

to arrange for the systematic removal of the sludge from the works. To begin sewage treatment without this is to end in the creation of a gigantic nuisance and become involved in an almost hopeless struggle to suppress it.

"Sewage-sludge may be disposed of in four ways—it may be compressed into portable cakes; or it may be conveyed in a semi-fluid condition to the open sea; or it may be used to make up waste land; or it may be dug into ground, so producing a highly fertile soil."

The committee recommended:—

"1. That the system of having water closets for public-works, jails, workhouses, infirmaries, and railway stations, should be forbidden, so as to reduce the quantity of water-closet sewage now turned into the river; water-closets in small houses should also be discouraged.

"2. That the ordinary privies and ashpits be altered to the tub and pail system, to be cleansed daily, as it has been carried out in Manchester and other important English cities and towns; and that special accommodation be provided for children.

"In the event of it being found necessary to purify the river:—

"7. That the whole drainage of the city be taken into main intercepting sewers, and conducted to a suitable point, and, after being rendered clear by precipitation and filtration, passed into the Clyde.

"8. That the sludge obtained in the precipitation process be got rid of in the cheapest possible manner. A part of it might be used in making up waste land, and a certain quantity might be taken away by farmers; but the greater part would probably require to be disposed of in the same manner as the dredgings of the river."

6. CONCLUSIONS AND RECOMMENDATIONS OF THE ROYAL COMMISSIONS ON METROPOLITAN SEWAGE DISCHARGE, 1884.

"FIRST REPORT.

"1. That the works of the Metropolitan Board, for the purpose of carrying the sewage of London to the respective outfalls at Barking Creek and Crossness, have been executed in a highly creditable manner, and have been of great benefit to the metropolis.

"2. That the storm-overflows allow the occasional discharge into the river, within the metropolis, of considerable quantities of solid fecal matter accumulated in some of the sewers; but this has not caused, under present circumstances, serious damage or offense.

"3. That the sewage from the northern outfall is discharged partly over the fore-shore, and not, as was originally intended 'through submerged pipes terminating below low-water mark;' this arrangement increasing the risk of nuisance from the discharge.

"4. That the discharge of the sewage in its crude state during the whole year, without any attempt to render it less offensive by separating the solids or otherwise, is at variance with the original intention, and with the understanding in Parliament when the Act of 1858 was passed.

"5. That the sewage discharged from its main outfalls becomes very widely distributed by the motions of the water, both up and down the river, being traced in dry seasons through the metropolis and almost as high as Teddington; and that it oscillates for a long period before getting finally to sea.

"6. That the dilution of the sewage by the land and seawater, aided by the agitation produced by the various motions in the river, effects a partial purification of the sewage by oxidation; and that this purification is carried further by the action of animal and vegetable organisms.

"7. That the sewage, which becomes distributed to the higher and to the lower portions of the river, thus gradually loses its offensive properties. The limits above