

*Subumbrella* (figs. 1-3, *w*).—The inferior or basal face of the umbrella exhibits beyond the deep submarginal ring-furrow a broad naked girdle, in which the radial canals ascend from the tentacular zone to the margin of the umbrella. The tentacular zone begins in the equator of the biconvex lens, and occupies the peripheral half of its lower convexity. Its breadth equals the radius of the central disc of the exumbrella.

*Pneumatocyst* (fig. 4, from above; fig. 5, from below; fig. 3, *p*, in vertical meridional section).—The float, filled with air, is campanulate, and envelops the subspherical centradenia, with exception of its basal centre, which is occupied by the central siphon. The equatorial diameter of the pneumatophorous bell is twice as great as its vertical main axis. The basal opening of the bell, closed by the base of the central siphon, is scarcely greater than half its height. The concave inferior face (or the cavity of the bell) is in close contact with the centradenia, and the thirty-two prominent radial crests of the former fit into thirty-two deep radial furrows of the latter. The convex superior face is flatly conical above the equator (*ug*); its peripheral girdle, beyond the equator, is regularly divided into sixteen furcate radial lobes (or thirty-two smaller lobes).

The central chamber of the pneumatocyst is surrounded by a regular girdle of eight radial chambers, each of which possesses a stigma on its upper, and a trachea on its lower side. This octoradial girdle is surrounded by eight to ten complete, concentric, circular ring-chambers, the outermost of which touches the equator of the lens. Outside follows the peripheral girdle of thirty-two lobes, which is recurved inwards and downwards (horizontally expanded by pressure, see fig. 4). The superior or convex face of the pneumatocyst bears in its superior central part (which is in contact with the exumbrella) numerous radial rows of stigmata. From its inferior or concave face, which is in contact with the centradenia, hang down thirty-two prominent radial crests, or rather lamellar pouches (fig. 6); and from the lowermost part of the latter arise numerous long tracheæ which enter into the glandular tissue of the liver (fig. 3, *uc*); the majority of them terminate here with open distal ends, whilst a small part of the tracheæ enters into the basal part of the wall of the siphons, and ends in its exodermal epithelium.

The chitinous substance of the thin wall of the campanulate pneumatocyst is very delicate and richly folded, like crumpled tissue-paper.

*Centradenia* (fig. 3, *uc*).—The large central gland is nearly spherical, and entirely fills up the subumbrellar cavity of the pneumatocyst. The circular polar area only of its lower pole is in contact with the base of the central siphon. Besides this smooth inferior area, the entire surface of the centradenia is traversed by numerous deep meridional grooves, which are filled by the lamellar radial pouches of the basal face of the pneumatocyst. The dense parenchyma of its exodermal cellular tissue is traversed by numerous bent tracheæ, and by a loose network of hepatic canals. The latter arise from a regular octoradial star of superior liver-canals, which unite in the superior or apical pole of the centradenia. These eight radial main canals embrace the greater part of its surface like