

Editorial

THE FLUXING OF ASPHALT.

In an early edition of *The Canadian Engineer* there will appear an article, by a well-known authority, explaining how asphalt can be easily fluxed to any desired penetration.

It is generally recognized that any properly refined asphalt, whatever may be its penetration, can be brought to any given higher penetration without difficulty and without doing any harm whatever to the asphalt, provided that a true asphaltic flux is added. It is apparent, however, that all municipal engineers in Canada do not yet realize this fact, because one Canadian city recently paid \$7,900 for 300 tons of fluxed asphalt of about 60 penetration, when they were offered an exactly similar asphalt, of 47 penetration, for \$5,800. By doing the fluxing themselves, the city could have saved upwards of \$2,000. But the city refused to consider any unfluxed material.

Incidentally, the specification issued by this particular city merely mentioned "refined asphalt" and did not call solely for fluxed asphalt. Nor was the required penetration stated anywhere in the specification, so that it was, to a certain extent, guess-work for any firm to bid on a fluxed material, not knowing to what penetration it would have to be fluxed. Moreover, no specification was issued defining the fluxing material to be used, thus allowing the possible use of light paraffin oils.

In view of incidents of this nature, we feel that an article reviewing the entire situation as regards fluxes and fluxing, will be of general use and interest.

PREVENTION OF TYPHOID.

At the convention of the American Waterworks Association, which is still in session in New York City as we go to press, a noteworthy paper entitled "The Typhoid Toll" was read by Mr. George A. Johnson, consulting engineer, New York. While it is impossible to print the paper in its entirety, we have in this issue reproduced such portions of it as are of particular interest to readers of *The Canadian Engineer*. From this extract it will perhaps be possible for our readers to realize with what care and thoroughness Mr. Johnson has gone into his subject.

Municipal engineers, especially those directly in charge of water supply, very frequently have to expend a great deal of effort to convince civic authorities of the economic waste resulting from impure water. The statistics which Mr. Johnson has produced and placed in proper sequence are most impressive, and should be quite sufficient to convince those who are responsible for the appropriation of monies for waterworks construction and maintenance, that typhoid fever, which is altogether too common in many of our communities, can be successfully prevented.

The results of water purification, as Mr. Johnson most convincingly shows, always give a large balance on the right side of the ledger. Where one dollar is spent for pure water, many dollars are saved in the form of vital capital through the prevention of sickness and death.

MONTREAL AQUEDUCT SCHEME APPROVED.

After the developments of the past three weeks, it is very unlikely that any change will be made in the Montreal aqueduct scheme.

On May 26th Controller Cote, who has charge of the Montreal works department, seemed partially to admit the need of some outside opinion being brought to bear upon the undertaking. He gave notice that on May 29th he would introduce a motion to appoint J. G. Sullivan and M. J. Butler as consulting engineers to advise Mr. Mercier *whenever their advice might be needed*.

When the time for his motion arrived, however, the controller failed to make it, and instead introduced to the Board of Control G. W. Fuller and J. M. Gregory, consulting engineers of New York City. According to newspaper reports, these gentlemen advised the controllers that the aqueduct scheme is a feasible commercial undertaking, and that the completion of the work should be left entirely in the hands of the city's engineers.

After several days of discussion, Mr. Cote withdrew his motion, and then Controller Villeneuve moved that Mr. Sullivan and A. St. Laurent be invited *to report upon the whole project*. As only Controller Ross supported him, the motion was defeated 3 to 2.

There are many very able men in the Montreal city engineering department, particularly the chief engineer. But they have inherited a scheme to which birth was given by their predecessors, and having become foster-fathers to the undertaking, they have assumed—perhaps unwisely—full responsibility for their adoption. Considering the large amount involved, and the heavy capital expenditures per expected horse-power, it would have been desirable for the Montreal board to have passed Controller Villeneuve's motion.

Messrs. Fuller and Gregory must have information not available to the general public, otherwise engineers of their repute surely would not have declared that the scheme is commercially feasible. Their O.K. upon the work and the plans has apparently ended the matter. Montreal must now sit back and pull straws to determine whether it is headed toward bankruptcy or toward prosperity effected through savings in light and power bills. After all, it's only the twentieth century and there's lots of time left yet for Montreal's government to progress!

SOO CANAL LOSES TRAFFIC.

Chiefly because the United States has constructed a large lock at Sault Ste. Marie, traffic through the canals of Canada last year decreased 58.9 per cent. In 1914, the traffic totalled 37,023,237 tons and in 1915, only 15,198,803 tons. The Sault Ste. Marie situation was responsible for 91 per cent. of the decrease.

In his annual report on canals, just published, Mr. J. L. Payne, comptroller of statistics, department of railways, Ottawa, points out that of the decline of 19,848,227 tons at the Soo, 1,049,241 tons were in Canadian boats and 18,798,986 tons in United States boats.

This meant a loss to the Canadian canal of 5.1 per cent. of the Canadian traffic and 94.9 per cent. of the