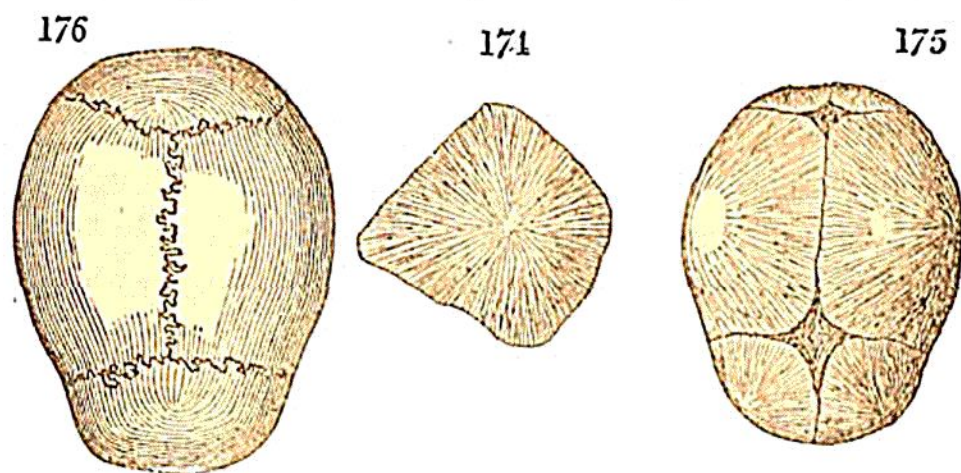


arranged longitudinally, and parallel to one another, and to the axis of the bone. They first constitute a ring in the middle of its length: this ring enlarges in all its dimensions, but principally in its length; the spicula becoming larger, not by the stretching of their parts, in consequence of the insinuation of fresh materials between those already deposited, but by the addition of new particles at both their extremities. In like manner, the ring increases in thickness, not by the deposition of phosphate of lime between the original layers, but by the application of fresh layers on the outside of those already existing.

In the flat bones, the process of ossification is very similar to what I have just described; only the fibres have a radiated arrangement, shooting out from the spot where the first deposit took place, as from a common centre. This is seen in Fig. 174, which represents the parietal bone of the



human skull, in an early stage of its ossification, and shows very distinctly the radiating fibres. In the cubical, and more irregularly shaped bones, the process is, doubtless, conducted with the same order and regularity, although it cannot so readily be followed by the eye.

The same process is repeated in different parts of the bone, wherever nature has, in conformity with determinate laws of development, appointed particular centres of ossification. The bone continues to extend from each of these centres, proceeding gradually towards the circumference, or the remoter parts of the cartilage, on which the ossific materials are moulded, and by the form of which that of the future