

Fig. 3. represents in its natural size, a portion of the Siphuncle which in Fig. 2. is laid bare along its course through the chambers, *d. e. f.* In the transverse Plate, *h*, the siphuncular collar is entire, but a Section of another collar in the transverse Plate, *i*, shews the contraction of the Siphon at its passage through this aperture, and exhibits also the overlapping, or squamous suture by which the Collar is fitted to the superior and inferior portions of the calcareous Sheath of the Siphon. See V. I. pp. 326, 327. Note. (Original.)

A similar structure may be seen at the Collars of the transverse Plates of the *N. Striatus*. See Pl. 33.

across the cavities of the Air chambers. As in the recent *Nautilus Pompilius*, there is no communication between the interior of the Siphon and that of the Air chambers, so in this fossil shell, there is proof that no communication existed between these cavities. A transverse section at *a*. shews the thin edge of the sheath of the siphuncle, surrounded externally with calcareous spar, and filled internally with Grit. Other Sections of the Siphuncle at *b. d. e. f.* shew the calcareous Grit within its cavities to be contracted at its passage through the collars of the transverse plates, and most enlarged midway between one transverse plate and another.

This fossil affords two proofs that no communication existed between the interior of the Siphuncle and that of the Air chambers. 1st. the calcareous sheath of the Siphuncle is seen at *d. e. f.* completely enclosing the calcareous grit which forms the cast within it. 2dly, had there been any communication between the interior of the siphuncle, and that of the air chambers, these chambers must have received some portion of the materials of the grit that have filled this Siphuncle: not a particle of grit is found in any one of the adjacent air chambers, but they are all lined, and some of them nearly filled with a crystalline deposit of Carbonate of Lime, disposed in uniform plates around the interior of each chamber, and around the Siphuncle. See Fig. 2. *c. c<sup>1</sup>. a. a<sup>1</sup>. a<sup>2</sup>. a<sup>3</sup>. und Fig. 3. d—h.* This deposit can only have been formed from water charged with carbonate of lime, introduced by infiltration, after the interment of the shell, and filling the chambers which are thus uniformly invested.