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THE CANADA LUMBERMAN

WOODWORKERS' MANUFACTURERS AND MILLERS' GAZETTE

NO. XIX. 1898.

TORONTO, ONT., JULY, 1898

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

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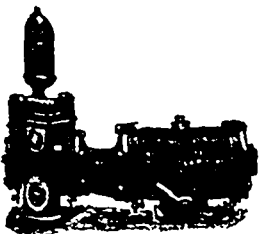
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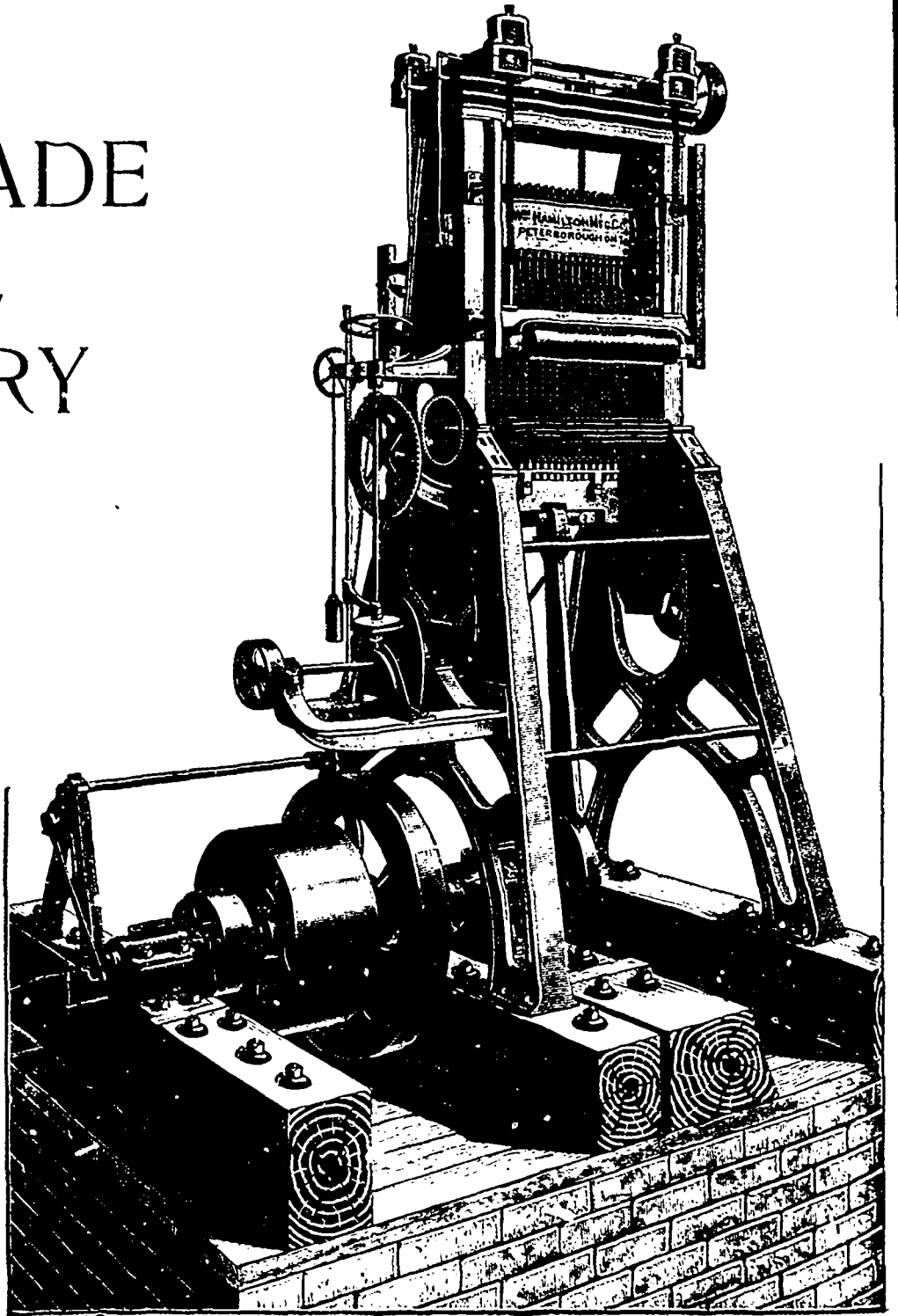
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THE CANADA LUMBERMAN

VOLUME XIX.
NUMBER 7.

TORONTO, ONT., JULY, 1898

TERMS, \$1.00 PER YEAR.
Single Copies, 10 CENTS.

RECORD OF A PROGRESSIVE LUMBERMAN.

As one of the most enterprising and successful lumbermen in Western Ontario, a portrait of Mr. J. E. Murphy, of Hepworth Station, is presented to our readers. Mr. Murphy is so well known to the lumber trade that any introduction here would seem almost superfluous. Suffice it to say that his operations are confined to hardwoods and hemlock, and that he is one of the foremost advocates of a direct export trade in lumber and manufactures of wood between Canada and foreign countries.

The subject of our sketch left the printer's case in the city of Boston owing to ill health, in 1873, and entered the employ of Jones & Murphy, then a prominent firm of lumbermen in the County of Perth, where at that time considerable quantities of standing pine were owned by the firm in the townships of Elma and Logan. He continued in their employ until their timber was about exhausted and a dissolution of the firm took place. In 1879 he purchased from his employers one of their mills in Logan township, and operated it for two seasons, when it became necessary to move the mill for want of timber. The G. B. and L. E. railway was then being extended northward from Chesley to the Georgian Bay, and in December, 1881, Mr. Murphy went north in search of a location, visiting Hepworth, Wiarton and Owen Sound, all three of which places he then looked upon as excellent locations for a mill. His capital being limited, he decided to locate at Hepworth, where he could build cheaper than at either of the other places. For the first year or two the business was not very remunerative, owing to the antipathy of the building trade to using hemlock, which was the staple variety of timber there, and which was found in abundance at that period. Things took a change, however, hemlock worked its way to the front steadily, and in a few years it was a difficult matter to yard as many logs as would supply his steadily growing trade. In 1889 Mr. Murphy lost his residence and contents, on which the insurance was unfortunately allowed to lapse, and the loss entailed in replacing the building and furnishings amounted to \$4,000.

In the year 1890, in partnership with Mr. George Gates, of Alpena, Mich., Mr. Murphy built a large mill in Owen Sound, for the purpose of manufacturing north shore pine timber, but about the time the mill was ready for operation the export duty was removed and our logs made free to the Americans. The result of this was that logs advanced considerably in price, and loggers found it more to their advantage to sell their logs to Americans than to

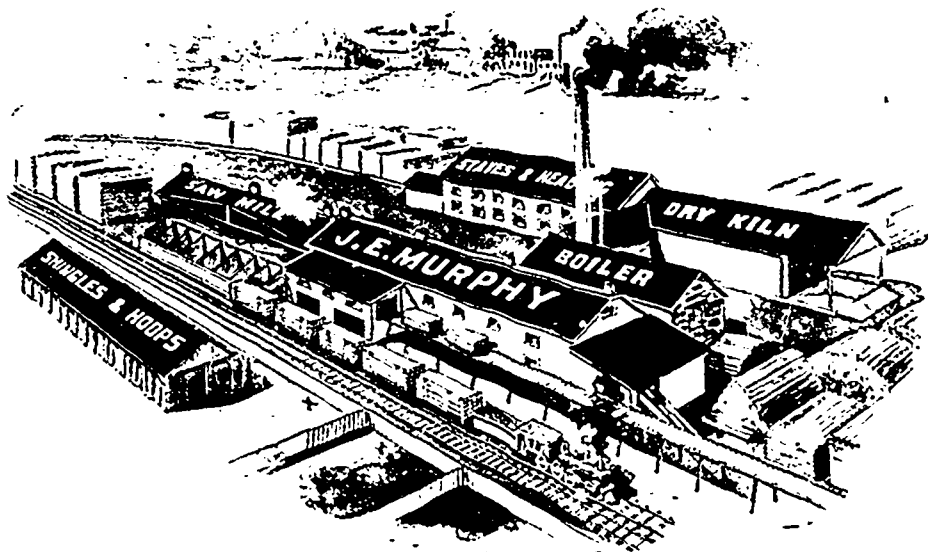
cut them on our own shores. The partnership was subsequently dissolved, and the mill, together with 2,200 acres of hardwood land on the Bruce peninsula, about 60 miles distant from the mill, sold to Messrs. Pickard & Rowan, who still operate it.

The erection of a new mill five miles west of



MR. J. E. MURPHY.

Owen Sound, on the G. T. R. extension from Park Head, was the next venture of Mr. Murphy. There he built a splendid mill, where he has 500 acres of timber. But after getting two seasons' cut piled up he was again visited by fire in August, 1891, the whole establishment being de-



MILLS OF J. E. MURPHY AT MURPHY, TOWNSHIP OF KEPPELL, ONT.

stroyed, entailing a loss of \$20,000, with only \$7,000 insurance. Not easily discouraged, however, he immediately made preparations to rebuild, and the buildings shown in the accompanying illustration are the result. The original buildings have been added to from time to time, until they now include a complete and handy saw mill, shingle mill, stave, heading and hoop factory, and a large dry kiln erected by the Mc-

Eachren Heating & Ventilating Co., of Galt, than whom Mr. Murphy considers there are no more capable men in their line. With the aid of this kiln he is enabled to turn out staves and heading to order from the stump to the car in two weeks time, recognizing that it is promptness and superior goods that count in building up a trade to-day.

The cutting capacity of each saw mill is about 12,000 feet per day; shingle mill, 12,000 cedar shingles; hoop mill, 7,000 per day; stave factory, 20,000 staves per day. The average amount of lumber turned over per year for the past 16 years has been 4,000,000 feet, the greater part of which has been hemlock, and the balance ash, birch, elm, basswood, maple and other minor hardwoods.

Although the largest portion of Mr. Murphy's business is at the Keppell mills, he still continues to reside at Hepworth, where he holds considerable farming lands, as well as a smaller mill that he has operated there for the past sixteen years. The timber is now pretty well cut away within several miles of this mill, and it is his present intention to either sell the mill, or after cutting one more stock, move to some location yet to be selected, where timber is more plentiful. Mr. Murphy is also interested in the Owen Sound Portland Cement Works at Shallow Lake, near Owen Sound.

WHAT CONSTITUTES A MANUFACTURED ARTICLE.

The United States Supreme Court at Washington has handed down a decision, through Justice Brown, in the case of the Tidewater Oil Company against the United States. The case was instituted to secure a drawback of duty on shooks, sides and bottoms of boxes, and involved the question of what constitutes a manufactured article. The Tidewater Company habitually imported shooks, sides and bottoms of boxes from Canada, which they manufactured into boxes, together with iron rods which they imported from Europe. The completed articles they then exported. Justice Brown decided the question, whether the boxes were wholly manufactured in the United States, in the negative. He held that the sawing

of the shooks was an important part of the manufacturing process, and as this was done previous to their introduction into the United States, the boxes could not be said to be wholly manufactured within the United States.

The employees of Ross Bros. and the McLaren Company at Buckingham, Que., recently requested a reduction in the working hours of from 11 to 10 hours, which was granted.

OBITUARY.

S. C. KANADY.

WITHIN the past month death has removed a well known Canadian lumber dealer, in the person of Mr. S. C. Kanady, who died in Toronto on Wednesday, June 8th. Deceased had suffered for years from bronchial affection, which it was thought would have proved fatal ere this, and it was only by careful nursing and the best of attention that his life was prolonged.

Mr. Kanady was a thorough lumberman, with an equal knowledge of both pine and hardwoods, obtained during a business career of nearly fifty years. He was associated and familiar with early lumbering operations in Ontario, when the trade was manifestly different from that of today. Of a life of sixty-two years, forty-four were spent in the handling of lumber, a calling which he chose when first launching into the commercial world. He had naturally a very wide acquaintance among lumbermen and throughout the Eastern States.

The late Mr. Kanady was an American by birth, although most of his life was spent in Canada. He was born at Evans Mills, New York State, and when a child removed with his father to Ontario, settling at Vienna, in Elgin county. At the early age of eighteen years he established himself as a lumber dealer, and in a very short time became quite an extensive shipper, supplying large quantities of pine lumber to Easton & Co., of Albany, N. Y. After residing at Vienna for several years, he removed to Detroit, but still continued his Canadian business.

Returning again to Ontario, Mr. Kanady located in Toronto, and formed a partnership with Messrs. A. R. Christie and Wm. Kerr under the firm name of S. C. Kanady & Co. This was about twenty-five years ago. For a number of years a very extensive and successful pine trade, both local and export, was done by this firm, and they were recognized as the leading wholesalers. Subsequently, however, largely owing to general commercial depression, they met



THE LATE S. C. KANADY.

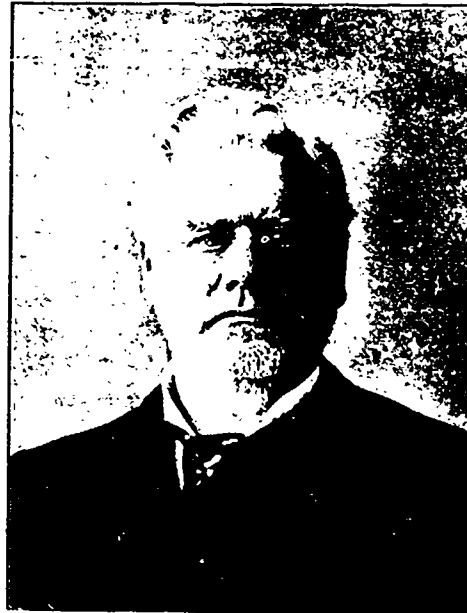
with business reversals and became financially involved, the outcome of which was that the partnership was closed out. Then for a short time Mr. Kanady continued alone, but early in the eighties he arranged a partnership with Mr. Ashley R. Ritchies under the former name of S. C. Kanady & Co., which continued until about seven years ago. Of late years Mr. Kanady has confined his business largely to the handling of hardwoods, having an office at his residence on Charles street, Toronto.

Although retiring in his disposition, Mr. Kanady was much respected and had many warm friends. He was a man upright in all his ways, of a sympathetic nature, and always willing to assist those in need. In his death the lumber trade lose an esteemed member.

WALTER MCFARLANE.

ON May 13th last death claimed as its victim Mr. Walter McFarlane, of St. Marys, N. B. Deceased had been ill for about a month, but had recovered sufficiently to be able to attend to business, and had every appearance of regaining his former robust health. He was, however, again taken suddenly ill, and expired in a few hours.

The late Mr. McFarlane was one of the most successful manufacturers of the Maritime Provinces, and was held in high esteem in the community in which he lived. He was of Scotch descent, having been born in Dunoon, Scotland, in the year 1843. He removed to Canada with his parents when fourteen years of age, and settled with them at Nashwaaksis, N. B., where he learned his trade as a blacksmith. After completing his apprenticeship he removed to Boston,



THE LATE WALTER MCFARLANE.

where he entered the employ of a street car company. Upon his return to St. Marys, he entered into partnership with Mr. Frank Bird, now of Burt's Corner, and purchased a small blacksmith business at St. Marys. Mr. Bird retired from the firm at the expiration of one year, and Mr. McFarlane continued the business, which, under his judicious management, flourished, and has since developed into one of the most important and successful industrial establishments in York county. Shortly after Mr. Bird's retirement, the surviving partner dropped the carriage and general blacksmith business and took up the manufacture of horse hames, peevies and patent hay lifting machines. Mr. McFarlane's success as a manufacturer of these articles was phenomenal, and demands for his goods came from all parts of the country, from Cape Breton to Vancouver. His factory was destroyed by fire in 1882, but was immediately rebuilt of brick and stone on a somewhat larger scale, to meet the demands of his rapidly growing business. The present large establishment occupies substantially the same site as the small wooden structure in which he commenced business over thirty years ago. In addition to his manufacturing

business, Mr. McFarlane controlled and operated a large coal mine at Grand Lake, Queens county and was also interested in the St. Marys Saw Factory. His estate is valued at \$50,000.

ROBERT SWIM.

HEREWITH is presented a portrait of the late Robert Swim, of Doaktown, N. B., to whose death reference was made in a former issue.

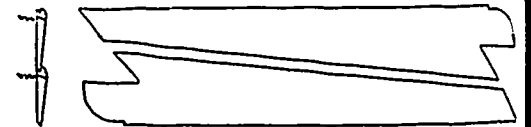


THE LATE ROBERT SWIM.

Mr. Swim was an extensive lumberman on the south-west branch of the Miramichi river and tributaries from 1870 to 1893, when he sold out his lumber business, timber lands, stores and saw mill to Swim & Co., consisting of F. D. Swim, Alonzo Kelly and Henry Swim. He became the second largest stockholder in the South-west Boom Co., which position he retained until his death. After selling out his lumbering business in 1893, he built a wood-working factory and connected with it a carding mill, which he owned and operated also.

A MARKETABLE CLAPBOARD.

Messrs. Macpherson & Schell, of Alexandria, Ont., send to the Woodworker the accompanying sketch of a clapboard they have been making for the past 28 years, regarding which they say:



"There is no patent on it in Canada, and if there should be any such patent taken out it would be of no value. One and one-quarter inch lumber is used for the wider widths, and for four-inch wide full inch lumber is used. The edge of the clapboard may be made ogee, quarter-round, or as the maker prefers. A four-sided planer or sticker and a resaw are used to make it."

TESTS OF "NEW AMERICAN" TURBINE.

Messrs. Wm. Kennedy & Sons, Limited, of Ora Sound, Ont., manufacturers of the "New American" turbine in Canada, have handed us a condensed table of the tests of a 36 inch "New American" wheel made at Holyoke testing flume on the 27th and 28th May 98, which show the following remarkable results.

At 53% of full discharge it developed	72.36	efficiency
" 64% " " "	77.95	"
" 79% " " "	84.35	"
" 84% " " "	85.89	"
" 86% " " "	86.36	"
" 93% " " "	85.81	"
" 100% " " "	83.09	"

Aver. efficiency from half to full gate = 82.86
Power developed by wheel under 16.72' head = 180.90 h.p.

Intending purchasers of water wheels will do well to investigate the merits of this wheel.



trade should be taken up by a few large dealers, who would be in a position, financially, to handle large contracts. To explain, I recently saw an order that was given to an American firm for 125 car loads of oak and ash. Now, where is there a hardwood firm in Canada that could fill an order such as that?" This question suggested an enquiry as to the extent of our hardwoods, to which my informant replied: "I believe we have sufficient hardwoods to supply fifty per cent. of the British trade. The reason that the local consumption requires nearly all the hardwoods produced is that there is no incentive to manufacture; you must create a market. Our hardwoods are now sold on too small a margin of profit; they are really sacrificed. Of course, you know that one drawback in the past has been that you could not drive hardwood logs, but with the new railways recently completed in different parts of the province there can be obtained immense quantities of hardwoods, and it is quite time that we took advantage of our opportunities. Taking a broader view of the question, and looking at it from a national standpoint, I think the cultivation of the hardwood industry is very desirable. On many so-called pine limits will be found considerable hardwood. Instead of cutting the latter, the tendency of lumbermen in the past has been to confine operations exclusively to pine, even cutting the very small trees. Thus the pine market has been almost ruined, while the country is being rapidly depleted of its forests. It seems to me that the protection of pine is the cultivation of hardwoods, and when this is properly recognized we will enter upon a new era in the lumber trade of Canada. There is a wonderful market in Europe for forest products."

DISPOSAL OF REFUSE AT HAMBURG, GERMANY.

IN view of the increased attention which is now being given by lumbermen to the question of the profitable disposal of sawdust and other mill refuse, Mr. W. M. Watson, of Toronto, sends us the following condensed report of the system employed at Hamburg, Germany, for the utilization of the garbage of the city. The particulars are obtained from a report recently issued by Mr. Herr F. Andreas Meyer, City Engineer.

The city of Hamburg, Germany, with its population of 300,000 inhabitants, has an incinerator, comprising 36 furnaces, to destroy the offal, garbage, street and marine refuse, and everything useless and infectious that may set up putrefaction. The destructor has been in operation since 1895. Herr Meyer informs us that the garbage and refuse of Hamburg is composed of market, dock and domestic garbage, sweepings from paved streets and slaughter houses, spoiled fish, etc., but that, on account of the small amount of cinders and coal ashes collected in Hamburg, in comparison to what is collected in British towns, and of the custom in Hamburg of covering the floors of the poorer dwellings, kitchens, yards and other flagged walks with sand, which when dirty is swept up and deposited in the garbage bin and comes to the incinerators, the combined refuse is hard to cremate, because the sand proves a detriment, and there is not the cinder fuel usual in the British refuse to create the heat to destroy wet rubbish.

The 36 furnaces, having 27½ square feet of grate surface, are erected in two rows of 18 each, placed back to back, with the large collecting and combustion chamber between them. The furnaces were built by the Horsfall Syndicate of Leeds, England, who guaranteed that each fur-

nace should consume 11,000 pounds of wet refuse or garbage each day, and the fumes, if any, discharged from the chimney should be odorless and totally free from unhealthy vapors, dust, etc. Six furnaces were first erected, and tested in 1894. They were found to be fully up to the guarantee, and the order was then given for the balance of 30 more, making the full complement of 36, which were finished in 1895 and have been working steadily ever since.

The garbage is collected by wagons that hold five cubic yards, and on arrival at the works are run on to an electric elevator and hoisted up to the tipping platform, then shovelled by hand on to the drying hearth, which is built with a steep incline at the rear of each furnace grate, where all the moisture is dried out, and driven by the blower through a trumpet pipe and along the patented iron box fixed on each side of the fire, delivered at a proper pressure into the ash-pipe, and then upwards through the body of the fire, which generates it into heating gas and completely destroys the fumes. The smoke and fiery gases from the fire are brought to the front over the cleaning door, and pass through the crown arch to a combustion chamber of the same size as the fire-place; from this chamber it passes on to the general collecting chamber, and then to the steam boilers, and gives heat sufficient to create steam to propell all the machinery about the place, including the dynamos for 76 lights, clinker crushers, hoists, etc., and it is said there is still an excess of heat from the burnt garbage sufficient to generate 100 horse power of steam. The forced draught is created by centrifugal blowers, and steam can be used when necessary, according to the amount of moisture that is to be extracted from the material treated. The chimney draught is ½" and the forced draught 1¼" water column.

The furnaces employ 18 men for each shift of 8 hours, or 54 men in all. One man charges the drying hearth of six furnaces once every 90 minutes, and one man keeps each set of three furnaces clean. Arrangements are provided so that any six of the 36 furnaces can be stopped and cooled off for repairs. No Sunday work is allowed. All the fires are banked up at midnight on Saturday and started at midnight on Sunday, and to get the brickwork of the combustion chambers to a fierce white heat again, or to the temperature that they were when all was closed down on Saturday midnight, about 1,300 pounds of small coal is used.

The works cover 3½ acres of ground in the centre of the town, together with the disinfecting building, close to the wharf and easy of access from all the main roads and waterways. They are perfectly free from any nuisance, dust or hot gases. The residum is screened and sold by the load, and, besides, 220,000 pounds of scrap metal was collected from the rubbish in a year, which sold for about \$200. The dust from the flues is found to be valuable in the manufacturing of artificial stone ornaments.

Lately the sweepings of paved streets have all been sold for manure, for which there is a good demand and price, and owing to the wet atmosphere of Hamburg, the sweepings are often very sloppy, and when burned had to be mixed with dry material to make it suitable to handle and rest on the drying hearths. The income from the sales goes a long way towards paying the expenses of management.

This kind of incinerator, or destructor—as it is called in England—is very applicable to this country, as it would turn any wet refuses from saw mills or tanneries to profitable account, by raising steam that might be used for manufacturing, for electric lighting, pumping or heating. A set of three furnaces will give at sufficient, without the assistance of coal or other fuel, for one boiler, and when erected all complete, with boiler and first-class brickwork, iron work, and handy appliances for easy working the furnaces, the cost will be about \$14,000, not including the cost of chimney or the roads leading to the furnaces.

When in Ottawa recently it was my privilege to meet Mr. G. B. Perley, the only surviving member of the once prominent Ottawa valley lumber firm of Perley & Pattee. Mr. Perley had just returned from Mexico, and although in his 73rd year, showed no signs of being fatigued by his six days' journey on the train. He takes pardonable pride in referring to the early lumbering operations on the Ottawa, with which he is thoroughly acquainted, and relates many an interesting anecdote relative thereto. "For forty years," said Mr. Perley, "our company operated at the Chaudiere, cutting from sixty to seventy-five million feet annually. The river, in the early days, was known as the Grand, and the city of Ottawa as By-town. The first water-power mill on the Chaudiere was built by Levi Young; then came the Bronsons, W. H. Baldwin, and J. R. Booth. The Gilmours at Chelsea and the Hamiltons at Hawkesbury were among the first to export to the British and South American markets. Owing to the death of the other members of our firm, the business ceased about three years ago, when the old Perley & Pattee mill was sold to J. R. Booth, who had previously lost one of his mills by fire. Since that time my attention has been engaged in winding up the affairs of the estate." Mr. Perley's thoughts again reverted to the fifties. "I remember well," he said, "how an employee of the Hamiltons, of Hawkesbury, told of being sent away up the Grand River as shanty clerk to a place called Hull. There, he said, was where we had our shanties. This early shanty site is now surrounded by some of the greatest sawmilling industries in the world."

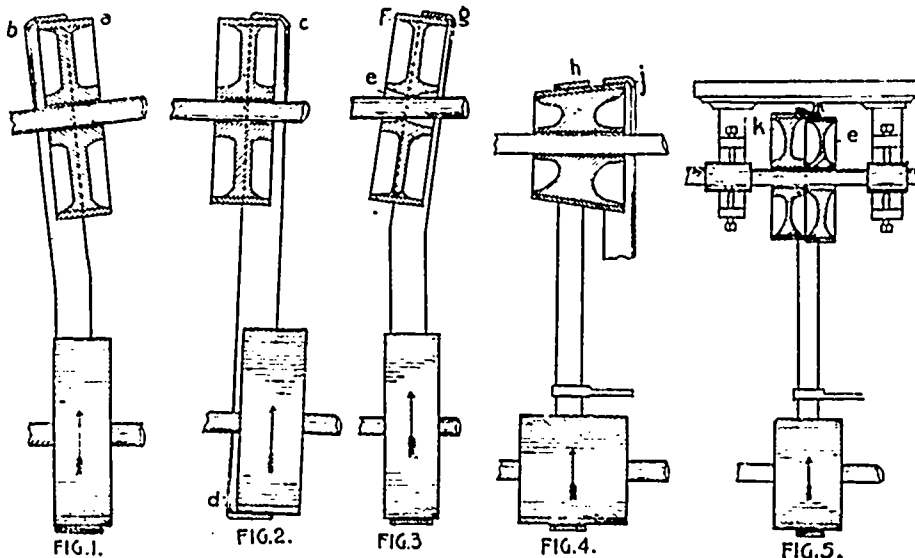
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A GENTLEMAN conversant with European trade, and one who holds strong views as to how the most can be accomplished for the Canadian lumber industry, recently took occasion to comment on the apparent indifference of the Canadian government to the interests of the lumbermen. In his opinion, it is the duty of the government to appoint a thoroughly practical lumberman to visit the European markets and report fully as to the openings for and methods of securing trade—something more in detail than is furnished by the commercial agents. Some of his views concerning the hardwood trade I will give to my readers, who may find therein food for reflection. "Until the manufacturer and the consumer are brought closer together," remarked this gentleman, "the hardwood trade will enjoy very little prosperity. There is no denying the fact that closer relations between producers and consumers is the tendency of the times. At the present time hardwoods are not taken out in sufficiently large quantities to enable manufacturers to put in the proper machinery for sawing the lumber in the manner required by the European markets, and I look for no improvement so long as the business remains in the hands of small mill men. The hardwood

HINTS ON BELT DRIVING.

By "MILL MAN," in Woodworker

CROWNED pulleys are usually employed where the nature of the drive is such that the belt is liable to run to one side or slip off. The centrifugal force keeps the belt on the crown of the pulleys. This tendency of a belt to hug that part of a pulley where the diameter of the rim is the greatest, has often been misleading. From it came the "high side" theory; and there are many good mechanics



HINTS ON BELT DRIVING.

who suppose that the only thing needed to keep a belt on the pulleys is a "high side" as a "leader."

Suppose that one edge of the pulley in Fig. 1 is elevated by raising the shaft on that side. A high side is produced at a, and according to the "high side" idea the belt should go there. Instead, the belt goes to b, where it hangs over the edge. This relieves the tension on the outer edge of the belt, while the tension on the inner edge remains. The belt conforms to these conditions and will run in the new plane of rotation indefinitely, but of course can not give good service, as part of the belt is off one of the pulleys. The example is given to show that there are some kinds of "high sides" that repulse belts.

The fact that some belts run like this in their regular work is usually due to the shafts being out of line, pulleys set untrue, rims beveled, etc. In Fig. 2 is an illustration of how belts are sometimes run, due to the shafts of both pulleys being out of parallel. The belt curls over at c on one pulley and at d on the other. This action is disastrous to a belt, and power is lost through slipping. The belt will not, however, slip off, unless other than the regular conditions come in, for the running requirements are filled. Shifting the pulleys on the shafts will not prevent the evil. The shafts must be adjusted parallel, the pulleys examined to see if true, hanger supports set up level, and the whole drive put into proper order.

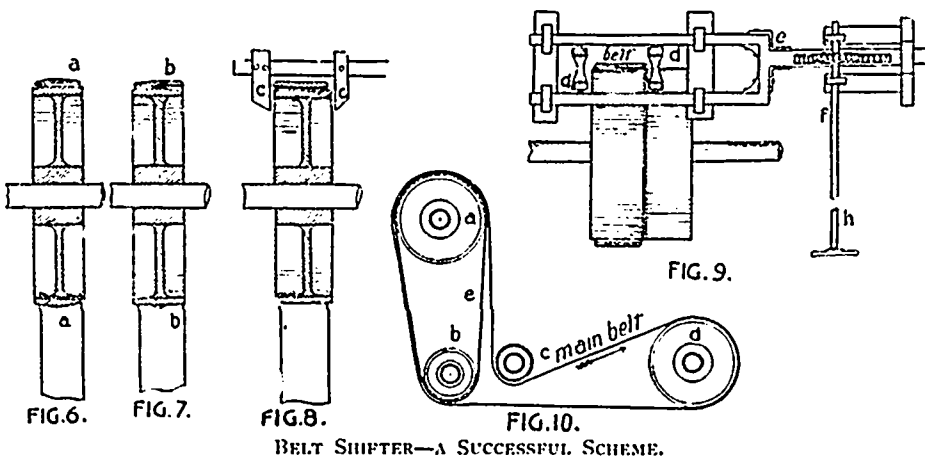
In Fig. 3 is a pulley worn hour-glass shape in its hub, as shown at e. The belt does not run on the higher side, at f, but goes to g, where it hangs, and goes no further, unless conditions cause it to slip off entirely. The remedy for this type of trouble with loose pulleys consists in boring the hub evenly and putting in a shell, or the hub may be babitted.

Fig. 4 shows a belt on a cone pulley. The

difficulties that usually arise with combinations of this description are due to the use of common belts. Belt h hugs the cone more on the side under which the diameter is the greatest. If no guides or belt shippers interfere, the tendency will be for the belt to keep moving towards that part of the cone where the diameter is the greatest. When the belt finally gets to the edge it will hang over, as at i. The shape of the cone having stretched the belt more at this side, which is now hanging over, the tensions are about

even and the belt will continue to run in the position shown for some time. Belting which is so made as to sustain an even tension on both edges on a tapered surface overcomes the trouble.

Fig 5 shows tight pulley k and loose pulley l, the hub of the latter worn, which allows the rim to drop below the level of the fast pulley, producing a high edge, which under ordinary circumstances attracts the belt, as at m. This should be fixed immediately, as not only a part of the driving power of the belt is lost, but the belt itself is unnecessarily worn by being shifted across the uneven surface. A new loose pulley,



BELT SHIFTER—A SUCCESSFUL SCHEME.

or a rebabbiting of the bearing of the old pulley, will remedy the trouble.

As stated at the beginning of this article, the proper type of "high side" is that produced by convexing the rim of the pulley, as shown at a, Fig. 6. The centrifugal force causes the belt to hug the crown. This is often accomplished by riveting a leather lag around a flat rim pulley, as at b, Fig. 7. Again, we find the sides of a pulley rim provided with guides—c c, Fig. 8. The belt rubs against these, and although it may not always keep in the centre, it cannot run off. Another and more mechanical method for both

keeping the belt in the right place, and shifting it from a fast to a loose pulley, and vice versa, is shown in Fig. 9. A wood or iron frame (e) is provided with two rollers (d d), set as shown, and just far enough apart to receive the belt. The frame is put in slides and the latter are fastened to supports. The shaft of the frame has a little cog wheel keyed to its top end, which wheel engages with a row of cogs screwed to the shaft of the frame. The lower end of rod is provided with a turning wheel (h), this being near the floor, so that it can be worked. Thus to shift the belt from one pulley to the other requires only the turning of this wheel.

In Fig. 10 is a scheme worked successfully by the writer on a belt system in which the main belt could not be made to keep well on the center of the several wheels. The belt passed over a, a 20-inch diameter wheel, under c, a 7-inch wheel, around d, a 20-inch wheel, beneath b, a 12-inch wheel, then to a again, a being the driver. After much trouble with this system, an additional belt (e) was put around a and b. This overcame the slipping of the main belt and has given satisfaction, for now both belts keep on the center of the wheels.

ELECTRICALLY-TRANSMITTED POWER.

H. B. WALDA & Bros., Ft. Wayne, Ind., have a wood-working shop with combination saw, shaper, scroll saw and lathes, run by a 12-horse power electric motor. Mr. Walda says: "We had an engine and boiler that cost about \$12 a month for fuel. Some days we wanted power for a few minutes only, so we put in a motor and now find we have the advantage of having power at any time at a second's notice. The shafting is lighter and pulleys very much smaller, as the shaft runs over 500. The speed is even and there is a great saving in oil and care, at a cost of less than \$12 a month. When not running there is no expense; when running the expense varies exactly with the work. If we are sawing

the meter registers accordingly; if a knot is sawn through, it takes more power, exactly as an engine would use more steam." Mr. Walda is a firm believer in electrically-transmitted power, especially for small wood-working concerns in places where there are electric power plants.

The Tracadie Lumber Co. have recently put in operation their new mill at Tracadie, N.B., which is equipped with band saws instead of the usual gangs. One hand saw and three clapboard machines are in operation, and the daily cut will be from fifty to sixty thousand feet. Modern labor-saving devices are included in the equipment.

REPORTS FROM FOREIGN MARKETS.

Below will be found particulars of foreign markets obtained from late reports of commercial and special agents of the Dominion government. It will be observed that reference is made to some openings for trade in manufacturers of lumber and woodenware.

ARGENTINE REPUBLIC.

Mr R M Renne, Buenos Ayres, under date of March 11th, 1898, says: "During the two months thirty-seven cargoes arrived at this port. These may be divided as follows:—Twelve spruce, ten white and fifteen pitch pine. Of these five were from Canadian ports, and it is probable that two-thirds of the twenty-two cargoes of spruce and pitch pine was of Canadian cut. Some spruce from Philadelphia is reported to have been of extra high class. The duty, as per tariff, may lead shippers astray. There is an additional two per cent on all except free goods. The price on spruce, white and pitch pine figures out \$5 75 gold per 100 square metres or \$5 35 per M feet (1,000 feet = 100 square metres). The market is active, nearly all cargoes being sold to arrive and deliver direct to consumers."

AUSTRALIA.

Mr J S Lark, Sydney, Aus., writes on March 26th as follows: "I have inquiries for oars, ash and spruce. There is a market for several thousand pairs at the right price in the colonies. The dearth of shipping is advancing the price of lumber in the colonies, and good orders could be taken if there was an assurance that charters were available.

Pacific coast lumber is firm and advancing in price. United States exporters have found some ships, as cargoes have been contracted for at advanced figures, and some of these exporters have offered to consign cargoes, as they say they are assured prices will still go up. I have heard of only one Canadian firm that has expressed its ability to find shipping.

Doors—I have an inquiry respecting the trade done in doors in this colony. If Canadian manufacturers can meet the price, this is an unusually favorable moment for getting into the market. In 1896 there were imported into New South Wales, nearly all into Sydney, 34,511 doors. Of this number 31,951 came from San Francisco. They are made from the sugar pine of California, have flat panels, and are known in the trade as double moulded. Other patterns could no doubt be introduced, but the trade should be begun with the pattern commonly sold. The following is a list of the sizes ordinarily sold, with the cash price as ships' slings of a parcel sold last week.—

- 6-6 x 2-6 x 1 1/4 6s.—7d. each
6-6 x 2-6 x 1 1/2 7s.—4d. "
6-8 x 2-8 x 1 1/4 7s.—4d. "
6-8 x 2-8 x 1 1/2 7s.—11d. to 8s each.
7-8 x 2-8 x 1 3/4 9s.—8d. each
6-10 x 2-10 x 1 1/2 8s.—10d. to 9s.—2d.
6-10 x 2-10 x 1 3/4 10s.—10d each.
7 x 3 x 1 1/2 11s.—2d. "
7 x 3 x 1 3/4 12s.—8d. "

A commission to the agent would be paid from this price. As freight would be an important item of the laid down cost it would have to be most carefully looked into by the Eastern Canada manufacturer, and it would probably be found that the cheapest route would be by sailing vessels from New York. The trade is very conservative, and so far the attempt to introduce cedar doors from British Columbia has failed. There would not be the same difficulty with white pine, as it once was largely sold and is known to the trade. The Californian door trade has been secured by one firm and hence others who formerly shared in it would be glad to have an opportunity to introduce other goods into the market. The great obstacle is the price. It is not likely to get lower for some time.

FREIGHT.—The importance of strictly inquiring into the best freight routes and getting the best rates will be of greater importance this year than last. The cheapest rate but longest time has been via sailing vessel from New York. To the beginning of the year the business was wholly in the hands of the four firms, who fixed a common rate, which for ordinary goods to Sydney has been eighteen cents per cubic foot, with five per cent primage. A fifth firm has now entered the field, and as it has received strong support from Australian firms it is likely to succeed. Rates have already fallen, as low as twenty cents having been reported. A difference of fifty per cent in freight charges is a matter of great importance and should be taken

advantage of. It is largely the paying attention to the details of the business, freight rates, proper transmission of bills of lading and invoices that will determine whether an export will be done at a profit or a loss.

GREAT BRITAIN

In a letter to the commercial agent at Glasgow, Messrs Allison, Cousland & Co., Glasgow, Scotland, say: "The trade in lumber and deals with Canada for 1897 continued to expand. The import shows an increase, but although the consumption of deals and boards continues to grow (at the expense of the timber in the log, which is rapidly being displaced), shippers have sent them forward too freely, with the result that prices have given way, and stocks are heavy at the present time. Deals of three inches or thicker have been taken up to much the same extent as formerly, but lumber shows a large increase both in imports and consumption. In regard to the quality of pine lumber, we may state that only first and second grades have been sold freely, the lower grades, shipping culls, &c., not yet having recommended themselves to our comment."

Messrs. Graham, Roxburgh and McLauchlan, Glasgow, write: "In Canadian goods, while the imports in 1897 were large, the demand was steady and prices have continued fairly firm on the whole. In log timber, white pine, red pine and elm have well maintained their values, but the tendency has been rather a drooping one in birch and ash, partly no doubt owing to heavy arrivals, but in the case of birch, more owing to the cheapness of plank imported from New Brunswick and Nova Scotia, and in the case of ash, owing to other cheaper woods taking its place. In lumber of all kinds a very large business has been done this year, and pine of all descriptions—with the exception, perhaps, of fourth quality, which has been imported rather freely—has met with steady demand at firm prices."

MAPLE ROLLERS.—The curator of the Canadian section of the Imperial Institute, referring to maple rollers, says: "In consequence of an inquiry received from the province of Quebec, I made inquiries as to the extent to which hard maple rollers are used by British manufacturers for the purpose of printing wall paper. I understand that a very considerable number is used in United States wall paper factories. Information was readily supplied by several houses which supply the manufacturers, but it would appear that the demand in the United Kingdom is very much less than that which exists in America. However, there are a few dealers who purchase about 1,000 of these from time to time. It appears that these rolls are generally two feet two inches long and the diameter from five and a half inches upwards. Detailed information, with current prices, was furnished to my original correspondent, and to several others. The dealers asked for samples and were quite willing to receive Canadian quotations when next purchasing. Letters have already passed between them and possible purchasers. At the same time I may mention that there is a very large demand for almost similar rollers by washing machine manufacturers. A portion of this is already supplied by Ontario houses but American competition is very keen, and the larger share of the trade is done by the United States."

SHOE LASTS.—Inquiries regarding the possibility of obtaining a portion of the British trade for shoe lasts show the outlook to be rather unfavorable, the trade now being held almost exclusively by Germany and the United States.

JOINERY.—"The High Commissioner for Canada in his annual report, thus refers to joinery: "A considerable trade is also being built up in joinery work, such as sashes and doors. I am informed that the excellent quality of Canadian made joinery enables it to compete in very favorable conditions with the large importation from Sweden. The Canadian trade is not much hampered by the Swedish goods, which are admittedly of a lower grade than Canadian. The importation from the United States, however, have had an effect upon the Canadian trade. The quality does not reach the Canadian standard, but the goods were sold at prices which render it difficult for the Canadian manufacturer to compete against them, even when the difference in quality is taken into account. It is believed that the American articles have been sold rather under cost price, or at very small profits, in order to create a market. It is not likely that this will continue, and it is generally expected in the trade that Canada may recover the practical monopoly of the American imported joinery market which she enjoyed some years ago."

One of the first shipments of pulp from Harvey's pulp mill at Black River, Newfoundland, has just been made. It was put up in bundles weighing about 200 pounds each.

SPOOL WOOD TABLE.

MR. R. A. Johnston, of Bay City, Mich., sends us the accompanying spool wood table for white birch, concerning which he says: "All spool lumber must be plump to gauge when thoroughly seasoned, with the sides straight and parallel. Sticks cut tapering or even 1/2 scant cause much waste and annoyance. Those having large knots, wane or other defects may be cut off when two or three feet of sound can be left, reckoned one-half or three-quarter bundles, observing, of course, that they contain the same number of pieces as the 4 foot lengths. Red heart, punky or discolored stock will not be received. Always put the exact number of sticks of the same size into a bundle and tie with strong string carefully and securely."

TABLE FOR SPOOL WOOD.

Table with 4 columns: No. of sticks in bundle of whatever length, Green size, Inches sq., Dry size, Inches sq., No. of feet in bundle, 4 feet long. Rows list various bundle sizes and their corresponding measurements.

CORRESPONDENCE

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

TRADE OPENINGS IN THE BRITISH MARKET.

TORONTO, June 10, 1898.

EDITOR CANADA LUMBERMAN:

SIR,—The manufacture of various lines of wood goods has developed very materially in Ontario during the past few years, but there is still room for expansion, and the British market is ready to absorb large quantities of many lines of goods if our manufacturers put themselves in position to supply the kinds needed at prices low enough to meet competition from the United States. Already several new lines of goods have been placed on the market and I believe with success. At Owen Sound is a mill turning out large quantities of butchers' wooden "skewers," and at Parry Sound a well equipped mill is making "cloth boards" for the British market under a patent process. Our foreign trade in furniture is increasing, and efforts are being made to meet the low prices in Excelsior, shoe lasts and other lines.

There would seem to be a very large demand in Great Britain for wooden handles of various kinds, and lately there have been inquiries for broom handles in quantities. The Bureau of Forestry is advised that the following firms are prepared to do business with Canadian houses making broom handles:

Alfred Field & Co., Edmund Street, Birmingham; T. G. Rollins & Co., Ltd., Old Swan Wharf, London Bridge, E.C.; Messrs. Market & Co., 725 Shoe Lane, Holborn Circus, London, E.C.

The sizes required seem to be 30 in. x 1 1/4, 30 x 1 1/2, 60 x 1 1/4, 66 x 1 1/2, 72 x 1 1/4 and 72 x 1 1/2. These are made in basswood, ash and maple.

Mr. Watson, Canadian Curator of the Imperial Institute, writes that the present supply of these goods comes largely from the United States. The prices are low, but these firms or any of them would be prepared to take the whole output of a factory.

The firm of Baker & James, 164 Corporation Street, Birmingham, are also desirous of receiving quotations for what they call "birch squares," square sticks of birch, ranging from 2 to 6 feet long and one-half inch to three inches square. I do not at present know what these are used for, but they are prepared to buy large quantities.

Trusting that some of your readers may be able to supply these goods, I remain

Yours truly, THOMAS SOUTHWORTH, Clerk of Forestry for Ontario.



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ADVERTISING RATES FURNISHED ON APPLICATION

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

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

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

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

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TO VISITING LUMBERMEN.

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

THE SITUATION AS TO LOGS AND LUMBER.

PRELIMINARY arrangements are well under way for a conference of commissioners representing the governments of the United States and Canada, to be held in the city of Quebec on July 15th next. The purpose of this conference is to discuss the differences which now exist between the two countries, and while no announcement has been made that the trade relations will be included in the subject of negotiations, it is only reasonable to expect that this will be the case. The question of export and import duties on logs and lumber will certainly force itself upon the commissioners for consideration, and therefore a brief review of the situation may be timely.

By an Act passed at the last session of the Ontario Legislature, all timber cut on Crown lands after April 30th, 1898, must be manufactured within the province. Thus Michigan mills sawing on Canadian logs will be compelled to close down after the present season unless some new arrangement for a log supply can be made. There is no possibility of obtaining this

supply from elsewhere than Ontario, hence the strongest efforts of the Michigan mill owners and their friends will be devoted to influencing the United States government to give such concessions as will provide for securing a supply of timber from the Georgian Bay to keep their mills in operation, thus preventing the almost total destruction of much valuable mill property and the settlements in which the mills are located. In the hope of obtaining free logs, the Michigan interests will demand that a reduction of the import duty on lumber from two dollars to one dollar be made.

Supporters of the present two dollar duty on lumber have proclaimed aloud that the bill passed by the Ontario Legislature restricting the manufacture of timber to the province would be disallowed by the Dominion Government, but this argument is very short-sighted, inasmuch as the bill itself provides that the Lieutenant-Governor may pass an order-in-council imposing additional regulations to carry into effect the intent of the bill. Noting more than the passing of an order-in-council would be necessary, and this, while producing the same results, would not require the consent of the Dominion government.

Throughout the New England states and New York the sentiment is strongly in favor of free lumber. The position is simply that the manufacturing industries that have used white pine as their raw material fear the loss of their trade owing to competition from southern pine, unless they are allowed to buy in the Canadian market, while from the same motive wholesale dealers are in favor of free lumber. But the greatest faction in influencing the government are the consumers of the Eastern States, who are strongly opposed to any duty on lumber.

Briefly, then, the Michigan interests will fight for a reduction of the duty on lumber, while the Eastern States want free lumber. Opposed to these influences will be the lumbermen of Minnesota and Wisconsin and the Southern States, who will protest against any interference with the present duty of two dollars.

As an international question, let us now look at the situation in Ontario. The lumbermen of this province are favorable to a fair exchange of free logs for free lumber, but that they would be willing to give free logs in consideration of the lumber duty being reduced to one dollar is somewhat doubtful. It is an acknowledged fact that the bill compelling home manufacture of timber would not have been passed but for the combined action of the lumbermen of the Georgian Bay district, and the Legislature will consider very carefully before taking any action to abrogate the measure, more particularly in view of the small majority of the party in power. Public sentiment throughout the province has received an awakening in favor of building up home industries, and the government cannot afford to disregard this sentiment.

It is much to be desired that at the forthcoming conference a settlement of the question of lumber and log duties should be reached. Should this be effected, it will be in the nature of a treaty which would extend over a long term of years. Lumbermen would not then be subject to tariff changes and consequent business interruptions every three or four years, but would be in a position to arrange their plans for the future, which has been inexpedient in

the past so far as United States trade is concerned.

The lumbermen of Canada feel that by the course adopted by the Ontario government they have command of the situation, and are very hopeful of an early and satisfactory settlement of the question. A meeting of the Ontario Association of Lumbermen will be held at any early date to discuss the situation, and to decide what action, if any, would be in the best interests of the trade. In the meantime, those who have not identified themselves with the association should, by becoming members, lend a helping hand to any movement that may be decided upon.

PROFITABLE UTILIZATION OF MILL REFUSE.

LUMBERMEN in Canada have of late years given some attention to a solution of the problem of the profitable utilization of sawdust and mill refuse, but as yet no generally accepted scheme has been devised. The steps which have been taken in this direction have been prompted, in some cases, by a recognition of the wisdom of obtaining, if possible, some commercial returns from the immense quantity of mill refuse, and in others, by the necessity of removing and disposing of the material.

The most successful sawmilling establishments of to-day are those which are equipped with machinery for a wide manipulation of the timber, manufacturing it into numerous by-products. There seems to be a growing appreciation of the expediency of conducting the sawmilling business along these lines, and also of utilizing the sawdust. It is not only desirable that some practical method of disposing of this material should be found, but also that it should be employed in such a way as to bring some returns for the labor and expense involved in removing it from the mill. There have been expended in Canada, as well as in other countries, immense sums of money in the erection of conveyors and burners to consume the sawdust, but there is now reason to believe that there will be discovered, in the near future, some scientific method of utilizing it for commercial purposes.

Recently, this subject has become a very grave one in the great lumbering centre of the Ottawa valley. It will be remembered that three years ago an act was passed by the Dominion Government disallowing the dumping of sawdust into the Ottawa river. The penalty for the first offence was a fine of \$20 and costs, for the second \$40 and a further penalty of \$10 per day for every day during which such offence was continued, and for the third a larger fine and \$20 per day. At that time some of the mill-owners erected incinerators to burn the sawdust, but others made no preparation for conforming to the law, which they believed to be illegal. However, no test of the case was made, as at each session of Parliament since the law was enacted an extension for one year has been granted. Six months ago the Minister of Marine and Fisheries sent out circulars warning mill men that the law would become operative on May 1st last, and requesting them to make arrangements accordingly. The Bronson & Weston Company put in a system of carriers, and conveyed the sawdust to the

Eddy factory, where it was used for fuel. For this it was found somewhat unsatisfactory, requiring a large amount of other inflammable material to promote combustion. The largest mill on the Chaudiere continued to dump its sawdust into the river.

On June 6th last, when much speculation was being indulged in as to the course which would be adopted by the government regarding the enforcement of the law, Sir Louis Davies introduced a bill in the House of Commons extending the time to May 1st, 1899. This was subsequently passed. In introducing the bill the Minister said:

"Since the meeting of the House I have been waited upon by some of those who are largely interested in the sawmill business, and the following views were submitted to me, namely, that about a year ago they entered into negotiations with a gentleman who thought he had discovered a process by which the sawdust could not only be consumed, but utilized, and a very important manufacture introduced into this country. They submitted statements to me regarding the construction of the apparatus for the purpose of testing the efficiency of his device. That being done, I said that after the statements I had made, I did not feel justified in introducing a bill further to extend the time, unless it was with pretty general consent. I submitted the statements to my predecessor in office, and he said that, speaking for himself, the circumstances more than justified the extension. He said that, so far as he was concerned personally, if I introduced the bill, it would have his support. I said I would further require, in order to place the matter fairly before the House, a statement of what proceedings had been taken, and of what stage the proceedings now were in relation to this alleged discovery and experiment."

Sir Louis Davies then read letters from Messrs. W. C. Edwards, M.P., and J. R. Booth, showing the progress that had been made with the scheme. These stated that the process had been demonstrated in laboratory form, and that Professor Ruttan, of McGill College, Montreal, had pronounced favorably upon it. An initial or illustrative plant was said to be in course of construction, and it was expected that six months would be sufficient to demonstrate the commercial possibilities of the scheme.

The proposed project will include the manufacture upon a large scale of calcium carbide, and the commercial and profitable utilization of all the refuse from the Ottawa river mills. The tar and pyrolygneous acid will first be extracted from the sawdust by distillation, and the remainder will be mixed with lime and subjected to a strong current of electricity. This will produce the calcium carbide used extensively in the production of acetylene gas.

Regarding the experiments made recently, Mr. Emerson, the inventor, says: "I have succeeded, after several years of laboratory work, in producing carbon in metallic state, free from any of the objectionable properties, of great density, and practically chemically pure, and converting same into calcium carbide. The raw materials from which the carbon was produced was supplied me by Mr. W. C. Edwards, from his mills at Rockland. Some of the samples ran as high as 92 per cent. in carbon, which is about ten or twenty per cent. better than the best coke."

The establishment of an industry such as is outlined above will be of wonderful benefit to the city of Ottawa and to the lumbermen of the Ottawa valley in particular. There seems reason to believe that success will be attained, and one of the greatest problems of the nineteenth century satisfactorily solved.

EDITORIAL NOTES.

The rules for inspecting hardwood lumber adopted by the National Hardwood Lumber Association of the United States, and published in part in our June issue, are not being favorably received in all sections, and it is probable that some changes will be found necessary. The Northwestern Hardwood Lumbermen's Association and the Lumbermen's Exchange of St. Louis have each rejected the rules, while the lumbermen of Grand Rapids, Mich., have adopted rules of their own. The St. Louis association contends that the rules as adopted are too severe, but still pronounces itself in sympathy with the movement. It could scarcely be expected that difficulty would not be met with in framing rules to meet the requirements of all the markets, but there is reason to believe that ultimately success will be attained.

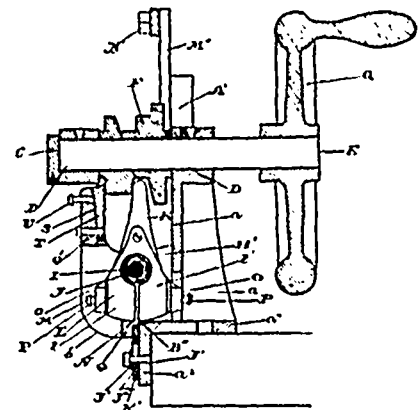
The lumber trade in the Ottawa valley has been somewhat disturbed of late by a strike of the employees at some of the mills. At the Rockland mills of W. C. Edwards & Co. the situation assumed the most serious aspect, over six hundred men being effected. The demands of the strikers were that the working day be reduced from eleven to ten hours, that higher wages be paid, and that they receive their wages every two weeks instead of monthly. These concessions have been in a measure granted by the company, and at time of writing the employees have returned to work, although further trouble, according to reports, would not be learned as a surprise. Without entering into a discussion of the justice or otherwise of the demands of the mill hands, we must express regret that some of the strikers should have resorted to such brutal tactics to endeavor to accomplish the end in view. So long as violence and personal injury is resorted to by labor organizations, the breach between employes and employers will surely widen.

We have recently heard some expression of indignation at the unfair treatment which is claimed to be accorded to the lumber trade by the railway companies in the matter of freight rates. It is contended that where only one line of railway reaches a certain point, thus giving the company a monopoly of the shipping trade, the freight rates are advanced considerably above the average rate. To prove the statement, it was pointed out that the Grand Trunk Railway carry the C. P. R. freight from North Bay to Toronto for \$14 per car of 24,000 lbs., and six cents per 100 lbs. for excess over that amount. Therefore, on a car of lumber weighing 30,000 lbs. the freight charges would be \$17.60 for a haul of 226 miles. A similar rate is given by the G. T. R. for carrying C. P. R. freight anywhere over their line in Ontario. But from Huntsville to Thedford, a distance of 250 miles, a rate of 11 cents per 100 lbs., or \$33 per car of 30,000 lbs., is charged, which certainly seems an excessive figure. To cite another instance, the rate from Warton to Toronto, 160 miles, is 6½ cents per 100 lbs., while a rate of 10 cents is charged from Warton to Thedford, 155 miles. It is not to be expected that freight rates can be made uniform, as the number of changes and work of handling must be a factor in fixing the charge, but there is certainly many points in

Ontario which may justly lay claim to more favorable rates. The lack of courteous treatment from the Canadian railway companies has caused some lumber dealers in Ontario to enquire into the possibility of obtaining west coast shingles from the United States instead of from British Columbia, and thus giving the carrying trade to American railways. The question is one which might well be investigated by the Lumbermen's Association of Ontario.

PATENT FOR SAW SETTING MACHINE.

Mr. William Clark, of Galt, Ont., has been granted a patent for a saw setting machine, as illustrated herewith. The claim is for a machine embracing in its constitution a rocker arm, a die connected to the rocker arm in combination with a cam motion, arranged to actuate the rocker arm to move the die alternately in opposite directions, to set the teeth successively on alternate sides of the blade, a feed mechanism to intermittently feed the saw teeth to the setting dies, and a saw holding vise arranged to be automatically closed on the saw during the setting of the tooth, and to be automatically opened during the feed of the next successive tooth to the setting mechanism. In a saw setting machine, a feed mechanism embracing in its construction



SAW SETTING MACHINE.

an arm pivotally connected to the frame of the machine at one side thereof, a lever pivotally connected to the frame at the opposite side of the machine, a link connecting the lever and the arm to cause their united action, a cam engaging the lever, a spring to return the lever and arm to their normal position after being actuated by the cam, a spring actuated dog pivotally connected to the arm, mechanism for regulating the length of the stroke of the arm, in combination with a setting die, a rocker arm to which is connected the setting die, a cam to actuate the rocker arm, a vise to rigidly hold the saw during the setting of the teeth, consisting of a stationary jaw, a movable jaw, a cam, the movable jaw arranged to be closed by the cam against the saw during the setting of the teeth, a spring to open the movable jaw during the feeding of the teeth to the setting dies, a vertically adjustable table to support the saw, and a vertically adjustable gauge for the saw teeth, substantially as specified.

In the saw mills of Canada many different methods employed for doing similar work, each one, perhaps, possessing certain points of merit. Superintendents, sawyers, filers, etc., are respectfully asked to contribute to this journal their views as to the best method of doing certain mechanical work, such as lining and setting up shafting, setting up rotary and other circular saws, rules for finding out and marking off the shape of circular saw teeth for guidance in grinding and filing.

ANNUAL FORESTRY REPORT.

The 1898 report of Mr. Thomas Southworth, Clerk of Forestry for Ontario, has reached our desk, and is, as usual, a valuable addition to forestry literature. At the outset, Mr. Southworth refers to the rapid strides that have been made in Ontario in late years in acquiring a knowledge of forest conditions and preservation. To-day the public are alive to the necessity of maintaining a due proportion of wooded land. The question of the reforestation of white pine is taken up at some length. Recent investigations prove conclusively that a new crop of white pine timber upon denuded lands may be secured by adequately protecting the young pine from fire and incidentally thinning out in places where it is actually needed. This is in contradiction to the theory held in earlier years.

EXAMPLE OF FORESTRY.

A good illustration of forestry practice in the absence of trained foresters, whose skill would undoubtedly increase the production, is afforded by Mr. W. P. Greenough, of Portneuf, Quebec. In reply to an enquiry of the Bureau of Forestry, Mr. Greenough says:

"Yours of 13th asking for information concerning principles of forestry adopted by me, came duly to hand. These principles are so extremely simple as scarcely to deserve being dignified by that name. I merely aim to allow timber to be cut no faster than it grows. As I am considering only spruce, which under ordinary conditions may be relied on to reproduce itself without special care, to accomplish this end it is only necessary to limit the size of tree that may be felled. This limit being fixed, I consider it a matter of altogether minor importance whether the lumberman cuts more or less in a given year, or goes over much ground or little. What wood is not taken in one year is certain to be wanted in another, and meanwhile is earning, by actual growth, an interest on its value. If we fix this value at any given rate the interest will thereafter be compounded, by growth upon growth.

My practice fixes the size of trees to be cut at (in effect) between 14 and 15 inches on the stump. Contracts read, "No spruce trees shall be cut that will not yield more than one log of 12 inches in diameter (12 feet long) at the small end, under the bark." The practical result is as above stated. This I consider sufficient to keep up the supply of logs indefinitely, while allowing an annual cut of 50,000 to 60,000 logs from an area of say 70,000 acres, of which I reckon (say) 20,000 acres as water, swamp or hardwood country. It demands a growth, roughly speaking, of about one log per acre annually on an already well timbered country. I think this is a safe calculation.

My limit of size has always been entirely satisfactory to purchasers of stumpage. There is at present a considerable demand for small spruce for pulpwood. I have never sold wood for that purpose, but I should not advise any one having spruce lands that he wishes to utilize to their capacity and at the same time keep up their value to fix the limit of size, whether for logs or pulp, below what I have done. Any considerable deviation from that I should fear would infringe on the capital represented by the present standing value of timber.

As regards care of limits, it is not very burdensome. A competent man makes occasional tours among the shanties during the lumbering season, to see that the terms of the contracts are observed, that no timber is wasted and that the cutting is satisfactory.

For returns I rely on the sworn statements of the cutters of the purchasers of rights to cut. The system most in vogue here of making logs through jobbers or small contractors is in the

main favorable in this respect. Every jobber watches the cutting, and if he makes no complaint it is almost certain that I have no reason for any."

Referring to the above, Mr. Southworth says: Mr. Greenough has adopted successfully the simplest form of scientific forestry, and this course is also being followed by some of our own lumbermen. The employment of trained foresters would increase the yield on the same area, but their employment must be regulated by the question of profit and loss. In any event until trained foresters are available, Mr. Greenough's plan would seem to be the wisest under the circumstances.

MANUFACTURING DEVELOPMENT.

The substitution of steel for wood in the construction of large buildings was thought at one time, the report states, to be likely to cause a great decrease in the consumption of timber. The total and sudden collapse of many of these steel buildings in the event of fire has, to some extent, put a check on this style of building, and new uses are constantly being found for forest products of various kinds. The rapid development of the manufacture of paper from wood has altered the relative values of our forest trees, making some of them, formerly of little use to us, very valuable indeed. This is notably the case with spruce, which in Ontario, south of the "Height of Land," is rarely found large enough for board timber. The seeds of the spruce germinate readily and grow so thickly in many parts of Ontario, especially in moist soil, that they attain but small diameter in a long period of growth, and because of this, lumbermen, in estimating the value of timber limits in former years, when their license included all sorts of timber, took no account of any but pine. The rapidly increasing demand for spruce for paper has recently caused a considerable value to be placed on many limits from which the merchantable pine has been taken. In this reference is made to the limits that were disposed of prior to 1892, since which time the spruce has been reserved by the Crown.

Our furniture manufacturers are said to be doing an increasing business with Great Britain, and until recently they have not been able to fill all the orders offered them from there. The same is the case with our paper mills, and several large orders from over the ocean have been refused. This is being remedied, however, and mills have been recently equipped or are now being fitted up especially for export business.

THE NORTHWEST LUMBER TRADE.

The last annual report of the Department of Interior states that the number of timber berths under license and permit in the province of Manitoba and the territories is 283, and on Dominion lands in the province of British Columbia 149. The timber dues received amounted to \$69,493.18, being an increase of \$7,291.08 as compared with the previous fiscal year. Of the revenue derived from timber, \$23,012.52 was for bonuses, ground rent, royalties and dues on timber cut from lands in the railway belt in the province of British Columbia, being an increase of \$4,493.42, as compared with the previous year. The total revenue received from timber in Manitoba and the Northwest Territories up to the 1st of July, 1897, was \$1,145,574.46, and the total revenue

from timber within the railway belt in British Columbia up to the same date was \$303,004.93.

During the year 34,376,599 feet B.M. of lumber were manufactured from timber cut under license in Manitoba, the Northwest Territories and within the railway belt in British Columbia, and 32,894,251 feet B.M. were sold.

The following table shows the imports of lumber from the United States, and marketed in Manitoba for five years:

Year.	Dressed.	Undressed.
1893.....	180,306 ft.	1,174,747 ft.
1894.....	647,388 "	3,073,195 "
1895.....	1,108,268 "	5,608,250 "
1896.....	2,103,857 "	9,853,883 "
1897.....	1,913,832 "	14,857,272 "

The following quantity of lumber, coming from the directions named, was disposed of in Manitoba and at points west as far as Regina, N.W.T., during the year ended June 30th, 1897:

	Feet.
Canadian pine, from the Lake of the Woods.....	45,000,000
Canadian pine, from points between Lake of the Woods and Port Arthur.....	10,500,000
Canadian spruce (manufactured in Manitoba).....	14,441,999
United States pine and hardwood imported from the State of Minnesota.....	10,871,104
British Columbia products.....	0,000,000

The current price of pine and spruce lumber, f.o.b., at the points below, is as follows:

	Pine.	Spruce.
Winnipeg.....	\$15.50 to \$17.50	\$13.50 to \$15.50
Portage La Prairie.....	15.50 " 17.50	13.50 " 15.50
Brandon.....	15.50 " 17.50	13.50 " 15.50
Moosomin.....	17.75 " 19.75	15.75 " 17.75
Deloraine.....	17.75 " 19.75	15.75 " 17.75
Minnedosa.....	17.00 " 19.75	15.00 " 17.00

A GIGANTIC BOG OAK.

An extraordinary discovery, and one which is just now exciting considerable interest in antiquarian circles in Lancashire and Cheshire, has been made at Stockport. During the excavations in the construction of sewage works for the town, some workmen came across what has since proved to be a massive oak tree with two immense branches. Professor Boyd Dawkins, the well known antiquary, is of opinion that the tree is one of the giants of prehistoric times, and he says that the tree is certainly 10,000 years old. The corporation of Stockport are at a loss what to do with the gigantic fossil, which is supposed to weigh about 40 tons, and as it is necessary that it should be removed a proposition has been made to blow it up with dynamite. This has aroused the indignation of a large section of the public, who recently presented the following petition to the corporation: "That there is a valuable tree of old oak at present lying upon and exposed in the gravel on and within their property. That the quality of color, grain, and solidity is better than any that can be bought in the open market. That as for artistic work alone it is greatly to be treasured; for nothing in this country is at present grown which can come up to its dimensions. That it contains within itself sufficient material to make the furniture for any public building or town hall which may be erected for the public benefit within our borough. That it only requires lifting from its bed, which, in the opinion of competent geologists, may be roughly estimated at 15,000 years of occupation. That private effort has failed to achieve its removal. That its destruction would be a public loss and an artistic calamity. That your representatives in council be, and are hereby requested to conserve for the borough this grant of nature to her sons and daughters, whose signatures are hereby affixed."

THE NEWS.

- Kerns & Marks have opened a retail lumber yard at Plum Coulee, Man.

- King Bros., Limited, lumber merchants, Quebec, have been incorporated.

- Tourigny Paul, saw and shingle mill, Victoriaville, Que., offering his business for sale.

- I. Proulx & Co., lumber dealers, Montreal, have obtained charter of incorporation.

- The Eau Claire Lumber Co., of Calgary, have closed their branch business at Regina, N.W.T.

- The Rathbun Co., Deseronto, Ont., are offering their general merchandise business for sale.

- Patineau Bros. will establish a saw mill at Dufresne, on the N.P. railway, near LaSalle, Man.

- Mr. George Paget has gone to England to negotiate for the sale of the Sturgeon Falls pulp mill.

- The Patent Clothboard Co., of Parry Sound, Ont., recently shipped two carloads of clothboards to Scotland.

- Messrs. Lennox & Kerr, of Walkerton, are preparing to erect a spool and bobbin factory at Owen Sound, Ont.

- A change has been made in the Dominion tariff, by which the duty on rubber belting is increased from 20 to 25 per cent.

- It is said that the Rat Portage Lumber Company are considering the equipment of its yards and buildings with electric light.

- It is reported that John O'Donnell, lumberman, of Bobcaygeon, Ont., was recently held up and robbed of \$500 near Selwyn.

- The Imperial Lumber Co., of Toronto, has established a branch at Tomawanda, with office in Cowper & Co.'s building on Main street.

- Messrs. Dillon & Thompson, of Shebistekong, Muskoka, have taken the machinery out of the shingle mill there and put in saw mill machinery.

- The Frost Lumbering Co. is preparing to erect a new steam mill at Arlington, N.S., on the site of the one destroyed by fire last summer.

- Hon. C. B. Buckman has purchased an interest in the Easter Mills saw mill on Rainy river, and will open an office and lumber yard at Rat Portage, Ont.

- Messrs. Shipe & Avery, of Toronto, manufacturers of bicycle rims, are looking for a site in Western Ontario for a factory which they propose to establish.

- The McEachren Heating & Ventilating Co., of Galt, Ont., has placed an order with the Jenckes Machine Co., of Sherbrooke, Que., for one of their patent Duke engines.

- Surveys are being made to determine the boundaries of certain timber limits on the Rouge river, the Ottawa Lumber Co. and Mr. J. K. Ward being the interested parties.

The Sarnia Post says that the Ontario Lumber Co. will establish a large planing mill at Point Edward, using the roundhouse as a nucleus. The company already have large lumber yards and docks at the Point.

- H. B. Mitchell, lumber manufacturer, of Selkirk, Man., has undergone a number of operations owing to a gunning accident in which his hand sustained serious injury, but up to date he has not found much relief.

- The New York Lumber Trade Association has organized a movement to boycott commission men, and to induce builders and others to buy only of the regular dealers who carry stock on hand and sell on their own capital.

- Messrs. Matthews Bros. & Co., picture frame manufacturers, have recently purchased the planing mill at the Dundas bridges, Toronto, and are adding new stickers and resawing machinery adapted to their requirements.

- Between ten and fifteen thousand logs have been boomed at Tweed, Ont. Louis Fobear, who has a complete portable saw mill in operation on the Easterbrook mill property, has the contract with the Rathbun Co. for cutting them into ties and lumber.

- John Gillies, James Gillies and David Gillies, of Carleton Place, Louis Laconture, Montreal, and Joseph Octave Blondin, of Lake des Peres, are applying for incorporation as the Temiscamieque Navigation Company. The head office is to be in Ottawa.

- The E. B. Fiddy Company, of Hull, Que., are about to erect a new match factory, to be equipped with the most improved machinery. It is said that where 40 men are now employed, four will be sufficient to do the work with the new appliances.

- The Arrowhead Saw and Planing Mills Co. has estab-

lished a saw and planing mill on the south arm of Arrow Lake, south of Revelstoke, B.C., with a capacity of 20,000 feet per day. A sash and door factory in connection will employ about 30 men. The company has opened yards at Nelson and Revelstoke. The officers of the company are J. C. DeCew, president; W. M. DeCew, manager; T. H. DeCew, secretary.

- Messrs. Geo. M. Webster & Co., coal handlers, of Quebec, are improving their facilities for unloading steamers, and for this purpose have placed an order with the Jenckes Machine Co., of Sherbrooke, Que., for four of their double cylinder rapid coal hoisting engines, with boilers.

- The Canadian Yukon Lumber Company is applying for incorporation, with headquarters at Montreal. The applicants are Richard Wilson Smith, William Miller Ramsay, Thomas George Roddick, M.P., Edgar Francis Hand and Henry Bulmer. The capital is placed at \$100,000.

- The Canadian Copper Co., of Copper Cliff, Ont., are fitting a new shaft, and have placed an order with the Jenckes Machine Co., of Sherbrooke, for two 100 h.p. special steel boilers, one 12 x 15 double cylinder double drum winding engine, three large steam pumps and rock breaker, and necessary gear for operating same.

- Concerning end matched flooring, about which we recently received an enquiry, a correspondent writes: "We do not see any advantage in having this class of flooring end matched, and our opinion is that it is simply a craze or fad fostered by manufacturers in the United States, who use it for the purpose of securing trade."

- The Bell Asbestos Co., of Thedford Mines, Que., are changing over their system of operating their mine hoist, and for this purpose have placed an order with the Jenckes Machine Co., of Sherbrooke, Que., for one of their 100 h.p. steel tubular boilers, and have also purchased from the same company one of their small locomotives, for shifting cars in pits.

- Application has been made for the incorporation of the H. R. McLellan Co., Limited, to carry on a lumber business, with headquarters at Ottawa. The capital stock of the company is \$500,000. Among those interested are H. R. McLellan, of St. John, N.B.; David McLaren, of Ottawa; and Alex. McLaren, of Buckingham. The new mill of the company is located at St. Margaret's Bay, N.S., and has a daily capacity of 75,000 feet.

- Messrs. King Bros., the enterprising lumbermen of Quebec, have closed a contract with the Jenckes Machine Co., of Sherbrooke, Que., for a complete saw mill, consisting of two 60 h.p. boilers, one 100 h.p. engine, one rotary saw mill with Duke steam feed, one double edger, one resawing machine, and entire shafting and pulleys. It is the intention of Messrs. King Bros. to erect this mill on the lower St. Lawrence the coming summer.

- Mr. Moore, of the British Columbia Mills, Timber and Trading Company, Vancouver, B.C., in a recent interview with a representative of the Commercial, said: "A good local and eastern business is doing at the coast mills, but foreign business has been quiet, owing to the scarcity and high rates of freight. Recently, however, rates were tending lower, and some charters have been made at reduced rates. Logs are scarce, and the mills have not material with which to do a very large export business. Shingle bolts are scarce."

CASUALTIES.

- Thos. Train had the first finger of his right hand cut off by a shingle saw in Rathbun's mill at Lindsay.

- A workman named Vizina had one of his legs broken in the Hull Lumber Company's saw mill at Hull last month.

- David Asselin, employed on Gilmour & Hughson's drive, was drowned at Windfall Lake while jumping from one log to another.

- A man named Gravelle, working on the drive for the Ontario Lumber Co., fell off a log in Doller's creek and was drowned.

- While driving logs on one of McLachlin Bros.' drives upon the Bonnechere river, Charles St. Louis, of the township of Grattan, fell into the water and was drowned.

- Alex. McLennan, lumber manufacturer, of Casselman, Ont., had his hand badly crushed in his mill last month. Blood poisoning set in, which necessitated partial amputation.

- The eleven-year old son of John Buckham, of Aylmer, Que., was killed in Bailey's mill at that place by being caught in one of the pulleys and whirled around several times with terrific force.

- W. McGillivray, engineer at Tat's saw mill on False Creek, Vancouver, B.C., was caught in the fly-wheel of the engine and whirled around at a tremendous rate. One leg was broken, and internal injuries received.

PERSONAL.

Mr. Frank Hillock, lumber merchant, Toronto, has gone on an extended European trip.

Mr. J. Ryan, of Three Rivers, Que., has been appointed woods and forests agent for the district of St. Maurice.

Mr. H. J. Pettifer, representing a syndicate of English newspapers, is at present in this country on a business trip.

Capt. Jas. Hamilton, for the past 18 years with M. M. Boyd & Co., of Bobcaygeon, Ont., has resigned, and has accepted the command of the steamer North Star, plying on the Peterboro' waters.

Mr. Geo. Thomson, late of Wingham, Ont., with his two sons, are now operating the Goderich Lumber Company's mill at Goderich, and report trade very good. The logs are towed from the peninsula.

Mr. Frank E. Coombe, who has been appointed manager in England of the Canadian Furniture Exporting Company, with headquarters at Manchester, left Kincardine last month to assume his new duties.

Allan Gunn, formerly of Barrie, and during the sixties one of the wealthiest and most prominent lumbermen in Canada, died at Orillia on May 18th. Mr. Gunn was 82 years of age, and was a schoolmate of the late Sir John A. Macdonald.

Mr. James Stark, lumberman, of Paisley, Ont., will soon enjoy a reunion with friends in his Mother land, after an absence of 27 years, having sailed on June 25th for England. THE LUMBERMAN wishes Mr. Stark a safe and pleasant voyage.

Mr. J. W. Taylor, who operates a sash and door factory at Exeter, Ont., was a recent visitor at THE LUMBERMAN office. Mr. Taylor appeared pleased at the increased present and prospective trade, remarking that building operations have not been so active for many years.

It is understood that upon the resignation of Mr. C. P. Higgins, Mr. H. Cartwright has been promoted to the assistant registrarship of the Ontario Crown Lands Department, and that Mr. Michael P. Doherty, of East Peterborough, has been appointed in Mr. Cartwright's place.

Mr. H. J. W. Carbray has been transferred from Quebec to Montreal, where he will manage that branch of the well known shipping firm of Carbray, Kouth & Co. Mr. Carbray was for fifteen years Collector of Crown Timber Dues for the province of Quebec, which office was abolished last October.

TRADE NOTES.

We regret to learn of the financial embarrassment of McMillan & Haynes, saw manufacturers, of St. Catharines, Ont.

A. N. Bishop, Annapolis, N.S., is enlarging his saw mill, and has purchased an engine and boiler from the Goldie & McCulloch Co., Galt, Ont.

The Lancaster Machine Works report numerous inquiries for their Stafford timber gauge. A large order was recently booked by this firm for Holland.

N. P. Tanguay, of Weeden, Que., has placed an order with the Jenckes Machine Co., of Sherbrooke, Que., for one of their patent Crocker turbines, complete with gate, draft, tub and gearing.

D. S. McArthur & Co., of Nelson, B.C., are developing their properties, and recently purchased, through the Roseland branch, of the Jenckes Machine Co., one of their complete hoisting plants.

The Jenckes Machine Co., of Sherbrooke, Que., recently supplied the Sydney Mine at North Sydney, Cape Breton, with one of their special coal hoisting engines, to be operated by compressed air. The compressor was supplied by the Canadian Kand Drill Co., of Sherbrooke, Que.

Mr. O. E. Young, of Magog, is building a small pleasure boat for Mr. L. B. Ward, of Brooklyn, N.S., to be used on Lake Memphremagog, and an order has been placed with the Jenckes Machine Co., of Sherbrooke, Que., for one of their 7 h.p. Duke marine engines, with boiler to run the same.

Under date of May 25th, Mr. D. K. McLaren, manufacturer oak tanned leather belting and mill supplies, Montreal, advises us that his factory is busily engaged turning out a belt order for Messrs. W. Doherty & Co.'s new factory at Clinton, Ont. This order amounts to upwards of three thousand feet, and was placed through his Galt steel depot.

ONE OF THE BEST.

MESSRS. J. & R. Miller, Mount Elgin, Ont., in renewing their subscription to THE CANADA LUMBERMAN, write: "We consider your paper to be one of the best on the continent for those engaged in any branch of lumbering. If the ideas given in its columns in regard to saw mill machinery and methods of working up what would otherwise be waste material were acted upon, they would materially increase the mill owners' profits."

THE LUMBER SURVEYOR.

In our rich virgin forests, which have thrived since time began,

With their tinted crests—the maple, spruce and pine,
Tread the ruthless devastators—the hardy lumbering man
And surveyor with his scaling rule and line.
The grand old trees primeval, which for centuries have withstood

The assault of countless seasons' cold and heat,
Are robbed of their bright beauty, and put, by reckoning good,
Into plain, prosaic, superficial feet.

Amid the deaf'ning rumble and the hiss of buzzing saws,
Where backbone and sinew tug with might and main,
Where the trees that formed the forest are grasped in iron jaws

And by teeth which rend their fibrous veins in twain;
There, amid the blinding sawdust and the roar of flying wheels,

The surveyor with his red chalk takes his stand,
And in that never-ending, ceaseless line of running deals
His own brain must be the force that speeds his hand.

By the steamer's rugged steel sides, which loom up black and vast

O'er the waters of the harbour's placid tide,
Where the throbbing engines rattle as slings of deals are passed

From the schooner's deck that nestles at her side;
And the men who do the labor, nor pain nor ache they feel,
Nor yet care they aught for cold or heat or wet,
And swift the slingers sling them with their brawny arms of steel

To the hold wherein the sturdy stowers sweat.

The eye that takes the length and breadth and thickness must be keen,

And the hand that makes the tally swift must be,
And the look must needs be cautious to tell a rot or seam
Or the bark that still clings to its mother tree.

And though we may not be well versed in literature or art,
And dead languages be far beyond our ken,
The thews, and brawn and sinews of our country, and the heart

And the backbone are the lab'ring lumbermen.

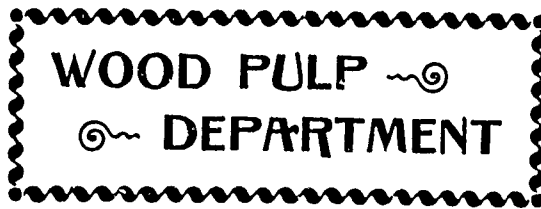
—W. PAUL McCORMICK, St. John, N.B.

NEW USE FOR SAWDUST.

THE London Timber Trades Journal thus describes a new fuel lately patented in England: It is for a new fuel, which appears to possess much merit and to deserve careful consideration of wood-workers. It is of the briquette class, but formulated on entirely new lines. The large blocks heretofore employed give way to a cube $2\frac{1}{2}$ in. x 2 in. x 2 in., experience proving this the best universal size. It lights readily, gives out more heat, and burns longer, weight for weight, than the best coals. It is very hard, there are neither dust nor "blacks," and, what is particularly to the point, it costs less than coals. Sawdust forms an appreciable percentage of the composition, and in these days of economical uses for by-products, the opening of a new field for the advantageous disposal of wastes from saw mills is pleasant to hear of.

EXPERIENCE OF A LUMBER SALESMAN.

THE Toronto World is responsible for the following: "One American who thought, as thousands of his countrymen do, that only Yankees can fight found out to his cost, at Trout Creek, near North Bay, yesterday that Canadians know something about it too. In an hotel at Trout Creek an American traveller for the Delta Lumber Co., of Detroit, stopped in his brag about whipping Spaniards to remark that Canadians were little better, and then rehearsed the old story that if "Gatling Gun" Howard had not appeared on the scene during the last Indian trouble the starving halfbreeds would have whipped them. A Canadian who was quietly reading his paper dropped it at this point to remark: 'We can't fight, eh?' and throwing off his coat, had the Yankee licked and lying in the corner before the astonished crowd knew what happened."



CANADIAN WOOD PULP IN THE BRITISH MARKET.

IN his annual report of the Department of Trade and Commerce, the High Commissioner for Canada refers at some length to the probable market for Canadian wood pulp in Great Britain. Among other things he says: "I am informed, by those engaged in the trade, that Canadian sulphite pulp is liked by most buyers who have placed sample orders, but that before it can replace, or compete successfully with that from Scandinavia, Canadian makers will require to study uniformity in quality and uniformity in moisture. This want of uniformity is a serious fault which Canadian makers are stated to underestimate. The Scandinavian makers are quite alive to its necessity, and as the result they practically command the market at the present time.

Canadian mechanical pulp is popular, and the trade, I am informed, would largely extend if the produce was covered with cheap canvas instead of being shipped in loose bundles. Being without covering and with fifty per cent. moisture, the pulp seems to absorb the dirt and dust inseparable from quay sides. Much good pulp is therefore lost through being handled in this condition, and the money value which it represents would go far to provide the canvas, which need only be of very inferior quality.

Some of my correspondents seem inclined to enter into a discussion upon the position of Canada and the United States in regard to this trade. Various suggestions have been made to me by which Canada might command the business. One is, that a duty should be levied on pulp wood exported from Canada. A step of this kind, it is claimed, would stop the import of paper into England from the United States, which tends to interfere with the use of Canadian pulp by the makers here owing to the low prices at which American paper is placed on the market. The following is an extract from a letter from one of my correspondents:—

"We beg to say we are of the opinion that a duty on pulp wood on leaving Canada would stop the import of paper into England from the United States and give that trade to Canada. Our experience is that Canada can compete with Scandinavia in the export of wood pulp to England and hold her own, so if she can do this, she will equally as well be able to compete with Scandinavia in the supply of paper to this country. The keenest competition in the pulp trade is to supply mechanical pulp for newspaper and wall paper manufacturing, and for this purpose the Canadian spruce pulp is superior.

"The low price at which the United States are dumping their paper on England is interfering very much with the English paper mills, and consequently with our import of Canadian pulp, so that the Americans are getting your wood, and with the manufactured paper, spoiling your English demand for pulp. We have to bring the pulp over with fifty per cent water, so that the cost of freight on the extra ton of water to each ton of pulp enables the States (by shipping paper and saving this extra freight and the cost of pressing the pulp) to ruin the English mills, and consequently stop the demand for Canadian pulp. There is a grand future in our paper and pulp trade for Canada if she does not allow the States to deprive her of the full benefit of the value of her forests."

Below will be found an extract from another letter from a gentleman who recently went to Canada to inquire into the possibility of developing a trade in paper between the Dominion and the United Kingdom:

"I must confess I was somewhat disappointed to find so few manufacturers alive to the great possibilities of a trade with this country. As a matter of fact, I found only one company making any serious and adequate efforts to meet the needs of the market. They see clearly the probabilities of a great trade, and are building very fine mills and erecting machinery capable of a large turn-out in both pulp and paper suitable for England and the continent. I am quite certain, after seeing for myself the vast timber tracts and water resources of the eastern provinces, that Canada need fear no rival so long as wood remains the cheapest material for paper making, and it is certainly a pity that the States are allowed to deplete her best forests for the benefit of paper makers outside of Canada, where, despite the low prices of certain grades of paper here, she could secure good profits and give employment to large

bodies of workmen by manufacturing pulp and paper on a large scale herself.

"For the successful achievement of the ends in view, it is necessary that paper and pulp should be easily shipped at Canadian ports all the year round to all the chief English and continental ports. Mills and paper buyers situated in Scotland want pulp or paper shipped direct to nearest ports, and so all over the country. With a new trade especially, all should be done that possibly can be to induce custom.

"London and Liverpool are fairly well looked after, even in winter, from St. John, but I have so far found it very difficult to get a quotation for freights from St. John in winter and Montreal in summer to Newcastle, Glasgow, Leith, Dundee or Cardiff. All these are large pulp and paper using centres readily reached from American ports, but not in direct touch to any appreciable extent with Canada. If something could be done to arrange for regular sailings between Canada and these ports, business would be materially helped.

The following is another letter that has reached me from a consumer of wood pulp:

"We beg to say that we have done a fairly large business in Canadian wood pulp. Large contracts have been made with some of the United States pulp mills, but we find that as soon as trade looks up in the latter country they do not carry out their arrangements as to delivery. So far we have not had this difficulty with the Canadian contracts, and for this reason we are anxious to encourage the Canadian business. We understand that an immense quantity of wood for pulp making purposes is sent from Canada to the United States, and that several attempts have been made to put a duty on it. If this were done, we are strongly of opinion that it would encourage the wood pulp making industry in Canada and foster the trade between that country and our own."

PULP NOTES.

The capacity of the Dominion Pulp Company's mill at Chatham, N.B., is to be doubled, so that it will within a short time turn out 30 tons of pulp per day.

The Tobique Manufacturing Company has been granted incorporation, to do a lumbering and pulp business on the Tobique river, in New Brunswick. Fred. A. Hale, M. P., and Hon. John Costigan are interested.

What is expected to prove an important factor in the building up of Canada's export pulp trade is the line of steamships which a company has been formed to put on the route between Manchester and certain ports designated in this country. Manchester is proving a most promising market for Canadian pulp exporters.

The Grand Falls Power Company, which is composed of Senator Proctor, of Vermont, Mr. James Manchester, Mr. G. F. Baird and Col. H. H. McLean, of St. John, N. B., propose commencing the development of the power of the Grand Falls at an early date. The plans of the company include the construction of a large canal to develop 80,000 horse power, and the erection of extensive paper and pulp mills. The work to be carried on immediately will necessitate an expenditure of \$1,000,000, but the whole work will require a capital of more than double that amount.

N. P. Tanguay has bought the saw mill of R. H. Cross at Weedon, Que., and will replace the steam power by electricity.

Messrs. B. R. Mowry & Son, of Gravenhurst, Ont., are now manufacturing the Automatic band saw sharpener. This machine is built on a new principle, insuring uniformity of teeth, and being positive in its action. This is said to be the great failing of many other machines. Saw mill men should give this new sharpener a trial.

No matter in what part of the Dominion you are situated, an expression of your views on any subject relative to the lumber trade is solicited by the publisher of this journal. No reader should wait for a personal invitation. Assistance thus rendered, as well as suggestions for making this journal more valuable to subscribers, will be much appreciated.

It seems that Commodore Dewey, the hero of Manila, was once a lumberman. When a young man he was employed by Dewey, Palmer & Co., a wealthy New York firm, to establish stave factories in Ohio, and while thus engaged he located the little town of Deweyville. The Mr. Dewey of the firm named is said to have been an uncle of the admiral. Whatever may have been the success of the gallant Dewey as a stave manufacturer, it is certain that he has made a staving good naval officer, and moreover, has coopered the enemy tight as a barrel, and hooped it to the Spanish war vessels in great style, says a correspondent.

OVER THE TREE TOPS.

In these years of advanced engineering, railways have sought and conquered many remarkable places, says the Philadelphia Press. Here we can ride up and down mountains just as if they were little hills, and hurry along the brink of gorges that make us shiver when we look down. From California, however, comes the strangest railroad story and picture for a long time. It tells and shows a train that actually runs over tree tops.

What a singular sensation it must be to realize that one is following a tuming, spitting locomotive over the very places where kind nature intended birds should rest, and that delightful quiet found among dense foliage reigns supreme. This railroad, down in Sonoma County, California, between the Clipper mills and Stewart Point, is not exactly a passenger, but is a railroad in every sense of the word.

It so happens that when the railroad comes to a place about equi-distant from the two points

mentioned, a huge ravine is encountered, the side and bottom of which are heavily wooded, two giant redwood monarchs of the forest towering far above the less pretentious growth and imparting an air of almost regal impressiveness.

Now, it was very necessary that the railroad should cross this ravine. It was also true that the building of a regulation railroad bridge would hardly pay. And this is where real genius came to the rescue. If the reader could stand either at the edge of this ravine or on one of its sloping sides, he would see that strangely enough the growth of the trees and their position is such that their tops can be cut off and an almost level surface of stumps be secured.

This is what genius saw, and hence the railroad across the tree tops. In the first place, the big redwoods were sawed off 75 feet from the ground, this being the exact height from the bottom of the ravine to the level of the tops of the trees. Next, trees on either side were sawed off of sufficient length to render their tops in a direct line with

the tops of the redwoods, as well as of the edges of the banks.

In this fashion was nature made to provide the piers and superstructure of the desired bridge. To the lumbermen, even the California veterans, the project seemed almost chimerical, but the builders pushed ahead, and presently one day with a shout of triumph a little logging engine pulled four flat cars and a caboose over the tree tops.



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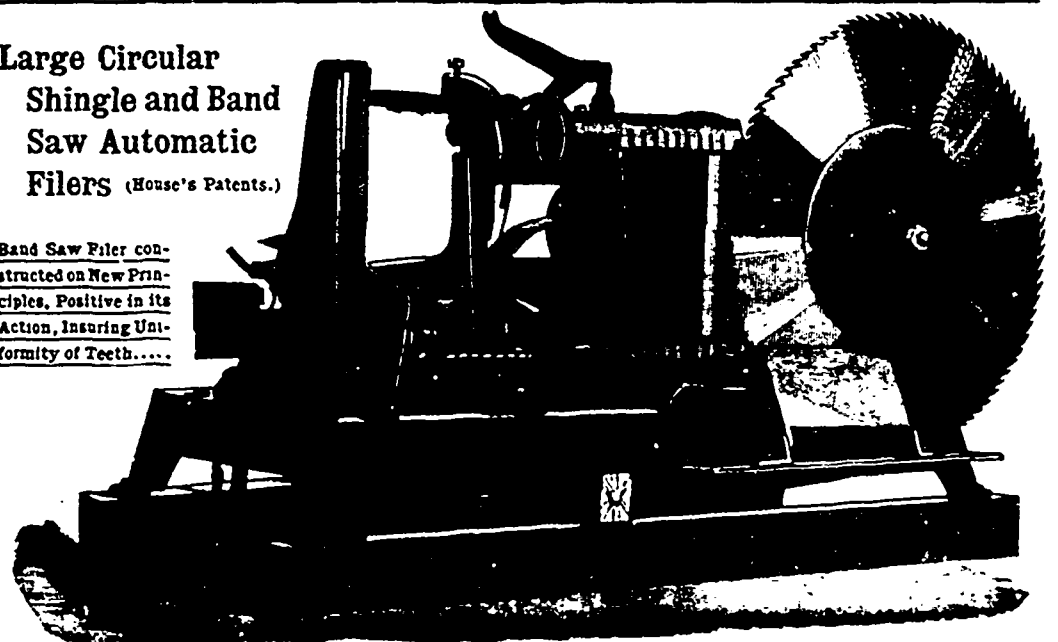
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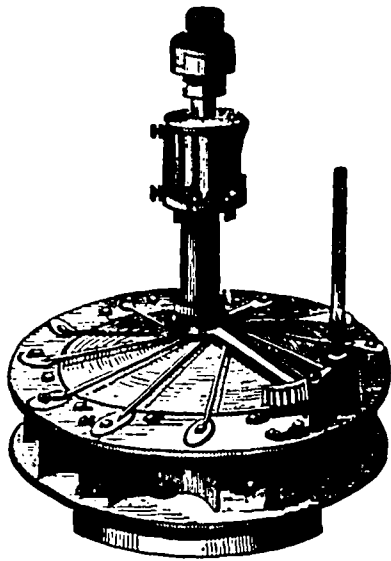
Large Circular Shingle and Band Saw Automatic Filers (House's Patents.)

Band Saw Filer constructed on New Principles. Positive in its Action, Insuring Uniformity of Teeth.....



Readers are asked to contribute freely to the columns of the CANADA LUMBERMAN, and to send in items of news whenever possible. Let each subscriber resolve to report the news of his locality, such as changes of ownership, mill improvements, market conditions, etc., and the whole will comprise a valuable compendium of information.

The most extraordinary forest in the world is one discovered by Dr. Welwitsch, which occupies a table land some six miles broad, at a height of 300 feet or 400 feet above the sea, near the west coast of Africa. The trunks of the trees of this peculiar forest are four feet in diameter, and yet they only attain a height of 1 foot, giving the tree the appearance of a round table. There are never more than two leaves, which attain a length of 6 feet and a breadth of 2 feet, the flowers forming crimson clusters.



It is well to think before putting in a Turbine, so that you think in the right direction. But don't think too long. Don't expect your stream to do high duty at low water mark with anything but the best Turbine to be had. That means

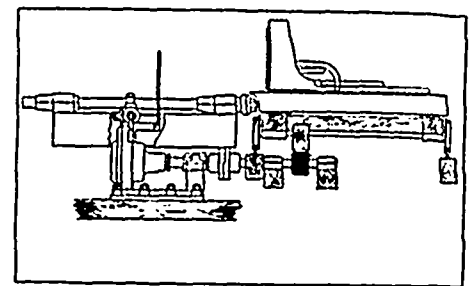
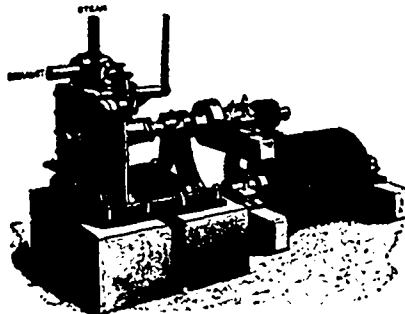
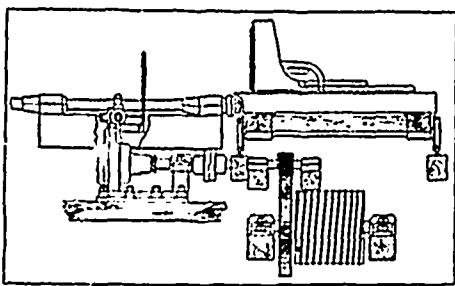
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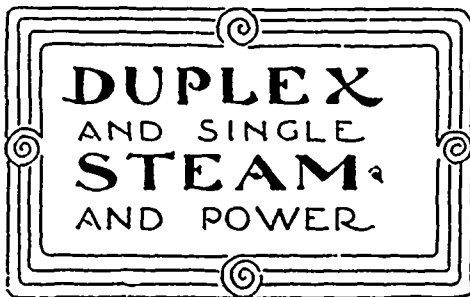
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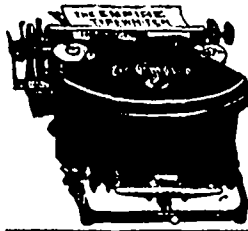
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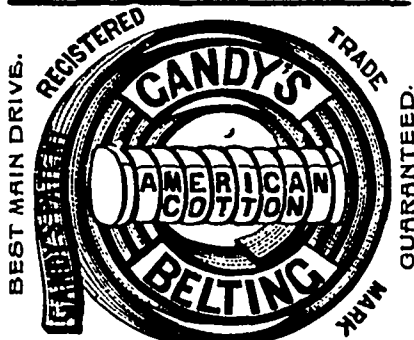
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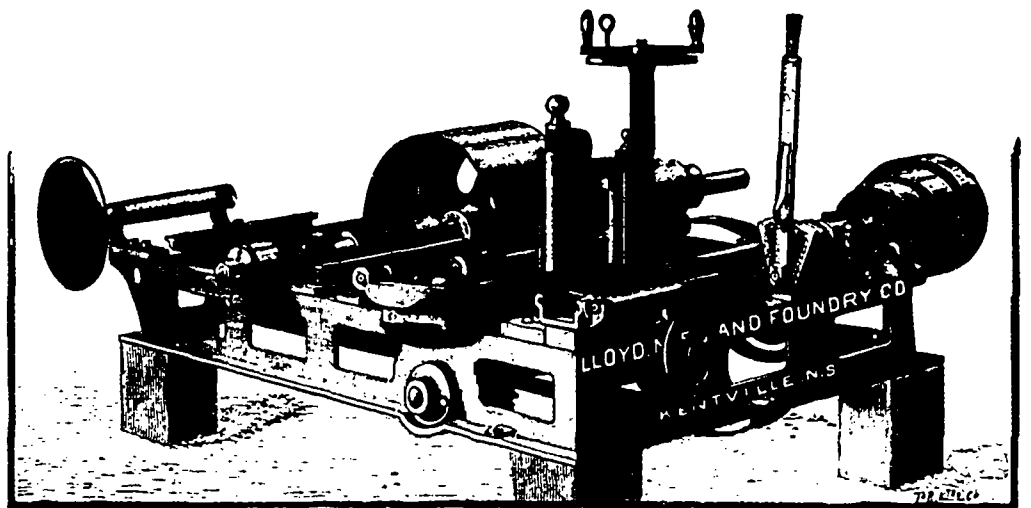
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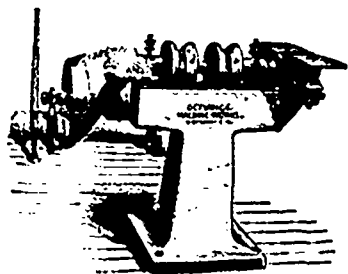
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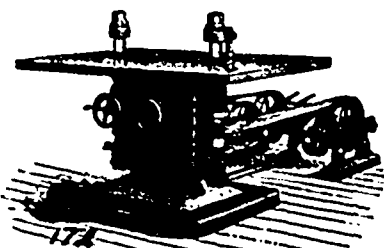
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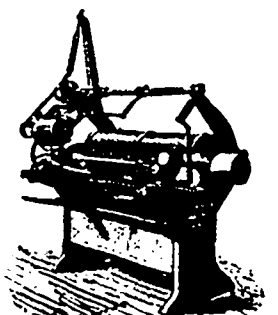
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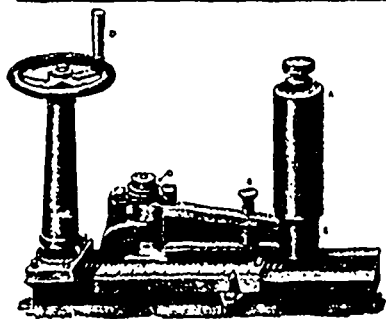


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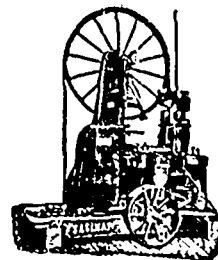
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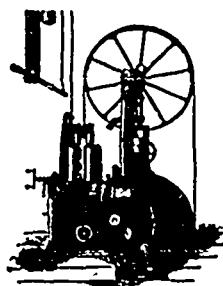
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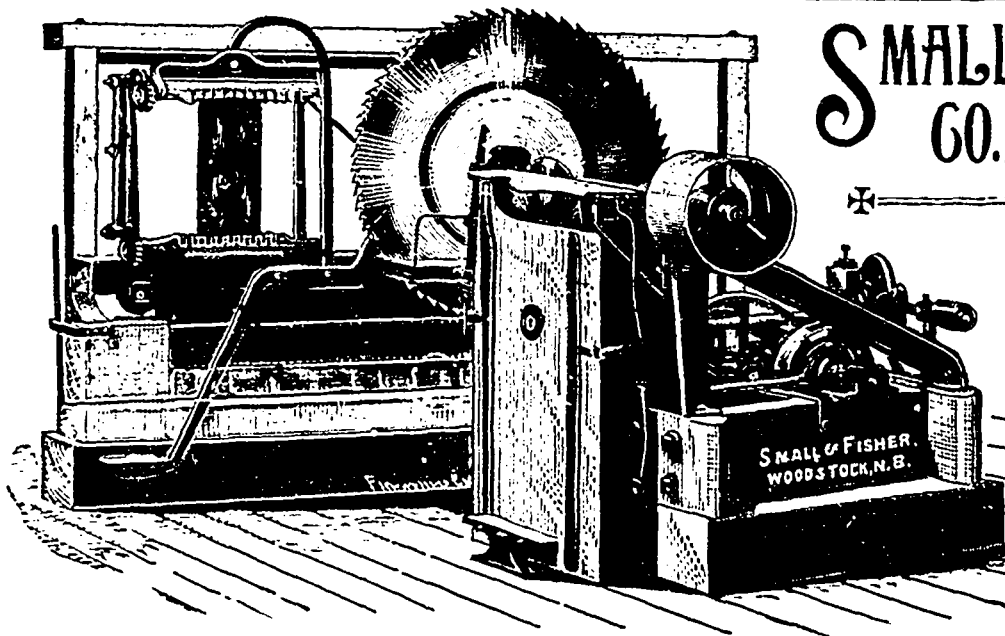
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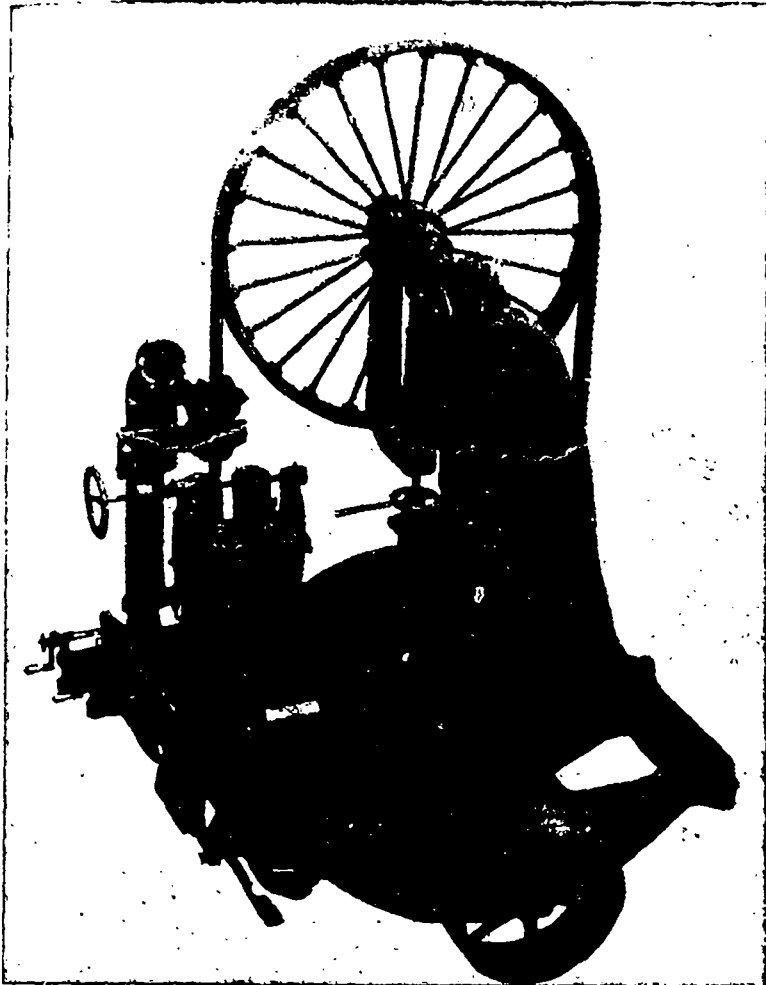
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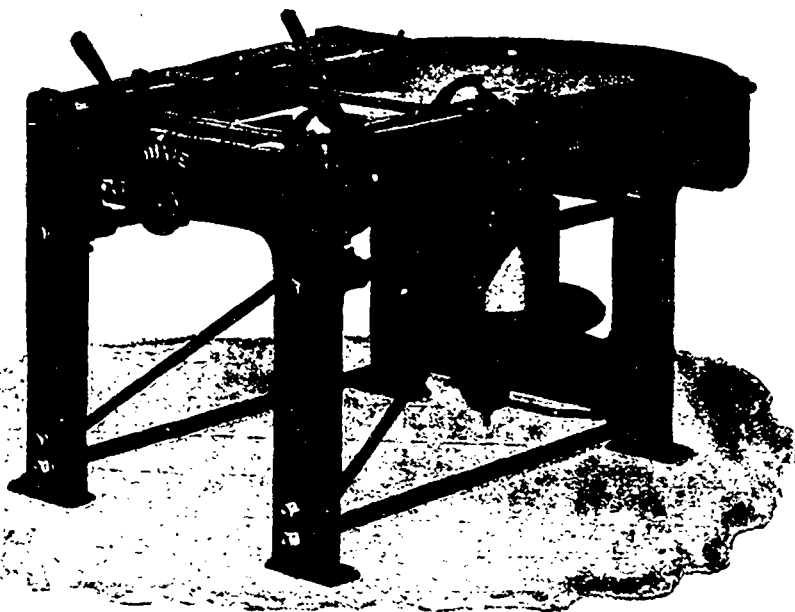
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DEAR SIRS, In regard to your Shingle Saws, you can say that I have been using Shingle Saws of your make (Simonds) for the past four years, and they have given good satisfaction. I am running nine machines and use a good many saws, but have never had a saw yet that did not work satisfactorily. Before using your saws I used saws of American make, which worked well, but after giving your saw a trial have continued to use yours, as they are cheaper, and in regard to working qualities are all that is needed.

Yours truly,

KILGOUR SHIVES.

CLAVERING, ONT., May 3rd, 1897.

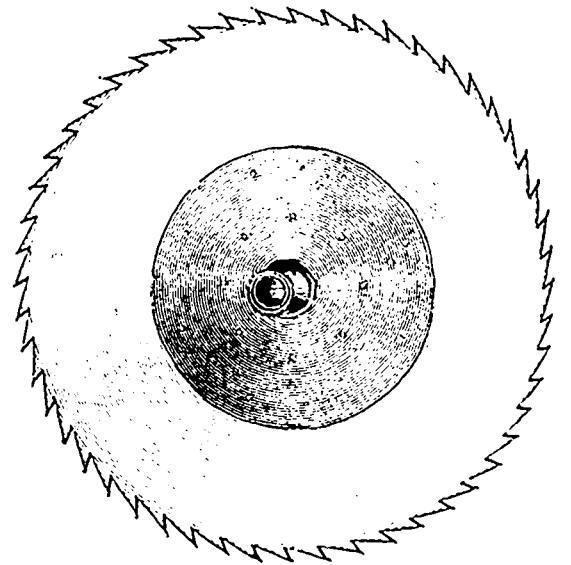
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GENTS, In reply to your letter asking me how I liked the 62" SIMONDS Saw, I must say in all my experience I never had a saw stand up to its work like the one purchased from you last month. Having used saws for the last 22 years, and tried different makes, I can fully say it is the best saw I have ever had in my mill, and would recommend the SIMONDS' Process Saws to all mill men in need of circular saws.

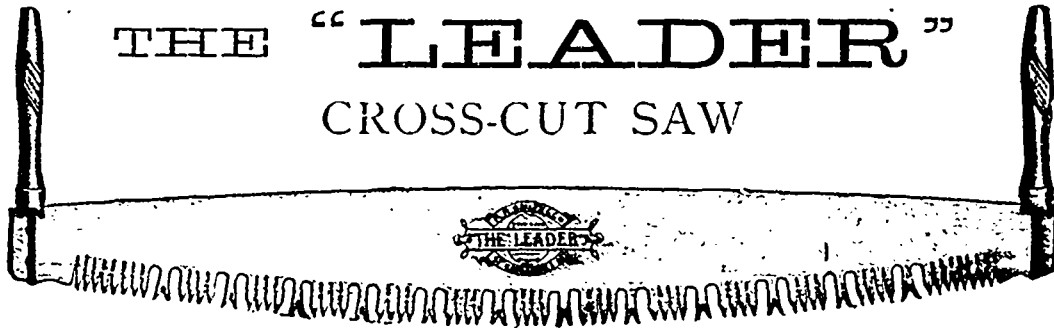
Yours truly,

W. G. SIMMIE.

P.S. I am sending you my old saw to be repaired; please hammer to same speed as
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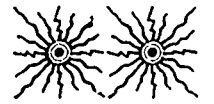
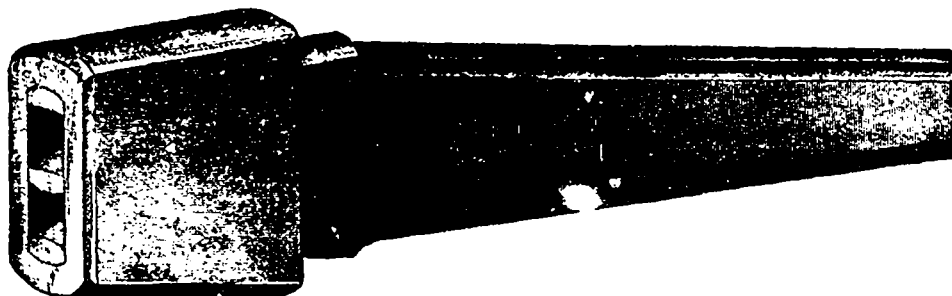
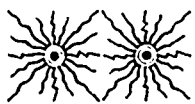


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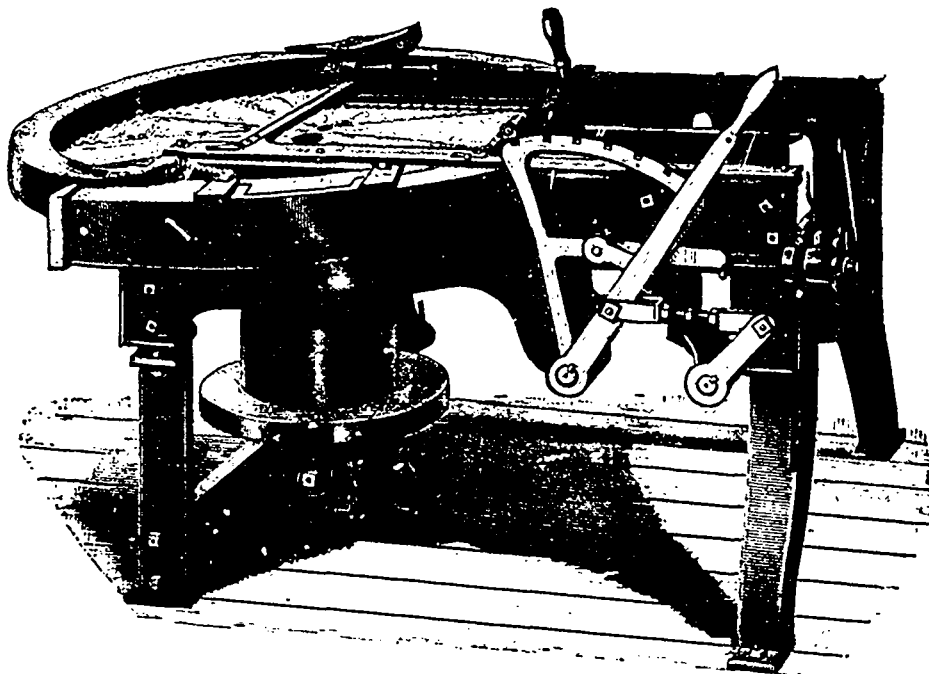
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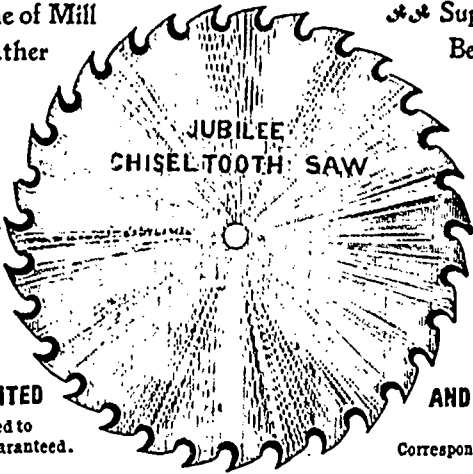
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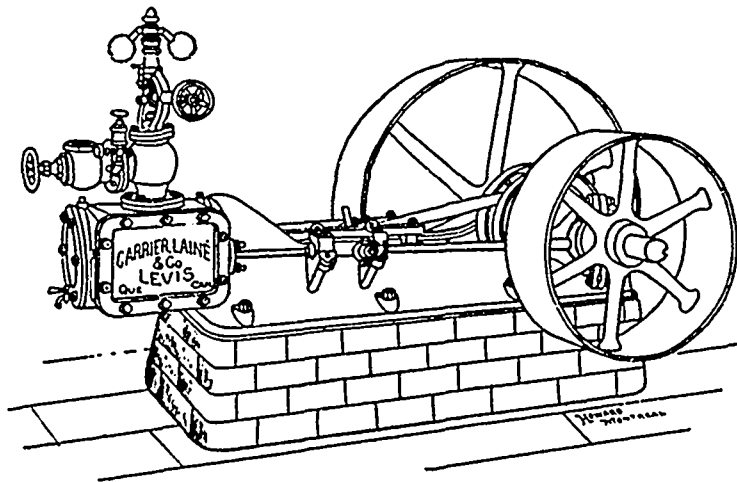
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