

FIG. 7.—Embryo of a mammal or bird, in which the five brain-bladders have just commenced to develop. *v.* Fore brain. *z.* Twixt brain. *m.* Mid brain. *h.* Hind brain. *n.* After brain. *p.* Spinal marrow. *a.* Eye-bladders. *w.* Primitive vertebræ. *d.* Spinal axis or notochord.

The *first* bladder, the *fore brain*, is in so far the most important that it principally forms the larger hemispheres of the so-called larger brain (cerebrum), that part which is the seat of the higher mental activities. The more these activities are developed in the series of vertebrate animals, the more do the two lateral halves of the fore brain, or the larger hemispheres, grow at the expense of the other bladders, and overlap them in front and from above. In man, where they are most strongly developed, agreeing with his higher mental activity, they eventually almost entirely cover the other parts from above (compare Plates II. and III.). The *second* bladder, the *twixt brain* (*z*), forms that portion of the brain which is called *the centre of sight*, and stands in the closest relation to the eyes (*a*), which grow right and left out of the fore brain in the shape of two bladders, and later lie at the bottom of the twixt brain. The *third* bladder, the *mid brain* (*m*), for the most part vanishes in the formation of the so-called *four bulbs*, a bossy portion of the brain, which is strongly developed in reptiles and birds (Fig. *E*, *F*, Plate II.), whereas in mammals it recedes much more (Fig. *G*, *H*

