it has been shown that of the few bacteria which are present in the effluent, a certain number come from the underdrains, and have therefore not passed through the filter at all. These belong to some of the species of water-bacteria, and, consequently, will be quite harmless. From tests made on the experimental filters at Lawrence with an easily recognized and hardy species, the actual reduction was found to be from 99.9 to 100 per cent. Now, when it is considered the filter is capable of producing such effects upon bacteria which exist normally in water, it will be evident that the effect upon the pathogenic or disease germs which are out of their natural habitat and in a decidedly unfavourable environment will be much greater. Thus what may be called the "hygienic efficiency" of this system must be remarkably high. The process is comparable to nature's method of purifying the surface water which furnishes the underground supplies; and if properly carried out, the water produced is probably of almost equal wholesomeness. The continued experience of places where sand filtration plants have been in operation for some time only goes to strengthen this conclusion.

In America the method is only just beginning to be employed. Up to the year 1892 there were but two plants of this description in the country, viz., those at Hudson and Poughkeepsie, which have been already referred to. Since that time 14 new ones have been completed and three others are under construction, the latter including the large plant at Albany. The experience to be derived from these plants is too limited to be of much value for some time to come; but the officials connected with the majority of them have invariably expressed their entire satisfaction with the method of working and with the results obtained.

In England and the continent, however, the experience of many years is available, this method, as we have seen, having been used long before the *rationale* of the process was understood. In England particularly, many of the supplies are from surface waters made available by means of large storage reservoirs; and in nearly every instance the stored water is filtered before being supplied to the consumers. The new supply for Liverpool, which was put into operation in 1892, comes from an artificial lake formed by damming the Vyrnwy River in Wales. This lake is 68 miles from Liverpool, and lies in a sparsely inhabited district remote from railways or towns. Yet the water from this source, safe as it may appear, is also made to pass through a sand filter before being allowed to enter the distribution pipes. In Germany the use of any surface water without filtration is prohibited by law.