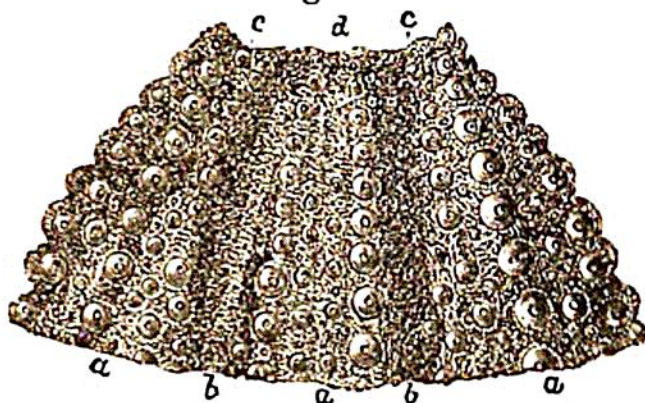


if closely examined, when denuded of its spines and other organs, will be found to be divided into twenty longitudinal portions, ten of which are covered with breast-shaped protuberances,* varying in size, which bear the spines, and ten narrow ones perforated with a number of small orifices, from which the tentacular suckers emerge; which last Linné named *alleys*;† I shall therefore call the spine-bearing ones *groves*. These last are alternately wide and narrow, and of a lanceolate form; the wide ones having six rows of the larger tubercles, and the narrow ones only two; between each of these groves is an alley containing nearly thirty oblique double rows of orifices, eight or ten in each row. These alleys terminate in a point at the upper aperture of the shell and are truncated at the lower. Each of the larger groves, if examined internally, will be found to consist of about twenty parallelograms arranged transversely and united by an harmonic suture, in which the edges are merely applied to each other without any inequalities.

Fig. 14.

A portion of shell of *Echinus esculentus*.

a. a. a. Tuberculated plates.

b. b. Perforated plates for suckers.

c. c. Smaller tuberculated plates.

These larger groves have a central longitudinal ridge, at which it readily divides and discovers a beautifully dentated suture, resembling the dog's tooth of a gothic arch;‡ on the side next the alleys the dentitions of the suture are much less prominent and conspicuous.

The smaller groves have the same ridge and divide in the same way, and seem to form one piece with the alleys on each side of it: so that one of the narrow groves

* Fig. 16, a.

† Ambulacra, Ib. b.

‡ Fig. 17, a.