

of its shell closed by a horny organ called the *patch*, which is attached to the foot or rather neck, by its convex or lower surface, sitting on a sub-triangular flat space spirally convoluted; this is the *operculum*, and if examined on either side will be found to be also spirally convoluted, proving that it is formed by the part on which it sits. When the animal expands its foot for creeping, the operculum is retracted within the shell, so as to be quite out of the way. If we examine the opercula of other shells, we shall find that the majority of them have the same spiral configuration traced both on the upper and lower surface. In most that I have seen the intervals of the whirls increase in width, as the spires of the shells do from the base to the mouth. In the top-shell* the whirls are perfectly regular and nearly equidistant. They vary much in thickness; I have one three-fourths of an inch thick, while those of the top-shell and periwinkle are very thin. In some of the thick ones, on the under side the convolutions are very convex, and sometimes elevated into concentric ridges. Some underneath have a forest of obtuse elevations, and many are rough with minute tubercles. As to substance some are horny, while

Fig. 43.



Voluta æthiopica.†

* Trochus.

† *a.* The eye, showing iris and pupil. *b.* The right hand tentacle. *c.* The proboscis exerted. *d.* The frontal margin of the head. *e.* The respiratory tube or siphuncle. *f.* Appendage at its base. *g. g.* The two gills, of which the right hand one has but one series of laminae. *h.* Termination of the alimentary canal. *i. i.* The right hand margin of the mantle. *k.* The male organ. *l. l.* The foot.

others resemble the shell; others are horny externally and shelly internally. If these formations on the under side, as in the common periwinkle, represent the shape of the part of the neck to which they are attached, as