Abstract: A description is given of an air electret filter (AEF), which is a type of air electret disinfectant equipment used for sterilizing sickrooms and operating rooms in a hospital. The apparatus is composed of electret PP film 30 mm wide, charged with a certain potential, and a corrugated aluminium foil 30 mm wide, 0.12 mm thick, rolled into a cylindrical filtering unit with a diameter of 58 mm. A number of these units were connected in series and assembled at the intake air tube or the exhaust pipe of an axial-flow fan to complete the apparatus. The AEF could be used for disinfecting sickrooms and operating rooms where the relevant bacteria killing rates were measured several times in order to determine the optimum conditions for disinfection after bacteria of given density had been sprinkled and the apparatus was operating for a certain time in the disinfecting cabinet.