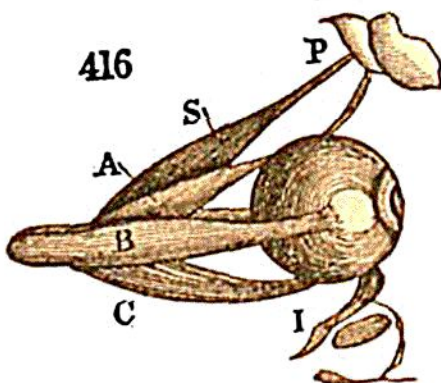


former act, the pupil is contracted; when the latter act, the breadth of the iris is diminished, and the pupil is, of course, dilated. By varying the size of the pupil the quantity of light admitted into the interior of the eye is regulated, and accommodated to the sensibility of the retina. When the intensity of the light would be injurious to that highly delicate organ, the pupil is instantly contracted, so as to exclude the greater portion; and, on the contrary, when the light is too feeble, it is dilated, in order to admit as large a quantity as possible. The iris also serves to intercept such rays as would have fallen on parts of the crystalline lens less fitted to produce their regular refraction, the object of which will be better understood when we have examined the functions of this latter part. But, before engaging in this inquiry, it will be proper to complete this sketch of the Anatomy of the Eye by describing the principal parts of the apparatus belonging to that organ, which are exterior to the eye-ball, and may be considered as its appendages.

The purposes answered by the parts exterior to the eye-ball are chiefly those of motion, of lubrication, and of protection.

As it is the central part of the retina which is endowed with the greatest share of sensibility, it is necessary that the images of the objects to be viewed should be made to fall on this part; and, consequently, that the eye should be capable of having its axis instantly directed to those objects, wherever they may be situated. Hence, muscles are provided within the orbits, for effecting the motions of the eye-ball. A view of these muscles, with their attachments to the ball of the eye, but separated from the other parts, is



given in Fig. 416. Four of these proceed in a straight course from the bottom of the orbit, arising from the margin of the aperture through which the optic nerve passes, and being inserted by a broad tendinous expansion into the