

various gases, ammoniacal liquid, a tar-like substance, and a residuum of animal charcoal.

3. That of employing it as a fertilizer, either after certain processes of manufacture or by applying it directly to the soil, as in irrigation—the passage of liquid sewage over and through the soil—or in the form of a deodorized powder.

Of the first method, I think nothing can be said in its favour. In seaboard towns sewage *may* be allowed to flow into the sea, but as Dr. Parks says, “In inland towns it cannot be discharged into rivers.” It not only destroys the fish, silts the beds of streams and creates palpable nuisances, but it is impossible to say when or where its pernicious effects upon the health of communities will end, through contaminating the drinking water and fouling the atmosphere. Though the water becomes purified in a degree by the influence of water plants and by oxidation, the purification must be an exceedingly slow process. According to experiments of Frankland*, the water in the river Irwell, which receives the sewage of Manchester, after a flow of 11 miles and falling over six weirs, showed but little improvement. Dr. Letheby† considers that purification takes place more rapidly, and that if sewage is mixed with twenty times its bulk of water and flows a distance of 9 miles it will be completely oxidised. On the other hand, however, Parkes says, “Average London sewage diluted with nine parts of water and syphoned from one vessel into another so as to represent a flow of 96 and 192 miles, gave a percentage reduction in the organic nitrogen of 28.4 and 33.3 respectively.” He found unchanged epithelium in unfiltered Thames water after a transit of 80 miles in a barrel, and after being kept five months.

It is satisfactory to know that this “barbarous” method of disposing of sewage is gradually going out of use; and it is most desirable that it should be abandoned at an early period. Britain, it is generally known, is at this time greatly exercised

* Reports of the Commissioners appointed to inquire into the Pollution of Rivers, 1870.

† Report of East London Water Bill Committee, 1867.