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ON THE FILTRATION OF THE PUBLIC WATER SUPPLY.

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The waters of the Ottawa, and of the north district generally, which flow past Montreal Island, are remarkable for the sandy or flinty character of their minute animal and vegetable organisms, and for the presence of alkaline silicates, which, when commingled with the waters of the St. Lawrence, become precipitated into gelatinous hydrate of silica. As the result of frequent microscopic examinations of the deposits formed by subsidence of the water supplied to my laboratory, and also the deposits separated by the process of *filtration* in my house filter, I find that the deposits consist of

1. *Angular fragments of sand and flint.*

2. *Gelatinous silicious magma.*

3. *Organic silicious filament of DIATOMS, also spicules and gemmules of fresh water SPONGES and skeletons of algæ.* This deposit resembles in general character the well known "TRIPOLI POWDER," used for the burnishing of metals, the keenness and polishing power of which is due to the presence of similar vegetable sandy fragments, which are scarcely less hard than "EMERY POWDER," and will cut fine scores in the brass work of taps and valves, followed by hard particles of sand, giving rise to continual leakage.

Therefore, I submit that the filtration of the water *before it is pumped into the mains of the city*, would, by removal of this gritty flinty matter, accomplish a *saving of waste* alike in