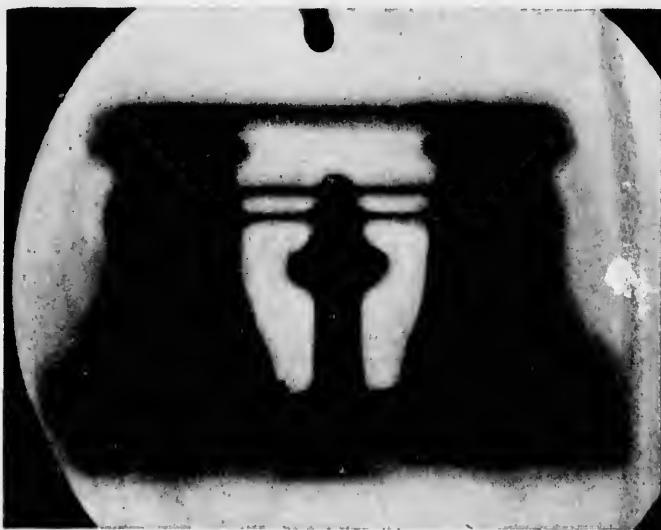


series of parallel discs, and, on pushing the exhaustion still further, these disappear entirely from the negative, but remain in the region of the positive electrode. Here a new appearance is presented. When the air has been exhausted to this degree, the part of the tube directly opposite the negative electrode begins to glow with a beautiful fluorescence, which indicates that some peculiar invisible discharge, causing this effect, is emanating from the negative electrode. It is the cathode rays, so called, which are said to form this discharge, and the tube in this condition constitutes a Crookes' tube.

These cathode rays have been very fully investigated by Lenard, Hertz, Thomson, and others. It is found that, like ordinary light rays, they travel in straight lines, are capable of producing intense heat, and, unless especial care is taken, there is great danger of melting the tube if the discharge is continued without interruption, even for a few minutes.



By kind permission of MASSEY PRESS.

FIG. III.

*Opera Glasses Photographed Through Case.*

If a magnet is brought up to the tube when these rays are passing they can be readily deflected from their direct path, and, in fact, a finger presented to the tube is sufficient to deflect them towards the point of contact.