however, is here and there disturbed by the interpolation of separate gaps, and it ceases immediately beneath the superior cuff, in the formation of a perfectly circular row.

The distance between two adjoining parietal apertures in the same row is, in the upper portions of fully-developed specimens, about 4 mm.; at the lower end, on the other hand, and in young forms the distance is only 3 mm. or less. In young specimens, and on the inferior portions of older forms, a slightly arched protuberance is formed in the middle of every four adjacent gaps. By the fusion of the elevations which lie between two adjacent spiral rows, raised bands are formed, which, by further increase, become prominent ledges or ridges. The arrangement and development of these ridges vary greatly on the walls of the lower part of the tube, they are always but feebly developed, but they gradually increase in height towards the upper end. In some specimens they hardly attain a height of 2 or 3 mm.; in other cases, however, they rise to a height of 10 mm. or more. Though they run, for the most part, parallel to the spiral rows of gaps, they seldom continue in the same direction, beyond a semirevolution. They often bend round at right angles, just at the end of half a spiral turn, and extend in the opposite direction down the other side of the tube. Sometimes again they assume an angular or undulating course, and here and there they may even form a meshwork. In specimens bent in an S-like curve, I usually observed several parallel ridges extending in an ascending spiral on both sides, from the lower concavity of the tube to the upper concavity on the opposite side (Pl. I. fig. 1).

Among the ridge-like formations must also be ranked that ring-like smooth ledge which borders the terminal sieve-plate, and which, though in many cases merely suggested, attains in others a height of 10 mm. Usually, however, the "cuff" is not in direct connection with the rest of the ridge system, but is separated from it by a concave circular zone varying from 5 to 10 mm. in breadth. It is distinguished from the other ridges by being thinner, and by possessing sharper edges.

On the inner surface of the wall of the tube may be observed a tolerably regular system of circular and longitudinal ledges, which together form a quadrate lattice-work. The circular ledges, however, extend somewhat further inwards than the longitudinal. The quadrate meshes which are thus formed have a breadth of 3 or 4 mm. They differ essentially from one another, inasmuch as the one series exhibit in their centre the circular parietal gaps already mentioned, with several minute grooves at the circumference, while the others only show one or more furrow-like grooves of various breadth and depth. The areas which exhibit deep furrows correspond to those ridges which are prominent externally, while the shallower grooves underlie the simple elevations that occur between every four gaps, in those regions which are not provided with ridges. The arrangement of the parietal apertures in oblique spiral rows, and the rhombic form of the areas occurring between every four adjoining gaps, are conditioned