

the ear is a membrane which stretches across the internal end of the auditory canal, eventually closing off the middle ear. The membrane is not directly across the canal, but at an angle of about forty-five degrees. It is made of tough fibrous membrane, capable of expansion and contraction. Of the bones of the middle ear, the malleus or hammer comes first in order. It is attached by its long process — the handle — to the drum and moves with every motion of that membrane. The incus or anvil bone is more like a bicuspid molar tooth than like an anvil. The part that corresponds to the crown of the tooth is joined to the malleus, while one of its roots is free and the other joined to the stirrup or stapes. This stapes is exactly like a stirrup, and its base or bar fits into the oval window of the inner ear, which will be mentioned later. These three bones are movable as a whole, and at the same time free to move upon one another.

The inner ear, which is the proper organ of hearing, being the distributing centre of the auditory nerve, is situated deep in the petrous portion of the temporal bone. It consists of two labyrinths — the osseous and the membranous. The osseous labyrinth is made up of three principal parts, the vestibule, the cochlea and the semi-circular canals. Of these three, the vestibule is the central one, and indeed the central cavity of the whole auditory apparatus. In its outer wall it has an opening called the fenestra ovalis, into which the stapes fits and through which all sound vibrations pass. In its outer wall this is the only opening, but in the inner wall there are several which admit divisions of the auditory nerve. In its back and upper — technically called its posterior and superior — walls it has five openings by means of which communication is held with the semi-circular canals. There is also another opening, the mouth of the "aqueduct of the vestibule," a little canal running out into the bony surroundings, but whose contents are uncertain and whose purpose is unknown. In all, therefore, there are at least twelve openings from this chamber. Well may it be termed the vestibule, with its numerous doors through which enter the vibrations of the outside world. And surely no other vestibule has within it the entrance to such a wonderland as will greet the scientist who cares to pass these portals. Truly the wisdom and power of God is great, and depth in learning, while often used in an endeavour to belittle that wisdom and power, to the fair mind will but serve as the strongest confirmation.

The semi-circular canals, the second portion of the osseous labyrinth, are three arched cylindrical canals set in the very