others, great attention has been paid to the various forms of sprays and nebulizers for the medication of the larynx and the parts of the respiratory tract lower down. What we have said of etiology, clinics, and therapeutics is equally true of the literature bearing upon this region, and careful observation of the publications of the past year must convince anyone of the advance which has been made in the study of the principles of, and their application in, laryngeal surgery.

Macintyre.

OTOLOGY.

In the following retrospect the number placed immediately after the title of any paper or the name of its author indicates the page in the volume of the JOURNAL OF LARYNGOLOGY for 1895 where the paper, or its abstract, is to be found. At the same time, for the benefit of those not possessing this volume, the original source is carefully indicated, and, to economise space, certain abbreviations will be employed, of which the following alone require explanation :—

"Fr. Soc."	The French Society for Laryngology and Otology.
"Par. Soc."	The Parisian Society for Laryngology and Otology.
"Germ. Cong., Vien."...	The Sixty-sixth Congress of German Naturalists and Physicians, Vienna, 1894.
"Ann. des. Mal."	"Annales des Maladies de l'Oreille," etc.
"B. M. J."	"British Medical Journal."
"Dutch Soc."	The Dutch Society of Laryngology, Rhinology, and Otology.
"Flor. Cong.".....	The Fifth International Congress of Otology, Florence, September, 1895.
"Belg. Cong.".....	The Sixth Annual Meeting of Belgian Otologists and Laryngologists, Brussels, June, 1895.
"B. L. A."	British Laryngological Association.
"B. M. A."	Annual Meeting of the British Medical Association, London, 1895, fully reported in the "British Medical Journal," 1895, Vol. II.

ANATOMICAL POINTS AND PECULIARITIES.—The *Anatomical Relations of the Membrana Tympani and their Pathological Importance* were treated of by Lake (690) in a paper read before the British Medical Association, and the same author contributes the description of a preparation presenting an *Abnormality in the course of the Chorda Tympani* (690, "Lancet," Jan. 5, 1895). Thomba found in one case a *Supernumerary Ossicle* (318, "Germ. Cong., Vien."). The *Morphogenic Homology of the Internal Ear* has been ingeniously studied by Bonnier (223, "Par. Soc.," July 6, 1894) in its relations to the "lateral line."

PHYSIOLOGY.—The *Physiology of the Middle Ear* was discussed by Secchi and others (827, "Flor. Cong."). They insisted on the "air-capsule" action of the tympanum, and regarded the ossicular chain as of

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very secondary importance. Bonnier (429, "Med. Week.," Jan. 4, 1895) gave a study of the *Normal Tension of the Labyrinthine and Cerebro-Spinal Glands*, and the agencies by which the necessary equilibrium is maintained.

AURICLE.—*Malformations of the Auricle* were described by Cartaz (221, "Par. Soc.," March 5, 1894), Gruber (313, "Germ. Cong., Vien.") and Rohrer (74, "Germ. Cong., Vien."). Hollinger (755, "Arch. of Oph. and Otol.," April, 1895) described an operation for the replacement in the normal position of a very much deformed and displaced auricle. An *Artificial Ear* was adapted by Grove in one case (427, "Lancet," Feb. 2, 1895). A case of *Symmetrical Gangrene of the Ears* was observed by Tweedy (495, "Lancet," March 23, 1895), one of *Bilateral Hæmatoma of the Lobule* by Randall (299, "Arch. of Otol.," Vol. XXIII., No. 3), and one of *Cornu Cutaneum Auriculæ* by Coosemans (811, "Flor. Cong.").

EXTERNAL MEATUS.—*Foreign Bodies* were observed by Ménière—an aurilave sponge—(222, "Par. Soc.," June 1, 1894), and Sikkel (468, "Dutch Soc.," July, 1894). The latter removed a cherry-stone by means of a funnel of india-rubber on the end of a funnel of metal. Ledermann (756, "Arch. of Oph. and Otol.," April, 1895) enumerates a variety of animate and inanimate objects removed by him from the meatus. *External Otitis* occurred in furuncular form in both ears in a case of typhoid fever seen by Sikkel (468, "Dutch Soc.," July, 1894). MacCuen Smith advocates the carbol-menthol treatment of *Furunculosis of the External Auditory Canal* (427, "Med. News," Jan. 19, 1895). In a case under Ledermann (757, "N. Y. Med. Journ.," May 18, 1895) *Diffuse External Otitis* appeared to result from the use of drops containing imperfectly dissolved carbolic acid. Dunn describes a case of *Otitis Externa Hæmorrhagica* (299, "Arch. of Otol.," Vol. XXIII., No. 3), and Lake several of *Keratosis Obturans* (893, "B. L. A."). In the latter salicylic acid was found beneficial. *Cto-mycosis* was found by Highet to be very frequent in Singapore (429, "B. M. J.," March 9, 1895). Hermet, in *Eczema of the Meatus*, employs a ten per cent. solution of nitrate of silver (221, "Par. Soc.," May 4, 1894). *Aural Exostosis*, in a case under Taylor (152, "B. M. J.," Oct. 20, 1894), was successfully removed by chisel after detachment of the auricle. Hovell, in a case in which the exostosis was close to the external orifice, drilled a hole in the growth and inserted a screw, by which he pulled it away (157, "B. M. J.," June 16, 1894).

MIDDLE EAR.—*Senile Changes in the Middle Ear* take the form of stiffening of the joints, according to Ferreri (814, "Flor. Cong."), more frequently than of nerve changes. *Traumatic Perforations* were studied by Corrado Corradi (814, "Flor.Cong."), who found them difficult to produce by indirect violence on the dead subject. Welsford observed a case of rupture of both drums by cough (150, "B. M. J," July 14, 1894). Lake gave interesting statistics and observations showing an unexpected frequency of *Facial Paralysis in Recent Otitis Media* (335, "B. L. A".). In the treatment of *Chronic Dry Catarrh* Bronner recommends the use of intra-tympanic injections (150, "B. M. J.," Oct. 13, 1894)

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of solutions of bicarbonate of soda in paroleine. Delstanche, who introduced this treatment, employs liquid instead of solid vaseline, as formerly (815, "Flor. Cong.," and 326, "Germ. Cong., Vien."). Dundas Grant showed a case of indrawn cicatrix in which he employed with advantage massive injections of paroleine driven into the tympanum through a Weber-Liel's intra-tympanic catheter (884, "B. L. A."). Deschamps advocates the inflation of air which has bubbled through a five per cent. water solution of formol (150, "Ann. des Mal.," April, 1894). Gradenigo regards intractable sclerosis of the middle ear as in many cases a parasyphilitic affection in late hereditary syphilis (78, "Germ. Cong., Vien."). Park (427, "Arch. of Oph. and Otol.," Jan. 1895) advises, as a new and more convenient instrument than the Politzer air-bag for inflating the middle ear, a conical nose-piece connected with the air-tank—a view in which many will differ from him. Mobilization of the stapes received renewed commendation from Miot (91, "Fr. Soc."), and Gellé ("Par. Soc.," Jan. 5, 1894) narrated benefits derived from liberation of it by incisions through contracting granulation tissue surrounding it. Marple, in a paper on the successful mechanical treatment of some unusual aural complications (754, "N. Y. Med. Journ.," June 1, 1895), mentions the advantageous use of the bent strip of soft rubber first introduced by Clarence Blake. So-called "oto-massage" receives complete condemnation from Burnett (755, "Med. News," Aug. 10, 1893), exception being made of Urbantschitsch's exercises; and Chevalier Jackson retorts (*ibid.*) that all depends on the skill of the manipulator. A case of *Clonic Spasm of the Tensor Tympani* is narrated by Hefleblower (754, "N. Y. Med. Journ.," Mar. 6, 1895). In view of serious hæmorrhage having in several recorded cases arisen during paracentesis of the membrane, the *Recognition of the Protrusion of the Bulb of the Jugular Vein into the Tympanum during Life* is studied by Gompertz (309, "Germ. Cong., Vien."). Some interesting cases of *Sarcoma* have been brought forward, one by Haug (326, "Germ. Cong., Vien."), affecting the pharyngeal orifice of the tube; one by Ménière (221, "Par. Soc.," April 6, 1894), in the middle ear of a child; and one by Kirchner (817, "Flor. Cong."), imbedding the petrous bone.

Suppurative Inflammations of the Middle Ear.—The rational treatment of acute otitis media is described by Gradenigo (431, "Med. Week.," Feb. 9, 1895), who deprecates air-douches and syringings, and advises drainage by means of a wick of iodoform gauze, filling the meatus, while the throat and nose are carefully treated. Du Fougeray (899, "Fr. Soc.") advocates this method. Helme and Lermoyez (738) insist on the preponderating influence of the staphylococcus in determining suppuration in the ear, and lay down formal rules for ensuring asepsis in otology. Gradenigo replies as to the sharing in the mischief by other bacteria. He, along with Pes, describe a few cases in which they got almost pure cultures of the bacillus pyocyaneus (495, "Bull. des Mal. de l'Oreille," Nov., 1894). In a bacteriological investigation of the suppurative ear discharge occurring as a complication of scarlet fever, Blaxall (149, "B. M. J.," July 21, 1894) found in most

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cases the streptococcus pyogenes, and in none the diplococcus pneumoniæ. In the aural pus from a case of otitis media following pharyngeal diphtheria, Kutscher (431, "Deut. Med. Woch.," No. 10, 1895) found true Loeffler bacilli. F. P. Ball draws attention to the occurrence of otitis dia as a complication of pneumonia (854, "Med. News," Sep. 21, 1895), and insists that, whenever "head symptoms" come on in the course of broncho-pneumonia, the ear should be examined. Galletti reports some cases in which otitis media occurred in consequence of plugging the posterior nares (431, "Archiv. Ital. di Otol.," Vol. III., 1895). Bar (815, "Flor. Cong.") described the unexpected supervention of otitis as a complication of the operation for adenoids, where every antiseptic precaution had been taken. In cases of purulent inflammations of the middle ear, in which there is a small perforation at the point of a mammilliform projection on the drum (320, "Germ. Cong., Vien."), Bing applies a drop of liq. ferr. sesquichlor. to the seat of the perforation. Szenes believes that obstinate middle-ear suppuration sometimes ceases when complicated by the occurrence of acute external otitis (76, "Germ. Cong., Vien."). Similar views were expressed by him, Colladon, and others at the Rome Congress in 1894. The treatment of intractable middle-ear suppuration by operation through the mastoid is advocated by Barr (688, "B. M. A."), and by large openings of the cavity of the middle ear by Luc (92, "Fr. Soc."). On the other hand, very fair results were obtained from the conservative method of treatment in chronic suppuration of the upper cavities of the tympanum by Gompertz (322, "Germ. Cong., Vien."). This consisted chiefly in cleansing and the skilful use of fine celluloid canulæ for the insufflation of powders into the affected loculi. Browne describes five cases of attic disease treated by a modified Stacke's operation (688, "B. M. A."), and Hicguet another in which, after operation, the patient's general condition underwent a marvellous change for the better, although the aural discharge did not cease (834, "Belg. Cong."). Hartmann gives some critical historical remarks on the operation for exposing the tympanic cupola space, attic, and the mastoid antrum (300, "Arch. of Otol.," Vol. XXIV., No. 1), in which he speaks in favour of a forceps for nibbling away the outer wall, like that devised by Gellé (215, "Par. Soc.," Jan. 5, 1894). The frequency with which chronic suppuration of the middle ear is tuberculous in nature was made the subject of important experimental research by Milligan (688, "B. M. A."), who found it to amount to eighty per cent. of "mastoid" cases. In the treatment of otorrhœa in scrofulous patients, Isaia (154, 430, "Med. Week.," Dec. 7, 1894) employs solutions of balsam of Peru in alcohol, for which he gives formulæ. A remarkable case of severe hæmorrhage arising from an aural polypus is described by Moure (825, "Flor. Cong."), the growth proving to be a cavernous angioma. Bing describes *Experiments on the Irrigation of the Tympanic Cavity* (319, "Germ. Cong., Vien."). He found that, in the presence of a large opening in the membrane, the Eustachian irrigation did not reach the attic and antrum, whereas it did so if the perforation was small. Politzer (*ibid.*) maintained the value of the process, in opposition to certain other speakers, who disparaged it on somewhat theoretical grounds. The reporter has seen ample evidence of its being indispensable.

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MASTOID PROCESS, ETC. — Sune Y Molist pointed out certain peculiarities of *Wounds from Firearms* in the mastoid region (826, "Flor. Cong."), and notably the tendency for the momentum of the missile to be checked in the spongy tissue where it frequently lodged. *Auscultation* is used for the purpose of detecting sclerotic conditions of the mastoid by Okuneff (811, "Flor. Cong."), a vibrating tuning-fork being placed on some point of the skull while a flexible stethoscope is applied to the mastoid. Brieger (814, "Flor. Cong.") refers to the rarity of *Primary Otitis* of the mastoid. In a case of mastoiditis under the care of Buys (834, "Belg. Cong.") *Necrosis of part of the Occipital Bone* took place, and the sequestrum was extracted from an abscess cavity. *Cholesteatoma* received clinical and pathological study from Lichtwitz and Sabrazes (220, "Par. Soc.," March 5, 1894), and a case was brought forward by Dundas Grant (885, "B. L. A."). Körner's method of lining the mastoid cavity after chiselling (practically the same as Panse's) is recommended by Reinhard (314, "Germ. Cong., Vien."). The *Treatment of Mastoid Suppuration* is discussed by Lubet-Barbon and Martin (91, "Fr. Soc."), and Hamon du Fougeray (90, "Fr. Soc.") formulates certain rules, especially insisting on the forward direction of exploratory proceedings. Buck (755, "N. Y. Med. Journ.," June 29, 1895) emphasizes the unfavourable prognosis of operations upon the mastoid in *diabetic persons*, though the cases he narrates would indicate that the prognosis for the patient is worse if operation is withheld. Lubet-Barbon points out the occasional limitation of inflammation of the temporal bone in relation to its developmental constituent parts (829, "Flor. Cong."), but indicates that this is exceptional. In a case of Körner's of tuberculosis of the temporal bone *extension to the Base of the Temporo-sphenoidal Lobe* took place (430). Moos published a case of *a Hitherto Undescribed Course of a Disease of the Mastoid Process* (299, "Arch. of Otol.," Vol. XXIII., No. 3), in which, owing to the persistence of the squamo-mastoid fissure in adult life, a very large mastoid abscess supervened rapidly during an acute otitis.

THE MORE DANGEROUS SEQUELÆ OF SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR.—Macewan (688, "B. M. A.") introduced a discussion on *Cerebral Complications in relation to Middle Ear Disease*, developing further the views advocated in his well-known classical work, and Barr advanced similar opinions (817, "Flor. Cong."), of which a very full and interesting report will be found in the JOURNAL. A very minute and instructive clinical study of different forms of *Severe Complications of Otitis* will be found from the pen of Paul Schubert (224, "Germ. Cong., Vien."), including abscess, sinus-phlebitis, and pyæmia without sinus-phlebitis. Cases illustrating *Otitic Abscess of the Brain* are published by Knapp (301, "Arch of Otol.," Vol. XXIII., No. 3), Brieger (311, "Germ. Cong., Vien."), and Murray (300, "B. M. J.," Jan 5, 1895), and *Cerebellar Abscesses* by Bacon (757, "Amer. Journ.," Aug., 1895) and Heymann (867, "Flor. Cong."). An unusual case of acute suppuration of the middle ear, with *Septic Thrombus of the Jugular Vein and Pyæmia without involvement of the Mastoid Antrum*, is related by

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Barling (854, "Birmingham Med. Rev.," Oct., 1895), and one of *Thrombosis of the Cavernous Sinus* in acute purulent inflammation of the middle ear by Kirchner (319, "Germ. Cong., Vien.").

NOSE, NASO-PHARYNX, ETC., IN RELATION TO THE ORGANS OF HEARING.—*Turbinotomy in Connection with Tinnitus Aurium* was strongly recommended by Carmalt Jones (689, "B. M. A.") on the strength of very extensive experience of the operation. Dadysett (554) brings forward a case in confirmation of this view, and MacNaughton Jones (816, "Flor. Cong.") attributed to it a modified value and in only a few selected cases. The reporter has employed it in a number of cases with great satisfaction. Alderton gives a curious statistical study on the *Influence of Affections of the Upper Air Tract upon the Ear* (428, "Ann. Oph. and Otol.," Jan., 1895).

Antiseptics in Intra-nasal Surgery was the subject of a paper by St. Clair Thomson (824, "Flor. Cong."), who considered the nasal mucous membrane a self-acting sterilizing medium, and held that the aseptic precautions detailed by Lermoyez and Helme (738, "Ann. des Mal.," Jan. and June, 1895) were unnecessary, besides being more cumbrous than the use of chemical antiseptics. The reporter emphasizes the difference between a diseased and a "healthy" nasal mucous membrane as a sterilizer. Brieger (824, "Flor. Cong.") thought that safety *qua* sepsis lay in removing only small portions of the mucous membrane at a time.

Adenoid Vegetations were discussed by Yersandt Arslan (810, "Flor. Cong."), who always operated under bromide of ethyl anæsthesia.

INTERNAL EAR, AUDITORY NERVE, ETC.—The *Pathological Changes in the Labyrinth*, as observed by himself and others, are fully passed in review by Politzer (795, "Flor. Cong."). Scheibe found *Anomalies of Formation in the Membranous Labyrinths* of two deaf-mutes, which suggest the possibility of Reissner's membrane arising from the stria vascularis (319, "Germ. Cong., Vien."). A case of *Acute Boiler-maker's Deafness*, under Urbantschitsch (316, "Germ. Cong., Vien."), improved under suction in the meatus and inflation through the Eustachian tube, suggesting a spasm of accommodation of the intra-tympanic muscles. Goldstein describes fully a case of *Exfoliation of the Cochlea, Vestibule, and Semicircular Canals* (391), with remarks on the amount of hearing power and the faculty of equilibration maintained. In a case of Gruber's, of *Extrusion of the Cochlea* (313, "Germ. Cong., Vien."), there were differences of opinion as to the presence of some perception of sound. The *Treatment of the various Forms of Nerve-Deafness* was the subject of a discussion before the British Medical Association, opened by Dundas Grant (687, "B. M. A."), and continued by Lewis Jones, who had found benefit follow the use of electricity in some cases of deafness produced by noise. The necessity for accurate diagnosis and for the recognition of functional dulness of hearing was emphasized by the introducer. Schirmunsky, studying the effect of *Pilocarpin in Diseases of the Middle Ear and Labyrinth* (430, "Monats. für Ohrenheilk," Feb., 1895), found it useful in recent effusions into the labyrinth, but useless in other cases. Thomas treats internal otitis invariably as if syphilitic (92, "Fr. Soc."),

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and reports a fair measure of success. Gradenigo attaches considerable importance to internal treatment based upon a proper clinical appreciation of the general condition and tendencies (813, "Flor. Cong."). In four cases treated by Barclay Baron with injections of pilocarpin (151, "B. M. J.," Dec. 1, 1894), one improved at once, another after several months, and in the others the results were negative. In the *Treatment of Ménière's Symptoms*, Dundas Grant (886, "B. L. A.") recommended pilocarpin in recent cases only. Small doses of quinine were found of special value when the symptoms arose from middle-ear disease—"pseudo-Ménière's disease." Calomel was advised when there was pulse-tension. Labit (92, "Fr. Soc.") reports several cases of recovery from acute "Ménière's disease" under pilocarpin, and Galloway (429, "B. M. J.," March 9, 1895) one in which bromide and iodide of potassium were beneficial. In a case of labyrinthine disease Guye observed a not yet described form of rotatory sensation (689, "B. M. A."), in which objects appeared to turn from right to left; and when slight there was involuntary movement in the same direction, but when severe in the opposite one. Cases of *Hysterical Deafness* were brought forward by Cartaz (88, "Fr. Soc.") and by Hector Mackenzie (495, "Lancet," March 16, 1895), the latter effecting a cure by re-education of the hearing centre. Rohrer (74, "Germ. Cong.") maintains a distinction between *Hysterical Deafness and Torpor of the Acoustic Nerve*, the hearing defect being similar in both, but hystero-neurasthenic symptoms being absent in the latter. *Partially-acquired Tone-Deafness* (309, "Germ. Cong., Vien.") was observed by Gradenigo; one infantile, another from intra-cranial auditory neuritis, the other probably from cochlear hæmorrhage. In a case of *Unilateral Deafness and Blindness following a Revolver Shot in the Chest*, under Jouslain (222, "Par. Soc.," May 4, 1894), the condition was probably reflex and due to nervous shock. Collet in a paper on *Auditory Disturbances in Tabes Dorsalis* (432, "Presse Med.," Jan. 12, 1895) attributes the deafness to disease of the nuclei of the auditory and of the trophic—fifth—nerve. Ménière adds a case of *Leucocythæmic Deafness* (455, "Par. Soc.," Jan. 4, 1895) remarkable by the absence of any previous ear disease.

Diplacusis.—In a case of Gradenigo's (429, "Arch. of Otol.," Vol. XXIII., No. 4) monaural diplacusis was harmonic and due to disease of the middle ear. Hans Daae narrates an unusual case in which the binaural diplacusis was not harmonic, and yet it was cured by treatment directed to the middle ear (428, "Arch. of Otol.," Vol. XXIII., No. 4). It will be remembered that non-harmonic diplacusis is usually due to disease of the auditory nerve, which, the abstractor suggests, may have escaped detection in this case.

DEAF-MUTISM. — Szenes (75, "Germ. Cong. Vien.") tested the residuum of hearing present in a number of deaf-mutes, and in many it was considerable, but not such as he would consider sufficient to justify their removal from a deaf-mute institution.

REFLEX DISTURBANCES.—*Auricular Reflexes* are enumerated and analyzed in a truly academical manner by Bonnier (217, "Par. Soc.,"

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Feb. 5, 1894), intrinsic and extrinsic reflexes of all sorts—compensatory, accommodative, synergic, etc., etc.—receiving attention. Gellé, in discussing *Auricular Inhibitions*, attributes to inhibition certain phenomena usually explained by fatigue (92, "Fr. Soc."). Masini found the *Influence of Lesions of the Organ of Hearing on Respiratory Changes* was to diminish the elimination of carbon dioxide, but only if the semicircular canals—not the cochlea—were involved (827, "Flor. Cong."). *Ear-Faints and Epilepsy* are apt to be confounded, and Hobby (151, "Ann. Oph. and Otol.," Oct., 1894) discusses the differential diagnosis.

THE CENTRAL NERVOUS SYSTEM IN RELATION TO AFFECTIONS OF THE HEARING ORGANS.—*Acoustic Neurasthenia*, as understood by Alderton (157, "Ann. Oph. and Otol." Oct.," 1894),corresponds very much to *Torpor of the Acoustic Nerve* of Rohrer (74, "Germ. Cong., Vien.") and *Hysterical Deafness* of Gradenigo (*ibid.*).

The *History of a Brain Tumour* given by Moos (432, "Arch. of Otol.," Vol. XXIII., No. 4) contains much information. The comparative infrequency of deafness in cases of brain tumour is referred to. Burger gives a case of *Syphilitic Paralysis of Cranial Nerves* (460, "Dutch Soc.," July 1, 1894), including auditory, facial, sixth, vago-accessory, glosso-pharyngeal, and trigeminal, with left hemiparesis. A very interesting case of complete deafness following acute meningitis, with the diplococcus of Fraenkel, was narrated by Grazzi (830, "Flor. Cong.").

The *Vestibular Cortical Centre*, according to a case investigated before and after death by Bonnier (223, "Par. Soc.," July 1, 1894), seems to be situated in the ascending parietal convolution. *Auditory Localization*, according to the same author (221, "Par. Soc.," April 6, 1894), is determined by the direction of the impact of sound waves on the membrane imparting a greater or less obliquity to the pressure of the stapes on the saccule.

MEANS OF DIAGNOSIS, TESTS FOR HEARING, ETC.—*The Functional Examination of the Hearing Power* for tones of various pitch has been much studied by Gradenigo (Schwartze's "Handbuch der Ohrenheilk," Vol. II.), and he has endeavoured to facilitate the complicated procedure by devising a means of a mechanical arrangement for setting tuning-forks in vibration with a definite degree (four different degrees) of force (829, "Flor. Cong."). His method of graphically determining the total *Field of Audition and Auditory Acuity* was carried out by Zwaardemaker (464, "Dutch Soc."), and further considered by himself (79, "Germ. Cong., Vien."). He found Kœnig's rods give more accurate results than Galton's whistle. The relation between hearing for speech and that for tones in general was investigated on this footing by Zwaardemaker ("Arch. of Otol.," Vol. XXIII., No. 4), who confirmed the observation that in nerve-deafness hearing for speech is relatively less impaired—in middle-ear disease the reverse. *The Hearing Power of the Aged* was examined by Bezold (297, "Arch. of Otol.," Vol. XXIII., No. 3), who found in a considerable portion of comparatively defective hearing a "positive" Rinné, and in general a diminution of bone-conduction only proportional to that of air-conduction. Zwaardemaker's *Presbycusic Law* (299, "Arch. of Otol.," Vol. XXIII., No. 3), founded on observations on normally-

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hearing persons, showed a lowering of the upper limit of audition from e^7 of childhood down to a^6 or g^6, anything lower than this being attributable to disease rather than senility. *Investigations with Tuning-Forks of Middle Register in over Six Hundred Cases* were carried out by Alderton (298, "Arch. of Otol.," Vol. XXIII., No. 3), confirming in a most valuable way many of the inferences derived from the methods as usually practised.

INSTRUMENTS, REMEDIES, ETC.—Courtade has devised an *Hermetic Covering for Siegle's Speculum, a Universal Handle for Instruments with Variable Angle*, and a *Hook for Pressure and Spring Traction* (216, "Par. Soc.," Jan 5, 1894), also a *Sliding Indicator for the Eustachian Catheter* (223, "Par. Soc.," Jan. 1, 1894). Delstanche has effected a *Modification in Massage Instruments for the Tympanum*, increasing their strength (839, "Belg. Cong."). The *Aural Auscultation Tube* has been made more handy by Cheatle (150, "B. M. J.," Sep. 22, 1894) by the adaptation of a head spring to keep it in the surgeon's ear; and Moll has made it more clean (470, "Dutch Soc."), by fitting movable glass tips to the patient's end, an improvement noticed by the reporter in the clinic of Drs. Lubet-Barbon and Martin in Paris. An *Ear-Bandage* devised by Hartmann (311, "Germ. Cong., Vien.") should commend itself. Plicqué describes the scope of *Electricity in Otology* in an appreciative and temperate spirit (755, "Ann. des Mal.," Sep., 1894). Mounier (900, "Fr. Soc.") believes it hastens recovery of hearing during convalescence from acute aural affections. Lewis Jones and Grant (687, "B. M. A.") found it beneficial in nerve-deafness produced by exposure to noises. Freudenthal recommends *Electro-vibratory Massage* with improved instruments (853, "N. Y. Med. Journ.," Sep. 28, 1895), and Lester describes an *Electric Pressure-Sound for the Direct Vibration of the Membrana Tympani* (754, "N. Y. Med. Journ.," June 8, 1895). The use of *Local Massage in the Treatment of Chronic Eczema of the External Ear* was advised by Bronner (830, "Flor. Cong."). Jouslain describes an *Electric Tuning-Fork* (223, "Par. Soc.") well adapted for Gellé's tests, though the mechanism does not seem applicable to forks of the extremes of pitch. An instrument of immense value to operators is Max Thorner's *Mastoia Retractor*, fully described in the JOURNAL (869). The *Action of Artificial Drums* was discussed by Gompertz (324, "Germ. Cong., Vien."). Their special indications were epidermized tympanic lining and postero-superior perforation. Ward Cousins brought forward an *Improvement in Artificial Drums*, from which he appeared to have got good results, although others had found the ordinary cotton-wool drum more efficacious (690, "B. M. A."). Cresswell Baber showed *Dummies for Illustrating and Teaching Diseases of the Naso-pharynx* (689, "B. M. A."). Pins recommends a *Nasal Douche which occasions Spontaneous Closure of the Eustachian Tube* (325, "Germ. Cong., Vien."), the douche being actuated by the patient's own blowing; and Ziem, for the same purpose, a force pump fitting tightly into the nose, so that the fluid may not be mixed with air (326, "Germ. Cong., Vien."). Szenes dwells on the *Therapeutical Value of Glycerine of Carbolic Acid and Menthol* in diseases of the ear (77, "Germ. Med. Cong."), which we can quite reinforce, always postulating

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that the drugs be not reprecipitated by the addition of water. The *Influence of Methodical Hearing Exercises upon the Hearing Sense* was brought forward by Urbantschitsch (316, "Germ. Cong., Vien."), and has been made familiar to English readers by Goldstein. An interesting *Demonstration of Instruments* was given by Delstanche before the Congress of Otology at Florence (310).

MALIGNANT DISEASE OF THE ORGANS OF HEARING. — Danziger (756, "Monats. für Ohrenheilk," July, 1895) gives a contribution to the *Case-History and Etiology of Carcinoma of the Organs of Hearing*, offering as etiological factors an old-standing otorrhœa and the habit of poking sharp instruments into the ear. Kirchner's case of *Sarcoma of the Petrous Bone* (817, "Flor. Cong.") illustrates the grafting of neoplastic growth on a long-standing inflammation. In a case of Bacon's (854, "N. Y. Med. Journ.," Aug. 31, 1895) there was a *Sarcoma of the Neck, involving the Tonsil and causing Deafness.* Ménière's case of *Ossifying Sarcoma in the Ear* of a child is referred to in connection with the middle ear.

TINNITUS AURIUM.—The *Treatment of Tinnitus Aurium* was fully reviewed by Miot and Herck (698, "Fr. Soc."). Dalby and Baber brought forward cases of *Objective Tinnitus audible on Auscultation* (687, 689, "B. M. A."). Carmalt Jones considers *Turbinotomy in connection with Tinnitus Aurium* an operation of great value (689, "B. M. A.").

MISCELLANEOUS.—*The Paracusis of Willis* is attributable, according to D'Aguanno (828, "Flor. Cong."), to relaxation of the ligaments or degeneration of the muscles of the tympanic ossicle. Verdos studied the *Aural Disturbances arising from Explosions of Dynamite* (828, "Flor. Cong.") owing to the opportunity afforded by the outrage in the Lyceum Theatre, Barcelona. Some *Peculiarities of the Negro in Otology* afforded De Roaldes the subject for an interesting paper (828, "Flor. Cong.").

Heymann has given interesting *Statistics of Ear Diseases* (865, "Flor. Cong."); Gellé a contribution to the *General Constitutional Treatment in Diseases of the Ear* (810, "Flor. Cong."), which, he thinks, is too much neglected.

REVIEWS have been given of the following works bearing on diseases of the ear :—

McBride, P., "Diseases of the Throat, Nose, and Ear" (152-157).
Miot and Baratoux, "Diseases of the Ear and Nose" (161).
Mygind, Holger, "Deaf-Mutism" (238).
Hovell, T. Mark, "Diseases of the Ear" (301).
Jacobson, "Text-Book of Otology" (305).
Dench, E. B., "Diseases of the Ear" (721). *Dundas Grant.*

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