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## MODERN PLANING MILL ESTABLISHMENT.

Not long ago a fire in the city of Hamilton destroyed the mill of The M. Brennan & Sons Manufacturing Company, Limited. In the place of the old mill has risen a modern structure that is a credit to the company as well as to the city in which it is located.

The Brennan Company have three yards in Hamilton, employing 75 men, and paying out in wages alone nearly \$32,000 per year. They also have saw mills situated at Rainy Lake, Cache Bay and Spanish River, whilst over two million feet of pine logs were taken out at Tioga during the past season.

The main building of the new mill is 120 x 120 feet, with a dry kiln 35 x 60 feet, and a shavings vault 30 x 30 x 40 feet. The chimney is 90 feet high with a 16 foot base, tapering to 4 feet at the top. In the sheds and yards are carried over five million feet of pine and hemlock lumber. The splendid improved burner erected on the premises was built from plans published in the last October number of this journal. The company are highly pleased with the burner and claim they have one of the best in existence.

Inside the mill are seen a varied lot of up-to-date machinery, including McEachren exhaust fans, S. A. Woods matchers, pair of Kelly twin engines of 125 h. p. capacity, Goldie & McCulloch surfacers, Otis freight elevator, Greenlee Bros' relishers, sash stickers, double tenoners, mortisers, shapers, combination and band saws, Jackson & Cockrane sanders, sash joiners, jig saws, boring machines, sash, door and blind machines, etc.

The splendid building is of brick and contains a Goldie & McCulloch vault, with wash rooms and other conveniences for the workmen. The whole is fitted throughout with electric lamps.

Whilst going through the mill our representative was struck by the immense timber and pneumatic hoists in sight and was informed that they were for a large order connected with the new Deering works at Hamilton.

The company are to be congratulated upon the progress made. We have pleasure in giving

a view of the Brennan planing mill, also one showing a portion of one of their yards.

J. R. H.

## RAILWAY TIES AND THEIR TREATMENT.

At a recent meeting of the Rocky Mountain Railway Club, Dr. Von Schenck, of St. Louis, delivered an interesting address on "Timber Preservation." Among other things he said was the following:

Abroad, the ties are stacked and dried before being treated. The time varies considerably in the different countries, but is never less than four or six months. This, however, is usually dependent upon the demand for ties. At the impregnating plant of the Great Western Railway, England, the ties are allowed to season

as vital as the impregnating itself. During this seasoning process the water or volatile substances in the wood are given an opportunity to leave the wood under the most favorable circumstances. When once placed in the soil in contact with moisture, the water in the wood has no opportunity of evaporating. In the case of a soluble salt, this leaches out with the greatest rapidity from wet wood, while dry wood is penetrated more slowly by water, and consequently lasts longer. The drying of ties before placing in track might be attended to with excellent results in this country, where no subsequent treatment is given to the timber.

The universal use of different impregnating systems in Europe has brought many of them to a high state of perfection. In England and

France engineers believe that their system gives them the best results, and they use—especially in France—as much of the impregnating material as the timber will hold, saying that the extra first cost is amply paid for by the increased length of life. As has been pointed out this system, which costs from 45 to 80 cents, pays with a tie which costs from \$1 to \$1.40. They know that with this system of impregnation they get about thirty years' life out of their timber.

In many other countries where the price of timber is not so high, cheaper systems

of impregnation are in use, and will continue to be used. Zinc chloride has given good results on some lines, even if it does leach out. Copper sulphate has done so likewise. The new Hasselmann treatment gives promise of good results, and is worthy of more extended trial.

The striking features about the impregnating work as now carried on in Europe may be alluded to again here. They are:

- (1) Seasoning of ties before treatment.
- (2) Strict inspection of ties and chemicals used.
- (3) Injection of larger amounts of chemicals than are used here.
- (4) Seasoning of the treated ties before placing in track.
- (5) Care in all stages of treatment.



PLANING MILL OF THE M. BRENNAN & SONS MANUFACTURING COMPANY, HAMILTON

for six months before treating with creosote. The Eastern Railway, of France, allows from fifteen to twenty months for oak, and six months for beech. They have found out by long experience that it is absolutely necessary that the ties be thoroughly dried out before submitting them to treatment. The piling of the ties so that large air spaces are left around them, gives good air circulation, and thus helps greatly in the evaporation of much of the water. This long seasoning before treatment, almost universally practiced abroad, is one of the greatest factors leading to successful impregnation with methods employing pressure. Its value can hardly be questioned. The seasoning after treatment is fully as important, and perhaps more so. This is a feature not sufficiently attended to in this country, and yet it is almost