

portion of the temporal and presents at its apex a downwardly directed process, the *spina angularis* (*sphenoidal spine*).

Surfaces.—The superior or **cerebral surface** of each great wing (Fig. 145) forms part of the middle fossa of the skull; it is deeply concave, and presents depressions for the convolutions of the temporal lobe of the brain. At its anterior and medial part is a circular aperture, the **foramen rotundum**, for the transmission of the maxillary nerve. Behind and lateral to this is the **foramen ovale**, for the transmission of the mandibular nerve, the accessory meningeal artery, and sometimes the lesser superficial petrosal nerve.¹ Medial to the foramen ovale, a small aperture, the **foramen Vesalii**, may occasionally be seen opposite the root of the pterygoid process; it opens below near the scaphoid fossa, and transmits a small vein from the cavernous sinus. Lastly, in the posterior angle, near to and in front of the spine, is a short canal, sometimes double, the **foramen spinosum**, which transmits the middle meningeal vessels and a recurrent branch from the mandibular nerve.

The **lateral surface** (Fig. 146) is convex, and divided by a transverse ridge, the **infratemporal crest**, into two portions. The superior or temporal portion, convex from above downward, concave from before backward, forms a part of the temporal fossa, and gives attachment to the Temporalis; the inferior or infratemporal, smaller in size and concave, enters into the formation of the infratemporal fossa, and, together with the infratemporal crest, affords attachment to the Pterygoideus externus. It is pierced by the foramen ovale and foramen spinosum, and at its posterior part is the spina angularis, which is frequently grooved on its medial surface for the chorda tympani nerve. To the spina angularis are attached the sphenomandibular ligament and the Tensor veli palatini. Medial to the anterior extremity of the infratemporal crest is a triangular process which serves to increase the attachment of the Pterygoideus externus; extending downward and medialward from this process on to the front part of the lateral pterygoid plate is a ridge which forms the anterior limit of the infratemporal surface, and, in the articulated skull, the posterior boundary of the pterygomaxillary fissure.

The **orbital surface** of the great wing (Fig. 146), smooth, and quadrilateral in shape, is directed forward and medialward and forms the posterior part of the lateral wall of the orbit. Its upper serrated edge articulates with the orbital plate of the frontal. Its inferior rounded border forms the postero-lateral boundary of the inferior orbital fissure. Its medial sharp margin forms the lower boundary of the superior orbital fissure and has projecting from about its center a little tubercle which gives attachment to the inferior head of the Rectus lateralis oculi; at the upper part of this margin is a notch for the transmission of a recurrent branch of the lacrimal artery. Its lateral margin is serrated and articulates with the zygomatic bone. Below the medial end of the superior orbital fissure is a grooved surface, which forms the posterior wall of the pterygopalatine fossa, and is pierced by the foramen rotundum.

Margin (Fig. 145).—Commencing from behind, that portion of the circumference of the great wing which extends from the body to the spine is irregular. Its medial half forms the anterior boundary of the foramen lacerum, and presents the posterior aperture of the pterygoid canal for the passage of the corresponding nerve and artery. Its lateral half articulates, by means of a synchondrosis, with the petrous portion of the temporal, and between the two bones on the under surface of the skull, is a furrow, the **sulcus tubæ**, for the lodgement of the cartilaginous part of the auditory tube. In front of the spine the circumference presents a concave, serrated edge, bevelled at the expense of the inner table below, and of the outer table above, for articulation with the temporal squama. At the tip of the great wing is a triangular portion, bevelled at the expense of the

¹ The lesser superficial petrosal nerve sometimes passes through a special canal (*canaliculus innominatus* of Arnold) situated medial to the foramen spinosum.