

THE SANITARY REVIEW

WINNIPEG: ITS SEWERAGE SYSTEM.

A proposal recently made to concentrate the sewage outfall of the city of Winnipeg by means of intercepting sewers at a point on the Red River, in the municipality of Kildonan, has raised a storm of indignation in that quarter. The Selkirk Board of Trade held a meeting on November 8th last, at which a lengthy resolution was drawn up. It was pointed out by the Medical Health Officer for the district that a beautiful body of water was threatened with cesspool conditions.

It can not be tolerated that the city of Winnipeg be allowed to continue the discharge of raw, untreated sewage as it does at present, or that it can assume a new location of discharge outside its own city limits, unless some efficient method is adopted of rendering the sewage innocuous and removing its objectionable qualities.

The time has most certainly arrived when the Provincial Legislature of Manitoba must take immediate measures for the prevention of stream and lake pollution by sewage. With the examples of the other Western Provinces, it is difficult to understand the lack of practical interest which has been taken in this most important subject.

Time after time, the public and the press of Winnipeg have taken up the subject of the serious pollution of the Red and Assiniboine Rivers. There is not an enlightened citizen of that Western metropolis but feels and acknowledges this blot on their civic administration.

The last annual report of the Medical Health Officer of Winnipeg referred to the objectionable and serious amount of unnecessary pollution. In spite, however, of every representation which can be made, the civic reply is logical, if somewhat stale, that there is no provincial law requiring municipalities to treat sewage before discharging it into streams and lakes.

Why should Winnipeg (simply because of its size) be called upon to purify its sewage discharge when Portage la Prairie and Brandon cities may continue legally to send their untreated sewage to Winnipeg? The only answer to this clear and logical assertion is that a Provincial Legislative Act is absolutely necessary in Manitoba, making it compulsory to treat all sewage effluents.

We understand that the Provincial Board of Health are taking certain steps to bring the matter before the Provincial Government. We know that Dr. Simpson, the chairman, is fully wise to the serious aspect of the want of efficient legislation, and, whenever the Government is ready to provide the legal sinews of war, he is also ready to provide efficient administration, which will place Manitoba on a level with the other Canadian Provinces, which are looking to the conservation of the purity of natural waters.

MEDICINE HAT WATER SUPPLY.

A recent report upon the quality of the filtered Saskatchewan River water as supplied at Medicine Hat is of an entirely favorable nature. The filters in use are the mechanical type, supplied by the Roberts Filter Company, of Philadelphia.

The report shows an efficient reduction both in bacteria and in suspended matter; this in spite of the fact

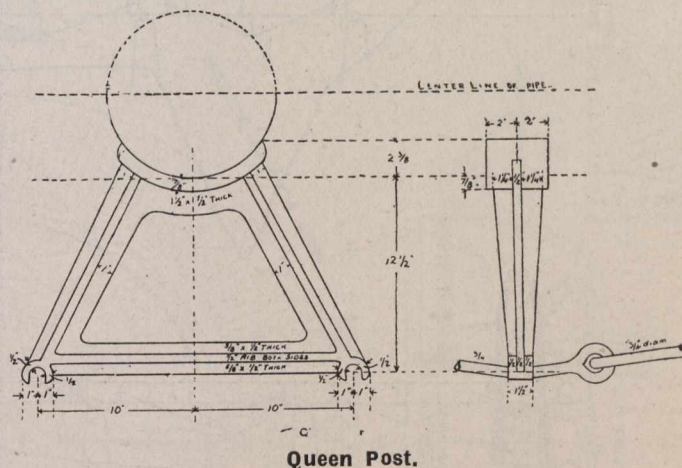
that the river is polluted with the sewage of several up-stream cities.

The bacteria counts per c.c. on agar are as follows: River water, 400; sedimented water, 80; filtered water, 10. Total reduction of bacteria, 97.5 per cent.

EXPOSED SEWERS AT LEAVENWORTH.*

By Joseph O'Neil, City Engineer.

In designing main trunk and lateral sewers for sanitary Sewer District No. 9, at Leavenworth, Kansas, the latitude of the design was limited by a great many natural conditions. The district consists of several minor drainage areas and contains numerous creeks and "draws," making the topography of the district very rough and broken. At points where creeks cross alleys and streets are located culverts and bridges, the crossing of which controlled the grades of the sewers almost absolutely. In addition to this, the several additions to the city comprising the district were poorly platted when originally laid out, and the arrangement of streets and alleys is bad. In some cases there are two and three alleys in one block, platted as "T" and "H" alleys; in other cases there are no alleys and it was necessary to condemn right-of-way for sewers. In order to lay out the



main trunk sewer so as to provide for lateral sewers in each block, the alignment was controlled entirely by these requirements, and the topography had to be disregarded for the most part.

Being thus controlled in grade and alignment, the depth varied from every shallow to exceedingly deep work, sometimes through twelve to fifteen feet of rock. In crossing creeks and ravines, it was often necessary to have the sewer above ground. These "exposed" sewers will be discussed in this paper.

It was deemed best to use light weight, bell and spigot cast-iron pipe supported on concrete piers, and to provide for the free expansion of the pipe. To attain this end, it was provided that the piers be mounted with cast-iron pier plates anchored into the concrete; on these plates were to be placed several lengths of round bar iron at right angles to the line of the sewer to serve as rollers and fitting over the top

*Paper before American Society of Municipal Improve-
ments.