

properly disposed of, we shall have air contamination, which though seemingly not nearly so pernicious as water contamination, is undoubtedly very injurious to health.

I now propose to make a few observations, first, on the different methods of *removing* excreta from the immediate vicinity of dwellings, and then, on the manner of *disposing of* or *utilizing* the excreta and sewage.

The different modes of removal are conveniently divided into 1st., The Water-Carriage Method, and 2nd., The Dry Methods.

The removal of excreta by means of the water used for domestic purposes, especially if there is abundance of water at such an elevation as will give considerable force, and an adequate fall for a free out-flow, is the most expeditious and cleanly, and, as channels of some sort are necessary for the waste water, it is certainly the most economical method. And very pretty to the mind's eye is a large town or city with an almost inexhaustible source of supply of pure water above it, from which streams are more or less constantly flowing through numerous pipes into and through our dwellings—through our sculleries and water-closets, and even laving our bodies, removing in short all impurities from around us and forcing them, if not a safe distance away in all cases, at least out of our sight. But this system of removal, unless every part connected with the waste-pipes and sewers, and even with the supply pipes, is of the most perfect construction, and the sewers properly ventilated, and constant vigilance is exercised in order to maintain this perfect condition, instead of preventing disease, it will be almost certain to furnish very ready means for its development and propagation: as by accumulations of excreta, and their consequent fermentation, and by the escape of poisonous gases into dwellings, or by reason of these gases, or even of the sewage itself, finding their way into the water of cisterns, or of contamination of the soil by leakage. Furthermore, the greatest difficulty in this plan of removal is the proper disposal of the large amount of sewage—of the largely diluted excreta, after it has flowed from the sewers. But more on this point further on.

The *dry methods* of removal are, that of admixture with deodorizing substances, as ashes, certain manufactured deodorizing powders, charcoal, and dry earth; that of removal without admixture; and the pneumatic plan.

The pneumatic system for the removal of excreta was briefly described in the third number of the SANITARY JOURNAL. In