

mistake for it the buzzing of the bee, which is merely a noise created by the vibration of the wings ; nor the grating shriek of the Locust, (grasshopper,) caused by the friction of his legs against his wings ; nor the shrill noises of the cricket, or the tell-tale call of the katydid, produced by the friction of the wing covers upon each other, and in numerous similar cases which might be cited.

122. Consequently, were the mammals, the birds, and the frogs to be struck out of existence, the whole Animal Kingdom would be dumb. It is difficult for us, living in the midst of the thousand various sounds which strike our ear from all sides, to conceive of such a state. Yet such a state did doubtless prevail for thousands of ages, on the surface of our globe, when the watery world alone was inhabited, and before man, the birds, and the mammals were called into being.

123. In man and the mammals, the voice is formed in an organ called the *larynx*, situated at the upper part of the windpipe, below the bone of the tongue, (a.)

The human larynx, the part called Adam's apple, is composed of several cartilaginous pieces, called the thyroid cartilage, (b,) the cricoid cartilage, (c,) and the small arytenoid cartilages. Within these are found two large folds of elastic substance, known by the name

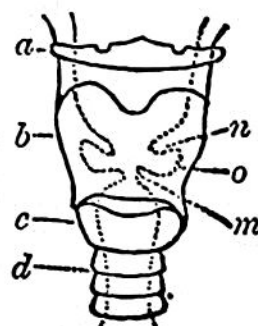


Fig. 22.

of the *vocal cords*, (m.) Two other analogous folds, the *superior ligaments of the glottis*, (n,) are situated a little above the preceding. The glottis (o) is the space between these four folds. The arrangement of the vocal cords, and of the interior of the glottis in man, is indicated by dotted lines, in Fig. 22.

124. The mechanism of the voice is as follows: the air, or its way to the lungs, passes the vocal cords. So long as these are in repose, no sound is produced ; but the moment they are made tense they narrow the aperture, and oppose