and the mirror are then placed as close to the observed eye as can be conveniently done. On directing a beam of light from the mirror into the eye, the rays take the course shown in Fig. 34 A, converging from the mirror and being brought to a focus by the refracting surfaces of the eye, in the vitreous humour a little distance beyond the lens, thus diffusely lighting up a portion of the retina. Assuming that observing and observed eyes have no error of refraction, and that their accommodation is relaxed, the rays of light from any point of the observed retina will take the course shown in Fig. 34 B, emerging from the eye parallel and being brought to a focus on the observer's retina. As the retina is observed near the principal focus of the dioptric system of the observed eye, this acts as a simple microscope and a magnified, erect, virtual image seen apparently some distance behind the observed eye. This image in the normal eye is enlarged about $\times 15$, but only a small part of the fundus can be seen at one time.

To get a more general view of the retina the indirect method must be employed. The concave mirror of 22 cms. focus is employed and the lamp being in position above described, the observer places his eye at convenient arm's length from the eye to be examined, and throws the converging beam of light from the mirror upon it. A double convex lens of about 7 cms. focus (L) is held by the left hand just in front of the observed eye, and the light directed through it. The rays converge to a focus just behind the crystalline lens in the vitreous humour, and illuminate the interior of the eye as shown in Fig. 35 A.[1] The path of the rays forming the image of the retina is shown in Fig. 35 B. The rays from any given point on the retina, on passing out of the eye, become parallel, and these parallel rays, on passing through the lens, converge once more to a point at its principal focus, forming an inverted real image, which is seen by the observer just beyond his near point.

At first on throwing the light into the eye a red glare will be seen filling the pupil. This is called the reflex. If the lens be now moved away from the observed eye, until the margin of the pupil disappears, and the observer's eye

[1] This diagram supposes that a concave mirror of 22 cms. focus is employed, that the light comes from a source a little behind the patient's head, and that the observer's eye is at the usual distance from the subject of 25 cms.