single mass, which but faintly shadows forth the parietes of its constituents (Pl. 9, fig. 11f, *a*, *b*, 11g).

Formation of the Mesoblast. We have already mentioned, that there is no constant size at which the ectoblast develops its mesoblast. A minute ectoblast may be seen with a well defined mesoblast, (Pl. 8, fig. 22, *c*, *d*, and Pl. 9, fig. 8a, F, *b*,) and another four times its diameter (Pl. 8, fig. 21a) without any, and so on, at various intermediate magnitudes. Some cells have even their entoblasts (Pl. 8, fig. 23b, *a*, *b*, 23d, *d*, *e*; Pl. 9, fig. 8a, D, E, F) at a diameter, which, in others, presents only a homogeneous content. However, to give, with some sort of precision, an idea of the limit of the development of the mesoblast, we would state, that, under a magnifying power of five hundred diameters, there cannot be found a single cell, except perhaps with rare exceptions, which presents to the eye a diameter beyond one eighth of an inch, that is, $\frac{1}{4000}$ of an inch in actual size, without a mesoblast.

As a natural consequence of this diversity of size in relation to the appearance of the mesoblast, this body may be much larger in one cell, than in another of the same diameter; for as soon as it is defined it begins to grow, and continues to increase in size, along with the ectoblast, till the egg drops from the ovary to enter upon a new phase of life. Unlike other mesoblasts, the mesoblast of the yolk cell is not arrested in its development when the ectoblast has reached a certain size, and does not remain as a mere indication of past activity, but ever persists in manifesting very active internal changes within its constantly increasing bulk. With the exception of the germinal vesicle, the mesoblast of the yolk cell, when at its full development, is the largest known, at times measuring about $\frac{1}{600}$ of an inch in diameter. With these preliminary remarks, one may be forewarned to expect here a mode of development of mesoblasts hitherto unnoticed or disregarded in other centres of cell evolution.

The earliest indication of a mesoblast is manifested by a slight haziness at one single point within the ectoblast, close against its wall (Pl. 9, fig. 8a, J, L', *b*). At first undefined and vanishing at its border, it gradually assumes a sharp, spherical outline and a pearly opacity reminding one of the primary physiognomy of the ectoblast; but yet it is of a denser nature than the latter. The size at which it gains its definiteness of contour varies in different cases, the hazy state of one often exceeding the clearly limited mass of another by several diameters. The attachment to the wall of the ectoblast is at times loosened almost as soon as the outline is perfected (fig. 8a, J); however, not long afterwards, every mesoblast becomes free, and may be found, for the rest of the interovarian life of the egg, at the centre of the sphere, whence it is derived.

In the case of the formation of a mesoblast in a most minute ectoblast, the