

pended like a circular curtain, with an opening in the centre (*pupil*), across the eye and attached at the junction of the *sclerotic* with the *cornea* is the *iris*, a muscular structure the most delicate of this class in the body, composed of fibres that radiate from the circumference to the centre, but with a ring of circular fibres to control the size of the central opening or pupil; the purpose of the entire arrangement being, in fact, to regulate the quantity of light admitted to the *retina*. 6. Some little processes (ciliary bodies) which serve to steady the crystalline lens. 7. The *crystalline* lens, a bi-convex, beautifully transparent object, with a very hard centre. This object is the most important of the refracting bodies in the eye; the *aqueous humour*, which fills up the space in front of the lens before and behind the *iris*, being comparatively unimportant. 8. The *vitreous humour*, intermediate in density between the aqueous and crystalline lenses fills the greater part of the cavity of the ball which lies behind the crystalline lens. The supernumerary apparatus connected with the visual organs is especially important, not to vision, but to the preservation of the main parts of the eye in good order; and in protecting and saving it so that it may perform its functions agreeably and for as long a period as the general organism of the individual may last. Of these supplementary parts the principal are: 1. *Eyelids*, which are composed of cartilage (translucent) covered with skin externally and mucous membrane internally, in the latter of which some glands are imbedded. 2. *Eyebrows* and *eyelashes* to protect the eye from dust, sweat, excess of light, etc., not to speak of their relation to comeliness. 3. The *lacrimal gland*, situated at the upper and outer part of the socket of the eye; its secretion (tears) serving to cleanse the eye constantly, and to lubricate an organ

that is in almost continuous motion during waking hours; the surplus fluid being carried off into the nasal cavity by the *lacrimal duct*, situated at the inner angle of the eye-lids. Special attention is directed to the *conjunctiva*, the mucous membrane that lines the inner surface of both lids and is thence reflected across the front of the globe of the eye in which part it must, of course, be transparent. This membrane is of the utmost importance: in almost all diseased states of the organ of sight it is more or less inflamed. "Sore eyes" generally means inflammation of the *conjunctiva*—it is, in fact, very much exposed. If a clear idea of the anatomy of the eye has been gained, in the practical way proposed at the commencement of this description, the physiology of the organ of sight may be readily comprehended.

*Physiology of the Eye.*—The rays of light pass through the transparent *conjunctiva* covering the *cornea*; then through the latter are admitted through the pupil, the size of which depends upon the action of the *iris* (a reflex one)—the opening being greater the smaller the quantity of light; when the rays reach the *aqueous humour*, or rather when passing through the *cornea*, refraction begins. While owing to the crystalline lens being bi-convex its refracting power is so great that with the help of the *vitreous humour* when the rays reach the back of the eye and fall on the *retina* (chiefly that point called the "yellow spot," the most sensitive part) it is found that they have crossed each other so that the image formed is necessarily inverted. Now were it not that the *iris*, which is opaque from its being pigmented on its posterior surface, cuts off all but central rays, and thus focuses the image at the back of the eye; and were it not that the *choroid*, by its pigment, absorbs rays that pass through the *retina*, there could be no