reported to us to produce any marked type of disease over the Clyde, even when they come in a state so concentrated as to produce sickness; whereas gases from sewers, in a condition which may not produce immediate illness, may produce in time typhoid fever, as we are credibly informed. "We must conclude, then, that it is not mere dispersion, but that it is a more thorough putrefaction and oxidation which takes place in the Clyde, and a more complete destruction of the organic substance by the abundance of air, than can take place in sewer water, whatever the senses may indicate to us. Of course, we must ever give some credit to the flow of air up the river, and the ever-fresh breezes that come from the Atlantic, as well as the mixture of air with water caused by steamers.

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If nature had contrived no method of · destroying such seeds of death, populations such as this is would never have grown up. And what is the method? That method is-first, putrefaction; at least I know of none other, except the concluding portion of the work-viz., through oxidation. When, therefore, you see the Clyde seething with gases of putrefaction, and when you smell it to such an extent that a feeling of loathing is produced, you may remember this-that the work of destruction is going on with a wonderful rapidity, and that the enemies of life are being slaughtered there, millions upon millions, never to appear again in a similar form, though other generations of them may rise up. As putrefaction seems not to take effect without the actions of organisms, I had the idea that it might be arrested by an abundant use of air, and I had some belief that the oxidation took place very rapidly after putrefaction.

was when examining this that I found it necessary to touch also upon the question of nitration in water. When nitrogenous bodies decompose with an abundance of oxygen the nitrogen becomes oxidised and nitric acid is formed. I had long suspected that the reverse also took place ; and that when there was an excess of putrefactive matter, oxygen was absorbed. and even removed from the nitrate, whilst nitrogen was given off. This process I was able to verify by carrying it on in the laboratory. It was clear then, and beyond all cavil, that rivers could purify themselves in time and organic matter be thoroughly removed. It was clear that organic substances, that germs of disease, that microbes, and the smallest organisms themselves, were all subjected to this universal and unsparing attack of putrefaction and oxidation. The result, as expressed in my report of the Rivers Pollution Prevention Act, was expressed in the following terms :---

Putrefaction destroys organic matter without the influence of oxygen. It breaks up organic compounds and destroys organisms. The evidence seems to indicate that it destroys even those bodies that produce disease, but that in certain conditions it produces others. This is a point not to be enlarged upon without more knowledge, but it is evident that by putrefaction we get rid of an enormous amount of offensive matter. Oxygen cannot enter under the surfaces of actively putrefying bodies; but wherever it is allowed to enter by the putrefaction being less active an action begins which in time completes the destruction of the body. We are not therefore, to suppose that the germs of disease can resist all these efforts It of Nature to destroy noxious things; nor