Hence we find that the hitherto parallel, or almost parallel, rays begin to approach one another. Further on, a still denser substance—the crystalline lens—is met with, and the rays are still further refracted, until finally they are accurately focused on the retina at *c*. But let us suppose the rays of light (*b*, *b*, *b*, *b*,) from a *near* object strike the eye. In such a case they would be distinctly *divergent* rays, and if left to themselves would not come to a focus

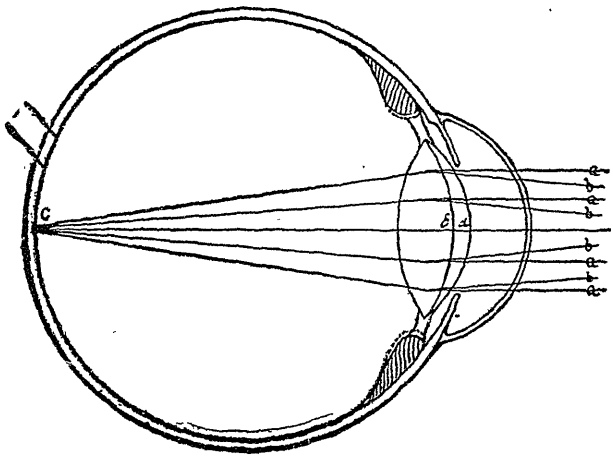

FIG. 4.

Showing how both divergent and parallel rays are focused on the retina by action of the ciliary muscle on the lens.

on the retina but *behind* it, and a blurred image of the object would be transmitted by the optic nerve to the brain. Or suppose the eyes, arranged for focusing upon the sensitive retina divergent rays from near objects, to be suddenly turned upon distant objects. Manifestly these more parallel rays would come to a focus in *front* of the retina, and an equally blurred image would result. *This defect in the visual apparatus is remedied, as indeed most optical defects are remedied or attempts at a remedy are made, by a change in the shape of the crystalline lens.* This wonderful power of *accommodating* the eye to all distances resides mainly in the ciliary muscle. As before mentioned, the elastic lens is kept flat in front by the pulling upon it of certain "guy rope" fibres by which it is attached to the sclera. When it is necessary to look at a near object (or, what amounts to the same thing, make the lens *more convex* so as to render divergent rays properly convergent) the ciliary muscle *contracts*, pulls the parts about it forward, and the taut fibres loosen; the lens, left to itself, swells out, becomes more convex, and in an instant the work is done.