

Plate III.). The *fourth* bladder, the *hind brain* (*h*), forms the so-called *little hemispheres*, together with the middle part of the *small brain* (cerebellum), a part of the brain as to the function of which the most contradictory conjectures are entertained, but which seems principally to regulate the co-ordination of movements. Lastly, the *fifth* bladder, the *after brain* (*n*), develops into that very important part of the central nervous system which is called the *prolonged narrow* (medulla oblongata). It is the central organ of the respiratory movements, and of other important functions, and an injury to it immediately causes death, whereas the large hemispheres of the fore brain (or the organ of the "soul," in a restricted sense) can be removed bit by bit, and even completely destroyed, without causing the death of the vertebrate animal—only its higher mental activities disappearing in consequence.

These five brain-bladders, in all vertebrate animals which possess a brain at all, are originally arranged in the same manner and develop gradually in the different groups so differently, that it is afterwards very difficult to recognize the corresponding parts in the fully developed brains. In the early stage of development which is represented in Fig. 7, it seems as yet quite impossible to distinguish the embryos of the different mammals, birds, and reptiles from one another. But if we compare the much more developed embryos on Plates II. and III. with one another, we can clearly see an inequality in their development, and especially it will be perceived that the brain of the two mammals (*G* and *H*) already strongly differ from that of birds (*F'*) and of reptiles (*E*). In the two latter the mid brain predominates, but in the former the fore brain. Even at this stage