The **maxillary surface** is rough and irregular throughout the greater part of its extent, for articulation with the nasal surface of the maxilla; its upper and back part is smooth where it enters into the formation of the pterygopalatine fossa; it is also smooth in front, where it forms the posterior part of the medial wall of the maxillary sinus. On the posterior part of this surface is a deep vertical groove, converted into the **pterygopalatine canal**, by articulation with the maxilla; this canal transmits the descending palatine vessels, and the anterior palatine nerve.

Borders.—The **anterior border** is thin and irregular; opposite the conchal crest is a pointed, projecting lamina, the **maxillary process**, which is directed forward, and closes in the lower and back part of the opening of the maxillary sinus. The **posterior border** (Fig. 169) presents a deep groove, the edges of which are serrated for articulation with the medial pterygoid plate of the sphenoid. This border is continuous above with the sphenoidal process; below it expands into the pyramidal process. The **superior border** supports the orbital process in front and the sphenoidal process behind. These processes are separated by the **sphenopalatine notch**, which is converted into the **sphenopalatine foramen** by the under surface of the body of the sphenoid. In the articulated skull this foramen leads from the pterygopalatine fossa into the posterior part of the superior meatus of the nose, and transmits the sphenopalatine vessels and the superior nasal and nasopalatine nerves. The **inferior border** is fused with the lateral edge of the horizontal part, and immediately in front of the pyramidal process is grooved by the lower end of the pterygopalatine canal.

The Pyramidal Process or Tuberosity (*processus pyramidalis*).—The pyramidal process projects backward and lateralward from the junction of the horizontal and vertical parts, and is received into the angular interval between the lower extremities of the pterygoid plates. On its **posterior surface** is a smooth, grooved, triangular area, limited on either side by a rough articular furrow. The furrows articulate with the pterygoid plates, while the grooved intermediate area completes the lower part of the pterygoid fossa and gives origin to a few fibers of the Pterygoideus internus. The anterior part of the **lateral surface** is rough, for articulation with the tuberosity of the maxilla; its posterior part consists of a smooth triangular area which appears, in the articulated skull, between the tuberosity of the maxilla and the lower part of the lateral pterygoid plate, and completes the lower part of the infratemporal fossa. On the **base** of the pyramidal process, close to its union with the horizontal part, are the lesser palatine foramina for the transmission of the posterior and middle palatine nerves.

The Orbital Process (*processus orbitalis*).—The orbital process is placed on a higher level than the sphenoidal, and is directed upward and lateralward from the front of the vertical part, to which it is connected by a constricted neck. It presents five surfaces, which enclose an air cell. Of these surfaces, three are articular and two non-articular. The articular surfaces are: (1) the **anterior** or **maxillary**, directed forward, lateralward, and downward, of an oblong form, and rough for articulation with the maxilla; (2) the **posterior** or **sphenoidal**, directed backward, upward, and medialward; it presents the opening of the air cell, which usually communicates with the sphenoidal sinus; the margins of the opening are serrated for articulation with the sphenoidal concha; (3) the **medial** or **ethmoidal**, directed forward, articulates with the labyrinth of the ethmoid. In some cases the air cell opens on this surface of the bone and then communicates with the posterior ethmoidal cells. More rarely it opens on both surfaces, and then communicates with the posterior ethmoidal cells and the sphenoidal sinus. The non-articular surfaces are: (1) the **superior** or **orbital**, directed upward and lateralward; it is triangular in shape, and forms the back part of the floor of the orbit; and (2) the **lateral**, of an oblong form, directed toward the pterygopalatine fossa; it is separated