(*E bv*). In comparing the hinder extremities (*bh*) in these figures he will find it equally difficult to distinguish the leg of a man (*H bh*), of a bird (*F bh*), the hind leg of a dog (*G bh*), and that of a tortoise (F *bh*). The fore as well as the hinder extremities are as yet short, broad lumps, at the ends of which the foundations of the five toes are placed, connected as yet by a membrane. At a still earlier stage (Fig. *A*—*D*) the five toes are not marked out at all, and it is quite impossible to distinguish even the fore and hinder extremities from one another. The latter, as well as the former, are nothing but simple roundish processes, which have grown out of the side of the trunk. At the very early stage represented in Fig. 7 they are completely wanting, and the whole embryo is a simple trunk without a trace of limbs. (Compare also Plate IV. and my explanation of it in the Appendix.)

I wish especially to draw attention in Plates II. and III., which represent embryos in early stages of development (Fig. *A*—*D*)—and in which we are not able to recognize a trace of the full-grown animal—to an exceedingly important formation, which originally is common to all vertebrate animals, but which at a later period is transformed into the most different organs. Every one surely knows the *gill-arches* of fish, those arched bones which lie behind one another, to the number of three or four, on each side of the neck, and which support the gills, the respiratory organs of the fish (double rows of red leaves, which are popularly called "fishes' ears"). Now, these gill-arches originally exist exactly the same in man (*D*), in dogs (*C*), in fowls (*B*), and in tortoises (*A*), as well as in all other vertebrate animals. (In Fig. *A*—*D* the three gill-arches of