

equally concerned in effecting locomotion, or only some of its parts are employed for the purpose.



Fig. 31.

165. The jelly-fishes (Medusæ) swim by contracting their umbrella-shaped bodies upon the water below, and its resistance urges them forwards. Other animals are provided with a sac or siphon, which they may fill with water and suddenly force out, producing a jet, which is resisted by the surrounding water, and the animal is thus propelled.

The Bêche-le-mar, (Holothuria,) the cuttle-fishes, the Salpæ, &c., move in this way.

166. Others contract small portions of the body in succession, which being thereby rendered firmer, serve as points of resistance, against which the animal may strive, in urging the body onwards. The earth-worm, whose body is composed of a series of rings united by muscles, and shutting more or less into each other, has only to close up the rings at one or more points, to form a sort of fulcrum, against which the rest of the body exerts itself in extending forwards.

167. Some have, at the extremities of the body, a cup or some other organ for maintaining a firm hold, each extremity acting in turn as a fixed point. Thus the Leech has a cup or sucker at its tail, by which it fixes itself; the body is then

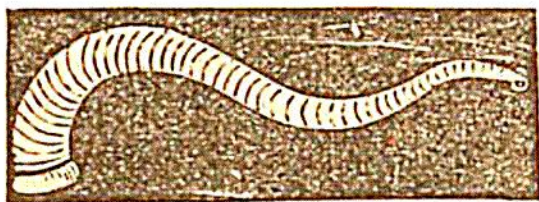


Fig. 32.

elongated by the contraction of the muscular fibres which encircle the animal; the mouth is next fixed by a similar sucker and by the contraction of muscles running lengthwise the body is shortened, and the tail, losing its hold, is brought forwards to repeat the same process. Most of the bivalve mollusks, such as the clams,