

lozenge-shaped, and have thicker walls. The outer, granular layer is very distinct, and contains the bloodvessels.

*The Urinary Bladder.* At the time of hatching, the mucous membrane of the bladder is composed of five layers of cells, (Pl. 20, fig. 13, 13a,) very similar to those of the long intestine, (Pl. 21, fig. 18, 18a, 18b,) the only difference being that there is one layer less, and that the cells of the several layers are more strictly on a level with each other (Pl. 20, fig. 13a). When seen from the inside of the bladder, the superficial cells (fig. 15) appear more or less polygonal, but yet their walls are slightly rounded. The mesoblast of some of them is elongated, and contains two entoblasts, an arrangement which is often indicative of a tendency to a self-division of the cell. In an expanded state of the bladder, the cells lose in a measure their polygonal shape (fig. 13). The muscular coating (fig. 16) is a mesh-work of superposed fibres, which run in every possible horizontal direction. These fibres are composed of elongated, fusiform cells, (fig. 14, 14a,) of variable length, according to their position. The outermost fibre cells are lozenge-shaped, about twice as long as broad, and excessively transparent. The large, round mesoblast is not so faint as the cell, and the entoblast, sometimes double, is sharply defined. The rest of the whole muscular system is composed of elongated, spindle-shaped cells, (fig. 14,) with faint, granular contents and a large mesoblast occupying nearly the whole width of the cells, which have none of the long, thin, tail-like prolongations seen in the oesophagus (Pl. 21, fig. 13, 13a).

*The Lungs.* At the time the lungs have fairly separated from the intestine, (Pl. 24, fig. 2, *t*, *t'*, and fig. 2a,) the inner wall, or mucous membrane, (Pl. 20, fig. 12, *b*,) is composed of a single layer of broad, cylindrical cells, with rounded outer ends. A short time before birth, the mucous membrane is composed of a single layer of cells, (Pl. 20, fig. 7, 9, *a*, 11, *a*,) of variable size, in different portions of the lung. They contain very scattered, granular contents, and vary in shape; some being broader than deep, (fig. 9, *a*, 11, *a*,) and others (fig. 7) much deeper than broad. The contractile tissue (fig. 10, *b*, 11, *b*) is a delicate, fibrous mesh, forming, with the mucous membrane, (fig. 11, *a*,) the walls of the cavities. The bloodvessels (fig. 10, *c*) do not follow the trend of the fibres of the mesh, but run at various angles across them, and in close proximity to the mucous membrane (fig. 7). The outer surface of the lung is covered by a thin layer of very pale, round cells, (fig. 9a, 11,) which do not touch each other, but are separated by numerous dark granules. Besides these, the surface is mottled, principally over the course of the bloodvessels, (fig. 5,) by numerous pigment cells, (fig. 8, 9a, 11,) which are nothing more than the pale cells, around which much darker granules are densely packed, in such a manner as to assume the appearance of an irregular two, three, four, or five-rayed star.