

A RECORD IN CONCRETE MIXING.

The rapidity with which concrete work can be done by an experienced gang and efficient machinery is exemplified by the following record recently made by workmen employed by the city of Toronto on Dundas Street, Toronto, using a Koehring No. 14 street mixer, made by the Canada Foundry Company, Limited. Seven hundred bags of cement, each weighing over 87 pounds, were put through the concrete mixer. It was also fed four cars of broken stone. Approximately 235 tons of concrete came out of the other end, and were laid in the roadway. This all happened in a working day of 540 minutes, so that about a ton of concrete was

primarily intended to exclude moisture. As yet, however, it has not been completely demonstrated, nor generally accepted, that a product can be obtained to fulfil entirely the second requirement.

Aside from these considerations, it is of course essential that the creosote be of such a nature as to remain in the wood for the desired period of protection. In this connection its relative solubility in water and its volatility are important. However efficient it may be in poisoning the food supply or preventing the absorption of moisture, if it will not remain in the wood with a considerable degree of permanence, its ultimate value will be small. Where the treated wood is to be placed in wet situations or under water, as in



Placing Concrete on Foundation for Civic Car Lines, Toronto.

made, handled, and put in place every two and a third minutes. The 235 tons of concrete measured 175 cubic yards. In other words, it would have formed a pillar five feet square and 189 feet high—far higher than the Lumsden building.

GENERAL REQUIREMENTS OF WOOD-PRESERVING OILS.

The value of any creosote as a preservative against decay is fundamentally dependent upon its ability to prevent the development of wood-destroying fungi. This prevention may be accomplished in either of the following ways:

1. By introducing a material sufficiently poisonous to wood-destroying fungi to prevent their development.
2. By introducing a material which will sufficiently exclude moisture or air to reduce the amount of either below that required by the fungi for their development.

In the past the creosotes which have been successful have generally possessed, at least to some extent, both of these properties; but the first is generally considered the more essential. In recent years, however, there has been some tendency to use materials not markedly antiseptic, but

the case of piling, a soluble preservative is inefficient; and a volatile preservative is especially unsuited for timbers exposed to the air in warm climates.

The relative ease with which a preservative can be injected is of much importance in wood-preserving operations; for this reason a product which is not sufficiently fluid at temperatures which can be conveniently used at commercial treating plants is undesirable. The presence of free carbon is known to decrease the penetrance of creosote and for this reason is objectionable.

AMERICAN MINING CONGRESS.

As a result of the determined campaign for reduced rates to the fifteenth annual convention of the American Mining Congress, which will be held in Spokane, Wash., November 25-29, the transcontinental railroads have announced the following rates: From Missouri River points to Spokane and return, \$52.50; from Chicago and return, \$68.80. Tickets on sale November 9, 10, 11, 21, 22 and 23, with final return limit December 31. A rate of one and one-third fares, on the certificate plan, has been granted from local points.