The second is:—That means must be taken to prevent the soil pipes from freezing above the roofs. In St. Paul it is found sufficient to enlarge the soil pipe at the top, so that a considerable amount of frost can accumulate in the enlarged end of it without obstructing the passage of air. In Minneapolis a galvanized iron jacket is required about the pipe above the roof, leaving an air space. This arrangement is perhaps better adapted to the climate of Winnipeg, but whatever means is adopted must be such as to insure at all times a free passage for the air.

If these precautions are followed, there is no sanitary objection to the removal of the traps.

Experience in the cities mentioned, and in many others indicates that it is possible to so control these conditions, that no harm will follow the omission of the house traps.

I recommend that this course be followed in Winnipeg, that is, that the use of the house trap be made optional, but coupled with stringent regulations covering the conditions necessary to success without the trap. This will have the effect of removing the disagreeable smells from the middle of the streets. The foul smelling air will then escape above the tops of the houses where it will be unnoticed.

## On the Discharge of Sewage.

Sewage is now discharged as is nearest and most convenient to either the Assiniboine or the Red River. If the conditions are otherwise equal, it is obviously better to have the outlets discharge into the Red River at as low a point as possible.

It is not worth while to incur a large expense to secure this result, however. The Assiniboine cannot be used as a source of water supply below any point where the sewers for Winnipeg will be constructed. The minimum flow of the river, which Col. Ruttan tells me is about 600 cubic ft. per second, is so great that it will receive and dilute so as not to produce a nuisance the sewage from a population of at least 150,000. When the quantity of sewage draining that way exceeds this amount and when the condition of the Assiniboine River becomes objectionable, it will be necessary to construct an intercepting sewer to carry the dry weather flow of sewage to the Red river below the city. Such an intercepting sewer was contemplated in the original design, but it will not need to be built for a very long time.

The only further recommendation that I have to make regarding the sewers, is that contained in Prof. Jordan's report, namely, that the houses in the city be connected with them as rapidly as possible. From the standpoint of typhoid fever, it is a vital matter, that these connections should be made.