

ally, and also has been my observation in the experience of others, to find cases in which, though the operators have felt that they had succeeded to an unusual degree in securing freedom from all disturbing influences, nevertheless to find disappointment awaiting them in those very cases, so that sometimes the most disastrous results have happened where operators felt they were the most sure of escaping any source of infection. For this reason up to the present moment I have felt that it was not only important for us to secure as far as possible the complete purification of the hands of the operator and of the field of operation and of the instruments that are being used and of the appliances brought in contact with the wound, but that it was important for us never to forget to provide for the removal from the wound, as far as possible, of all material which would be the ready pabulum for any infecting substance that might accidentally have crept in. So I am not ready in ordinary work to give up drainage, or to give up whatever method may promise to secure the escape from or the diminution of the formation of the albuminous materials ready to enter into decomposition in the wounds that we make.

I am convinced that in the use of heat for the sterilization of instruments and of appliances, as it becomes general, we are making another decided advance in our ever-present contest with infective material, and the extremely practical and easily managed methods which have been brought to us by the essayist of the evening, and by Prof. Roberts, are of such a character as to make it evident that there is nothing in the use of dry heat but that may be at least fairly within the command of any gentleman who does very much surgery. Of course, the more we complicate these matters, the more we try to reach perfection in these matters of detail, the more difficult it is for one who is not doing it all the time, as are these gentlemen who have presented these things to night, to have them at command just when they are wanted. In hospital work it may be more easy, and yet I am persuaded by experience that even there it is not always easy to get just what we would

like to have done just at the moment when we would like to have it, however well ordered the hospital may be. For the sterilization of instruments, then, we may hope that dry heat may become more generally used than it has been heretofore, and that in the use of dry heat we may be able to secure the purification of our instruments. But for persons in general who may not have occasion to use sterilized instruments every day, and who are not likely to provide themselves with even the simple apparatus for dry heat, the apparatus for using boiling water may be more readily available as a rule. For this purpose a small asparagus boiler, which may be bought for seventy-five cents, is an excellent device. This, when filled with water, may be put on the range or on the gas-stove or over an ordinary nursery lamp and boiled as long as desired, the ordinary instruments can be put in it, and by means of a little tray which lifts in and out, may be readily removed from the boiling water. This boiler may be taken to the house of a patient, the instruments there boiled and left in until the moment for their use arrives.

I have been looking, however, not only for something which will sterilize the instruments, but also something that may be available in the operating-room for sterilizing all appliances, dressings towels, night dresses, the gowns that we use, and blankets with which the patient is covered, and all that sort of thing. It seems to me it is quite important that we should have a wide extent of sterilized surface about our field of operation, in order to diminish to the greatest degree possible danger of infection; for, as has already been remarked this evening, it is difficult for the surgeon, however he may be permeated with the idea of aseptic work, it is difficult even for him to avoid making a slip, so that the less opportunity one has of becoming contaminated, the more likely he will be to do uncontaminated work.

The sterilizer, which Dr. Rand has mentioned, the Arnold sterilizer, seems to give to us a practical method of accomplishing this sterilization of the accessories of our work. This sterilizer comes to us so thoroughly guaranteed upon the part of bacteriologists in whom we