

MONTREAL'S WATER FAMINE.

Something over a year ago, in November 1912, the Canadian Fire Underwriters Association sent a resolution to the Montreal City Council of which the following formed part:—

"That in view of the enormous liability assumed by the Fire Insurance Companies transacting business in this City, the securing of which protection is absolutely essential to its Trade and Commerce, the Underwriters regard the present situation and future prospect with the gravest concern and alarm, and before considering what steps they should take to conserve the individual interests of their Companies, do most earnestly represent to His Honor the Mayor in Council that a Commission of three Engineers of repute be forthwith appointed (one of whom to be nominated by the Underwriters) to investigate into and report at an early date upon the troubles which have occurred and the whole conduct and management of the Waterworks Department of this City."

This resolution was passed as the result of a string of troubles with breaking mains and pumps, which incidentally resulted in a needless \$500,000 fire loss in Point St. Charles. It was backed up by the Board of Trade, the Canadian Manufacturers' Association and other representative bodies, but its effect was absolutely *nil*. For some reason or other, the Controllers fought the proposal for an investigation tooth and nail and although the Aldermen were in favor of it, they succeeded in pigeon-holing the proposal. Nothing more would probably ever have been heard of it, had not the startling events of the past week brought up the matter again into the full glare of publicity.

The underwriters' demands, scoffed at a year ago, are shown by the present events, through which the greater part of the city has been without water for over a week, to have been amply justified. A year ago the City was assured by the Controllers that in regard to water supply "all was for the best in the best of all possible worlds," and the impression was skilfully disseminated that the fire underwriters were merely looking for an excuse to raise their rates. There is this to be said for the Controllers; they scoff at the idea of an investigation no longer—the logic of events has converted them to that extent to the point of view held by the underwriters twelve months ago.

ORIGIN OF THE BREAK.

There appears to be a consensus of opinion among many engineers that the origin of the break in the intake pipe which took place on the afternoon of Christmas Day is the excavation of earth for the purposes of the aqueduct widening in too close proximity to the conduit, so that the foundations of the conduit were rendered insufficiently strong to support it. Professor Brown, in the interesting address which he made to the meeting of citizens held at the Board of Trade on Tuesday, stated that the enlargement of the aqueduct had been carried on until its

sides were so close to the conduit that the latter had been left without any reliable support on one side—not more than a few feet of loose earth. In addition to this the bottom of the aqueduct had been excavated to a depth of several feet below the bottom of the conduit carrying the city's water supply. The conduit was a structure intended to be embedded in earth providing it with lateral support on both sides. This support had been virtually removed on one side for several hundred feet, and the foundations of the conduit were in danger of undermining by the deepening of the aqueduct.

POSSIBILITIES OF FURTHER BREAKAGES.

The conduit was subjected to forces which never should have come upon it, cracks developed on the aqueduct side, followed by serious leaks, and, after some ineffective attempts had been made to check the impending disaster, a fissure developed over some 60 feet length of conduit, a large portion of the side breaking away, causing complete stoppage of the city pumps. "Speaking for myself," he continued, "I am unable to describe as an 'accident' the calamity which has visited Montreal, as a result of jeopardising in this manner the only available source of its water supply."

Not only does this condition of affairs prevail at the actual spot where the present breakage took place, but, says Professor Brown, "it appears that for several hundred feet the conduit is virtually in the same condition as that which existed at the break, and in the absence of a thorough investigation there is no assurance whatever that other cracks do not exist, nor that, in the absence of adequate support on the aqueduct side, other breaks similar to the present one will not occur. This is the condition of several hundred feet of the conduit on which a great portion of Montreal depends for its water supply."

Other engineers criticise forcibly the engineering methods used in the building of the conduit. These are matters for the discussion of experts and can only be solved by them. The present point at issue is the necessity for concentration on an investigation which will be a real investigation—not a white-washing affair—but an investigation by experts, who will have full powers of both enquiry and judgment. This investigation must not be confined merely to the question of the present break; there must be, as the underwriters demanded a year ago, an investigation into "the whole conduct and management of the waterworks' department of the City." The present crisis may not be without its benefits if it wakes up the Montreal public generally to a realization of the gross shortcomings of our municipal administration, and to the necessity of making a sweeping change.

(Continued on page 21.)