

*Velarium* (figs. 3-5, *uf*).—The vertical sail is a simple fold of the exumbrella, which arises in the longitudinal or sagittal axis of the elliptical disc, along the median line of the campanulate pneumatosaccus. Its form and size are very variable, since it is very contractile; if highly expanded, it appears nearly rectangular, with a median notch at the central top (fig. 3), and its vertical diameter is greater than the major axis of the horizontal disc; if strongly contracted it appears much smaller, and has the form of a shallow vertical elliptical disc (fig. 4). At other times it is more crescentic in form, or cordate with a deep constriction in the middle of the top.

The velarium is composed of an elastic support, or a thin vertical plate of jelly in its median plane (fig. 5), and a thin mantle-plate of the exumbrella, covering both sides of this fulcrum. This mantle-plate exhibits beyond the exodermal epithelium a double strong muscular layer, composed of two different strata, an outer thinner layer of transverse or horizontal muscles, and an inner thicker layer of longitudinal or vertical muscles; the bundles of the latter are parallel, of equal breadth, about forty or fifty on each side.

The parallel vertical bands of equal breadth ascending in the velarium to its top (twenty to thirty in the sagittal diameter) are simple vessels, which arise from the exumbrella of the campanulate pneumatosaccus. They are united at the free superior edge of the sail by a marginal sail canal. This runs along the whole free edge of the sail and opens at its base into the two sagittal canals of the exumbrella, which run to the two opposite poles of its major axis.

*Subumbrella* (fig. 2).—The inferior or basal face of the umbrella, beyond the series of marginal glands, consists from without, inwards, of the following parts:—(1) The inferior or subumbral side of the broad mantle border (*um*); (2) the elliptical corona of tentacles (*t*); (3) the corona of gonostyles (*gs*); and (4) the large central siphon (*so*).

*Pneumatocyst* (fig. 8, from above; fig. 9, from below; fig. 3, *pf*, in profile; fig. 5, *pf*, in vertical section).—The chitinous thin-walled float, filled with gas, is flatly campanulate with an elliptical quadrilobate outline. Its length (or principal axis) is 2 mm., its breadth or transverse axis 1.5 mm., and its height (or sagittal axis) also 1.5 mm. It is composed of an elliptical central chamber, an inner corona of eight radial chambers, and an outer corona of four to eight concentric elliptical ring-chambers. These latter are divided by two crossed centripetal furrows (a sagittal and a frontal notch) into four rounded lobes (figs. 8, 9). These are systematically arranged in pairs. The left anterior and right posterior lobes are smaller than the right anterior and left posterior.

*Stigmata* (fig. 8, *pe*).—The convex superior face of the pneumatocyst, which is covered by the exumbrella, exhibits only three stigmata. These lie in a straight line which crosses the major axis of the elliptical disc at a very small angle. The subcentral stigma (*po*) lies nearly in the top of the central chamber, and opens on the left side of the base of the sail; the second lies on the surface of the left anterior quadrant, and