

by clamp-screws. In the interior of the cylinder there is a car running on an iron track, on which the soiled articles are placed. Steam, generated by a neighboring boiler, enters the chamber by two sets of tubes—one to raise the temperature to 130° C., the other, pierced with holes 40 millimetres in diameter, to allow steam to enter the chamber when it is desired. The necessary pressure-gauges, thermometers, etc., are placed on the exterior of the cylinder.

**DISINFECTION AND ISOLATION IN CONTROLLING EPIDEMICS.**—Dr. Franklin Parsons, after referring to the epidemic diseases, mentioned the experiments of Koch in destroying the spore-bearing and non-spore-bearing micro-organisms, in which that observer had proved that carbolic acid had an inhibitory effect on their growth, spore-bearing forms requiring immersion for one or two days in a five per cent. solution, whereas a two per cent. solution only killed them in a week. Sulphurous acid gas, in a six per cent. mixture, failed to kill spore-bearing organisms after four days' exposure. Dry heat (284° F.) would destroy spores in three hours; but this temperature would injure all textile materials. Steam at 212° F. would destroy spore-bearing forms in five minutes; and articles to be disinfected were easily penetrated by it. A watery solution of iodine or corrosive sublimate (one per cent.), or chlorine bromene (two per cent.), would destroy spore-bearing organisms after one day's immersion.

**THE CARRIERS OF INFECTION** were the body of the patient, the excreta and the skin, the air tainted by exhalations from the sick, clothes, bedding, etc., articles of food, walls and floors of dwellings, collections of filth, dust on walls or in cracks, and sewage. The body may be disinfected by suitable washes, and, after death, buried in lime or charcoal. The air may be extracted from the sick chamber and burned in a furnace or in a ventilator containing burning gas jets. Discharges from the nose and throat may be received on rags and burned; those from the bowel and kidneys should be received in vessels containing a five per cent. corrosive-sublimate solution. Clothing, bedding, etc., should be exposed to steam, or, where that is impracticable, boiled after having been immersed for some hours in a bichloride of mercury solution. Books and letters

should be exposed to dry heat for some hours. Thorough boiling of water or milk, or cooking of food, will disinfect food stuffs. For house disinfection, sulphurous acid or chlorine is recommended, followed by scrubbing of the walls, removal of paper, and whitewashing where practicable.

Dr. P. C. Smith, of Glasgow, considered that there were two divisions of the subject: disinfection and isolation; first, in hospitals; second, at home. Cities should have pavilions for the different zymotic diseases, towns, a cottage hospital, with a tent (or portable house) for small-pox; they should have steam disinfecting chambers, and the clothing of typhus and small-pox patients should be burned. At home the room occupied should be in the top story, divested of carpet and furniture, save a bed and chair for the nurse. There should be no communication between the nurse and the occupants of the house; food, etc., being placed on a table at the door. Disinfection of discharges, clothing, the room, etc., should be done as mentioned by the first speaker.

Dr. Hope, of Liverpool, considered "domestic isolation" a fallacy, and instanced eighty cases of typhus fever so treated, in which the disease had spread to 386 individuals of the families, with 62 deaths, contrasted with thirty-eight cases in which the patient was at once removed to the hospital and the house disinfected and cleansed, and no extension of the disease took place.

**ISOLATION AT HOME** (Dr. Cardwell Smith, Prof. of Hyg., Glasgow Med. School), is at all times a difficult matter. Among the poor it is absolutely impossible, and in cases of small-pox and typhus in all cases it should not be attempted. In cases, however, of scarlet fever, measles, diphtheria, and typhoid fever among the well-to-do it may often be carried out in a fairly satisfactory manner. The room should be at the top of the house, of course; no furniture but the bed, and perhaps a mat for the feet, which could afterwards be burned. Plain tables and chairs are all the furniture required, with a table on the landing outside.

**THE CONTAMINATION OF DRINKING-WATER WITH LEAD.**—Dr. Sinclair White, as the result of extensive experiments, concludes that acid water invariably acts on lead, the intensity of action varying with the acidity; new lead pipe being acted on more than old, the amount of lead dissolved increasing for the first twenty-four