agreed with the observation of the President that it was not necessary to remove the whole of the anterior wall of the frontal sinus so long as all parts of the cavity could be thoroughly explored. In this case he had done so because the extent of the sinus could not be seen through a smaller opening. Having thoroughly removed the lining membrane, his plan was to pass the largest possible drainage-tube from the floor of the sinus through the fronto-nasal canal, leaving the end projecting a little beyond the nostril, so as to prevent any risk of reinfection of the healing sinus by shutting it off from the nose.

## Abstracts.

## LARYNX.

Avellis, G. (Frankfort).—The Shape of the Ventricles in the Singer's Larynx. "Arch. f. Laryngol.," vol. xviii, No. 3.

The writer has for some years observed that in singers the ventricles of the larynx are remarkably wide. It is only after the breaking of the voice that this is to be found. When the larynx is lowered the orifice is seen to be larger. He quotes Zuckerkandl's and Killian's observations on the larynges of great singers to the effect that the crico-thyreoarytenoid muscles (including in this term the lateral crico-arytenoid, the superior and inferior thyreo-arytenoid, and thyreo-epiglottidean and ventricular muscles) were found (post mortem) exceptionally differentiated and strongly developed. Zuckerkandl believes that these can put the ventricle into a state of greater tension and therefore better adapted for vibration. (Some writers on vocalisation have over-estimated the value of the ventricular bands; perhaps some of us have under-estimated it.)

Dundas Grant.

## EAR.

Bryant (New York).—Operation for Recurrent Middle-ear Suppuration and Mastoiditis. New York Otol. Soc. "Arch. of Otol.," vol. xxxv,

The mastoid process and cells were removed and the posterior wall of the osseous auditory canal down to the annulus. The superior wall was also removed, opening the epitympanic space, but leaving the attachment of the membrane and ossicles intact. The hearing afterwards, as tested by the watch, was nearly perfect. (A case subjected to a similarly limited operation with satisfactory result was shown before the Otological Society of the United Kingdom, vol. iv, p. 22.) Dundas Grant.

Knapp, A. (New York).—Infective Sinus Thrombosis: the Varieties of General Infection and Treatment. "Arch. of Otol.," vol. xxxv,

The two main forms of systemic infection are described—namely one with metastases, known as pyæmia and characterised by severe rigors and