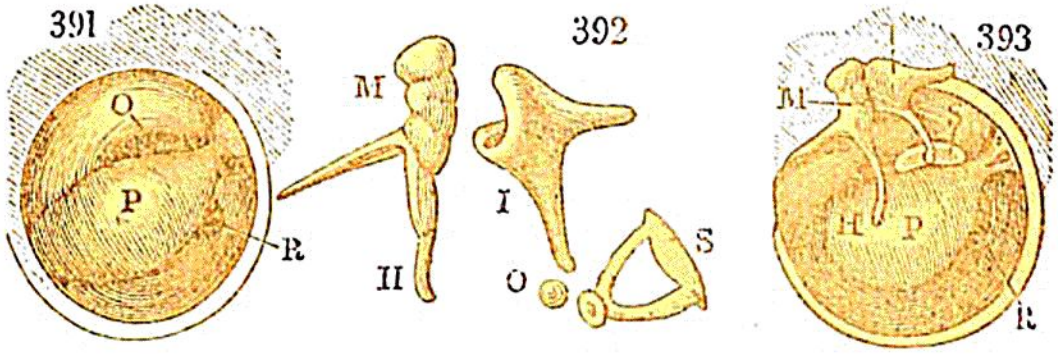
these evils by establishing a passage of communication between the tympanum and the external air, by means of a tube (E,) termed the *Eustachian tube*, which begins by a small orifice from the inner side of the cavity of the tympanum, and opens by a wide mouth at the back of the nostrils.* This tube performs the same office in the ear, as the hole which it is found necessary to make in the side of a drum, for the purpose of opening a communication with the external air; a communication which is as necessary for the functions of the ear, as it is for the proper sounding of the drum. We find accordingly that a degree of deafness is induced whenever the Eustachian tube is obstructed, which may happen either from the swelling of the membrane lining it, during a cold, or from the accumulation of secretion in the passage. It is also occasionally useful as a channel through which sounds may gain admittance to the internal ear; and it is perhaps for this reason that we instinctively open the mouth when we are intent on hearing a very faint or distant sound.

On the side of the cavity of the tympanum, which is opposite to the opening of the Eustachian tube, is situated the beginning of another passage, leading into numerous cells, contained in the *mastoid process* of the temporal bone, and therefore termed the *mastoid cells:* these cells are likewise



filled with air. The innermost side of the same cavity, that

* This opening is seen at E, in Fig. 382, p. 283, representing a vertical and longitudinal section of the right nostril.