

I have already said that river water is liable to impurities from the intake of drainage from its banks. You have heard the report of the Engineer regarding the "settling basin" supplied by Little River. You have also heard that prior to the very partial cleaning it received in 1897, the water contained 470 bacterie in a cubic centimetre (a cubic centimetre is about 16 drops), and that now it contains only 60. And I say, that had he said thousands instead of hundreds, he would have been nearer the mark. I do not mean to accuse him of wilfully decreasing the number, but that his apparatus for counting must have been defective.

I have no doubt pathogenic—or disease-producing germs—were not found in the water. This is excusable, because they are so very difficult to detect, especially in running water, though they are readily detected in the human body, and in the excretions from the bowels or kidneys.

The majority of infectious diseases are caused by micro-organisms. There are four ways in which they may enter the body, namely: by ingestion, by inhalation, by inoculation, and by congenital transmission.

The micro-organism, which will occupy our attention this evening, is the Typhoid-Eberth's-Bacillus, a vegetable plant, known as the cause of that deadly disease—typhoid fever—a preventable disease, and one standing fourth on the mortality list. When under the microscope, and magnified 1100 times, the germ looks not unlike a common house fly, with its wings removed, and about two-thirds its size. It is very tenacious of life, cold not affecting it, but five minutes boiling kills it. It has been known to live three months in a dead human body, ninety days in water, and long enough to travel hundreds of miles in that fluid. It has also been known to travel a mile under ground, reaching a well and producing the disease. *It sinks in still water*, but flows with the stream. It reaches the water—where it is too often found—through drainage conveying the excretions from a human being having typhoid fever; when there, it multiplies with marvellous rapidity. It is