

of water. Excavations made in such quicksands often fill up over night, in spite of careful timbering, by reason of the flow of the wet quicksand into the hollow formed by the excavation, in part below the ends of the timbers, and in part between the very small cracks between the timbers.

Such a quicksand was met with in the excavation made in connexion with the City of Montreal's filtration plant, in course of construction in 1913. An examination of this material was made by Messrs. Milton Hersey Co. Ltd., from whose report the following information is taken, with their permission:

	1.	2.
SiO ₂	57.40	58.85
Al ₂ O ₃	17.50	13.25
Fe ₂ O ₃	7.00	6.25
CaO.....	1.84	7.00
MgO.....	3.11	2.61
SO ₃	4.95	2.47
K ₂ O.....	1.82	3.60
Na ₂ O.....		7.67
Ign.....	8.05	7.67
	101.67	101.70

Analyses 1. Soil from new city filter.

" 2. Boulder clay from northwest corner of Peel and St. Cathrine streets.

N.B. FeO calculated as Fe₂O₃. S. calculated as SO₃.

(It is considered that the close correspondence of these analyses in certain particulars is not of very great importance.)

Another analysis of a sample from the filtration plant showed 65 per cent of SiO₂.

"An examination and comparison of the material from the filtration plant and the boulder clay showed that of the former 79.63% passed through a 200-mesh sieve, (but of that which did not pass through, 7.6% consisted of coarse sand and pebbles), whilst of the matrix of the latter 86.17% passed through a 200-mesh sieve. Flotation tests were carried on which showed that this sand and the boulder clay consisted of particles of similar sizes, and in similar amounts, but that they were both very