

of the lumber at Lake Superior ports, which had been counted upon as a portion of the available stock of this and other lake markets. This will be available for early spring trade. It is early to speak of the result of the season's work at the mills, but what with low water in most of the streams of the Northwest, and the shutting down of mills with an average loss of at least a month of the sawing season, we doubt if the increased capacity and the facilities afforded for night sawing through the use of electric lights will compensate to bring the season's cut up to a full average.—*Chicago Lumber Trade Journal*.

Condemned Saws in Perfect Mills.

TAKE two saws from the same maker, that are alike in size, gauge, speed, feed and hammering, and running in the same kind of timber. One saw works well when often the other will not work at all. They, being alike, should certainly run near enough alike that neither should be condemned. What can be the trouble? To take the theory of some saw makers, we can not get out of the trouble, they claiming that no two saws can be made to run alike, same size, etc. We take it for granted that they allow us the discrimination, or the assertion would not be made; so when we find that two saws do not run alike, there is a vast difference in the saws somewhere.

When we take into consideration temper, teeth, etc., we find often why two saws made to run alike do not. We hear a great deal said about more teeth, theories being set forth claiming the more teeth the saw has the more feed it can stand, and make better lumber. To show how a great many are thus deceived when certain conditions are not considered. I know of a man who has a good mill, making good lumber, running on four-inch feed in yellow pine. This idea of teeth struck him and he concluded to increase his capacity. He made due allowance in his estimation of how much more he could cut, and so he cut his claims in half. He was running 50 teeth in his saw, but concluded to order 90 teeth. He ordered of the same saw maker, and the saw came, hammered properly, and to speed. It was tried. It wouldn't go straight. Several trials were made. Saw heated so badly on the rim that it was impossible to run it. So it was sent back to the saw maker and he couldn't tell why the saw did not go. The trouble was the saw had too many teeth, and the feed (4-inch) was not sufficient for each tooth to cut a chip but cut, or rather scraped, the dust so fine that it escaped on each side of the throat of the teeth, and binding between saw and board, heated the saw. If this saw could have had the feed increased to eight inches it would have worked better. Both saws were alike. One run well; the other would not run at all.

But, says one, they were not alike, one having 40 teeth more than the other. We will then take them of the same number of teeth, speed, feed, gauge, timber, etc., hammered alike, and yet one saw will run well and the other will not, one being of a milder temper than the other. The mild temper is soon condemned, the higher temper running well. The trouble is this: the mild temper expands more from centrifugal force, and from the start is weaker on the rim and soon lets down; the higher temper remaining more firm, has slightly changed in its adjustment. The other is laid aside or sent back to the saw maker. The mill man is impressed that saw making is a kind of guess work, and that occasionally they make a good one. I am not claiming the high temper to be the best of the two when certain things are taken into consideration. The milder temper might have suited him best; speed might have been high enough to crack the higher temper, then the milder temper would have been the best saw. Two saws can be made to run exactly alike even when there is a slight difference in the temper. There are saw makers that claim to make saws to run alike, and so they do. This little difference in temper is considered something, and the saw is hammered a little more open, and when a man jumps up to twice as many teeth on the same saw, the saw maker notifies him that the saw will not work satisfactorily and explains why; and if the saw is sent to him he does not blame the saw maker if it does not go right. There can be a little more deviation to this teeth business when a man is sawing soft timber, but in hardwood the teeth are confined to a limit.—*Foreman, in The Woodworker*.

A Steam Wagon.

At Auburn, Maine, is a novelty in the shape of a common wagon, having all the appearance of a common Concord wagon, with the exception that a part of the boiler and its covering will show above the body of the wagon. All the motive power is concealed under the flooring. The power is furnished by two small engines of about three-horse power; the boiler is made from iron pipe in spiral form; the wagon body contains two seats, easily holding three each. A small tank for holding water is placed in the forward end of the body in a place especially adapted for it, and a small bunker for coal on the side end.

The Kiln a Positive Necessity.

Where time is of little consequence and ground room of no value, hardwood manufacturers can air their lumber generally to good advantage. In fact, some varieties of wood present a better appearance by air-drying, as the kiln is apt to crack some woods and develop the defects, especially if any haste is attempted in the process. This is clearly the case with cherry, and kiln-dried stock will run more to the lower grades than if air-dried. But there is a southern wood—the North Carolina pine—that requires the kiln to bring it to a state where it is proper to use in house finish. Boards which have been on sticks 60 days and put in the kiln will shrink one eighth of an inch in width in a twelve-inch board. Sawyers who understand the nature of the wood, saw $12\frac{1}{4}$ inches for 12-inch boards, and practical results have shown that the shrinkage in thoroughly drying amounts to that. Any lumber sent to market without being fully kiln-dried is almost sure to give dissatisfaction in the working, as the matching will soon begin to gape and unseemly seams will sour even a sweet tempered man. This is doubtless the cause of the numerous complaints from the eastern markets, especially New York. There is only one proper method of curing North Carolina Pine and that is to dry it in a kiln before shipping. The evidence before us is convincing upon the point and it is and will be impossible for shippers to send lumber to market which has been on sticks for a number of months and ship as kiln dried without running onto a snag, and in the end injure their own business. Every mill should be equipped with a kiln. The present requirements of the market make it a positive necessity.

Band Mills and Small Logs.

All reports of band saws hitherto have been in regard to putting them in, and of their wonderfully successful and economical operation after they have been set up, and now, for a change, comes the news that one has been tried and found not to be the right thing in the right place. The superintendent of the Penoyer Brothers' saw mill, at Oscoda, Mich., who has had a band saw under his charge for some time past, is quoted as saying that in his judgment it is not the thing for small logs, with which rapidity of manipulation is of more consequence than the highest economy of sawdust. Though this has not been determined upon, it is thought likely that the proprietors of the mill in question will remove the band saw, which has never been put forward as a desirable machine for small, cheap timber. It has been omitted from the equipment of some new mills of the most modern construction, in the building of which no expense has been spared, simply because the timber to be cut is not good enough to warrant the additional expense of band sawing. Those who have in mind the purchase of band saw mills, will do well to make some figures before they place an order, especially if their pine runs largely to small logs of medium, or low grade. For the cutting of such, a circular saw is doubtless the cheaper tool, and will remain so until pine is a good deal scarcer than it is now. Sawdust is worth saving, it is true; but sawdust worth \$25 a thousand will justify a greater expense in saving it than will that which could not be sold for more than \$9 or \$10. There are two sides even to band saw economy, and it is not wise to rush blindly into a trial without counting both the cost and the profit. To do so may save a disagreeable later surprise should it happen that the cost sums up the larger total.—*Timberman*.

Sawing by the Thousand.

In nearly all the saw mills which "saw by the thousand," lumber is not manufactured as it should be, and there is a great deal of unnecessary waste. The interest of the mill man are not naturally those of the log owner. The mill man generally wants to get as many thousand logs through the mill in a day as possible, and he is not particular whether the lumber is well made or not, or how much material goes into sawdust or mill wood which might go into lumber. The log owner is interested in getting as much good merchantable lumber out of his logs as possible, and he does not care particularly how long it takes to accomplish it so long as he pays for the work by the thousand. Lumbermen who will take the pains to go to the mills where the mill men for the most part cut their own timber, and job and retail their own lumber, will have it demonstrated to them very quickly that better lumber is made in these mills.—*Indianapolis Wood Worker*.

Glasgow, Scotland.

GLASGOW, Oct. 22.—Business on the Clyde is quiet, but there is a little more doing with firm prices. First class square pine is in moderate stock, and ship-builders seem more disposed to supply themselves. There was a sale at Port Glasgow by Hunter & Sheriff on the 20th, chiefly waney board-wood, red pine, pitch pine and spruce deals, when fairly satisfactory prices were realized.

Among the Manufacturers.

The Gutta Percha and Rubber Manufacturing Co., of Toronto, call attention to the fact that Mr. T. McIlroy, Jr., who was their manager, is now no longer in any way connected with the Company, nor authorized to sell or purchase the goods made by the Company. Their advertisement appears in this issue of the LUMBERMAN.

Messrs. Geo. F. Haworth & Co., of Toronto, are pushing work on their leather belt factory, and expect to have it ready for operation early in December. This factory is located in the four-storey brick building at 11 Jordan street, lately occupied by the Grant Lithographing Company. It is being equipped with the best and most efficient machinery, and will be conducted by experienced men.

We have much pleasure in drawing the attention of our readers in general, and the members of the Art Preservative in particular, to the advertisement of the Toronto Type Foundry, which appears on third page of cover. As is stated elsewhere the new outfit with which this paper is printed was supplied from this foundry, and is a fair index of the class of material handled by this firm. Our plant is on the point system of interchangeable type bodies and works admirably. A long personal acquaintance with Mr. J. T. Johnston, the manager of the Toronto Type Foundry, enables us to recommend him with confidence to our contemporaries of the press, as a courteous and obliging caterer to the wants of the craft, and deserving of the most liberal patronage.

The current issue of THE LUMBERMAN contains an unusually large amount of additional advertising, all of which is intended to prove of considerable interest to our readers. Prominent among these is the full page display of Chas. Esplin, Minneapolis, Minn., manufacturer of the Esplin Band Saw Mill. This gentleman having made arrangements with the Wm. Hamilton Mfg. Co., of Peterborough, Ont., for the manufacture of his celebrated band mill, is now able to supply the trade of Canada with complete machines on the shortest notice. The enterprise of the Wm. Hamilton Co. in supplying the latest class of machines is to be commended.

After an absence of a few months the announcement of the Montreal Saw Works again appears on back of cover. This firm is too well and favorably known to need an extended notice here.

The Dodge Wheel Split Pulley Co., Toronto, who recently sent specimens of their pulleys to Australia for exhibition, are in receipt of numerous enquiries from that country regarding them, and also from parties in San Francisco, California. The article finds much favor in Sidney and other Australian markets, and a good trade is being worked up for them there.

Messrs. Eastman Bros. & Co. of Boston, Mass., are advertising in this issue of THE LUMBERMAN for a large variety of hardwood lumber. We have much pleasure in directing attention to the same.

Steam vs. Water Power.

The cost of steam power in small amounts is greater than in large amounts, but for mills requiring 500-horse power or more as economical results can be obtained with steam as with water, in almost every case. To this add the advantage of a uniform, steady power, independent of the rise and fall of a river, and the saving which this may mean, also consider the better results attained by steam power and we can plainly see why this statement is practically proved at Fall River and elsewhere, and there is no better proof than this, that steam mills can successfully compete with other mills driven by water power.—[Chas. T. Main, in lecture before New England Cotton Manufacturers' Association.

Gilmour vs. Paradis.

The Gilmours have appealed their case against Father Paradis to the Judicial Committee of the Privy Council. The hearing will not take place till next spring. Mr. Dalton McCarthy, Q. C., will appear for the Gilmours. Father Paradis has been transferred by his ecclesiastical superiors from his parish, Egan, on the Upper Gatineau, to Quebec.

To raise steam to a pressure of 90 pounds, the water must be heated to a temperature of 324° Fah. If a quarter of an inch of scale intervenes between the shell and the water, it would be necessary to heat the fire surface of the boiler nearly 600° or 100° Fah., above the maximum strength of iron.

A Canadian journal has taken a vote among its readers on the question of annexation to the United States. Out of nearly a thousand answers over seven hundred oppose the step while only about two hundred favor it. Votes taken on this side of the line would probably give similar results. Until decisive majorities in both countries favor it a union is quite out of the question. It is an issue of years, of generations.—*Philadelphia North American*.