

limestone, and other mineral substances, when in solution, or in a semi-fluid state, have flowed, and upon consolidation formed sharp and enduring casts, exhibiting the forms of the plates, and the disposition of the pores, striæ, &c. of the original structures.

The common Echinus of our sea-coasts (*Echinus sphæra*), known by the name of Sea-egg, Sea-urchin, or Sea-hedgehog, presents the usual characters of this type of animal organization, which differs from the other Echinoderma in the absence of arms.

The globular envelope, or shell of the Echinus, as it is popularly called, is composed of numerous calcareous, polygonal plates, exquisitely adapted to each other, and arranged in regular and elegant patterns; appearing in the globular and spherical forms, like the lines of the meridian on a globe. The plates are disposed in vertical series, united by finely serrated sutures, and forming quinquepartite sections, into which the envelope very commonly separates upon the decay of the investing integument. Each section is divisible into four vertical rows; two large, termed *areae* (spaces), see *Lign.* 84, fig. 3, *c*, the plates of which are ornamented with papillæ, or tubercles; and two smaller, called *ambulacra* (avenues), which are analogous to the grooves or furrows of the Star-fishes (*Lign.* 84, *a.*); and these are perforated by numerous pores, for the exertion of tubular feet, or tentacula. Besides these