substance in these disks is far greater in proportion to the cavitary system, than in *Orbitolites tenuissima;* at least half the breadth of each annulus being occupied by the inter-annular septum, and the partitions that separate the adjoining chamberlets being also much thicker. These partitions are best brought into view by a concentric fracture separating one annulus from another, so that the outer series of chamberlets is laid open on its central aspect, as shown in fig. 5 ; but such a separation is much less easy in this type than in the preceding, in consequence of the much larger surface of adhesion between the successive annuli. When the cavitary system is laid open by a section in the radial direction, so as to traverse a succession of annuli (fig. 6), there is seen in each of the partitions that divide the chamberlets a large fissure on its peripheral side, by which the adjoining chamberlets of the same annulus are brought into connection. This fracture also shows that the columnar chamberlets of the marginal portion of the disk are not straight, but arcuate ; their two extremities bending inwards, or towards its centre.

It is only, however, by reducing the thickness of the disk by grinding, so that it can be examined by transmitted light, that its internal structure can be properly traced out. If only one of its surfaces be ground away, so that the sectional plane passes near the other, it will traverse the chamberlets, but not the passage-system which connects them, as is seen in Pl. IV. figs. 1, 2, 3 ; but when this plane is made, by grinding from both surfaces alike, to pass through the middle of the thickness of the disk, the communications between the chamberlets are brought into view, as shown in fig. 4. Here we see the flask-shaped primordial chamber *a*, opening at its neck into the circumambient chamber *b*, which almost completely surrounds it ; while from the other end of this, there issues a passage that leads into the undivided chamber *c*.

Taking this chamber as our starting-point for comparison with the "orbiculine" portion of the disk of *Orbitolites tenuissima*, we find the parallelism extremely close. The septal plane which bounds it externally is traversed by two passages that lead into two chamberlets *d*, which are connected with each other laterally by a passage left in the partition between them. The septal plane that closes-in these two chamberlets is traversed by five radial passages, leading to as many chamberlets in the next row *e;* of these passages two proceed from each of the chamberlets in row *d*, and one from the passage that connects them ; and all five chamberlets are brought into lateral connection with each other by passages left in the radial partitions, as shown in Pl. III. fig. 6. The next septal plane is traversed by a radial passage from each of the passages of communication between the chamberlets of the preceding series, and also by passages from the chamberlets themselves ; and as each of these leads to a chamberlet of the succeeding row, the number of these is further increased. The same mode of growth continues, until the lateral extension of the rows of chamberlets (each representing a single "peneropline" chamber) brings together their extremities so as to complete the circle;