

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

and water mains, and electric conduits are as much a part of street improvements as pavements, and the improvement should include the whole or none.

The bursting of water pipes by freezing forms the subject of a letter by John Tyndall in The Plumber and Decorator, in the course of which he states that the air does not play a sensible part in the bursting of water pipes. In his early days he was accustomed to give expression to the apparent paradox that there is no such thing as real uniformity in nature. In regard to pipes considered "almost uniform," the slightest accident, says Tyndall, on the interior surface, a speck of dirt, for example, will start the crystallization at one point rather than at another. That the freezing should occur with absolute uniformity throughout a water pipe he regards as physically impossible. Spaces of dirt will cause some portions of a pipe to be filled by a solid plug, while other portions continue filled with water. Spaces of liquid he considers sure to occur now and then between the ice plugs, and if the latter be of any length, it would require a considerable force to push them through the narrow openings. As the force of the water is not sufficient to force the ice apart, the tube will be torn asunder across the line of least resistance.

PERSONAL.

Mr. J. C. Kennedy has resigned his position of town engineer of Owen Sound, Ont., to accept a more lucrative position at New Glasgow, Nova Scotia.

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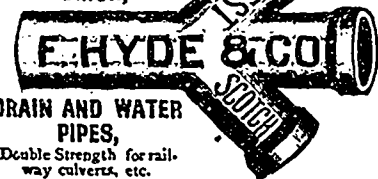
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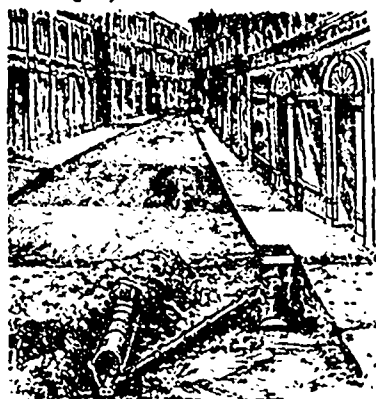
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