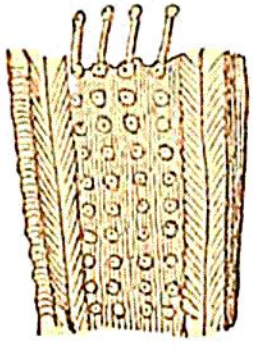
membranous walls, which impart mechanical firmness to the fabric.

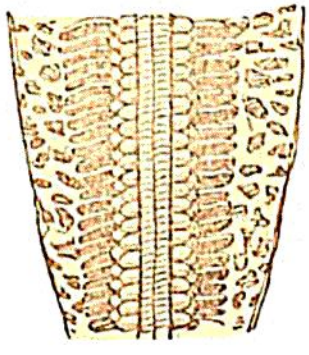
The *Asterias*, or star-fish (Fig. 88,) is so named from its star-like form; and the number of rays composing the star is generally five. Besides the tough coriaceous integument, which protects the mass of the body, each ray is farther supported by a series of calcareous pieces, resembling those which compose the spinal column of vertebrated animals, and forming an articulated axis, constructed with the evident design of combining the greatest strength with a proper degree of flexibility. Cartilaginous plates are also added for the more special support of the integument. This integument itself is irritable, and has the power of changing its form, although the muscular fibres by which its motions are effected are not easily distinguished. Calcareous grains of a solid consistence, are thickly interspersed throughout its texture; and these, in various parts of the body, both in the upper and the under side, often project from the surface in the form of spines or prickles. They are particularly large around the mouth of the animal, which opens at the centre of the under side. These calcareous masses have a crystalline arrangement, and exhibit on fracture the exact oblique angles characteristic of the primitive rhomboid of carbonate of lime.

The under side of each ray (Fig. 95) has a groove, termed,

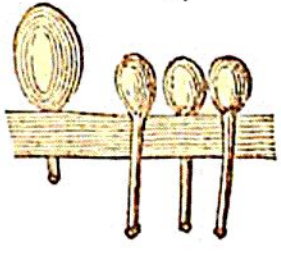
95



96



97



by Linneus, the *ambulacrum*, or *avenue*, a name which it has received from its fancied resemblance to a walk between rows of trees; for each groove contains a quadruple row of perforations, like pin holes, through which small fleshy cylindrical processes pass. These processes extend but a short distance from the surface; but they admit of being