that the observer is unable to see anything clearly. If the eyes are closed the nystagmus is severe and the disturbance of the centre of gravity marked. If in the above circumstances the eyes are voluntarily moved in the direction of the strongest movement of the nystagmus so that this is strengthened the disturbance of the sense of equilibrium is increased; by movement of the eyes in the opposite direction this disturbance is diminished. These experiments appear to show that stimulation of the vestibular apparatus does not directly affect the consciousness by causing the sensation of rotation, but that a reflex nystagmus is started by the vestibular nerves, and that this gives rise to the rotatory sensations.

Proof for or against these theories can only be obtained from a case with complete bilateral ophthalmoplegia and nuclear paralysis of all the eye muscles, together with an intact vestibule. In such a case, if there were sense of rotation, or disturbance of the sense of equilibrium, there would be proof that the vestibule alone could cause the symptoms.

The relation of nystagmus caused by labyrinthine disease to that caused by optical experiments is very interesting. Optical nystagmus is easily produced. A white roller is covered with black stripes at short distances from each other; the patient glances along the roller in a direction parallel to its axis; the roller is then rotated as the hands of a clock, seen from the patient; this causes a horizontal nystagmus to the right. Further, if there is a labyrinthine nystagmus to the left, this can be corrected by causing the patient to look at the rotating roller in the manner described; the nystagmus is, however, in no way influenced after ceasing the experiment.

Professor A. KREIDL remarked that it was assumed that the movements of the endolymph gave rise to the ocular movements. These were, therefore, in the relationship of cause and effect. The disturbance of the endolymph was, therefore, the ultimate cause of the sensation of rotation. *Knowles Renshaw.*

Abstracts.

NOSE AND ACCESSORY SINUSES.

Green, D. C. (Boston).—*Subcutaneous Correction of a Roman Nose.* "Boston Med. and Surg. Journ.," June 28, 1906.

Patient, a girl with a marked Roman nose as the result of periostitis following injury. An incision was made within the nose through the

mucous membrane over the lower edge of the left nasal bone. The bone was freed from the skin above and the mucous membrane below, and made to present, as the septal cartilage is made to present, in a submucous resection. Both bones were thus treated. When all was free, a median strip, including the deformity and a piece of the septum, was removed, leaving a gap. Then each nasal bone was chiselled free along its outer border and the bones made to meet in the median line without deformity. The result was excellent, the patient now having a straight profile. *Macleod Yearsley.*

King, Gordon.—*Some Reflex Neuroses of Nasal Origin.* "New Orleans Medical and Surgical Journal," March, 1906.

Deals chiefly with "sniffles," hiccough, laryngismus, spasmodic croup, asthma, parosmia, chorea, noctural enuresis, heterophoria, glaucoma, epiphora, cardiac irregularities, dysmenorrhœa, and stammering.
Macleod Yearsley.

Mosher, H. P. (Boston).—*Inflammation of the Frontal Sinus.* "Boston Med. and Surg. Journ.," June 7, 1906.

Taking as his text the frequency of headache as a symptom of frontal sinus disease, the author proceeds to discuss the development and anatomy of the sinus, the surgical routes thereto, and the diagnosis and treatment of acute and chronic inflammation occurring therein. The value of X rays in giving information as to the size, diverticula, and occurrence of septa in the sinus is specially insisted upon. Mosher divides cases of chronic frontal sinus suppuration into two groups—(1) those in which the chief features are the eye-symptoms; (2) those in which the prominent features are pain and nasal discharge. *Macleod Yearsley.*

EAR.

Hopkins, F. T. (New York).—*Electrolysis in the Treatment of Chronic Eustachian Stenosis.* "Arch. of Otol.," vol. xxxiv, No. 6.

The writer thinks this method has fallen into discredit through those who have tried it falling into errors such as insufficient attention to the naso-pharynx current. The smallest bougie No. 1 (French) measures one third of a millimeter in circumference, and the author advises dilatation up to No. 3 or even No. 4. The bougie is used at intervals of from two to four weeks. After three months or more the next larger bougie is employed. He approves of inflation before the passage of the bougie, but deprecates it after for fear of emphysema. He has found cases in which the tinnitus and dulness of hearing diminished after the larger bougies were passed, when no improvement had followed the use of the No. 1 bougie.

In the discussion on this paper in the Otological Section of the New York Academy of Medicine, Dr. Kenefick expressed an inclination to restrict its application to cases of long standing, where the stricture was of a more dry and less vascular character, and in a general way he considered that long-standing closure of the tube, tinnitus, a medium degree of deafness, and extreme vertigo were favourable cases for the electric bougie in proper hands. Dr. Gruening considered that emphysema following inflation with the bougie indicated that a false passage had