

By a similar process of continued bifurcation, or the detachment of branches in the form of loops, new vessels are developed in other parts of the body, as has been particularly observed in the finny tail, and the external gills of the frog, and the newt, parts which easily admit of microscopical examination.*

Progress is in the mean while making in the building of the skeleton, the forms of the principal bones being modelled in a gelatinous substance, which is converted into cartilage, beginning at the surface, and gradually advancing towards the centre of each portion or element of the future bone; and thus a temporary solid and elastic scaffolding is raised, suited to the yielding texture of the nascent organs; lastly, the whole fabric is surrounded by an outer wall, the building of which is begun from the dorsal region, and conducted round the sides of the body, till the two portions come to meet in the middle abdominal line, where they are finally united into one general and continuous integument. The eyes, which were hitherto unprotected, receive special means of defence, by the addition of eyelids, which are formed by a farther extension and folding of these integuments; and the greater part of the surface of the body gives rise to a growth of temporary down, which, as we have seen, is provided as a covering to the bird at the time it is ready to quit the shell. But this hard shell, which had hitherto afforded it protection, is now opposed to its emancipation; and the chick, in order to obtain its freedom, must, by main force, break through the walls of its prison; its beak is, however, as yet too tender to apply the force requisite for that purpose. Here, again, we find nature expressly interposing her assistance; for she has caused a pointed horny projection to grow at the end of the beak, for the special object of giving the chick the power of battering its shell, and making a practicable breach, through which it shall be able to creep out, and begin its new career of life. That this horn is pro-

* Such is the result of the concurring observations of Spallanzani, Fontana, and Dollinger.