

The liquified sewage, practically clear and greatly purified, flows out gradually, as it is allowed to flow in, but at the opposite end of the tank. It may be turned into a stream or lake, or may be further purified by being allowed to flow in thin sheets over flat surfaces as it issues from the tank ; or by land' irrigation.

Another good plan is by upward filtration of the sewage through "cultivation filters," consisting of coke or gravel, giving a large surface to the air. In this, the purification is accomplished by aërobic bacteria, which require oxygen for their work. The sewage in this way is purified to about the same degree as in the septic tank.

PATHOGENIC BACTERIA AND AUTO-INTOXICATION.

The bacterial origin of many diseases is now generally recognized as not any longer a theory but an established fact. Yet a few high authorities hesitate to accept it as such ; that is, as the origin of the diseases. As in the beginning Ziemssen said in respect to the tubercle bacillus,—“ Various points in the subject of tuberculosis seemed, from the standpoint of the bacillus theory, to be beset by almost insuperable difficulties ” (Clinical Lect., Doherty's Trans.).

In no disease probably has the bacterial origin been more generally accepted than in that of enteric fever, in which Eberth's bacillus is regarded as the cause. For a long time it was contended by high authorities that this bacillus was nothing more than the usually benign bacillus coli communis transformed into a virulent pathogene by its environment. Eventually Klein and others appeared to set this at rest by showing apparently distinct and permanent differences. Now, Dr. McWeeney, at the Royal Academy of Medicine, Ireland (*Brit. Med. Jr.*, Feb. 11, '99), describes the “ peculiar behavior of a strain of typhoid bacilli which he had isolated by the usual methods from the bile of a fatal case of typhoid,” present there in great numbers. It had the cultural characters of Eberth's bacillus, but with the distinctive peculiarities of extreme slowness of growth on gelatine plates, with fewness, delicacy and shortness of flagella. Although it was actively mobile during the first twelve hours, “ it died down by the end of twenty-four hours to a wagging movement hardly distinguishable from the bacillus coli.” Tested side by side with several typical cases “ it proved markedly resistant against agglutinating influences.” These two races of undoubted typhoid bacilli, Dr. McWeeney states, “ gave directly opposite serum-diagnostic results.”