

and villages, who would do well to profit by the calamity at Princeton, and remove the cause before valuable lives are sacrificed.

Privy vaults and manure heaps not unfrequently seriously contaminate well water at farm house.

Dr. Hopkins, of Bridgewater, Mass., U. S., writes July 6, 1880, to the Editor of the *Sanitary Engineer*, and enquires if the following cases which he gives can be true:—"A gentleman suspected that his well was polluted, and ordered a new one dug fifty feet further off from his cesspool. While the workmen were sinking the well, a stream of pure sewage began to run through an opening half-way down, and the work was abandoned." I lately saw stated in a health report, the following: "A well was tainted from some source. The privy was one-hundred feet distant. To test the possibility of the privy affecting the well, the former was cleaned out, and a barrel of salt water poured into it. In a day or two, the well water was found to have a decidedly saline taste."

The Editor replies as follows:—"We believe there have been numerous and authentic cases reported of wells having been polluted at distances exceeding one hundred feet, by cesspool or kitchen drainage leaking through a porous soil. In one case mentioned by Dr. Eldredge, of Rhode Island, brine from ice cream was conveyed 150 feet."

MEMPHIS RECLAIMED.—It is reported that Memphis is at last clean, and so far worthy of exemption from further epidemics of yellow fever. Thirty miles of sewers have been laid, and in addition, an equal number of miles of drain tile. Aside from sewerage and drainage, there has been a cleaning and filling of vaults, a demolition of hundreds of old buildings, a tearing up of Nicolson pavement, cleaning of cellars, and a general renovation of stores and dwellings.

THE PURIFYING POWER OF WATER.

A good deal has been written about large bodies of water, as of rivers and lakes (and the Toronto Bay for example), purifying themselves, as by oxydation of the impurities. A discussion recently took place touching this point, before the Chemical Society of London, Eng., Prof. Huxley took part in it, and said as follows:—"He would state briefly only what were demonstrable facts. Diseases caused by what people, not wisely, call germs, *e. g.*, splenic fever, pig typhoid, etc., are caused invariably by bodies of the nature of bacteria; they could be cultivated through twenty or thirty generations, and then when given to the ox or the pig would invariably give rise to the characteristic disease. We have no reason even to imagine that any body capable of causing disease by such means could be anything but a body having the nature of a bacterium. Now, bacteria are just as much plants as mushrooms or cabbages, or the *Wellingtonia gigantea*, so that we know under what conditions bacteria can live and what they will do. Bacteria can be sown in Pasteur's solution just as mustard and cress can be sown in the soil; in it they thrive, and the liquid becomes milky, and he would ask the president whether there was any known method by which, if one drop of this Pasteur's solution were placed in a gallon of water, its constituents could be estimated. (The president having answered that he thought it was doubtful, the speaker continued.) Every cubic inch of such water would contain 50,000 to 100,000 bacteria, and one drop of it would be capable of exciting a putrefactive fermentation in any substance capable of undergoing that fermentation. For purposes of public health, the human body may be