focus. In this experiment, P is the object, and O, the image; in the previous experiment, O was the object, and P, the image. *

If, when the flame is at P, diverging rays that fall upon the lens L are so refracted that they meet only at O, these refracted rays can not therefore fall upon the eye of the observer at A, hence the eye of an observer at A can not see the flame at P. The eye of the observer can therefore assume but one position in order to see the flame at P; that position is only in the direction of O C.

In these experiments, we have a very good model of the living eye. When the box is so arranged that the bottom is exactly at the principal focus of the lens, (parallel rays being brought to a focus at that point,) the normal eye is represented; when the bottom of the box is farther from the lens than its principal focus, the myopic eye is represented; when the bottom of the box is between the lens and its principal focus, a hypermetropic eye is represented.

The human eye, in its antero-posterior diameter, is about one inch in diameter. Its refractive media are, the cornea, aqueous humour, crystalline lens, and vitreous humour. Their combination is equal to the refractive power of a double convex lens having a focal distance of a little less than one inch. The optical centre of the eye is supposed to be near the centre of curvature of the cornea. As in the case of a double convex lens, parallel rays are brought to a focus at the pricipal focus of the eye. When the normal eye is in a state of rest, the principal focus is exactly on the basilar layer of the retina.

"When a properly formed eye is exactly accommodated for a luminous object, the diverging rays from this incident upon the eye, are refracted by the ocular media in such a manner that they unite at a point on the surface of the retina, which is the image of that object. The retina, in consequence of its transparency, transmits much of this light to the *choroid*, by which most of it is absorbed; but many of these rays are reflected in the same direction in which they entered the eye, and return to the object whence they started. The object, then, and its image on the retina are reciprocal points; they may be considered conjugate foci, each being in turn object or image."†

Thus, let E (fig. 3.) represent an eye accommodated for the object O. In this case the diverging rays from O, falling upon the cornea of the eye E,

* When a person is "sitting" for a photographic picture, the person is the object, and the inverted picture in the camera is the image; but during a magic lantern entertainment, the inverted painted slide in the instrument is the object, and the enlarged view upon the screen is the image.

† Hulke.