a considerable amount of objectionable matter, in a form to cause or aggravate disease, enters the Water Works at such times. During the steady mild weather, after the Exhibition week in September, the Bay water improved; an examination, on the 17th of October, of the water inside the Works, showed that it contained no objectionable quality, but of samples taken before and since, the same could not be said.

## The Water supplied to the City.

The character of water supplied is very variable. The water, in passing through the pipes, may deposit much of its undissolved contents, and these may in future time be taken up and carried to the place of supply by water that was unobjectionable when it entered the Works. The mud and cat-fish drawn by the steam fire-engine from the hydrant at the corner of King and Yonge streets, may have astonished the uninitiated, but it is certain that all the mud was not got out on that occasion. But if the water, as drawn into the Works, were unobjectionable in character, this difficulty would be constantly lessening. At present there is no filtering of the water, the supply-pipe runs out from the Esplanade a long way, but, as it is broken in several places, one within 150 feet of the Esplanade, that may be assumed to be the spot from which the water is obtained.

A better locality would be a little west of the point of the Island, opposite the Queen's Wharf. A filtering crib placed there and connected with the works by an iron pipe with joints (such as is used in some Scottish water works), to allow it to accommodate itself to the varying depth of the water, would remedy all the difficulty. At no time this summer has the water of the locality indicated presented any unfavorable character. In the mean time, a filtering crib should be constructed at the place of the present source, so as to prevent floating particles and mud from being sent into the pipes. The softness of the water of Lake Outario makes it peculiarly eligible for culinary 8.44 grains per imperial gallon, equivalent to a little more than 1 grain of inorganic matter in 10,000 grains only, the water of the great lakes is remarkably pure. Economically considered, soft water is better than hard, as in the preparation of ten, coffee, and liquid food, hard water is wasteful. In this view alone, therefore, it is desirable that the public water supply should be so extended as to furnish all the more densely populated districts of the city with lake water. But if we take into account the character of the water found in many of the wells in crowded places, and to which the pipes of the water works are not laid down, the strongest reasons can be given for an extension of the works.

## The quantity of Water Supplied.

The quantity of water supplied by the Water Works averages more than one and a half millions of gallons daily (1,662,171). This quantity is pumped by two engines, one, the old one of thirty horse power, supplying the Yorkville Reservoir, with more than half a million of gallons per day of twelve hours working, and usually working eight days per week. This reservoir is about 125 feet above the level of the lake. The new engine of sixty horse power is used to fill the St. George's

Reservoir, seventy feet above the level of the lake, sending to it more than one million gallons daily, or six and a half million gallons weekly, in six working days of twelve hours each. The capacity of each reservoir is about three million gallons, together containing only four days' supply for the city, irrespective of any sudden and great demand that might occur on account of fire. But this small store need not cause apprehension, while we have the unbounded supply from the lake and the Works are in good order. A connection formed between the pipes forming the system of each engine and reservoir, allows the water of one system to be distributed by the pipes of the other, but the larger, or new engine, cannot be used to drive the water to the Yorkville Reservoir, from the smallness of the pipes leading to it. The quantity of water used at even a large fire is insignificant compared with the daily wants of the city. The Yorkville Reservoir was only drawn on for one-sixth its capacity at the Rossin House fire, while the ordinary Sunday expenditure will reduce it twice that amount. The lavish use of the water of the Works is quite apparent, for while 20 gallons per head per day is the common allowance in English towns for every use, public and private, the quantity furnished to this city equals thirty gallons per head per day, while only a moiety of the inhabitants make use of it. Much of it must be allowed to run to waste.

A constant water supply is of great consequence in a sanitary point of view, as well as on account of its necessity in case of fire. If the service supply be not constant, the public filtering of water is insufficient, for the vessels in which consumers store it become the depots of impurities. The service supply of this city should be so remodelled that the water should be always on, both in dwellings and at the hydrants, and when it is found that waste is allowed the supply should be by metre.

An extension of the supply to certain districts is urgently needed, and the wells of those parts should be closed, for many of them derive their contents from the soakage of foul and even a fæcal soil.

## Health of the City.

The health of the city this season will compare favourably with any of the last few years. Al-though great fears were entertained of a sickly season, especially in view of the approach of cholera, thanks to a kind Providence, and to those hygienic measures, public and private, which have been adopted, we have been spared hithert). The mortality for the six months ending September 30th, is less by 159, and, deducting the deaths of volunteers, by 168, than that of 1865-the mortality of which year, was slightly lower than that of The death rate of 1865 was about 22-2 per 1864. 1,000 per annum. The death rate of 1866 will be about 19 per 1,000 per annum. A death rate of even 16 per 1,000 is too high for a city placed as Toronto is, with cheap and abundant good water for the taking, and excellent opportunity for drainage. A death rate of 14 per 1,000 would be a natural one, and the public should not rest satisfied until that point is reached. The diminished mortality this season is chiefly in diseases caused or aggravated by filth. The whole gain for six months