

FIG. 5.

The small, hyperopic or long-sighted eye whose images come to a focus beyond the retina.

In this way the lens can adjust itself to almost any required degree of convexity, and consequently to any distance needed.

However, eyes are not all of that convenient size which permits of the ready focusing of images on the retina.

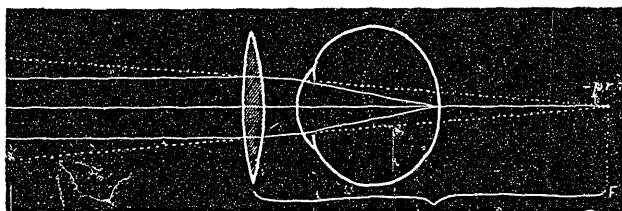


FIG. 6.

Showing how convex lenses bring rays of light to a focus *on* the retina of a long-sighted eye.

They may, for example, be *too small*, and in that case the ciliary muscle is constantly at work. An eye that is too short from before backward belongs to the class of long-sighted or hypermetropic eyes. For habitual distant vision, the ciliary muscle of a long-sighted eye adjusts itself pretty much as the driver of a cable car does his "grip" between stopping places, to hold the lens in proper shape. Young people do this easily, as their lenses are soft, and not only expand easily but are quickly and readily compressible; but as time goes on the crystalline

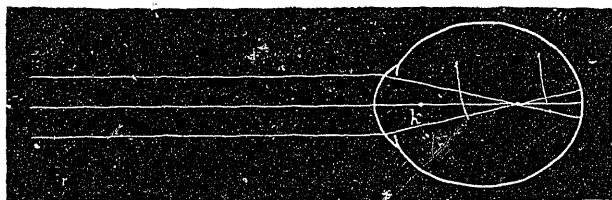


FIG. 7.

In the large or myopic eye, the focus "falls short" of the retina, as shown above.