes for the American trade. Shipments are made by water and also by the C. P. Ry. and C. A. Ry. lines. The latter line has connection with Hawkesbury across the river from Calumet, and the lumber is taken from the mill to the C. A. Ry. yards across the river on scows.

The Rouge is a river which rises and falls rapidly, thus affording considerable difficulty to the handling of logs. This trouble is overcome by an immense boom which was built at the mouth of the river a couple of years ago. This boom is considered to be one of the largest and strongest in the Ottawa district. It has a capacity of about 600,000 logs, and about 1,000,000 pieces are gapped annually. The limits that supply the Calumet mill are situated on the Rouge River about 100 miles from its mouth. They are 600 miles in extent and covered with splendid spruce forests.

Mr. Perley is vice-president of the Hull Lumber Company, and associated with him are Messrs. W. G. White, of New York, and C. E. Read and F. W. Avery, of Ottawa. Since the destruction of its large mill at the Chaudiere in the memorable Hull-Ottawa fire on April 26th, 1900, the company has operated smaller mills at Ottawa and Aylmer, and will this year saw thirty-five to forty million feet of pine logs which were cut on the company's extensive limits on the Upper Ottawa.

The subject of this sketch has been identified with the lumber interests in and about Ottawa all his life. He is the eldest son of the late Mr. W. G. Perley, who at the time of his death represented the Capital City in the House of Commons. Mr. Perley, sr., was a member of the well-known and long established firm of Perley & Pattee. Nearly half a century ago, the firm operated a large mill on the site of the present Booth mill, at the Chaudiere. It was sold to Mr. J. R. Booth eight years ago, and was remodelled and operated by him after the destruction by fire of his large mill adjoining. Perley & Pattee had extensive limits along the Ottawa river and tributaries, and were prominent in the square timber, as well as in the mill business. Mr. G. H. Perley was actively engaged in this business for fifteen years, and

MR. GEORGE H. PERLEY, OF OTTAWA.

as a young man laid a successful foundation for his business career.

Mr. Perley is 44 years of age. He received his early education at the city's famous grammar school, and afterwards took a very creditable course in Harvard University. From that institution he received the degree of Bachelor of Arts. Mr. W. G. Perley was actively identified with Mr. J. R. Booth in the building of the Canada Atlantic Railway. For several years his son held the position of vice-president of the road. No man holds in a higher degree the confidence and esteem of the community than he does. In 1897 he was appointed Chief Executive Officer of the committee having in charge the distribution of the Prescott and Russell Fire Relief Fund. Nearly $50,000 was distributed amongst 592 owners and tenants of the two counties burned out in the destructive fires. Last year he was Chairman of the Ottawa and Hull Fire Relief Fund Committee, when over $956,000 was distributed. Mr. Perley in both positions displayed administrative ability that did him credit. The problems he was called on to solve would have dismayed many a man. He has taken a keen interest in all things pretaining to Ottawa and the Ottawa Valley. He is a member of the Rideau Club, and an enthusiastic member of the Ottawa Golf Club. Mr. Perley occupies a palatial residence on Ottawa's Fifth avenue, Metcalfe street.

TIMBER RESOURCES OF ARGENTINA.

The forest resources of Argentina, South America, are among the richest in the world, but are remote from the ocean, and thus expensively reached, if reached at all. The forests of the interior of Argentina, throughout the north and the northwest, on the eastern mountain slopes and in the valleys of the Uruguay and Perena rivers, are famed for their richness in timber resources. In that country there are fully 500 varieties of woods, with no less than 100 of utility in commerce. But the richer timbered areas lie remote from the seaboard and away from centers of consumption. Hence, there, as in Brazil, it is often cheaper to import lumber than to cut it at home. Brazil has a tropical profusion o useful woods. In the province of Amazonas alone there are thirty kinds of building lumber and thirteen kinds available for cabinet purposes. But labor is scarce, and the means of transportation are so imperfect that the production goes little beyond the demands of local consumption.

It has been found by some experimenting that the method of covering steam pipes with sawdust mortar is more successful if the sawdust, at the given proportions of one of lime to five of sawdust, is mixed with the quicklime just as it is slaking. The use of cottonseed hulls at the rate of one of lime to eight of hulls, mixed with air-slaked lime, at any time, gives even better results. The air-slaked lime is much cheaper than quicklime. Fine sawdust is preferable to coarse, the lime causing the disintegrating of the fine particles of dust and making a practically air-tight cover. Either cover should be applied wet and not disturbed any more than possible while it "sets."

The following method of lacing a belt with wire is recommended by a mill foreman: Punch small holes 5-16-inch from the edge and the same distance apart, and lace the wire through the holes and around a piece of round iron or stick about the size of a lead pencil, pulling evenly. Treat both ends alike, and, withdrawing the stick, join the end, lapping wire rings thus formed. Draw a piece of lacing about a quarter of an inch wide through the lap of the wire, and cut off, leaving about a half inch to draw. This makes a hinged wire lace, the wearing qualities of which are said to be unsurpassed.

THE SAW MILLS OF CACHE BAY, ONT.

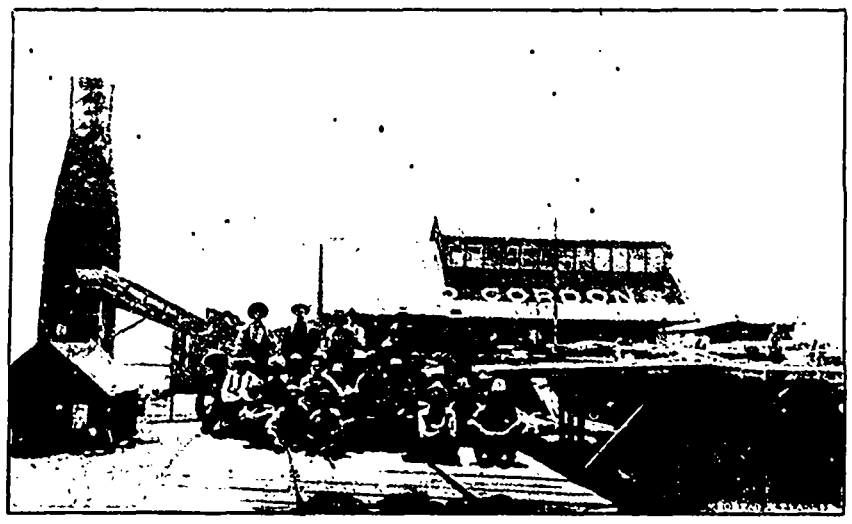
Cache Bay is one of the lumbering villages on the north shore of Lake Nipissing, on the Canadian Pacific Railway Although a large portion of the village was recently destroyed by fire, the saw mills, which provide employment for a large number of workmen, were saved The village is located 26 miles west of North Bay and 53 miles east of Sudbury Cache Bay, from which the village takes its name, is a narrow bay about five miles in length, extending north from the main lake The word "cache" in French literally signifies "hidden." In the old days of the French trappers and voyageurs, it was customary for parties to leave a portion of their supplies at certain points until their return, and it is said that Cache Bay was one of those points where supplies were stored The population is about nine hundred.

There are two steam saw mills in the village, the larger one being owned by George Gordon & Company, of Pembroke, and being shown in the accompanying illustration The firm manufacture lumber, lath and shingles, and square, waney and dimension timber They have extensive timber limits on the Sturgeon, Veuve and Wahnapitae rivers, and one large limit on the south shore of Lake Nipissing, which was purchased by them a couple of months ago

The capacity of the mill is 140,000 feet per day. One wing is 96 feet long by 90 feet wide, the other 100 feet long by 50 feet wide. The mill is equipped with the latest and most improved machinery, including one band saw, one gang, two circular saws, two double edgers, two sets of trimmers, three steam feed saw carriages, three steam log canters, two log hauls, one slab slasher, one shingle mill, and one lath mill. The refuse burner is 21 feet wide and 110 feet high. The power equipment comprises two engines, one 20x24 and the other 24x30, and six large boilers

The lumber is carried on transfer and live rollers to the sorting tables and conveyed from them on lorries on tramways to the piles There are seven C.P.R. sidings of over 2,000,000 feet capacity each in the yard, and the lumber is loaded direct from the piles on to the cars The second illustration is a view of the yard. The mill and yard are lighted electrically from a private plant on the premises.

The members of the company are Messrs. George Gordon, Robert Gordon, and Robert Booth, all of Pembroke Mr. Robert Booth is a nephew of Mr. J. R Booth, of Ottawa Mr. Alex. McCool, formerly of the Pembroke Lumber Company, is foreman; Mr. J F Stewart, shipper; W. J. Swan, bookkeeper J M Sarsfield, timekeeper; R. H. Millord, chief filer; and R. J. Storey, engineer.



SAW MILL OF GEO. GORDON & CO., CACHE BAY, ONT.

GRADING OF CO-OPERAGE STOCK.

The following are the grades and specifications adopted by the National Slack Cooperage Stock Manufacturers' Association, of the United States, at its annual meeting held at Toledo, Ohio, on May 21st :

Staves.—Elm staves 30 in. long shall be cut not less than 5 staves to 1 15-16 in. in thickness. Elm staves 24 in. to 28 1-2 in. long shall be cut not less than 5 staves to 1 7-8 in. in thickness, except 24 in of keg staves when specially cut, when said staves shall be cut 6 staves to 2 in. in thickness.

Cottonwood staves of all lengths shall be not less than 5 staves to 2 in. in thickness.

No. 1 staves shall be of full thickness and uniform throughout, free of knots, slanting shakes, doty wood or other defects.

Meal barrel staves shall be free of slanting shakes over 1 1-2 in long, knot holes, unsound knots (but sound knots of not over 3-4 in. in diameter shall be allowed), free of thin staves, and shall consist of good, sound workable staves.

No. 2 staves shall be free from dead culls.

Mill-run staves shall consist of the run of the knife, made from regular run of stave logs, dead culls thrown out.

Special Stock.—White ash staves shall be cut 5 staves to 2 1-8 in. in thickness graded the same as elm, but only No. 1 and No. 2 quality.

Mill-run or hardwood apple barrel staves shall be cut 6 staves to 2 in. in thickness, and shall consist of the run of the mill, from the regular run of stave logs, dead culls thrown out.

Mill-run cottonwood apple barrel staves shall be cut 5 staves to 2 in. in thickness.

All of the above staves shall average in measurement 4 in. a stave or 4,000 in. a 1,000 staves across the bilge, with the exception of the keg staves, which shall measure 100 in. a bundle of 50 staves, across the bilge, and 24 in. half keg staves, which when not otherwise specified shall measure 3 1-2 in. wide of 17 in. a bundle across the bilge. All other staves not specifically mentioned shall be sold according to the local custom or under special arrangement

Hoops.—Sugar barrel hoops shall be 6 ft 6 in., 6 ft. 6 in. and 6 ft. 9 in long, cut so as to be not less than 5-16 in. and 3 16 in. in thickness when finished and seasoned, and not less than 1 3-8 in. wide when seasoned

Flour barrel hoops shall be 5 1-2 ft. and 6 ft. long and shall measure when seasoned not less than 5-16 in. and 3-16 in in thickness and not less than 1 3-8 in. wide.

Keg hoops shall be sold on special specifications as agreed upon between buyer and seller

No. 1 hoops shall be of good, sound timber fully up to specifications, free from broken ends in the coils, and well finished

N. 2 hoops shall be free from broken hoops in the coils, and otherwise fully up to specifications.

Heading.—No. 1 basswood or cottonwood heading shall be made from good sound timber free of damaging defects, of such diameter as required, well jointed 1-2 in in thickness and thoroughly kiln dried.

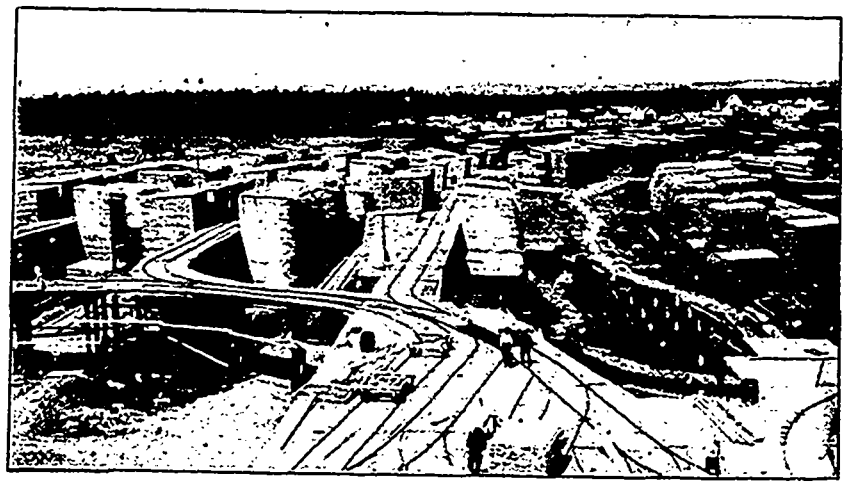
No. 1 hardwood heading shall be of the same [illegible] 7-16 in. and only [illegible] thoroughly kiln dried.

Mill-run heading shall be the run of the mill, dead culls out, thickness and dryness the same as No. 1.

No. 2 heading shall be the heading thrown out of the No. 1, dead culls out All staves, hoops and heading not specifically mentioned shall be bought and sold on terms and specifications agreed upon between buyer and seller.

BURNING GREEN SAWDUST.

Having received a letter from one of the readers of The Wood-Worker who finds it difficult to make steam enough to run his plant in the winter season when burning green elm sawdust, and as I believe others have the same trouble, it will be profitable to review the whole situation for the benefit of all concerned.



YARD OF GEO. GORDON & CO., CACHE BAY, ONT.

My correspondent informs me that there are 1,500 mills of his class in the United States and Canada, many of which have the same trouble consequently he wants to know how many square feet of heating surface in a boiler will produce one-horse power while burning green sawdust. As my conclusions may conflict with others in this respect, it is proper to give reasons in full, especially as these will enable others to tell whether their plants are properly proportioned to do good work or not. This plant contains

x16 inch automatic engine, revolving 190 times r minute, with a boiler pressure of 90 pounds s indicator diagrams are not furnished, it will t be possible to tell just how much power this gine is developing, and the next best thing is o determine how much power it can develop un- r fair conditions.

The area of a 16-inch circle is 78 square inches, d the piston speed is 507 feet per minute. The an effective pressure is taken at one-half the ler pressure, making it 45 pounds. When we ltiply these three together and divide the pro- ct by 33,000, we find it can develop 54-horse wer. Large engines of this type will develop horse power on 30 pounds of water per hour, t for one of this size it will be necessary to llow 35 pounds, calling for 1,890 pounds per ur.

shells is 54 inches and they are 14 feet long, with 46 tubes 3 1-2 inches in diameter This makes 98 square feet of heating surface in the shell, and 550 in the tubes, or 648 for each boiler, and as there are two of them they both contain 1,296 square feet of heating surface.

Now, if 1,296 square feet of heating surface is to supply 176 horse power it is allowing only 7 1-2 square feet for each horse power, which is evidently much less than it ought to be, as at least 15 should be allowed. Is it any wonder that they have hard work to keep up steam in the winter time when the sawdust is frosty and may have ice and snow mixed with it? It is usually claimed that there is not work enough on the engines in these mills to call for their full capacity. This may be true, but my experience has been [illegible] in cold weather, wh n the

Columbia River Lumber Company, Golden, B.C.—Hanna's Camp. Slide for driving logs almost completed, 700 feet long and drop of 125 feet. Photo taken on May 10th. That night the reserve dam in the mountains burst and swept entire work away.

here is also a slide-valve engine in this plant ha is 11 by 14 inches, revolving 225 times per nute The area of an 11-inch circle is 95 square hes; the piston speed is 525 feet per minute, nd the mean effective pressure is taken at 45 unds, which makes 68-horse power. We must low 50 pounds of water per horse power for is engine, making 3,400 pounds per hour, or ,290 pounds for both engines.

Let us note whether we have boiler capacity nough to supply this easily or not. One-horse ower at the boiler consists in evaporating 30 ounds of water in one hour under conditions hat are about the same as found in this plant, o that to run these engines the boilers must upply 176-horse power.

We will next note whether they are in condi- ion to do this or not. The diameter of the shafting turns hard in its bearings, and exposed pipes and engines cause much condensation of steam, the full power is called for during a portion of the time at least, so far as the boilers are concerned, and usually they are not large enough to furnish it easily. If only one-half the engine capacity is called for in the above-mentioned case, each horse power must be developed by 15 square feet of heating surface, which is about right where coal or dry wood is used, but is not enough for green sawdust It should be increased to 20 at least, in this case.

Failure to make steam enough in these mills is usually due to two causes, one of which is that the power estimated as enough to run the machines is less than really is called for in practice. The other reason may be explained as follows: The power of a boiler is computed by its ability to evaporate 30 pounds of water in one hour for each horse power, therefore if a man buys a 60-horse power boiler and puts in a 50 horse power engine, of a type that requires 50 pounds of water per horse power per hour, it is no wonder that he can not keep up steam easily, for while his boiler is calculated to evaporate 1,800 pounds of water per hour, the engine must have 2,500 pounds, if it has a full load.

There is another point that I wish to call attention to in this connection, as follows Each of these boilers has 46 tubes each 3 1-2 inches in diameter, so that the combined area of their openings is 382 square inches The area of stack should be about 20 per cent. greater than this in order to secure best results. This brings the whole up to 458 square inches, so that the stack should be 2 feet in diameter and none of the connections between it and the tubes should be less than this. For two boilers it should be 34 inches in diameter, and whether for one or more boilers it should be 80 feet high above the grates. Stacks that are smaller and shorter than this are used every day in the year, but the best results are not obtained unless they are at least nearly as large and as high as the above calculation calls for

A plant that gave very good results when burning wood, green sawdust, etc., as proportioned as follows The engine was 11x30 inches and revolved 72 times per minute With a mean effective pressure of 40 pounds (one half the boiler pressure) it could develop 42 horse power. The boiler contained 900 square feet of heating surface Calculated on the above basis the engine called for 50 horse power at the boiler, which was an allowance of 18 square feet of heating surface for each boiler horse power, or 21 square feet for each horse power that the engine could develop. As the work of sawing is unsteady it did not develop this continually, but for portions of the day it came fully up to it. As I was perfectly familiar with this plant before the mill was burned, I consider it a good practical example of what can be done, as much green chestnut sawdust was burned for fuel.

Taking all of these things into consideration, the following rule for determining the number of square feet of heating surface that will be required in a tubular boiler that is to be fired with sawdust, will answer provided the engine is in good order. When the valves and piston leak steam there is no way to determine the amount required, except to give it a trial.

Rule. Multiply the area of the piston in square inches by its travel in feet per minute, and by one half the boiler pressure Divide by 33,000 and the quotient will be the horse power of the engine. For an automatic engine, multiply the horse power by 18 For a throttling engine, multiply by .25 This will be enough to supply steam when cutting off at about one-quarter stroke in the automatic engine, and its equivalent in the throttling.

The mills and booming privileges of Miller & Woodman, at Pleasant Point, N.B., have been sold to A Cushing & Company, of St John, at a price said to be in the vicinity of $20,000

Sir Henry Joly, Lieutenant-Governor of British Columbia, who has always taken a deep interest in the subject of forestry, has undertaken to test the growing in British Columbia of some of the trees of Eastern Canada, and in November last planted some seeds of black walnut, butternut, white ash, green ash, red oak and maple. A large percentage, it is said, have started growth. The Lieutenant-Governor will make comparisons of the growth of such trees in Quebec with their development in British Columbia. After the trees have attained a satisfactory size for transplanting, it is his intention to distribute them among those who may be interested in such matters.

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and 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.

Especial 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.

FOREST FIRES.

FIRE has again brought ruin to hundreds of miles of the forests of Canada. The most serious damage has been done in the Tamiscaming and Kippewa districts, in the northern pine sections of Ontario and Quebec. Although the actual loss is not yet known, the estimates range from $500,000 to $1,000,000. In New Brunswick and Nova Scotia the loss has been about $100,000.

The immediate monetary loss represents but a small portion of the damage, as millions of young pines which have no present value, but which, if allowed to grow, would in years to come be of immense value to the country, have been destroyed. The loss by the destruction of these young pines is more than the damage to the merchantable trees. They would have been commercially valuable in a few years, but it will be a long time before the new growth can replace them.

The larger trees damaged by the fire will be cut by the lumbermen as soon as possible. Perhaps it may follow that the timber output of the coming season will consequently be heavier than would otherwise have been the case, but it is hoped not to such an extent as to materially affect the lumber market.

In the opinion of Mr. Lumsden, a lumberman of many years' experience, the recent fires along the Ottawa river were caused by settlers burning brush in order to clean up the land. The Ontario Government has adopted a fire ranging system which gives the Department of Crown Lands authority to place rangers on territory under licence to lumbermen, and lumbermen themselves employ various measures to prevent the spread of fire. With all the precautions that are taken, it seems almost impossible to prevent an occasional fire getting such a start as to result in great damage.

It is manifestly in the interest of the country generally that liberal appropiations should be made by the Dominion and Provincial Governments to prevent the spread of forest fires and to educate settlers in the direction of lighting and controlling fires in or near a forest. We know of no investment from which equally good returns are likely to be secured as the appropriation of a liberal sum for the protection of the forests.

The sixth annual report of the chief fire warden of Minnesota contains information regarding forest fire-ranging which is very suggestive. The forests of that state are estimated to be worth one hundred million dollars. During the six years the fire ranging system has been in operation, the damage from forest fires has averaged only $35,000 a year, a comparatively trifling sum. It is even more remarkable that the entire expenditure for the system of protection was but $5,000 a year. No one would for a moment question the expediency of a system which, at an expense of $5,000, restricts the damage by fire in forests valued at $100,000,000 to $35,000 a year. The season of 1900 was the driest and most dangerous season that has occurred for six years. The number of forest fires reported was 139, which burned over 179,521 acres, and did damage to the amount of $153,399. Of the 139 fires 23 were caused by clearing land, 9 by railway locomotives, 13 by campers and hunters, 5 by burning meadows, 2 by river drivers, and 87 by unknown causes. It seems strange that the cause of so many fires should be unknown, but it is fair to assume that most of them were the result of carelessness on the part of settlers and hunters, rather than of accident.

The lumbermen who have suffered by the recent fires deserve the sympathy of the public. The loss in some cases represents more than the profits of an entire season's operations. Fire is but one of the many obstacles with which lumbermen have to contend.

THE COMING LOG CROP.

MOST of the lumbermen of Canada are now completing their arrangements for getting out another season's crop of logs. Prosperous conditions prevail throughout Canada. The harvest in Manitoba and the Territories is most abundant, while in the other provinces a fair yield of grain is assured. The lumber business, if we except the eastern spruce trade, is likewise prosperous. There is always the danger at times such as these of an over-production of lumber, and for this reason we would urge upon the lumbermen of Canada to adopt a conservative policy in respect to the quantity of logs to be taken out during the coming winter.

While pessimistic sentiment is not to be admired, it is very necessary to look carefully into the future and to so plan your business as to provide for reverses which arise from time time. The lumber business has enjoyed several years of good times, but as "in times of peace prepare for war," so it should be with the lumbermen as far as production is concerned. Very little can be lost by a manufacturer in restricting his production, as the timber if left on the stump will yearly increase in value; while if he should find himself with an over-supply of lumber in a time of depression a financial loss is almost certain.

Canadian lumber manufacturers might very properly turn their attention and capital to the establishment of plants for manufacturing a greater quantity of their lumber into woodenware specialties, many of which are in great demand at home and in Great Britain. The production of plants for the manufacture of box shooks, tool handles, mouldings, chair stock and like goods will always find a ready market, the difficulty to a greater expansion of trade in these lines in the past being that it has been impossible for British importers to secure the goods.

The manner in which the British manufacturer utilizes every piece of raw material should be an object lesson to Canadians. A representative of an Irish firm which manufactures carriages recently visited Canada for the purpose of obtaining a supply of timber. To the writer he stated that such pieces of timber as were not suitable for carriage purposes were made up in tool handles, and those that would not make handles were cut up into chair stock, by which means every piece of timber of any size was utilized. He was looking into the question of carrying this policy of utilization still further, by putting in a machine for the manufacture of skewers.

The above suggestions are thrown out in the hope that Canadian lumbermen will not overstock the market with lumber, but will endeavor to restrict the output and obtain the best possible returns from the timber which is taken out.

LUMBER INSURANCE.

The Canadian Fire Underwriters' Association, at a meeting held in Toronto last month, decided to adopt specific rating, and in so doing made a sharp advance in the rates of insurance on lumber. This course, it is claimed by the underwriters, has been rendered necessary by reason of the heavy losses which the companies have sustained on lumber. The increase is equal to about one per cent. Although the new rate is only intended to apply immediately to the towns and villages of Ontario, it is understood that next spring the advance will go into effect throughout the Dominion.

While admitting that lumber is a more hazardous risk than other commodities, the lumbermen regard the advanced rate as excessive and unwarranted by the losses. While it is possible, by isolating the lumber from all buildings, to secure a comparatively low rate, many of the mills are so situated as to render this impracticable.

Commenting upon the action of the underwriters, the Insurance and Finance Journal says:—

"It is expected that the danger spots mainly will have to bear the brunt of any increase, and, on the other hand, risks or groups of risks superior of their class, will have a favored consideration in rating. The object of this system of rating is to charge for insurance in proportion

to risk assumed. The following illustrations present the question in a popular light. The plan adopted in a certain class of stores of having all goods in a certain department priced at one figure, although of various values within a narrow limit, may work profitably on a small scale when the goods are of a cheap class, the best being worth only a few cents, but such a system would be utterly impracticable in dealing with more costly goods, which vary largely in value. For example, were an average price of 75 cents per yard fixed for goods in a dry goods store, some of which were worth 50 cents a yard and others $1 a yard, the sales would soon run so heavily on the dollar a yard articles as to make the business a record of losses. The only plan to carry on any business steadily with advantage is to sell each article proportionately to its cost, so that whatever line of goods is run upon by purchasers the result will be satisfactory. In fire insurance the range in the cost of different risks is exceedingly wide. There are properties that suffer very serious damage by a trifling fire, while others in order to be injured proportionately would have to endure a serious fire. It is certainly contrary to the very fundamental laws of business for an underwriter to charge the same rate for one class of risk as the other. There are also wide variations in the character of risks owing to their different location, though within the same municipal area. The risks in one street differ from those in another street; even on the same street the chances of fire vary considerably. To charge a common rate for fire insurance within any large area, as a city or town, is to ignore these variations in the character of risks arising from their locality or their surroundings. To estimate the exact difference between one risk and another within a given area is a difficult task, as all the conditions affecting the risks cannot be thoroughly known. In fixing rates, averaging must be adopted to some extent, but the companies being desirous of establishing rates on a more scientific basis, a basis more equitable to themselves and to insurers of property, are moving towards a system of specific rating, the results of which, we trust, will be gratifying."

EDITORIAL NOTES.

It is reported, with what accuracy we cannot say, that the Canadian Northern Railway Company have restored the rate on lumber coming into Canada from Minnesota to 16 cents a hundred pounds, the probable result of which will be to lessen the quantity of United States lumber which will find a market in Manitoba and the Territories. While an advance in freight rates is not generally in the interest of the country, the present advance seems justifiable from the stand-point of equal rights, as there is no reason why United States lumber should be permitted to come into Canada free of duty, while the same privelge is not accorded to the Canadian product. Let the Dominion Government place a corresponding duty upon American lumber, and our manufacturers will have no fear of competition.

Where quality is placed subordinate to cost in a specification for lumber, it has often been the case that yellow pine has been employed in preference to white pine, as by means of the employment of cheap negro labor it has been possible to place yellow pine lumber on the market at a comparatively lower cost. It is of some concern to learn that the negroes of the south are now demanding higher wages, and that where the price for common negro labor a few years ago was ninety cents a day, it is now $1.50 a day. The question is proving somewhat perplexing to the southern lumbermen, who fear that if present conditions continue it may mean a loss of a portion of their trade. The demand for higher wages, however, seems only natural as the result of the greater development of the resources of the Southern States.

In a letter to the Department of Trade and Commerce, Mr. James Cummings, special trade commissioner to South Africa, after visiting all the business towns in the Colony of Natal, writes that he finds a general demand for goods that Canada could supply at a profit and better than the present arrangement from Great Britain and the United States. He points out what has been previously mentioned in these columns, that Canadian lumber, doors, furniture etc., is purchased there without the buyer having any knowledge that they are of Canadian manufacture. The mercantile classes of Natal will give the goods from Canada the preference over those from foreign countries, and in view of the wonderful development under way and in sight in South Africa, the business men of Canada should lose no time in endeavoring to secure as much of the trade as is possible.

The National Lumber Exporters' Association of the United States have undertaken a most difficult task, but one which if brought to a successful issue, is likely to result most advantageously to the lumber shippers of the United States, and eventually to those of Canada. It is to compel steamship companies to issue to exporters a clean bill of lading, or in other words a statement showing the exact quantity of lumber shipped, without the usual limiting clauses such as "more or less," "shipper's load and count," or others of similar import, also to deliver the goods in the same condition as when received. The Association, to accomplish its purpose, caused to be shipped two cars of lumber so prepared and tallied as to render proof of the quantity contained in them an easy matter, and upon their receipt by the steamship company demanded bills of lading setting forth the exact quantity contained in the shipment. This was refused by the steamship company, and suit was begun in the United States Division Court for the Southern District of New York to compel the delivery of such a bill. It is claimed that in the United States the loss resulting to lumbermen through inability to enforce delivery of the amount received, and in equally good condition, amounts to over $1,000,000 annually, for which loss there has been no redress. The suit will likely be bitterly opposed, but it is hoped that the Association may be successful in its effort, as the exisitng regulations are most unfair to the shipper. In another column will be found an accounnt of a suit brought to recover damage on account of short delivery of a quantity of lumber shipped from St. John, N.B., to Great Britain.

Some owners of steam plants and some engineers of the same believe that the feed water can not be supplied from the top, nor above the water line. The impression is prevalent that pressure is much greater in the steam space than it is in the water space. This error is very common, even among people otherwise well informed.

POINTS ON SAWING LUMBER.

A writer in the Mississippi Valley Lumberman says: "Speaking of sawing inch lumber as an investment, I do not entirely agree with many who seem to think that there is a chance to make a good deal of money even should prices maintain their relative positions. To begin with, it costs at least one-fourth more to saw inch lumber as compared with dimensions. While No 2 boards and No. 1 dimension are supposed to be made of practically the same quality of stock, yet any one knows, who has had any experience in the saw mill business, that the boards will not hold up in grade as the saw mill will surely open out certain defects which in two inch lumber are covered up. Another factor which very few take into consideration, is that it takes more lumber to manufacture two one inch boards than one two inch board. Inch lumber is supposed to be sawed 15-16 of an inch thick, while two inch dimension is usually sawed 1 and 13-16 inches thick. The saw kerf takes out on an average about 1-8 of an inch for every cut that is made. It will therefore take 3 16 inches more lumber to manufacture two one inch boards than one two inch plank. There is good reason therefore in charging an additional price for the same quality of lumber where it is manufactured in the different thicknesses. In the past some of the lumbermen were in the habit of sawing their dimension practically plump thickness in order that they might re-saw it into boards should the demand make it necessary. That class of people have been very favorably situated the last few months. One manufacturer told me that he had been able to run his dimension through the re saw for 15 cents per thousand."

PRACTICAL NOTES.

With the intention of counteracting the danger of the fire buckets being found empty when needed, either through evaporation or the water having been used for some other purpose and not replenished, the superintendent of a large mill devised the following plan. The hooks from which the buckets hung were fitted up with pieces of spring steel strong enough to lift them when nearly empty, but not sufficiently so to lift them when full. Just over each spring, in such a position as to be out of the way of the handle of the bucket, was set a metal point, connected with a wire from an open circuit electric battery. So long as the buckets were full, their weight, when hung on their hooks, kept the springs down, but, as soon as one was removed, or lost a considerable portion of its contents by evaporation or otherwise, the spring on its hook would rise, come in contact with the metal point, thus close the battery circuit, and ring a bell in the manager's office, at the same time showing on an annunciator where the trouble was. As the bell continued to ring until the weight of the delinquent bucket was restored, it was impossible to disregard the summons, and no further reason was found in that establishment to complain of the condition of the fire buckets.

Cleaning files. A file, to do its work fast and well, should be kept free from its cuttings, says American Manufacturer. Cuttings "pin" when they lodge so finely that they cannot be removed with a brush. Pinning may be obviated by chalking the surface of the file, but this has the effect of reducing its bite. A little oil on the file will frequently reduce the tendency to pin. It should be used, however, only on the fibrous metals, as it glazes the surface of the non-fibrous metals, making them harder to cut. Chalk is usually applied to a file when a smooth, fine work surface is desired. The effect of the chalk is to prevent the teeth from cutting as freely as when it is not used, and thereby produces about the same result as would occur if a finer cut file had been used. When oil has been used on a file it can be readily removed by thoroughly chalking and brushing two or three times, as the chalk soaks up the oil and leaves a dry surface

ECONOMY IN LUMBER MANUFACTURE.

Any one familiar with the saw mill business can call to mind case after case where two saw mills operating practically side by side and under identical circumstances show radically different results, says the American Lumberman. One is prosperous and evidently making money, the other is struggling for life. The result of one is wealth and of the other a mere existence, even if failure does not ensue. What is the cause of this difference in results? It is easy to say that it is a matter of ability. So it is, but that is hardly more satisfactory an answer than the description of all deaths as heart failure.

More than in most businesses the success of any lumbering operation rests in attention to little things Two mill operators may have precisely the same start and the same continuing opportunities, with results in profit that will be meased by a difference of anywhere from $1 to $3 a thousand.

There are two mills each turning out about 40,000 feet of lumber a day. One has fifteen men on the mill floor, the other has thirty. Consequently the first cuts its lumber at a cost of 65 1-2 cents a thousand feet and the other at $1.31. One may effect a saving af 50 cents a thousand over its competitor in logging alone, while in the yard, dry-kilns, the planing mill, amounts proportionately as great may be made or lost.

There was once a saw mill in the south where thirty men took the logs from the skids in the woods and along the tracks, delivered them to the saw mill, put them through the saw mill, put the product through the dry-kiln and delivered it at the planing mill, at the rate of 60,000 or more feet a day. This was done not with expensive machinery, not with an elaborate provision of labor-saving appliances, but simply by an intelligent arrangement of the details with relation to the particular situation. A more modern mill might have saved two or three men or with the same number have increased the output. We venture to say that in this same general locality other mills were using 75 to 100 men to do the same work.

Take a complete lumbering operation, for example, such as one in the south which cuts its own timber, logs it by rail, finishes the product in the planing mill and distributes it in car load lots to the trade. How is a high degree of success secured?

In the first place the business is so organized that every man does the maximum amount of work, and works with the utmost effectiveness. In the next place the work in the woods is intelligently laid out so that no time is wasted. This is a matter of location of the logging railroad and of wheel roads from the stump to the tract In a large operation steam loaders may be employed, but in a small one advantage is taken of the ground so as to make loading of the cars as easy and cheap as possible. If one man can do two or three things, two or three men are not employed to do them. On the other hand, if a man be most effective at one task he is not diverted by being called upon to lend his hand to another. The logging railroad is kept in repair so that there are no accidents or delays There is a storage pond at the mill so that if by ill luck there should be a breakdown anywhere the mill will not have to close, remembering that it is not so much a big theoretical capacity as steady running that counts in the mill product, in both quantity and cost.

The mill itself will be of substantial construction with particular attention paid to the foundation of the principal machine and the lining up of the shafting. Given these conditions the machinery will be easily kept in repair, and it will be seen that they are so kept, for upon this point largely rest both the quantity and quality of the product Misent lumber means either a lower grade or an unknown amount of work in dressing it Power will be ample. The boilers should furnish more steam than is nominally required by the engine and the engine should be rated above the nominal requirements of the machinery which it runs. A successful mill will not try to economize in the wages of the foreman, the engineer, the filer, the sawyer, the edgerman or the chief grader. Not only so, but all these men must work together harmoniously. There should be no cliques among the employes and no kickers. It is a mistake to suppose that the tale-bearer, the company spy, is a profitable member of the force, unless, indeed, it be that the entire force is made up of sluggards and soldierers, in which case blame lies with the management quite as much as with the men themselves. It is a mistake to suppose that in every case a machine is cheaper than a man. The ideal mill will stick to the happy medium. Some have too much machinery and too few men. Some have too much of both, while some might well substitute machinery for human muscle.

The grading platform is an important part of the mill. It should be ample and conveniently arranged on such a system that the product can be handled and distributed with the fewest men without confusion or delay. Here is a weak point in many a mill. In distributing to yard it would not be wise to say that either tram cars, push carts or wagons hauled by horses were absolutely the best—highly successful mills can be found that employ any one of them—but whatever the system employed it should be kept in easy working order, and the yard itself should be laid out intelligently as to grades and dimensions and to accommodate both piling and taking from pile.

The dry-kiln business is one by itself, requiring special knowledge and experience, but its arrangement in relation to the rest of the plant should be such as will be convenient and its equipment such as to require a minimum amount of labor.

The planing mill gives the finishing touches to the best part of the saw mill product and therefore largely fixes the value of the commodity. The machinery must be of good type, but above all must be well installed and maintained. Here, as in the saw mill, two or three first-class men can save the business from loss. And so we come to the office and selling department of the business. This is too large a subject to be even outlined here.

NON-INFLAMMABLE WOOD.

The degree of excellence to which the fireproofing of modern buildings has been carried, is evidenced by the severe tests which have recently been made in the United States and other countries with wood treated by the electric process of fireproofing This process is the latest development in the science of rendering wood non-inflammable, and has been adopted by the British and United States naval authorities after a series of the most exhaustive comparative tests with every known method of fireproof construction in the line of material that could be utilized as wood in the building of warships. It has been endorsed by leading architects and chemists in this and other countries and has been used in some of the most modern buildings recently constructed.

When the lumber is received at the fireproofing works it is piled in conical shape on iron cars with 3-8 lath between each layer of boards. After the load has been made up 105 ft. long, it is drawn into a cylinder by a one inch cable, after which the door is closed and locked. Then a steaming process takes place inside the cylinder, thus opening the pores of the wood. The sap is extracted from the wood and drawn from the cylinder by vacuum While this is taking place inside the cylinder the chemicals in the large tanks overhead are going through a heating process. After the lumber has been softened to a certain degree and the pores thoroughly opened, the heated chemical is allowed to pass by gravity into the cylinder until it is filled, after which the pressure pumps are set to work and are kept working until the pressure has gained 1 to the square inch. The chemicals in th are then forced back into the overhead means of air pumps, the doors are o the lumber drawn out of the cylinder a ferred to dry-kilns, where the proces pleted.

This electric process of fireproofing is ent carried on by three companies in th States, one in London, Eng., and the Fireproofing Company, of Canada, Limit office and works at Cote St Paul, Mont representative of the Canadian Archit Builder recently visited the works of t pany, which are situated at Cote St. the Lachine Canal. The Grand Trunk Company have siding into the premises, every facility for shipping by water or available. The property covers an area acres, and the factory is built of solid br roof supported on steel columns and gird building is divided up into a cylinder-roo gine and pumping room, boiler room, coal chemical-room, store-room, office, two dr and transfer table. The building is so l that double the plant can be added as th ness increases. The cylinder-room is long by 32 feet wide, and contains two c 105 feet long by 7 feet in diameter, capa holding 15,000 feet B.M. of lumber each charge. Above the cylinders are three la tanks, each having a capacity of 26,330 g The tanks contain the fireproofing so which is pumped into the cylinders under sure The doors of the cylinders are faste radial steel bolts weighing about ten tons are operated by two men in a few seconds doors have to stand at times an internal pr of from 200 to 300 pounds per square inch boiler-room is 37 feet by 24 feet and co two Babcock & Wilcox high pressure 75 power boilers. These boilers supply steam cylinders, pumps, dry kilns, etc.

The engine-room is 39 feet by 37 feet, as tains a 75 horsepower Corliss engine winch, 40 horsepower, for operating ra lifting 8,000 pounds; one vacuum and pr pump, 16x20x24 in., duplex water pump, fo in., connected to canal by an 8 inch water two duplex pressure pumps, 5 1-2x3 1-2x high pressure to cylinder; one pump for se service to feed tanks, 5 1-2x3 1-2x5 ft.

The chemical mixing room is 37 feet by 3 and a storeroom above of the same size. h room is placed two setting tanks 12x8x6 in ectly above is one circular tank, 5 feet dia by 3 feet 6 inches deep, used for mixing the icals; two dry kilns two-storey high, 123 f 16 feet 6 inches wide, each heated by the "C mon-Sense" system of radiation. The storey is filled with the lumber, placed on and is fed by a fan 110 inches in diameter, nected to a condenser, 21x5 ft. 2 in. x 4 ft high; this condenser is filled with cold radiators, which purify the air as it through same into heater 12 ft. 3 in. x 5 ft ft 2 in high; this heater contains 8,000 f 1 inch steam pipe, which heats the air to a temperature, after which it is blown into th kiln at the extreme end and sucked out a rear end by means of the fan, which mai continuous circulation of air. Above th kilns is a room for storage of lumber, 125 f 33 feet The office is 32 feet by 48 feet, and cludes a test-room, in which the chemical solutions are tested for strength and impu A traverse table 35 feet wide by 10 feet tra 137 feet and is worked by a steam winch used for transferring the cars of lumber fro yard to the cylinder and from there to th kilns, this giving access to all tracks in the The railway track from the Grand Trunk way enters the grounds about midway and through the centre of the building, con with the various rooms, so that the least a of handling of lumber is avoided, ensuring omy and the smallest amount of damage t material.

EGARDING SHORTAGE OF LUMBER.

imber Trades Journal gives the follow-
unt of a decision of the British Courts
of interest to Canadian shippers :
urday last, in the King's Bench Division
High Court of Justice, the case of the
mean and New York Steamship Com-
hich was tried at Liverpool in February
ore Mr. Justice Bucknill and a special
e again before his lordship for further
tion.
as an action brought by the plaintiffs, a
shipping firm, to recover from the de-
A. F. & D Mackay, of 10 Canada Dock,
, the sum of £175 15s 3d, balance of
on a cargo of timber shipped per the
atas," from St. John, New Brunswick,
pool. The net freight amounted to
5s 3d, towards which the defendant firm
£1,750, and they claimed to be entitled
n the balance against alleged short de-
goods. It appeared that the charter
ovided for the payment of freight on in-
asurement on the quantity of timber
, as ascertained at the port of delivery
cial jury at Liverpool found that there
a difference between the quantity ship-
shown by the bills of lading and that
, and the case was adjourned to London
ee to the principle by which the ques-
shortage should be decided.
dship, in giving judgment, said he must
the defendants. There were two ques-
his consideration. The first one was a
of freight, and the second was that of
ter-claim, and in his opinion the defend-
e entitled to judgment upon both. It
o him that the real answer to the claim
the shipowner had chosen to sign a bill
, the accuracy of which he might, if he
d, have ascertained. But the shipowner
verified the bill of lading, which com-
ar classes of timber. Having signed the
lading the shipowner undertook by the
party, that the bill of lading should be
e evidence as establishing the quantity
him something less than the quantity
d. The freight was payable on the intake
ment of the quantity delivered as ascer-
t the port of discharge. When the vessel
at the port of discharge the consignee
ascertain what timber of each particular
d been delivered to him. And he found
one of these classes there were 1,215
hort, which entitled him to say to the
er that the latter had in that class,
d him something less than the quantity
the shipowner had admitted having re-
ccording to the bill of lading. His lord-
hought the proper way to ascertain the
was to ascertain what was the amount
particular class of goods delivered, and
late the rate of freight on the shortage,
on any particular class of the timber.
as what had been done here. The exact
ayable to the shipowner for freight could
tained. With regard to the counter-claim,
signee was entitled to say to the ship-
that he had received so many pieces of
of a certain sort, valued at a certain
but that something short of the proper
had been delivered, and the counter-
as for that amount. It was clear, his
thought, for the reasons he had stated,
defendants were entitled to recover upon
im and counter-claim.—London Timber
Journal

ERICAN FORESTRY ASSOCIATION.

pecial summer meeting of the American
Association will be held at Denver,
August 27th to 29th, inclusive. There
two sessions daily, the proceedings of
ill be of special interest to all concerned
est problems. There will be presented a
ol valuable papers, including one by Mr.
Pinchot, Government Forester, of Wash-
D.C.

PERSEVERANCE BRINGS SUCCESS.

As incessant drops of water,
With persistent, tiny blows,
Beat down the rugged mountains
And dissolve the deepest snows ;

As when thread to thread is added,
Larger still the fabric grows,
And the most persistent knitter
Wears the longest warmest hose.

As the dog by dogged gnawing
Tastes the marrow of the bone,
And repeated mallet tapping
Brings the statue from the stone,

As the most untiring printer,
With incessant "click, click, click,"
Marches largest verbal armies
By divisions o'er his stick ;

As letters to letters added
Makes complete the longest page,
And minutes oft recounted
Tell the sum of longest age :

As oft-gained bits of wisdom
Make the store of knowledge great,
And man after man enlisted
Fills the armies of the state,

As rivulet after rivulet
Swells the river o'er its banks,
And continued penny savings,
Aggregate the wealth of banks

So the constant advertiser,
By a law of common sense,
Builds his business enterprises
Into volumes most immense.

ELECTRIC POWER FOR SAW MILLS.

Taking up the question of the advisability of adopting electric power for saw mills, a writer in the Timber Trades Journal says.

There can be no doubt but that the adoption of electric driving of a saw mill effects a considerable economy over steam engine driving through shafting, whether the electric current is obtained from a central supply station or has to be generated on the mill premises. The most recent and weighty report yet issued upon the question as to the relative advantages of steam engine one two inch plank. There is good reason there trical transmission was that issued by the Master Mechanics' Association of America a few months back. In this report they pointed out that where there are a number of separate shops, the fact that all the shops can be readily supplied with power from one centre and without the intervention of great lengths of shafting, the fuel saving may readily be 33 per cent, and that even when all the machines are collected together in one shop, the individual tool method, i e, a separate motor for each machine over three horse power, is more economical than shafting transmission.

The gain to be effected by electrical driving depends in a great measure on whether the machines are continuously at work or whether some of them are liable to stand idle for varying lengths of time, for in the latter case the shafting is continuously absorbing the same power, despite the fact that no work is being done It is a matter of frequent occurrence that the shafting alone absorbs from 30 per cent to 50 per cent., and even up to 70 per cent., occasionally of the total power developed, whereas with electrical transmission, allowing for all losses in the motors, mains and generator, the total losses at full load should not be so great as 20 per cent., and when working at, say, 1 2 to 3 4 load, not more than 25 per cent. If now we take into consideration the fact that the electrical energy consumed is in direct proportion to the work done by the motors, whereas with shaft transmission the energy consumed by the shafting is constant independently of the load, we find that the electrical transmission must of necessity effect a considerable saving.

As regards convenience and shop output it is evident that with shaft transmission the arrangement of the machines in the shop is necessarily such as to allow of the shafting and engine connection being as simple as possible without regard to the best methods of handling the work. Electric transmission, on the other hand, presents no restrictions on the placing of the tools, and consequently the arrangements are planned with a view to the least possible waste of labor. Again, should extensions be required, no account need be taken of the present arrangements, as the new machines may be put down in any convenient position without regard to any line of shafting.

The trouble arising from the use of electric motors is now practically nil, as they can be obtained either perfectly water and airtight, or what is known as the "ventilated enclosed" type, these latter being as reliable as the totally enclosed, and considerably cheaper.

The actual horse-power required to drive the various classes of machines varies very considerably, depending upon whether the wood is dry or damp, on the state of the saws and cutters, etc., and upon the skill of the workman.

The following figures may be taken as approximately correct as the average power required.—

Circular saws	20in. to 37in. dia.	12/15 h.p.
" "	36in. by 48in. "	15/20 "
Frame saw	30in. to 18in. "	20/25 "
" "	18in. by 6in. "	15/20 "
Planer	12in. by 14in. "	12/15 "
"	12in. yellow pine, top only	10/12 "
"	6in. oak flooring, top and two sides	30/35 "
Daniel 30in. head planer, cutting 3-16ths off top		9/10 "
Moulding, 6½in. yellow pine, 4 sides		9/10 "
Tennoning, oak end sills, 3¾ in. × 5in. × 10in. cut		7/8 "
Three spindle boring mill, oak 2in. bits		2/3 "

It is advisable always to provide adequate power, indeed, rather to put in motors of rather larger than smaller power than is actually required for this class of work, as frequently much greater horse power than those given above are momentarily demanded by the work, and although a motor is capable for a short period of developing three times its rated power, yet a more constant speed, less frequent interruption of the work, and better regulation of the pressure of supply is obtained if ample power is provided. Contractors under the stress of competition are liable to quote for motors barely capable of doing the work demanded of them, with resulting unsatisfactory working of the plant.

The motors should always be protected by means of automatic circuit breakers, to save them being burnt out in the event of any sudden overload pulling them up, and for cutting them out of circuit should the supply of current be temporarily suspended. If so protected modern motors of good design, and if made by firms of good standing, require no skilled attendance whatever.

SANITARY REGULATIONS.

The Provincial Health Officer, acting under instructions from the Provincial Secretary, has issued in pamphlet form the regulations adopted by the Provincial Board of Health, under the authority of the act passes last session, respecting sanitary regulations in unorganized territories The owner, manager, agent or foreman of any lumbering or mining camp, saw mill, smelting works or other industry or of any railway construction camp, located in an unorganized district, is made responsible for carrying out the the regulations. Provision is made for proper ventilation of dwelling houses occupied by the employees, and for the erection of a hospital building, or, in lieu thereof, a properly equipped double walled tent, with all facilities for heating and ventilation, must be kept on hand in case of necessity. The pamphlet is being sent to all mill owners in unorganized districts and others who come under the regulations.

SAW vs. PULP MILL.

That the saw mill and the pulp mill cannot live in peace on the same river is daily becoming more apparent—at least in eastern territory—as is instanced particularly in the last season's log drives in Maine. While it is true that drives may be late in any year from natural and unavoidable causes, it is also true that much of the delay lately experienced in Maine has been caused by the holding up of drives at sorting gaps in order that pulp logs may be sorted out from the others. This process of sorting out delayed the East branch drive seventeen days this year, and at last advices there was no telling how long it would take to sort the pulp logs from the West branch drive. There is apparently no remedy for this, because with the pulp men buying logs from many different operators, located at widely separated points along the lumbering waters, the various lots of logs purchased must necessarily be mixed all through the drives when the logs are started down the rivers in the spring. It seems to be a question as to which will survive—the pulp mill or the saw mill—and as the pulp men are the richer and their business the more profitable, it is the belief of many that, except where favored by exceptional advantages, the saw mills must soon disappear.

This prospect is regarded variously by the people of Maine. Some say that if the pulp men are the more prosperous and can pay higher prices for logs than can the lumbermen it is not only logical but desirable that the pulp mills should survive and the saw mills go. Others declare that the pulp mills, while of great temporary benefit to certain timber land owners of whom they buy supplies, will ultimately bring disaster upon Maine, by denuding the state of its forests, which eighty years of lumbering has not done.

United States Senator Eugene Hale, in a speech at Skowhegan in 1891, said. "In forty years the forest lands of Maine will be as bare of good timber as is this platform upon which I stand." At that time there were few pulp mills in Maine, but ever since those log-eating establishments have been mushrooming, until to-day there is warfare between the pulp and lumbering interests as to which shall control the rivers of the state. Calvin Moore, a prominent lumberman of Somerset county, Maine, who has for many years operated upon the head waters of the Kennebec, says:

There is no use denying the facts. The time is near at hand when lumber for the outside market will not be available in this state. It is a fact that the pulp mills have eaten into the very vitals of the lumber business. They are creeping toward the tree, where once the tree was floated to the mills. It is a common thing and has been for a number of years for pulp mill managers to purchase of lumber operators logs that the pulp managers had not time to cut on their own holdings. The Hollingsworth & Whitney Company, with mills at Winslow and Gardiner, cut more than 20,000,000 feet of logs last winter and purchased large quantities.

Fifteen years ago the ordinary lumber operator cut from 1,000,000 to 2,000,000 feet of logs in a winter. It was then understood that the operator would be twenty years in cutting over a township and that he could then go over the same land again, beginning where he had cut the first lot, and get just as good logs as before. As a rule, this is true. Whatever pine the operator passed by on his first cutting over, on account of its being too small, would, when he made his second trip, have grown to good size, but when he had cut that down he was out of pine, for where a pine is cut a spruce growth follows.

Now, when a single corporation cuts 20,000,000 feet in one winter we can easily see how long it will be before a township becomes entirely stripped of its spruce. In a short time the great timber section will be an expanse of stunted growth fit for no purpose except to shelter game, and the lumber operator will have to go to Canada for his logs.—American Lumberman.

LARGE TIMBER CONTRACT.

Mr. F. Clergue, of Sault Ste. Marie, Ont., has signed a contract with Mr. H. R. McLellan, of St. John, N.B., which is the largest of its kind ever entered into in America, and means that Mr. McLellan has undertaken to cut and skid 300 cords of hardwood per day for two years. This wood is to be used for the purpose of making charcoal for the steel plant at the "Soo," and at the same time the bye products will be extracted and utilized for commercial purposes by the largest carbonization plant in the world.

Speaking of the contract, Mr. McLellan said. Mr. Clergue's carbonization plant is by far the largest of its kind in the world, and 300 cords of wood per day is only half the quantity that Mr. Clergue's works will really have the capacity to consume. His plant is to be constructed for the consumption of 600 cords per day. While I appreciate the fact that this is a vey large contract, I am satisfied to enter into it after seeing the immense quantities of hardwood that are lying along the Algoma Central Railway. I do not think there is any doubt about Mr. Clergue being able to supply his carbonization plant for a great many years to come. I only went out on the railway for a distance of thirty miles and in that distance I saw sufficient hardwood to supply 600 cords per day for ten years at least. The wood is all to be got on Mr. Clergue's own land. I shall bring my own men from Northern Maine and New Brunswick to cut and handle the timber, and I intend to be on the ground about the 15th of August. In addition to using horses for yarding and hauling I will use steam skidders and lidgerwood cableways for procuring this wood This carbonization plant is, I may explain, an auxiliary of Mr. Clergue's great steel works, but at the same time he saves the bye products."

ONE WAY OF DIVIDING TRADE.

The Mississippi Valley Lumberman contains an interesting article reprinted below, in which is reflected a series of incidents peculiarly true to real life.

A good many lumbermen declare that it is impossible to successfully carry on a retail lumber business without having some kind of an understanding or agreement between all of the competing dealers. Many different methods have been tried, but there has been found some drawback to each. Where a uniform price list is agreed upon the customers and particularly the farmers very soon come to the conclusion that there is some combination between the lumbermen to extort excessive profits, and accordingly they will go many miles to make sure there is active competition for their trade. The dividing of the business with reference to the total number of cars is often apt to give one dealer a great deal of advantage over the other. The quality and character of material sold varies so largely in price that this plan is not often a very equitable one to follow. One of the most general practices is to divide up the different customers in accordance with the first letter in their name. Each retailer, in case there were two, would then have one-half of the 26 letters of the alphabet, representing parties whom they would consider their particular customers. By this plan, however, a good many sharp buyers soon discover that there is some scheme whereby they are compelled to purchase from but one dealer, and naturally they are inclined to make trouble. Some dealers have tried the experiment of figuring together each bill as it came up, allowing the different dealers to take them in rotation. The objection to this method is that it necessitates frequent consultences between the lumbermen, and the public becoming familiar with this practice, concludes that there is a combination, and accordingly is suspicious and discontented. I had a talk the other day with a retailer who seemed to have devised a very equitable and satisfactory plan for dividing up the trade of his village. There are but two dealers at this point, and once a month they get together. Twenty-six small cards are provided and on each is printed one of the letters of the alphabet. These cards are placed in a hat and shaken up and each dealer alternately draws one out. The thirteen cards which the dealer has then represents the first letter in the name of the parties in the neighborhood who will be his customers for the month. A list price is agreed upon which each dealer will maintain when asked for prices by any customer that belongs to the competitor. The party who wins the bill has the privilege of cutting the price list up to five per cent. The next month the same lottery drawing is gone through with. By this plan the customers are kept guessing and it gives also the semblance of a very active competition between the local dealers.

LUMBERMEN'S SUPPLIES.

Attention is directed to the page advertisement of Lewis Bros. & Company, which appears in this issue. Every lumberman knows that the success of his business depends to a great extent on the quality of the tools he employs, and Messrs. Lewis Bros. & Company have established a reputation for handling the most reliable and modern tools for all branches of the lumbering business.

The firm is well known as one of the largest dealers in lumbermen's supplies in Canada. They are sole agents for Hurd's celebrated axes, including Hurd's Michigan, Dayton and Wedge Pattern razor blade axes, Hurd's razor blade scoring axes, Hurd's Michigan pattern double bit, and Hurd's 707 hand-made double bit, and others. They also represent Messrs. Henry Disston & Sons, the leading saw makers of the United States, and Shurley & Dietrich, Maple Leaf Saw Works, of Galt, and supply peaveys, cant hooks, boom chains, skidding tongs, Swede's iron pike hooks, etc.

Mail orders received by Messrs. Lewis Bros. & Company are given prompt and careful attention, goods being shipped the same day as the order is received. It is largely owing to this careful attention to detail, as well as to the reliability of their goods, that this firm has succeeded in building up the immense patronage it now enjoys.

HOW CIRCULAR SAWS ARE MADE.

Circular saws are now made of cast steel specially manufactured for the purpose. An ingot heated to the requisite temperature is reduced to the proper thickness in powerful rolls. The plate is then centred and a circle scribed upon it, after which it is passed to the shearer, who reduces it to a circular form. The centre hole is then bored. It is then handed to the toother, who punches out the teeth around the edge, after which it is rough-filed or ground on an emery wheel to take off the burr left by punching. The rough saw is now again heated in a large furnace until it is of a bright red color. It is then plunged into a bath of sperm oil, which makes it hard and brittle. The oil is then partly cleaned off, and the rest burned off in a furnace to give the saw the required temper. When cold the saw is hammered on a steel faced anvil until it is quite straight. It is next ground between vertical grindstones revolving in opposite directions, and then polished with emery on a large disc. Once more the hammermen take it and strike it with smooth-faced hammers on an anvil as before until it is absolutely straight and true, and has aquired the proper tension which allows for expansion when the saw is revolving at work. The teeth are now set alternately right and left to allow for clearance when sawing timber. They are then sharpened by being filed on the front and top of the teeth, which operation completes the manufacture.—Invention.

EETING OF PACIFIC COAST LUMBERMEN.

The monthly meeting of the Pacific Coast Lumber Manufacturers' Association was held at Vancouver, B.C., on June 27th. This is the first since a meeting of this character has been held in British Columbia, and will be the means of bringing the lumbermen of the two countries closer together

The following British Columbia mill men were present John Hendry, R. H Alexander and W Beecher, of the B. C. Mills, Timber & Trading Co, Vancouver; J. G. Woods, of the Moodyville Lands & Saw Mill Co., Moodyville; J Palmer, of the Victoria Lumber & Manufacturing Co, Chemainus; Andrew Haslam, of Nanaimo; R C Ferguson, of the Royal City Mills, New Westminster; J. W. Hackett and J. Robertson, of Hackett & Robertson, Vancouver, C Scott, of the Pacific Coast Lumber Co., New Westminster. W. H. Lewis, of the Brunette Saw Mill Co, New Westminster; J. C. MacClure, of Robt Ward & Co., Vancouver; E. H. Heaps, of E H Heaps & Co., Vancouver; H. H. Spicer, of the Spicer Shingle Co., Vancouver; H. Rowe, of the Canadian Pacific Lumber Co., Port Moody, J. De Pencier, of the North Pacific Lumber Co., Garnet.

The British Columbia Mills, Timber & Trading Co, of Vancouver, and the Moodyville Lands & Saw Mill Co., of Moodyville, were elected members of the association.

It was decided to make two classes of membership—one for the rail and the other for the cargo trade

The report of the rate committee was heard and other matters discussed. The cargo committee also made a report, and trade conditions were gone over.

In the evening a splendid banquet at the Hotel Vancouver was tendered the visiting lumbermen by the British Columbia mill men, and toasts were offered and speeches made until 10 o'clock, when the Washington delegation repaired to the steamer Mainlander for the return home.

The big plant of the British Columbia Mills, Timber & Trading Co was visited. The Washington lumbermen were pleasantly surprised at the quantity of lumber turned out, the up-to-date equipment of the plant and the good workmanship. After the meeting, in the forenoon, a visit was paid to E. H. Heaps & Co.'s shingle plant, and also the plant of the Hastings Shingle Manufacturing Co.

LUMBERMEN TO ENTERTAIN ROYALTY.

The following have been appointed a committee of the lumbermen of the Ottawa Valley for the purpose of providing their Royal Highnesses, the Duke and Duchess of York, with a suitable trip from Britannia to some point above the Chaudiere Falls down the square timber slide channel on the occasion of their approaching visit to Ottawa: Wm. Anderson, Ottawa, F. W. Avery, Ottawa, A. Barnet, Renfrew, Samuel Bingham, R. M. Beckett, C. Jackson Booth, J. R. Booth, L. Blackburn, J. H. Bronson, F. P. Bronson, J. C. Browne, Ottawa, George Bryson, Fort Coulonge, James Carswell, Renfrew, Robert Conroy, Aylmer, Robt M. Cox, Levi Crannell, Hon R. R. Dobell, Ottawa, E. B. Eddy, Hull, W. C Edwards, M.P., Rockland, H. K. Egan, Ottawa; John Ferguson, Calumaston, Allan Francis, Renfrew, Alex Fraser, J B. Fraser, Gillies Bros., Braeside, Gillies, J. and A., Arnprior; George Gordon, Pembroke, Allan Gilmour, John Gilmour, G. B Greene, Ward Hughson, Robt. Hurdman, Ottawa, James B. Klock, Klock's Mills; Alex. Lumsden, C. A. McCool, M.P., David MacLaren, Ottawa, Claude McLachlin, Hugh McLachlin, Arnprior; Thomas Mackie, Pembroke; Wm. Mackey, John Mather, Edward Moore, Capt. Murphy, Ottawa. J. W. Munro, Pembroke; G. B. Pattee, George H. Perley, Chas. E. Reid, Hiram Robinson, Peter Whelen, Ottawa; Hon. Peter White, Pembroke; Walter White, Ottawa..

The committee are preparing an elaborate programme. It is proposed to construct the flat boat in which the Duke will shoot the slides on an extensive scale. The start will be made from a point near Britannia, and the Royal boat will be escorted by a flotilla of canoes and lumbermen's river boats, in which there will be a large number of shanymen dressed in the garb of the old-time voyageurs. His Royal Highness will be privileged to listen, it is said, to a programme of river songs as sung by the lusty voyageurs. Pork and beans (shanty style) will be supplied to the party at the base of Parliament Hill It is intended to make the scene as representative as possible.

THE RECENT FIRES.

The principal losers by the late fires in the Temiscaming and Kippewa districts are the Shepard and Morse Co., J. R. Booth, Alex Lumsden, Hull Lumber Co., Gillies Bros., of Braeside, and McLachlan Bros., of Arnprior.

Mr. D. B. Rochester, of the Hull Lumber Company, estimates the loss at from $500,000 to $750,000.

Mr. J. R. Booth has limits between 300 and 400 miles in extent, and it is said portions of these limits suffered severely.

The Shepard and Morse Co. have about 160 miles in the burned district, but the company does not expect to lose much It was first reported all their limits were burned over, but this was found to be untrue.

Mr. A. Lumsden has about 100 square miles near Hay Bay, in the southern portion of the burned area. This limit is said to have been pretty well burned over Mr Lumsden also had about 100 square miles near Lake Kippewa, but this limit is believed to have escaped.

The Hull Lumber Company has limits about 300 miles in extent, and the fire has covered about twenty-five miles. The principal loss on this limit was in the destruction of young pine that would be valuable in a few years A large quantity of the older pine, although damaged by fire, can be cut and saved.

The forest fire at Ingraham River, St Margaret's Bay, N.S., consumed over one thousand acres. Mr. Beardmore, of Toronto, was the heaviest loser.

THE BEST BAND MILLS.

What are the best band mills in use to-day? I claim those with the most sensitive and equal tension are best. By equal tension I mean that both front and back columns will take up strain exactly alike.

I will endeavor to explain a little actual experience I lately had on a mill with a poor tension. The tension on this mill as it was originally built would raise and lower the columns alike under a certain amount of strain, but when a little more was needed—as was the case when sawing—the back column would take up the stretch in saw when in the cut, but the front column was *not* equal to the emergency, and would remain rigid, or perhaps on the contrary drop a little. This was caused by the straining device being so arranged that it gave a direct strain on the back column, but to get strain on the front column the builders of the mill had used four extra knuckles, two connections and two extra shafts, and the result was, the less hook I carried in my saw teeth the more the saws, when in the cut, would come ahead on the wheels. Why? Because the less hook I carried, the harder my saws cut (causing them to stretch more) and the more strain it put on the mill The back column was equal to the extra strain and would take up the stretch in saw, but the front column was inclined to do just the opposite. Consequently, while sawing lumber with the mill in that condition, the average filer will readily understand which edge of the saw was bearing the heavy on the wheel and whether it was possible to make straight edges with a good, heavy feed.

Some filers may say that making the saws long in the back would have helped it out. To those of that mind I would ask, would you not, right on the start, have had to tilt your top wheel ahead to take up that extra length of back saw? And wouldn't your back column have been right there to take up the stretch just the same, and the front column have acted as before? I tried it, and that was the way it served me

Perhaps it would not be a bad plan for the foreman that informed Mr. GeBott there was no excuse for a filer having cracks in the backs of his saws to do a little experimenting on a mill where the straining device acted like the above. I was more fortunate than Mr. GeBott, as my foreman, when he saw the condition of the mill, at once set about to remodel the straining device, and consequently saved the saws and at the same time was able to get more and better lumber through the mill.

To others who have cracks in the backs of their saws, it might not be a bad plan for them to put the lines on the mill and see if the top wheel is not cross-lined into the log.—N. E. Huff in "The Wood-Worker."

BRITISH COLUMBIA LUMBER SHIPMENTS.

Following are the export shipments of lumber from British Columbia for the six months ending June 30th, 1901:

Name	From	For	Carg -Ft.
Antofagasta	Chemainus	Antofagasta	777,156
Alsterthal	Moodyville	Valparaiso	1,467,071
Schome	Hastings	Valparaiso	728,193
Alex. Gibson	Moodyville	Cape Town	1,603,585
Atheman	Moodyville	Bombay	44,852
Palatinia	Moodyville / Hastings	Yokohama	718,838 / 1,198,120
Admiral Tegethoff	Moodyville	Antofagasta	706,844
Dundee	Chemainus	Cork	1,712,532
Prince Victor	Hastings	Queensboro	784,942
Anna	Moodyville	Callao	1,332,873
Senator	Chemainus	Liverpool	1,074,930
Roland	Chemainus	Greenock	834,582
James Drummond	Chemainus	Fremantle	1,135,518
Antuco	Hastings	Callao	1,225,458
Passepartout	Barnet	Sydney	436,891
Commerce	Pender Isle	Santa Rosalia	169,540
Falls of Garry	Hastings	Sydney	1,627,472
Prince Albert	Hastings	Queensboro	1,211,970
Antonietta	Chemanins	W.C. of S.A.	790,434
Star of Bengal	Chemanius	Adelaide	1,461,765
Fantasi	Hastings	Liverpool	927,103
Eric	Pender Isle	Santa Rosalia	143,233
Sonoma	Chemainus	Melbourne	741,000
Mindoro	Hastings	Fremantle	880,650
Thalassa	Hastings	Plymouth	1,091,970
Hawan	Chemanius	Taku	1,102,347
Palatinia	Hastings	Taku	883,094
Bangor	Hastings	St. Michaels	170,260
Sulitelm	Moodyville	Valparaiso	Loading
Cavour	Moodyville	Callao	"
Luzon	Pender Isle	Santa Rosalia	"
Sixtus	Chemainus	Continent	"
Highlands	Chemainus	Cape Town	"
Khorasan	Hastings	W.C of S.A.	"

To sharpen dull files, lay them in diluted sulphuric acid until they are eaten deep enough

An authority suggests that in finishing white maple, only one coat of varnish be used, in order that the wood shall retain its whiteness, and let this be the lightest copal, of good body

Mr. H. Sapery, manager of the Syracuse Smelting Works, Montreal, has just returned from an extended trip of three months on the Pacific coast and in San Francisco, and reports the condition of affairs very good.

W. H. C. Mussen & Co., dealers in contractors', railway and mining supplies, etc, 763 Craig St., Montreal, has recently received the sole agency in Canada for the wire rope manufactured by W. B. Brown & Co., of Liverpool, Eng.

Hose for fire-lighting purposes about mills and yards should have an outside connection If the connection is within the mill, the fire may be in exactly the location to prevent the hose being used.

THE NEWS

A saw mill will be built at Waterville, Que., by F. G. Gale. &

A. Modiste is putting up another portable mill at Wawa, Ont.

A. D. Watson, of Clavering, Ont., is building a new saw mill in Keppel.

Halcombe Bros. have put in a new shingle mill at Little Rapids, Algoma district.

It is stated that Mr. Ainslie, of Comber, Ont., will build a planing mill at Sarnia

John Kalbfleisch is building a large dry-kiln in connection with his mill at Tavistock, Ont.

The recent strike of woodworkers in Ottawa has collapsed, the men having decided to abandon the fight.

The C. Beck Manufacturing Company, of Penetanguishene, Ont., have built a new steel refuse burner at their mill.

It is reported that the Saginaw Lumber Company, of Saginaw, Mich., have decided to build a saw mill at Sandwich, Ont.

The Moyie Lumber Company, of Moyie, B C, have commenced operations The mill has a capacity of 40,000 feet per day.

The Revelstoke Lumber Company, of Revelstoke, B.C, has elected James McMahon president, R Houson secretary and D. Robinson manager.

E Stewart, Dominion Forester, read a paper on "Tree Growing" at a meeting of those interested in the subject held at Brandon, Man., last month.

No. 4 saw mill of the Rat Portage Lumber Company, at Norman, Ont., made a record cut of lumber recently, the total for the day being 162,000 feet.

George White has built a new planing mill and sash and door factory at Parry Sound, Ont. The Parry Sound Lumber Company are also erecting a planing mill.

Nineteen of the twenty-six candidates who tried the cullers' examinations recently held in Hull, Que., were successful, but no names have been made public.

The mill of the Ontario Lumber Company at French River, Ont, again resumed operations last month, the tramways and yard having been rebuilt since the fire

William Lawton, W. I, Fenton, and others are seeking incorporation at St. John, N.B., to carry on the lumber and wood-working business of William Lawton & Sons.

The Parry Sound Lumber Company have had their mill at Parry Sound, Ont., connected with the town waterworks system. A fire brigade has also been formed by the employees.

Hugh Brennan, of Hamilton, and other members of the Mississaga Lumber Company, conferred with the town council of Meaford, Ont., recently regarding the erection of a saw mill there.

Thomas Southworth, chief of foresery for Ontario, has received a request from a firm of manufacturers to ascertain whether ironwood can be obtained in any considerable quantity in the province.

The exports from forest products from Canada during the year ending June 30th, 1901, totalled in value $30,003,857, as compared with $29,663,668 for the year 1900. The products of the mine show a large increase over the previous year.

Some of the British Columbia shingle manufacturers are using tin bands in lieu of the galvanized article, which is in short supply. The tin bands are made from cannery refuse and seem to answer the purpose very well, being light and strong and less likely to rust than the black bands. The cost, moreover, is only 3 1-2 cents a pound.

Price Bros. & Company, of Quebec, have just completed a new saw mill at St. Catharine's Bay, Saguenay, to replace the Ste. Etienne mill which was burned last year. The mill is very complete and was built under the supervision of C. P. Charlton.

In the village of Kingsbury, Que., Williamson & Crombie are operating a large saw mill and manufacture about 4,000,000 feet of lumber annually. Major Williamson, the senior partner, is now a veteran verging in the seventies and takes only a perfunctory part in the business.

The British Columbia Mills, Timber & Trading Co., of Vancouver, B.C., has shipped three spars to be used on King Edward VII.'s yacht to be built next year. Nearly all the famous yachts are using Douglas fir spars, and evidently King Edward knows a good thing when he sees it.

The Edward Sinclair Lumber Company, Limited, is seeking incorporation, with a capital of $42,000, to carry on the business of the late E. Sinclair, of Miramichi. The incorporators are the children of deceased, Bertha Ferguson, of Moncton, and O. W. Sinclair, of Eureka, Cal.

A Cushing & Company, who recently purchased the Miller & Woodman saw mill property at Milford, near St. John, N.B., are putting the mill in readiness for work. One of the gangs has been removed, and the eight shingle mills formerly operated will be placed in the saw mill. The shingle mill will be converted into a box shook mill.

James Leigh & Sons, of Victoria, B.C., are making additions to their mills and will install machinery for the manufacture of show cases, shelving and other finished work. They are installing in their sash and door factory an Egan band saw for the manufacture of boxes, packing cases, etc., a trade which has been largely increased by the demands from the north.

In connection with the burning of the saw mill of Alfred Dickie at Lower Stewiacke, N. S., which took place on July 4th, it is said that the mill was in ashes in less than half an hour after the flames were first seen. The mill was equipped with modern machinery and had been built less than two years. This makes the fourth time that Mr. Dickie has lost his mill by fire.

The Pigeon River Lumber Company, which has acquired the saw mills of Graham & Horne, at Fort William, Ont., will likely replace the mills by new ones of larger capacty. It is estimated that the timber the company have in sight will supply 10,000,000 ft. a year for a period of fifteen years H. Finger, the vice-president and manager of the company, has been engaged in the lumber business for a lifetime.

Contractor R. G. Reed, who has been trying to obtain the Government's consent to the transfer of his holdings in Newfoundland to a limited liability company, has accepted extensive modifications. It is said that he has surrendered 3,000,000 acres of land, containing large forests, at 30 cents an acre, as well as the ownership of the railway and telegraphs. It is stated that a bill to effect these changes will likely be passed by the Government.

The W. C. Edwards Company, of Ottawa, Ont., have provided for their employees club rooms nicely finished in oak. There is a large room for games, books, magazines and newspapers, and a kitchen where the men may warm their tea or food. There is also a class room in which those who desire to study matters bearing on their trade will be able to do so, and it is probable that a course of lectures will be given in this room during the winter months.

Mr. Marow, secretary to the German Consulate of Montreal, was a recent caller at the office of the Canada Lumberman.

CASUALTIES.

Edward Pelletier, an employee of McLaurin & McLaren, of East Templeton, Que., fell from the top of a pile of lumber, fracturing his left thigh and breaking his left wrist.

By being caught in the live rollers at the saw mill of the Rat Portage Lumber Company, James Flett was badly injured, necessitating the amputation of a portion of his foot

Andrew McKillop, employed in a steam saw mill at Sydney N.S., was caught in the machinery and whirled in the air for several minutes, but received only slight injuries.

A serious accident occurred last month at the mills of the Brunette Saw Mill Company, New Westminster, B.C. By the bursting of an emery wheel the face of George Coulson was badly cut.

THE TIMBER SUPPLY.

At a recent meeting of the Society of Arts, in London, Dr. W. Schlick read a paper on "The Outlook for the World's Timber Supply. The first part of the paper was occupied with statistical details on the export and import of timber in the various countries of the world.

As regards Europe, Dr. Schlick reached the conclusion that the present deficiency of 2,620,000 tons were sure to increase, because the European sources of supply were not likely to meet the additional 600,000 required annually; personally he would not be surprised, if ten years hence the deficiency amounted to three or four times the present quantity. Of the importing non-European countries, taken all together, there was no doubt the net imports would increase as time went on. Of the exporting countries, the regions around the Caribbean sea exported mahogany and other furniture woods, but they also imported so much lumber, that their net exports were only 15,000 tons a year. The west coast of Africa exported various hard woods, but they were so expensive that they hardly affected the question. British India could not do more than send some teak and furniture woods. In Asiatic Russia, even supposing there was a surplus of production for export, the cost of transport would be practically prohibitive. The timbers of Central Africa were not of the sort required in Europe in large quantities, apart from cost of transport, and in South America matters were in a similar position. It would not be possible, he felt sure, for the United States to meet, for any length of time, the increased demand which they had supplied for the last few years. Their present annual production, estimated at 75,000,000 tons, was exceeded by the present annual consumption by 33 per cent, and this meant that they consumed annually, not only the legitimate growth or increment, but also a portion of their capital. Fortunately the seriousness of the position had been recognized, and efforts were being made to introduce more conservative lumbering, and to protect the forests against ravages by fire and grazing. As to Canada, it has not responded to the extra requirements of Europe, and he doubted whether it would be able to do so in the future, unless decided steps were taken at once, to start thorough protection and systematic management on selected areas, or, as they might be called, reserved state forests.

There should be no difficulty in permanently reserving 100 million acres, and if half the annual revenue—£700,000—derived from Canada forests were devoted to that purpose, substantial progress could at once be made to secure not only the present, but an increased output for any length of time, leading ultimately to a return tenfold, or more, the present amount and securing a permanent supply of coniferous and other timber for the world. In the second part of his paper, Dr. Schlick drew attention to a few lessons that might be learned as regards the British Empire as a whole and these islands in particular. With all the forest wealth of the colonies we imported into the empire timber valued at

arly £18,000,000 every year, and the sum lately d risen at the rate of £771,000 annually. arely the time had come for a more vigorous orest policy on se sible lines throughout the mpire Systematic forest management should be troduced, more particularly into Canada and ustralia, and, above all, let the self-governing olonies consider a little more seriously, that itherto the magnificent example set by India. t we should begin by putting our own house order. The imports of timber into the United ingdom in 1899 were valued at £25,000,000, and late years they had increased at the rate of ,000 tons, £919,000, annually. Eighty-seven r cent of the total consisted of pine and fir, e sources of which were specially exposed to haustion, and where were we to obtain the e or ten million tons of coniferous timber we quired, when the countries around the Baltic, d perhaps also Canada, had begun to fail us? et we had sufficient, and more, surplus land at me to produce all this timber without putting single acre out of cultivation. There were ,000,000 acres of waste land and 13,000,000 res of mountain and heath land, from which to oose the necessary six or seven millions, and rely £25,000,000 going out of the country every ar was money enough to take some trouble out

A MICHIGAN DECISION ON DRIVING HARDWOOD LOGS.

The following account of a recent decision regarding the driving of hardwood logs will be of terest to Canadian lumbermen:

The Supreme Court of Michigan has decided in e recent case of Bellows v. Crane Lumber Co., N W. 1103, that where a stream was obructed by defendant placing therein and atmpting to drive hardwood logs, many of which nk, it was error for the trial court to charge e jury that plaintiff could not recover the exse of removing such obstruction to driving eir logs, if the jury found "that the defendant as driving the logs in a reasonable manner, put sufficient men, and was using all diligence to ep the river clear," since the question whether was reasonable for defendant to place in the er and attempt to float such logs should have en left to the jury.

Mr. Justin Hooker, writing the opinion of the rt, said: "Comp. Laws, 5075, makes it the ty of every person who uses the waters to run gs to put on men enough to prevent obstructons to navigation, and gives to others the right compensation for increased labor in floating eir logs in consequence thereof. It would be ing a great way to say that a man has the ht to attempt to run logs that will sink, at y time he chooses, if, by reason thereof, it will impossible to run them, or necessarily and riously obstruct navigation. The court inructed the jury that defendant had a right to run its hardwood logs, and that, if they used all reasonable diligence to get their drive down e river, and employed all the men on the same t. t was practicable, and did not do anything unreasonable to delay the plaintiffs or obstruct the use of the stream, they could not then take into consideration the fact that the upriver drive overtook them, or was hindered by them, for the lower drive had the right of way, so to speak. He added: That is, if you find that the defendant was driving the logs in the reasonable manner, put on sufficient men, and using all diligence to keep the river clear. This instruction might be considered correct were it not for the fact that is claimed that, owing to the alleged improper attempt to float logs that should have been expected to sink, it was made impossible for any one to keep the river clear.

"If it is true that a million and a half of these logs could not be floated down the river, and were not, but sunk, and remained along the stream, the fact that the defendant was making great efforts to bring up its rear, and do an impossible thing, should not preclude plaintiffs from recovering the expense in getting their logs by such obstruction and the jams formed thereby In a sense a man has a right to float logs when he chooses, but it does not follow that he may expect others to suffer because of his unreasonable attempt to float logs which he ought to know will not float. It was a question for the jury whether it was reasonable to attempt to float the logs. It is proverbial that a "stern chase is a long one," and significant that defendant's rear was overtaken by a drive which started 100 miles behind, and substantially at the same time. The fault may have been in the attempt to float logs not in a condition to float, and in such case it was not proper to give the jury to understand that, if the defendant was working all the men practicable and using all reasonable efforts to clear the stream, the plaintiffs must suffer for their inability to clear the river of logs that they should not have attempted to move at the time.

"We think a discussion of other questions raised unnecessary, except that in relation to costs. Plaintiffs contend that it appears that their claim was established at more than $100, and was reduced by set-off. This cannot be said to affirmatively appear from the record. The judgment is reversed, and a new trial ordered." The other justices concurred.

NEW CENTURY IDEAS.

The Toronto Exhibition to be held from August 26th to September 7th, announces that its principal characteristic will be the adoption of New Century Ideas. The phrase might be considered a bit indefinite but for the fact that contemporaneously the statement is made that there will be daily and nightly displays of all the new weapons of war as well as recent developments in the arts of peace. The pom pom will be on view, wireless telegraphy will be shown in practical use off the shore to passing vessels, magnificent displays of illuminating effects will be made, recently announced developments in electricity will be shown, demonstrations will be made in the cultivation of the sugar beet, modern methods of rescuing at sea will be illustrated, manœuvres with latter-day artillery will take place, in fact the military will be very much in evidence in all its branches, while the handy-man and the marines will also be used largely in the off-shore operations and the brilliant nightly spectacle the Bombardment of the Taku Forts by International Forces. An International Military Tattoo will be the feature of the opening night, when a large body of troops will be utilized. Reduced fares will be given by all the railways.

WOOD PULP DEPARTMENT

BRITISH IMPORTS OF WOOD PULP.

The imports of wood pulp into Great Britain during the first six months of this and the two preceding years were as under :

YEAR		VALUE.
1901.....224,678	tons	£1,220,900
1900.....232,020	"	1,213,070
1899.....196,114	"	934,681

The following figures show the comparative imports from the countries mentioned : —

NORWAY.

1901.....128,455	tons.	£550,630
1900.....141,214	"	641,060
1899.....118,781	"	465,882

SWEDEN.

1901..... 49,271	tons.	£401,045
1900..... 55,661	"	386,840
1899..... 42,947	"	289,639

CANADA.

1901..... 33,757	tons.	£162,822
1900..... 18,832	"	74,048
1899..... 16,445	"	63,778

UNITED STATES.

1901..... 6,741	tons.	£54,400
1900..... 4,711	"	18,466
1899..... 8,043	"	48,620

OTHER COUNTRIES.

1901 . 6,454	tons.	£52,003
1900..... 11,602	"	92,656
1899..... 9,898	"	66,762

During the last six months there was a shrinkage of 7,342 tons in the British demand for wood pulp, compared with the corresponding half of 1900. Whilst the shipments from Norway, Sweden and other countries declined, those from Canada and the United States show an increase.

THE BELGO-CANADIAN PULP MILLS.

The new mills of the Belgo Canadian Pulp Company at Shawinigan Falls, Quebec, when completed, will be the largest individual mills in Canada. The plans call for a ground wood mill which will make 100 tons of ground wood pulp, 50 tons of bleached sulphite pulp, and 100 tons of newspaper every twenty-four hours.

Ground was first broken for these mills October 15th, 1900, and the ground wood mill will be in operation September 1st, 1901, with a shipping store house, 100x250 feet, two stories high, with two standard guage railroad tracks through the centre, so the floor of a car will be level with the shipping room floor.

Fifty tons of this pulp will be pressed about 40 per cent. dry, and fifty tons pressed and dried to about 88 per cent. dry. This dry pulp will be cut into sheets 24x36 inches, pressed into bales, each weighing about 450 pounds, as will also the wet pulp, and wrapped in jute. This mill has 24 grinders, with stone 19x54 inches; 26 ten plate screens, and 13 of the 72-inch wet machines, all furnished by the Friction Pulley and Machine Works, Sandy Hill, N.Y., two 128-inch Fourdernier drying machines and one I. 'an engine, furnished by the Black & Clawson Company, of Hamilton, Ohio. The necessary wood preparing machinery and conveyors are furnished by the Waterous Engine Works Company, Brantford, Ont.; 600 horse-power of boilers, furnished by the Sterling Company, Chicago, Ill.; 20 special turbine wheels and hydraulic feeder gates for each, and six hydraulic bailing presses, furnished by the Holyoke Machine Company, Holyoke, Mass., and the heating and ventilating plant, furnished by the B F Sturtevant Company, Boston, Mass.

This mill is built of concrete, brick and steel throughout, except the shipping-room floor, which is wood, known as mill construction, and is looked upon to be the most complete and modern mill in this country when completed, from the fact that the only belts used in the mill are on the wood preparing machinery and wet machines.

Two grinders are driven with one wheel direct, connected to the grinder shaft. The 26 screens and one pulp grinder are driven with one wheel directly connected, and the Jordan engine, one large stock pump, the wet machines, the drying machines, the wood room shaft and the lighting generator are also each driven with one direct connected wheel. So the superindentent or foreman operating a mill where every machine is driven by belts or gears will appreciate the fact that the operating expenses in this mill are reduced to the minimum.

These mills were designed by, and are being built under the supervision of the well-known hydsaulic and mechanical engineer, A. C. Rice, State Mutual Building, Worcester, Mass.

PULP NOTES.

General B. C. Tilghman, the discoverer of sulphite fibre, died in Pennsylvania last month.

The paper mill of the Canada Paper Company, at Windsor Mills, Que., was destroyed by fire on July 29th. The loss is about $200,000.

It is announced that Mr. Tobin, M.P., has completed arrangements for the erection of a pulp mill at Brompton Falls, Que., the municipality having granted financial aid towards the project.

It is reported that New York capitalists have acquired large tracts of timber land at Wolfville, N S , from S P Benjamin & Company, with the intention of establishing a large pulp mill.

Several Canadian manufacturers of pulp were creditors of Taylor Bros., of Toronto, who assigned recently The estate is being wound up, and it is thought that the unsecured creditors will get very little.

The failure is announced of C. W. Thompson, until recently manager of the Consolidated Pulp & Paper Company, of Toronto. The embarrassment is understood to have been caused by the failure of the latter concern.

The barge Advance recently loaded 600 cords of pulp wood at Providence Bay, Manitoulin Island, for Erie, Pennsylvania, the shipper being Mr. Lehman, of Kogawonk, who has a contract to supply 7,000 cords this season.

An American company is said to be negotiating for the purchase of the pulp mills at Jonquieres, in the Saguenay district, Quebec, as well as the valuable water powers near the mills. A. K. Hansen & Company, of Quebec, are acting as agents.

Thomas Meaney and Henry Holgate, C.E., of Toronto, are at present at Seven Islands, Labrador, making plans, etc., for developing water power to operate a new pulp mill which Messrs Thomas Meaney & Company propose to erect at that place.

W. H. Davis and David Russell, of Montreal, representing a syndicate, are reported to have purchased an extensive area of spruce timber limits situated at the head waters of the St. Maurice River, Quebec, and intend to develop t water power and erect a large paper and pu mill.

An experimenter in the pulp line says that i is able to take nine shavings from the plain mill, and, after cooking them three hours i nitric acid and caustic soda produce a fine, ha fibred pulp at a price that would make the o dinary pulp maker turn green with envy

At a late meeting of the shareholders of t Maritime Sulphite Fibre Company, of Chatha N B , a resolution was passed to the effect th the company should cease doing business, a accordingly the mill was closed about two week ago. The cause of this action has not be learned, but it is thought that the business ha not been conducted with financial success

The Riviere du Loup Pulp Company has be organized in Toronto, with a capital stock o $500,000, to carry on the works pertaining to pulp company and acquire the rights of t Riviere du Loup Company, incorporated und Quebec laws. A. C. Ross, of Toronto, C. Kloc fer, of Guelph, and Hon J R. Stratton Peterborough, are provisional directors.

In reporting upon the wood pulp market i France, M A. L. Grondal, of Paris, states th transactions are insignificant in mechanical pu the tendency is towards lower prices. In che cal the market is inactive, consumers showing preference to wait until the situation is on more permanent basis before making arrang ments. As a consequence contracts will be close much later than usual this year, in the hope the prices will be more steady.

Notice has been given of the incorporation of the Miramichi Sulphite Fibre Company, with a capital of $1,000,000. The intention of the pro moters is to acquire the timber limits and mills of the William Richards Company, of Chat ham, N.B., and to build a 50-ton sulphite fibre mill at that place. One of the promoters, Jo Moravec, is an experienced sulphite fibre manu facturer, and has prepared the plans for the mi The town is to give a bonus of $15,000 when th mill is in working order.

It has long been a source of regret to Frenc papermakers, and the trade at large, that i spite of the very large quantities of wood pul consumed in that country, there are but few fac tories of note manufacturing this material on th spot, although suitable timber is to be fou large quantities in numerous localities Th there is an opening for industrial enterprise this kind seems to be amply proved by the fa that during last year 134,213 tons of wood pul were imported into France, valued at abou £1,430,000.

The James McLaren Company, of Buckingha Que., are about to construct a large pulp an paper mill at that place. It is the intention t manufacture only mechanical pulp at present but provision will be made to start paper mill as soon as the trade conditions warrant it. William Kennedy, of Montreal, has charge of th hydraulic work. The contract for the brick an concrete work has been let to Holbrook & Sch erland, of Ottawa. The McLaren Company ow extensive spruce limits in Northern Quebec whi will furnish a plentiful supply of spruce for th mill.

Speaking of the erroneous report that the mi of the Sault Ste. Marie Pulp & Paper Compa were closed down on account of an insufficie demand, Mr. Clergue says : "We are now ru ning the pulp mill to its capacity, and find no trouble in disposing of all the pulp we can turn out. We are sending it to England, France Germany and Japan. There is no danger of the mill being closed." The Sault Ste. Marie Com pany have for some time been making and sel mechanical wood pulp. It is now proposed to make a mixed pulp, putting into the groun wood a percentage of sulphite pulp for the va ious requirements of the paper trade. Com

...is now being made between the two mills, ...the proper mixing ...chinery is being install... the mechanical ...l. Pulp containing any ...ed percentage of sulphite will be delivered ...per mills.

...Oriental Power ...lp Company, Limited, ...been incorporated ... the British Columbia ...rnment, to build ... pulp mill in that prov... The capital is $...,000

...cerning the outl... for pulp in Canada the ... Mill, of New Y... says: "It looks as if ...time were at ... when the only way to ...a continued expa...sion of the pulp industry ...would be to build new paper mills to take ...of the product ... new pulp mills. It is as ...that the prod... of Canada's pulp wood ...be marketable w... most chance to profit. ...top short of this ...duct when nearly the ...labor cost of ...producing paper from the ...has been incurred ...ems to be bad economy, ...that it is bad ec...my is the evident lesson ...the present situation. If there were paper mills enough in Canada to absorb the output of the pulp mills, the bankers would not now be talking as if they meant to stint their support to the pulp industry."

CLOSING OF A PULP MILL.

The suspension of business by the Maritime Sulphite Fibre Company, of Chatham, N.B., has furnished food for much comment regarding the prospect for finding a market for all the pulp that will be manufactured in Canada when the mills now under construction are completed, and of operating mills at a profit. The Chatham World gives expression to the following views.

"The suspension of the Maritime Sulphite Fibre Company does not mean that the manufacture of sulphite pulp is not profitable on the Miramichi, and that another mill might not pay good returns on the capital invested. It means nothing of the kind. There is a big profit on sulphite pulp, especially on a good quality of the article, and a worldwide market for it. The trouble with the Maritime Sulphite Company is not that it has not been operating at a good profit, but because all its earnings have been swallowed up by its interest account. Its works have cost at least twice as much as they should have cost, expensive plants having been put in and torn out by successive managers in a most wasteful manner, and the capital, instead of having been put in by the stockholders, has been borrowed at too high a rate of interest for an industrial establishment to pay. The mill pays but does not pay enough to keep the interest account square and leave anything for the company. The Dominion Pulp mill, which was built economically, and has been managed as an industrial establishment rather than an experimental station for testing the merits of different sulphite plants, is paying its owners good dividends, and a new mill, if built and managed by practical men, would, no doubt, do likewise. The Maritime Sulphite Fibre Company's mill, now in possession of the Royal Trust Company, acting on behalf of the bond holders, will soon be sold, no doubt, and then operated profitably. It has suspended because it cannot pay bank interest on a half million dollars, but it might pay good dividends on an investment of, say, three hundred thousand

PERSONAL.

Thomas Mackie, M.P., of Pembroke, Ont., last month went to Saskatchewan, N.W.T., to inspect timber limits in that district recently purchased by him.

A valued official of the Crown Lands Department of Ontario passed away at his residence in Toronto Junction on July 13th, in the person of Mr. Alexander Kirkwood, for many years chief of the Accounts branch of the above named Department Mr. Kirkwood retired from the Crown Lands Department in October last, after a service extending over forty-seven years. At his death he was seventy-seven years of age. He was possessed of a great capacity for work, and had given close attention to the books of the Department. He always took a deep interest in forestry, and was a member of the Ontario Forestry Commission, which presented its final report to the Government about one year ago.

Mr. D. Laine, one of the founders of the well-known firm of Carrier, Laine & Company, of Levis, Que., dropped dead on June 28th. Deceased was a successful business man and highly esteemed. He was a member of the Council of Arts and Manufactures of the province and of town council.

LUMBERMEN'S WEEK AT THE PAN-AMERICAN.

There is to be a great re-union of lumbe from all parts of the country at the Pan Ame can Exposition in Buffalo during Lumberm Week, August 26th to September 1st The co mittee in charge consists of Messrs. John Scatcherd, Geo P. Sawyer, and Alfred Hu Mr. R. A. Eaton, superintendent of the Buf Business Men's Association, will furnish info ation regarding accommodation, etc., to th intending to visit the Exposition.

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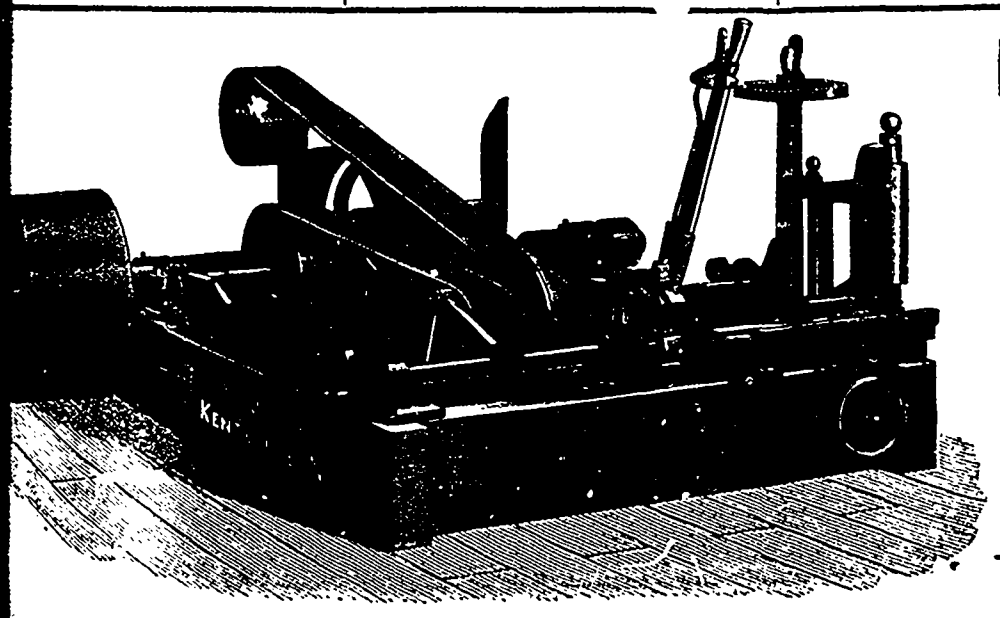

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