

MUNICIPAL DEPARTMENT

OILED ROAD CONSTRUCTION.

(Continued from 1st week.)

The oil was applied hot, coming, in this instance, directly from the refinery three miles distant; starting with a temperature of 250 to 300 degrees Fahrenheit, and arriving on the road with a temperature of 200 to 250 degrees. It was used at the rate of 120 barrels to the mile. Late in the fall a second light application was made. Two men with four horses did this work, putting on one-half mile per day. In some experimental work the year before the county did not have a machine that would properly put oil on a hard, smooth road. It owned a machine, which was all right for dusty roads; but this was an entirely different proposition. The outlets in the old machine are 6 inches apart, and to cover the surface of a hard road with this required letting down enough oil to spread 6 inches, which is more than necessary, and even then there will be streaks and spots that are not covered. To get over this a man was sent after the machine with a street broom to spread the oil. This was a makeshift for experimental work. There was a waste of oil, and the spots that were not covered when the hot oil descended from the machine were afterward covered by the broom with comparatively cold oil. This did not penetrate as deeply as did the hot oil.

To remedy this Mr. White designed an entirely different machine with which the mile and a half of road just described was oiled. It is sus-

pended from the rear end of the oil tank. It is operated by levers and gauges; has outlets 3 inches apart, covered by gauges, by which any quantity of oil can be let out, from the minutest stream up to 200 barrels to the mile for an 18-foot road. With the levers and gauges the operator can regulate the quantity discharged to a nicety, and the width of application from 18 inches to 6 feet. The regulation of the quantity discharged is important, especially when oil is put on a road that has been oiled before.

The total cost of construction of this mile and a half closely approximated \$1,200 per mile. It has elements in common with the construction of any other road. First, the grading is the same, but in this instance rather heavy on account of the hill encountered. Then the graveling was done in the same way Mr. White would gravel a road not intended for oiling. But in this instance it may be noted that the gravel deposit was conveniently located along the road, making the haul short. We can then eliminate the only really new element, the oiling; and in this instance it cost 120 barrels of oil at \$1.25 per barrel, \$150, plus cost of application \$15, a total of \$165 per mile.

THE LARGEST DREDGE.

A new dredge, said to be the largest in America, is now under construction at the Polson Works in Toronto for the Department of Public Works, Ottawa. She will be launched in August, and will be used on the Lower St. Lawrence. She is 160 feet long and 42 foot beam, and draws 12 feet 6 in. of water, and has a well in the centre, through which her suction pipe is handled. The pipe can be dropped seventy feet if necessary, and is hauled up into the well when the dredge is moved. The dredge is equipped with triple expansion engines of 1,100 horse-power to operate the pipe, and is capable of discharging 2,000 cubic yards of earth in an hour. The pipe is operated with a centrifugal pump 15 feet in diameter. The engines are supplied with steam by four locomotive boilers six feet in diameter and twenty feet long. The dredge is built entirely of steel plates of extra heavy weight, and will class 10 per cent. above English Lloyd's.

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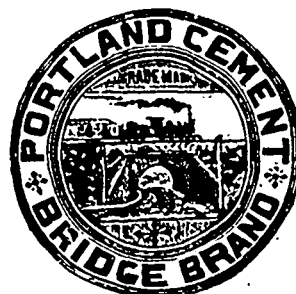
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