

patriotic Pasteur was completely broken: but the enormous death rate among the wounded, arising from ignorant and careless medical methods stirred up the scientist to action. A Dr. Guérin suggested that "the cause of purulent infection may perhaps be due to the germs or ferments discovered by Pasteur to exist in the air." Acting on this supposition Dr. Guérin washed the wounds of the injured with carbolic acid, and kept out the air from them, covering them with cotton wool and this with linen bandages.

The general opinion of the doctors had been that "purulent infection was an almost Divinely instituted consequence of any important operation," yet Guérin by his method succeeded in saving nineteen out of thirty-four patients to the amazement of the whole profession. Pasteur, taking great interest in this experiment, visited the different hospitals, and saw his opinions being vindicated.

It delighted the humane man of science to receive in 1874 a letter from Sir Joseph Lister, from which we make an extract: My Dear Sir:

"I do not know whether the records of British surgery ever meet your eye. If so, you will have seen from time to time notices of the antiseptic system of treatment, which I have been laboring for the last nine years to bring to perfection.

"Allow me to take this opportunity to tender you my most cordial thanks for having, by your brilliant researches, demonstrated to me the truth of the germ theory of putrefaction, and thus furnished me with the principle upon which alone the antiseptic system can be carried out.

"Believe me, etc.,

JOSEPH LISTER.

Note.—Lister's method, as is well known, was in operating on wounds to disinfect with carbolic acid instruments, sponges, hands, all dressings, and the wounds being operated on.

The Germ Theory of Disease.

Thus, in one way and another did the report of the discoveries made by the vigorous and alert minded Frenchman gain currency. Few problems are of greater interest to the public mind than that of the public health, and the occurrence and danger of infectious disease. The public men of France saw the great value of his discoveries, even before the experimenter himself saw it.

Pasteur's line of investigation was leading directly to the question of how to deal with diseases in men and animals. "There are," it was declared, "germs of microscopic organisms on the surface of all objects in the atmosphere and in water."

Dr. Davaine, a French physician, had applied the principle to medicine in 1863. In 1873 the matter was fully discussed. Pasteur referred back to his cultures of *Bacillus anthrax* and showed that this was the germ of the disease Anthrax or Murrain, also called Splenic Apoplexy, known from the earliest times in all lands among animals, wild or domestic—among cattle, sheep and swine. He showed how it was propagated. He demonstrated by his thorough experimental method its effect on hens.

In March, 1878, the Academy of Medicine assembled to hear the discussion between M. Collin, an opponent and Pasteur. The scientist maintained that no organic matter, unless it contained germs of anthrax, would produce the bacteria of anthrax. Collin denied every position of Pasteur, and among other things said it was possible to give anthrax to hens. Pasteur to show