

**MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.**

and as a rule unfit for paving purposes. A greater portion than above specified is desirable, and will make the clay more easily vitrified at a less heat, and is to some extent a measure of its economic manufacture, as a lower heat and consequently less fuel will be required in its burning. Too great amount of these fluxes, amounting perhaps to three times the quantities above mentioned, will render the clay hard to handle on account of great fusibility. According to Richter, lime and magnesia are more active fluxing agents than potash and soda. The presence of lime or magnesia in a paving brick in reasonable quantities is not believed by the writer to be detrimental to the brick if it exists in a finely divided state and is intimately commingled with the other constituents so that a silica of lime or magnesia will be formed in the burning.

(To be Continued.)

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GRAND TRUNK RAILWAY CO. OF CANADA. CHIEF ENGINEER'S OFFICE, HAMILTON, ONT., Oct. 17, 1893.

REPRESENTATIVES OF THE ESTATE OF JOHN BATTLE, THOROLD, ONT.

Gentlemen: In reply to yours of September 19th last as to the cement manufactured at the John Battle Works, Thorold, Ontario, we have been using it on this Division of the Grand Trunk Railway for many years, and have found it to be of good quality.

Yours truly,

JOSEPH HOBSON, Chief Engineer.

**WILLIS CHIPMAN, B.A.Sc.,**

M. Can. Soc. C.E.; M. Am. Soc. C.E.; M. Am. W. W. Ass'n. **CIVIL AND SANITARY ENGINEER** Water Works - Sewerage Sewage Disposal 103 HAY STREET TORONTO.

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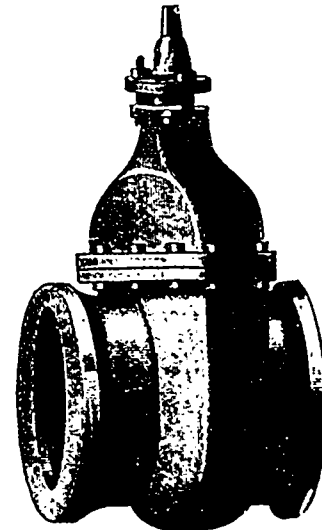
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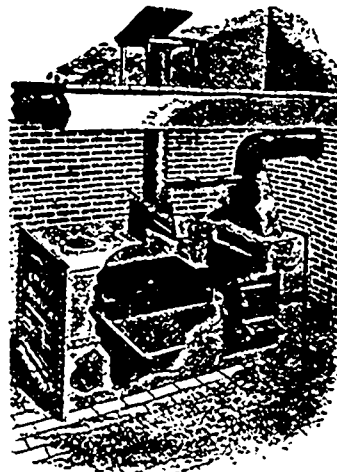
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