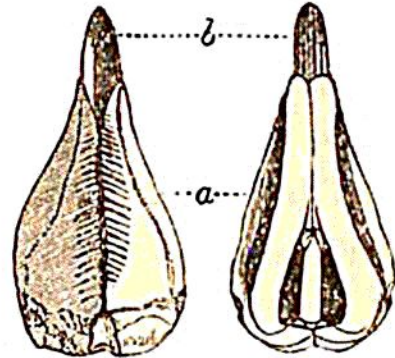


sisting of five pieces, corresponding with the five segments, into which the shell may be divided; each of these pieces forms an arch,* and the whole a pyramidal frame, which was compared by Aristotle to a lantern without a skin. To these is attached the moveable part of the apparatus, consisting of five jaws, each containing a long tooth (*fig. 22*), the teeth converging in the centre close the mouth (*fig. 23*). Altogether this complex machine consists of twenty-five pieces moved by thirty-five muscles. The disposition of these pieces, Lamarck observes, and of their moving muscles, indicates that the parts of this machine can have only a common movement, and no one of them an individual or separate one; but it appears from Cuvier's elaborate description of this wonderful and complex machinery, if I understand him right, that the action of certain muscles will give to any one of the teeth that form the pyramids an independent motion. This powerful apparatus, which the animal can incline in different directions, indicates a kind of food, less easy to bruise and masticate than what we have seen satisfies the whale, and these organs afford a singular contrast to those by which that enormous monster obtains its food.

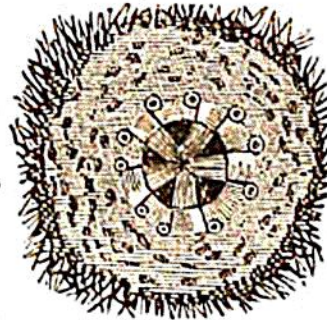
The Echinidans, whose station appears to be often near the shore upon submerged ledges of rock, feed upon whatever animal they can seize. We have seen that they sometimes turn upon their back and sides, as well as move horizontally; this enables them more readily to secure their food, with the aid of the numerous suckers in the vicinity

Fig. 22.



Portions of *Echinus esculentus*
a. The jaw. *b.* The tooth.

Fig. 23.



Circular space round the
 mouth of *Echinus esculentus*.

* Fig. 17, *d.*