

The first attempts to obtain a photographic image were made by simply placing a strip of unexposed film in front of the retina. Two parallel incisions, about 4 mm. long and about 3 mm. on either side of the estimated position of the macula, were made through the sclera, choroid, and retina. Working in the dark with only a photographic safety lamp, a strip of film 4 mm. wide was placed through one incision, across in front of the retina, and out the other incision. The film was then pressed forward slightly on the lateral side of each incision to make it fit snugly against the retina and conform to its curvature. This was accomplished without appreciable loss of vitreous. The whole posterior segment of the eye was then covered with a dark cloth to eliminate extraneous light and an attempt was made to photograph a visual acuity chart about 17 feet away, using a flashlight bulb. A very fast film, Super XX, was employed. In spite of repeated attempts along this line and the use of various exposure times, no image was obtained on the film. Only a black spot was recorded, showing that the portion of the film within the eye had been exposed to light.

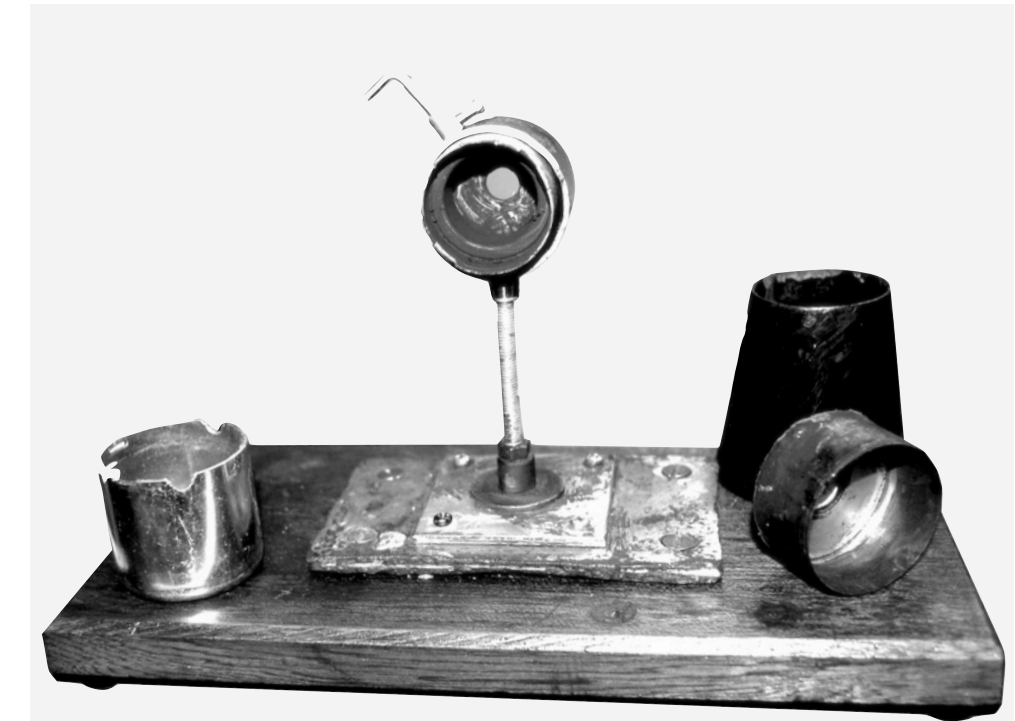


Fig. 1.—Apparatus for holding eye. Shows outer tube mounted in stand (center); inner cup for eye with optical glass in back (lower right); and metal cap (lower left).

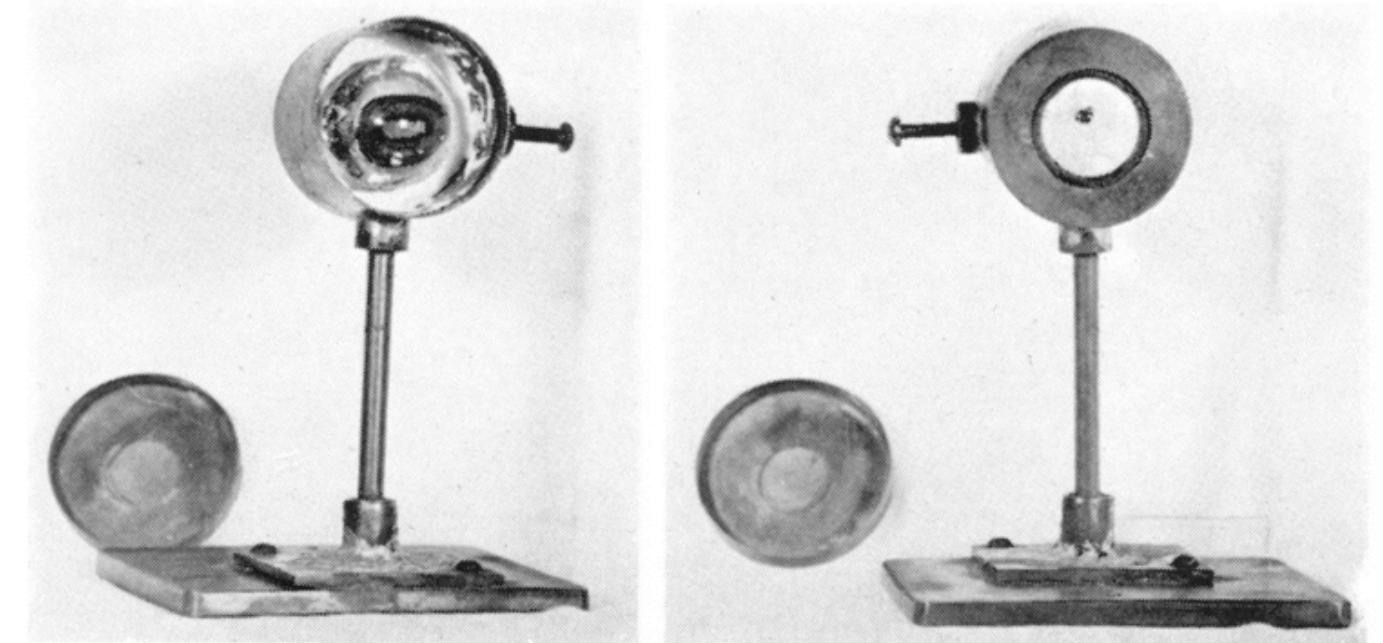


Fig. 2.—Sheep's eye mounted and held by plaster in inner cup, which has been assembled into outer tube. Note set screw at side for keeping position of inner cup firm. Eye ready for use as a camera.

Fig. 3.—View from rear of holder containing sheep's eye, showing window in coats of eye at posterior pole. Sclera fits firmly against optical glass.

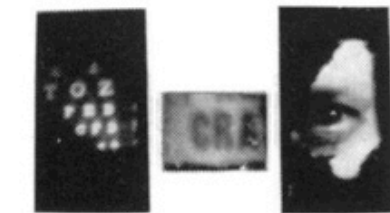


Fig. 4. Fig. 5. Fig. 6.

Fig. 4.—Instantaneous exposure of visual acuity chart negative with transmitted light.

Fig. 5.—Newspaper headline with daylight and 1/50-sec. exposure.

Fig. 6.—Human eye, 60-watt bulb, and 1/10-sec. exposure.