

empty into them. With a foolish rashness, thinking merely to be rid of a nuisance which is before their eyes, some will rush the refuse of a town into the very source which is to supply them with their drink. Nor is this an exaggeration; for we read how, at one point, the Thames was a receptacle of filth while at another, a few miles below, it furnished its flood as potable water. The Romans afford us a similar example. But it is not necessary to traverse the ocean to find an exemplification of imprudence. At Troy, the inhabitants befoul the Hudson with excrementitious matter and offal, while, at Albany, this same water, which has delivered the northern city of its filth, is supplied for household usage. Water from shallow wells should always be regarded with a certain degree of suspicion. It often affords a palatable drink, yet there is always some uncertainty as to the soil and matters which it has passed before forming the well which appears so refreshing. Street and surface liquids may drain into it: stagnant marshes may be sufficiently near so that some of their putrescence may ooze through; and also, which is very likely and extremely dangerous, ammoniacal liquors may percolate from vicinal cesspools, privies, or manure pits. But should there be neither wells, springs, lakes, nor rivers of sufficient magnitude or purity to afford a wholesome supply, then an artificial storage basin must be resorted to in order to collect the water which falls from the skies. In this connection our attention must be directed to the phenomena which occur in nature in relation to the rainfall. The better the engineer is acquainted with the daily, monthly, and yearly fall of rain, not only with average quantities but also with maxima and minima, the better will he be able to meet the wants of the town or city which may have relied upon him for the supply of its drinking water. But a longer discussion of this topic would lead us into a subject different from the one which is at present to be treated; consequently it were more prudent to leave the question of water, while still dwelling on the fact that water acts upon impurities by carrying them away to the sea, and that, if this enormous exit, this inexhaustible receptacle, did not exist, the result of excretal accumulations would be the pollution

of the water and not the purification of the sewage. One would not build a tank and throw into it however so little sewage, with the hope that this would become pure and clean. No one would touch the water, however large the tank and however small the quantity that may have been emptied into it. In comparison with a river, the assumption of a tank, coupled with the idea of a size which it would be likely to receive from our financial and labor capacity, seems truly absurd: yet in what light would a comparison stand between a river and the ocean?

The Earth! Yes! it is written with a capital letter and followed by an exclamation point. Why should we not use this mark of distinction and pause a while in consideration? We return, for an instant, to our days spent with classical mythology, and remember the maternal goddess. In the Earth we have had our incipency: on the Earth we live; on the Earth we shall have passed our days of joy and sorrow: to the Earth we must return. Such is our destiny! Is it strange that we should have paused while writing—"The Earth"? The earth bears the crops that feed us. It is studded with all the beauties of landscape that delight the eye. It rears its mountain heads and rugged peaks, whose grandeur strikes the admiring mind with awe. The earth is good for us, and becomes such as we make it. The Being of Infinite Perfection has made everything with reason and for some good. It is for us on all occasions to find that good which, for every creation, existed in the mind of the Maker. The earth is a contingency of such varied composition and constituents, that surely nothing is wanting there. And it is indeed so, especially in the consideration of the present subject. The mineral world is continually being assimilated by the vegetable kingdom, and it is the animal kingdom that should return to the terrestrial crust, such matters as will supply the deficiencies occasioned by vegetable rapacity. Such is the process of nature. And if it could always be carried out, a great deal of annoyance would be avoided. But great difficulty is often encountered, especially in cities, and in countries where the character of the soil does not encourage agricultural pursuits. We must adapt ourselves to our modern