

when he saw anthrax bacilli in the blood of sheep dead of splenic fever.

Pasteur's unique work in connection with the germ theory of disease is well known, and it was upon his observations that Lord Lister based his system of antiseptic surgery for the treatment of wounds, which has revolutionized modern surgery, and rendered the performance of operations formerly impossible a comparatively safe procedure.

Following on the history of bacteriology a chapter is devoted to bacteria as the causes of disease, in which these micro-organisms in their different forms are described, as well as the conditions which influence their growth.

All disease-producing germs, we are told, have their favourable seat in some part of the body where they grow more or less luxuriantly, and in the secretions and excretions of which the chief source of their infection lies. The pneumonia germ prefers the lungs; the typhoid germ selects the lower portion of the small intestine; the diphtheria germ the throat; the cholera germ the intestinal tract; the germ of tuberculosis prefers the lungs, but it is called a "medical tramp" because it will lodge in any part of the body and make its home there.

The theory of antitoxins is then explained. It must be understood that an antitoxin is not the direct result of bacterial action, but is properly described as an unknown body resulting from the resistance of the healthy organism to the toxins of pathogenic bacteria.

According to prevailing theory antitoxins are the products of the body-cells formed under the influence of the bacterial toxin. These are used both to counteract the effects of the toxins which are elaborated by pathogenic bacteria in the body, and to render the system immune, so that it may resist the action of the bacteria should they gain access to the body. They are not germicides. One theory of their action is that they neutralize the toxins, and give the natural bactericidal powers of the body an opportunity to exercise their function.

#### SURGICAL TECHNIQUE.

Part II., which is concerned with surgical technique deserves the careful study of nurses, who will be amply repaid by its perusal.

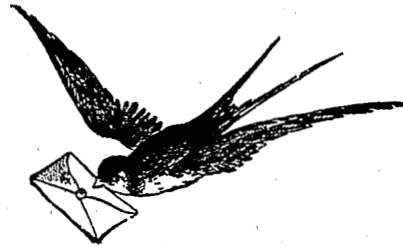
The care of the operating room, of methods of sterilization, and the care of instruments, is detailed. It would appear that in almost all large hospitals in the United States there are three operating rooms—one for general, one for gynaecological, and one for septic cases. The operating room for septic cases should be far removed from the others, and neither surgeon nor nurse attending this room should have anything to do with the others. Rooms are also set apart for dressing the cases which are wheeled on a stretcher from the wards for this purpose.

The best methods of sterilization are fully described, and the various instruments needed in different operations. The production of anaesthesia and the different anaesthetics are dealt with, as well as the various dressings, etc., used in surgical work. The preparation of the operation room, and all concerned in the operation, are detailed, and the various exigencies which may subsequently occur. A chapter is devoted to signs of death and autopsies, in which much useful information is conveyed.

## Our Foreign Letter.

### ACROSS NORWAY ON A BICYCLE.

(By Our Holiday Correspondent.)



Relief from work at last! The morning of Friday, the 9th of August, was hot and cloudless when the train moved out of Fenchurch

Street station, taking me and my wheel to the S.S. *Orlando*, belonging to the Wilson line of steamers. Upon arrival at Tilbury she could be seen lying placidly at anchor in the bosom of Father Thames. In a very short space of time the steam tender transferred the passengers from the train to her and no time was lost in weighing anchor. Like a greyhound the good ship leapt from her moorings, and was soon steaming out of the great key to the world's commerce, heading for the land of waterfalls and enchanting scenery. The following day was bright and calm, a soft summer zephyr alone disturbing the silvery surface of the often restless North Sea, making everyone jubilantly buoyant.

We reached Christianssand early on Sunday morning. The landscape, as the ship approaches the deep green water of the Christianssand fjord, is decidedly rugged and picturesque, and is occasionally dotted with cottages painted red, yellow, and white, with red tiled roofs, and a pretty village shelters here and there in the many inlets.

Christianssand is a bustling little port of 13,000 inhabitants, prettily situated at the mouth of the Torrisdal River, being called at by most steamers, both foreign and coasting. Unfortunately drizzling showers fell during the few hours' stay, which prevented my cycling to the Vigelandfos (fos, waterfall) about eleven English miles from the town, and reached by a good road all the way, so one or two friends I had already made walked with me to the beautiful Raven's Valley, surrounded by wooded heights, about a mile and a half distant. Returning, we visited the very fine cathedral, and Ernst's excellent hotel, which is equipped with every modern convenience. Here we changed some English into Norwegian money, and then went on board again. For the remainder of the time before starting we amused ourselves watching the movements of the various boating parties who were out for a afternoon's row down the lovely harbour. At 4 p.m. the engines moved once more, and we were soon skimming through the Skagerack to

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