

natural transition to the compound eyes of insects, to which we now give our attention.

88. *Compound eyes* have the same general form as simple eyes; they are placed either on the sides of the head, as in insects, or supported on pedestals, as in the crabs. But if we examine an eye of this kind by a magnifying lens, we find its surface to be composed of an infinite number of angular, usually six-sided faces. If these *façettes* are removed, we find beneath a corresponding number of cones, (*c*), side by side, five or six times as long as they are broad, and arranged like rays around the optic nerve, from which each one receives a little filament, so as to present, according to Müller, the following disposition.

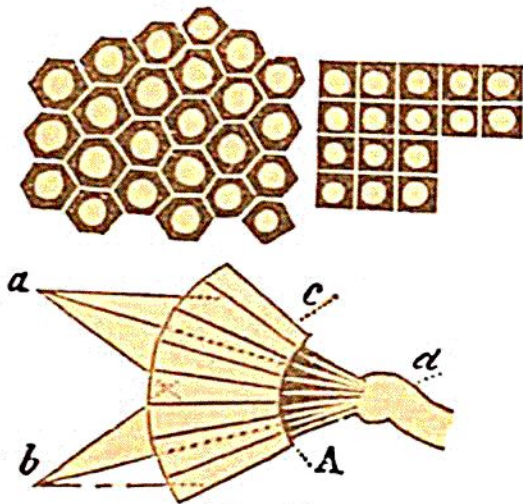


Fig. 18.

(Fig. 18.) The cones are perfectly transparent, but separated from each other by walls of pigment, in such a manner that only those rays which are parallel to the axes can reach the retina *A*; all those which enter obliquely are lost; so that of all the rays which proceed

from the points *a* and *b*, only the central ones in each pencil will act upon the optic nerve, (*d*;) the others will strike against the walls of the cones. To compensate for the disadvantage of such an arrangement, and for the want of motion, the number of *façettes* is greatly multiplied, so that no less than 25,000 have been counted in a single eye. The image on the retina, in this case, may be compared to a mosaic, composed of a great number of small images, each of them representing a portion of the figure. The entire picture is of course, more perfect,