

With the invention of the laryngoscope fifty-eight years ago, the art and science of laryngology was founded. We have lost most of those who brought back to this country the first laryngoscopes from Vienna and Buda-Pesth, but we are happy in having still amongst us one of these early pioneers of laryngology. Dr. T. J. Walker, of Peterborough, who was one of the secretaries in the Section of Laryngology when the International Congress of Medicine met in London thirty-two years ago, is still in full practice (Plate). If I have read the history of laryngology aright it was Dr. T. J. Walker who, as seen in the *Lancet* for November 9th, 1864, recorded the first published case of removal of a polypus from a vocal cord by the endolaryngeal route. This, he is noted, was done without the aid of either chloroform or cocaine!

Dr. T. J. Walker's co-secretaries in 1881 were Dr. Felix Semon and Dr. F. de Havilland Hall (Plate). Dr. Hall has somewhat forsaken laryngology for the wider subject of internal medicine, but Sir Felix Semon is faithful to laryngology, which he has served so well, and of which he remains the welcomed and honoured *doyen* (Plate).

The late Sir George Johnson, who presided over the Sub-section of Laryngology in 1881, made a valuable contribution to the question of laryngeal neuroses (Plate). The clinical work of Morell Mackenzie and Lennox Browne is well known, and their text-books were recognised throughout Europe.

Henry Butlin's name will always be associated with the surgery of laryngeal cancer.

With the mention of these names we arrive at the present-day history of rhino-laryngology in this country. It would be both difficult and invidious to attempt a consideration of the contributions made to the speciality by the many earnest workers in Great Britain. Their number and enthusiasm is shown by the value of the *Transactions of the Laryngological Section of the Royal Society of Medicine*, which numbers nearly 200 members. Scotland has its own special Society of Oto-laryngology. An Irish laryngologist, Sir Robert Woods, has earned such distinction in our special work that he has lately received the well-earned honour of knighthood; and "gallant little Wales" presents in Dr. D. R. Paterson a laryngologist of such culture and merit that he is now the president-elect of the Section of the Royal Society of Medicine.

The work done and being done in Great Britain bears the character of the nation. It is noticeable for its practical character, for the quick adoption of any idea or procedure which promises ready application in practice, for the instinct to simplify complicated methods, and for its humanity. As I remarked in Berlin in 1911, it is to a large extent true that the gold of science is mined in Germany, minted in France, and put in circulation by the English!

THE FOUNDATIONS OF BRITISH OTOTOLOGY.

BY MACLEOD YEARSLEY, F.R.C.S.,

Senior Surgeon to the Royal Ear Hospital, etc.

THE occasion of an International Congress of Medicine in London is the opportunity for taking stock of what British science has done in the past in the various departments of medical work. When one looks over the history of otology in the United Kingdom during the past century one



SIR GEO. JOHNSON (*President*).



SIR FELIX SEMON (*Secretary*).



DR. F. DE HAVILLAND HALL (*Secretary*).



DR. T. J. WALKER (*Secretary*).

EXECUTIVE OFFICERS, LARYNGOLOGICAL SECTION, INTERNATIONAL MEDICAL CONGRESS, LONDON, 1881.

finds much to be proud of, and can realise that our country has played a foremost part in one of the youngest of the great special branches of medicine and surgery.

Until the seventeenth century—indeed it is not an exaggeration to go further and say until the nineteenth century—otology was very empirical, and had scarcely passed out of the domain of quackery. Sir William Wilde, writing in 1853, remarks that “the affections of the ear, whether functional or organic, are spoken of, lectured on, written of, and described (even in great part to the present day), not according to the laws of pathology which regulate other diseases, but by a single symptom, that of deafness.” This quotation is a very true one, and demonstrates the unscientific condition of otology up to within comparatively recent times.

The fact that the names of the earlier pioneers of aural anatomy—Eustachius, Vesalius, Ingrassia, Columbo, Fallopius, Koiter, Varolius, Fabricius, Rivinus, Brendel, Zinn, Cotugno, Scarpa, Sömmering, Corti—are all foreign, has helped to hide much of the progress of otology due to British scientists, and has partially veiled the names of such men as Munro, Tod, Home, Shrapnell, Buchanan, Wharton Jones, Wallis, Petit, Cleland, and others.

Otology has practically no history worth mentioning before the eighteenth century, although John of Gaddesden recognised the importance of drainage in treating middle-ear inflammation sufficiently to recommend that, in cases of discharge, one of the lower classes should be hired to suck out all the morbid material of the ear by means of a tube in the meatus! It may be noted, in this connection, that Fallopius (1523-1562) first taught that a discharge of pus from the ear of a child should not be meddled with, as it was an effort of Nature to throw morbid material out of the head through the ear! A teaching that may have formed the foundation of that pernicious doctrine of the unwisdom of “stopping a discharge” that even now survives among the ignorant, and is responsible for numerous fatalities and destruction of hearing.

It is difficult to trace the rise of British otology from its emergence out of the slough of empiricism and quackery to its present position as a scientific speciality based upon a solid foundation; one can only take the names of British otologists in chronological order and note what they have achieved. If this be done, it will be found that many advances popularly attributed to our continental *confrères* have in reality originated in our islands.

A notable instance of this fondness for referring British discoveries to foreign countries is the so-called “German system” of deaf education, now designated, more appropriately, the “oral system.” It is a fact that this method of education was in use in England and Scotland in Dr. Johnson’s time, and is mentioned by Boswell in his biography. This was long before it was even thought of in Germany. But one may go still further, and say that a full century before Dr. Johnson visited Braidwood’s school in Edinburgh, and was pleased with the way in which a deaf scholar pronounced one of the lexicographer’s *sesquipedalia verba* written upon the board, long before the congeries of states was welded into the German Empire, an Englishman was educating deaf children to speak. John Wallis, Savilian Professor of Geometry at Oxford, and one of the founders of the Royal Society, exhibited to Charles II, in 1663, a “deaf and dumb” youth, Daniel Whalley, the son of a friend, whom he had taught to speak and to understand speech. Wallis’s method was applied in a few other cases,

and its origin may be traced to his treatise, "De Loquela," on the methods of production of articulate sounds.

In 1680 Thomas Willis first drew attention to the symptom of hearing better in a noise (*paracusis Willisii*).

J. L. Petit, a British surgeon, was the first, according to Schwartz, to open the mastoid for the evacuation of pus, an operation which he performed between 1750 and 1774. Although the history and development of the mastoid operation has been rather the achievement of Continental surgery, it is interesting to know that it is to Great Britain that the earliest record of this valuable surgical advance is to be attributed.

Another great advance in otology originated practically with a British surgeon. It is true that Guijot, the postmaster of Versailles, invented the first form of Eustachian catheter in 1724—he used it upon himself through the mouth; but it was Archibald Cleland, an English army surgeon, who, in 1741, advised injections *viâ* the Eustachian tube, and used probes for its exploration. According to Wilde it is certain that Cleland was the first to introduce the catheter through the nose. He was also the first to use a lens for the examination of the ear. In 1755 another British surgeon, Jonathan Wathan, reported cases of Eustachian catheterisation, without, apparently, knowing anything of Cleland's work on the same subject.

Alexander Munro (1797), Professor of Anatomy, Medicine, and Surgery in the University of Edinburgh, claims to have been the first anatomist to trace the auditory nerve within the cochlea, vestibule, and semicircular canals, and wrote a monograph on the organ of hearing in man and the other animals.

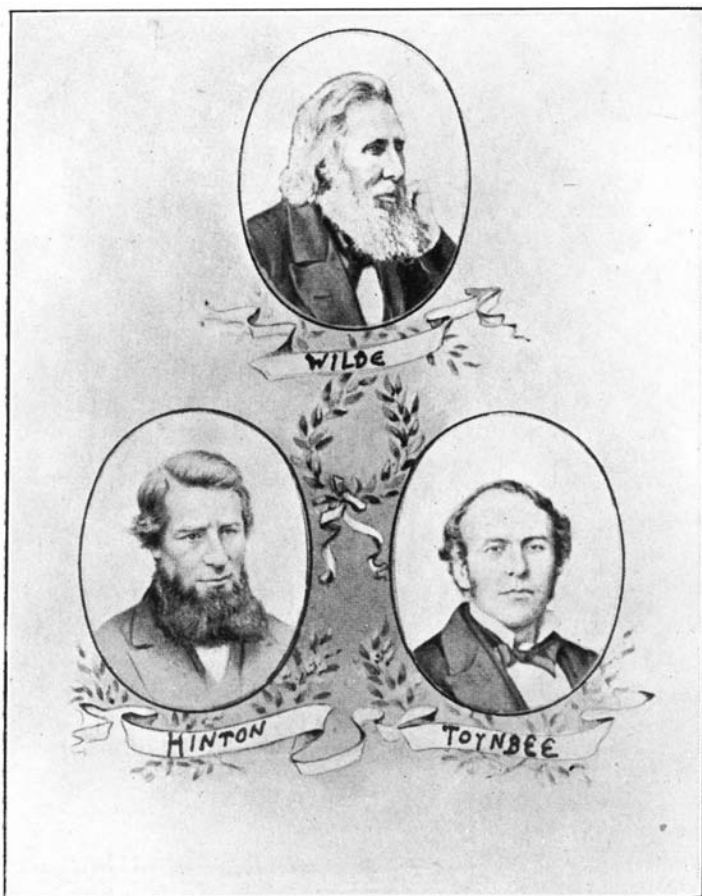
David Tod, who wrote three treatises on the brain, the eye and the ear, published in London and Edinburgh in 1797, also contributed essentially to the anatomy of the ear.

Sir Everard Home, Hunter's son-in-law, was the first to write an exact account of the tympanic membrane, published in the *Philosophical Transactions* for 1800, and it was he who suggested to Sir Astley Cooper the operation of perforation of the membrane. John Cunningham Saunders also, in his work on the ear, which is brief, scientific, and far beyond its predecessors, advocated paracentesis in acute suppuration of the middle ear. He was the first, in March, 1805, to establish an infirmary for the deaf, the work of which was, however, limited later to the eye.

In 1816 John Harrison Curtis founded the Dispensary for Diseases of the Ear, which later became the Royal Ear Hospital, for Diseases of the Ear, in 1841, when the late Queen Victoria became its patron. Curtis was succeeded about the year 1845 by William Harvey, who died of carbuncle in December, 1876. This hospital can, therefore, lay claim to being the oldest special hospital in existence. Curtis published a treatise on the physiology and pathology of the ear in 1836.

In 1832 Henry Jones Shrapnell first described, in the *Medical Gazette*, that part of the tympanic membrane which is known by his name. Between that date and 1823 the most noteworthy production of British otology was a book upon diseases of the ear, published by Thomas Buchanan, of Hull. This surgeon published four works.

Between 1836 and 1839 T. Wharton Jones contributed a very valuable monograph upon the ear to "The Cyclopædia of Anatomy and Physiology" (edited by Robert B. Todd), and in 1839 Joseph Williams won a gold medal from the University of Edinburgh for his monograph on the anatomy, physiology and pathology of the ear.



WILDE. HINTON. TOYNBEE.

The early Victorian period, into which we have now entered, was, however, the dawn of modern British otology, and Grunert, in a letter to the *Lancet* (1900, ii, p. 1836), acknowledges that the English otologists were the first to promote the study of otology on a sound scientific basis. At least six great names must endure as inseparable from the rise and growth of British otology—William Harvey, James Hinton, George Pilcher, Joseph Toynbee, William Wilde, and James Yearsley—whilst it would be invidious to mention those who, still living, have advanced the work to its present state. To these six surgeons I propose to devote some detail. Of William Harvey I have been unable to find any obituary notice, save a short paragraph noting his death in the *Lancet* of 1876. His name is not to be found in the "Dictionary of National Biography," save in a note, to be referred to later, on Pilcher.

James Hinton was born at Reading in 1822. In 1838-9 he was cashier in a woollen drapery in Whitechapel, after which he became a clerk in an insurance office. Slaving at what must have been an uncongenial occupation, he devoted his nights to study, becoming later a student at St. Bartholomew's. Taking his M.R.C.S. in 1847, he spent some time at sea, his prospects clouded by an unrequited attachment to a Miss Haddon, who twice rejected him. He next began practice in Bartholomew Close in partnership with Fisher, paying special attention to aural surgery. His life became brighter when Miss Haddon succumbed to his third entreaty and married him in 1852. In 1854-5 he delivered a course of lectures on "Sound," and, in 1856, began a literary career by papers on physiology and ethics. To otology he contributed his "Atlas of the Membrana Tympani," "Questions of Aural Surgery," and translations of v. Tröltsch's "Surgical Diseases of the Ear," and of Helmholtz's "Mechanism of the Ossicles and of the Membrana Tympani," published by the Sydenham Society. In 1875 he began to suffer from brain trouble due to overwork, and started on a voyage to the Azores, only to die on December 16, 1875, of acute inflammation of the brain.

George Pilcher, born in 1801, obtained his M.R.C.S. in 1824, and began at once to practise as a surgeon in Dean Street, Soho. He was appointed lecturer on anatomy, physiology and surgery at the West Street School of Medicine, and became consulting surgeon to the Surrey Dispensary. In 1838 he was awarded the Fothergillian Gold Medal of the Medical Society of London for a valuable essay on the structure and pathology of the ear. He was President of the Medical Society in 1842, and became lecturer on surgery to St. George's Hospital in 1843, in which year he received the F.R.C.S. on the foundation of that diploma. He died in 1855. In the "National Dictionary of Biography" it is said that he "entered upon the practice of aural surgery at a time when the quackery of John Harrison Curtis had raised that speciality to an unenviable notoriety. To Toynbee, Pilcher, Yearsley and Harvey, aural surgery in this country mainly owes . . . its position."

The name of Joseph Toynbee, otologist and philanthropist, must ever stand out among British otologists. Born in Lincolnshire in 1815, he obtained his M.R.C.S. in 1838. His aural studies began during student life, letters from him, signed "J. T.," appearing in the *Lancet* of 1836. After acting as assistant to the late Sir Richard Owen at the Royal College of Surgeons, he became surgeon to the St. James's and St. George's Dispensary, where he established a Samaritan Fund. For his researches demonstrating the non-vascularity of articular cartilage he was made F.R.S. in 1842, and in 1843 he became one of the first Fellows of the Royal College of Surgeons. Commencing practice in Argyll Place,

he removed later to Savile Row, and was appointed aural surgeon and lecturer upon diseases of the ear to St. Mary's Hospital in 1852, a post which he resigned in 1864. He was, besides, aural surgeon to Earlswood Asylum for Idiots, and consulting aural surgeon to the Asylum for the Deaf and Dumb. His work in otology is mainly valuable for its anatomical and pathological investigations, and a lasting monument of his labours is to be found in the famous Toynbee collection in the Museum of the Royal College of Surgeons. His valuable life was prematurely ended on July 7, 1866, from the accidental inhalation of chloroform whilst experimenting to find out a method of relieving pain in acute inflammation of the ear. His work has, however, won lasting fame, and, according to St. John Roosa, it was his observations on the muscular action required to open the Eustachian tube that led Politzer to his method of inflation.

A name scarcely less great than Toynbee is that of William Robert Wills Wilde, who was born at Castlereagh, Co. Roscommon, in 1815. Apprenticed to Professor Colles in 1832, he became M.R.C.S.I. in 1837, after which he went for a voyage, of which he wrote the narrative. After study at Moorfields Ophthalmic Hospital, Berlin and Vienna, he settled in Dublin in 1841, where he founded the Hospital for Diseases of the Eye and Ear. In 1853 he published his standard work, followed later by a book on the eye. He wrote also upon non-professional subjects. Appointed surgeon to the Queen in Ireland and receiving the honour of knighthood, he died in 1876. His work did more to place otology on a sound basis than anything which had appeared since the days of Valsalva. He taught that the true nature of aural disease was inflammatory in a large proportion of cases, and, as St. John Roosa puts it, "Wilde deserves the title of the Father of Modern Otology." Fayette C. Ewing, writing on the "Progress of Otology in Fifty Years" in the *Laryngoscope* for 1903 (pp. 857-860) and noting the effects of Listerism in aural surgery, points out that Wilde knew and insisted upon the importance of cleanliness and drainage, and the advances made since his time hinge almost entirely upon antisepsis.

James Yearsley is now best known for the artificial trachea which bears his name. But he did better work than that, and he laid the basis of much of what is the basis of modern treatment and preventive work, the study of the naso-pharynx. Born in Cheltenham in 1805, he became the pupil of Ralph Fletcher of Gloucester (a man well known as a skilful surgeon and a collector of pictures), whose daughter he married. Later a student at St. Bartholomew's, he became M.R.C.S. and L.S.A. in 1827, L.R.C.P.Ed. in 1860, and M.D. St. Andrews in 1862. After a short period (1829-1837) in general practice—so valuable to the specialist—at Ross, in Herefordshire, he studied as an aural surgeon in Savile Row, founding shortly after the present Metropolitan Ear and Throat Hospital. He wrote several works on otology and on diseases of the throat, which, if less scientific than those of his contemporaries, are valuable for their sound doctrine regarding the origin of most cases of impaired hearing in the mucous membranes of the throat and ear. He insisted strongly upon the connection between deafness and diseases of the naso-pharynx and advocated the removal of tonsils. He died in 1869 and lies in the churchyard of his son's church at Sutton Bonnington in Leicestershire.

To carry this short sketch of British Otology beyond these men who laboured to establish it upon a firm and scientific basis would be beyond its scope. Sufficient has been said to demonstrate that our speciality owes much to British science. Its development and its future lie in able



JAMES YEARLEY.



SIR WILLIAM DALBY (*President*).



DR. PRITCHARD (*First Secretary*).



DR. LAIDLAW PURVIS (*Second Secretary*).

EXECUTIVE OFFICERS OF OTOLOGICAL SECTION, INTERNATIONAL CONGRESS OF MEDICINE,
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hands, and, in more recent times, the names of Cresswell Baber, McEwen, Urban Pritchard, Dalby and others show how well the legacy of the early Victorian aural surgeons have been administered in trust for future generations. The future of British otology is safe; it is advancing and will advance, and the direction taken by that advance will be that of prevention.

**A SURVEY OF THE WORK DONE IN BRITAIN ON THE
DISEASES OF THE NASAL CAVITIES AND THEIR
ACCESSORY SINUSES.**

BY A. LOGAN TURNER, M.D., F.R.C.S.E.,

Surgeon to the Ear and Throat Department, Royal Infirmary, Edinburgh; and

W. G. PORTER, M.B., F.R.C.S.E.,

Surgeon to the Eye, Ear, and Throat Infirmary, Edinburgh.

IN reviewing British work in the domain of the nasal cavities, we shall refer in the first instance to investigations on the development and anatomy of the parts and to those dealing with physiology.

Anatomy and Physiology.—Among papers on development one by J. E. Frazer (1), published in 1910, on the early development of the Eustachian tube and naso-pharynx, is worthy of mention. He regarded the tube and middle-ear cavities as derived from a recess that was really part of the pharyngeal cavity containing in its walls first, second, and probably third arch elements, and therefore differing from the view generally held, that they are derived from the first inner cleft recess. In his investigations he made use of reconstruction models and serial sections.

Here, also, we may refer to a paper by W. G. Porter (2) (1907) on a fold sometimes to be found immediately in front of the posterior nares. The fold was first noticed on the normal side in a case of unilateral atresia of the choana, and it appeared to be a very slight degree of atresia on that side as well. Subsequent investigation showed that this fold was present in one out of three individuals, and the author suggested that it probably represented the remains of the bucco-nasal membrane, the persistence of which, as Haag pointed out, was probably the cause of congenital atresia.

An interesting investigation has been carried out by T. W. E. Ross (3) (1913) on the nerve supply of the inferior turbinal as shown by vital staining. He showed that the inferior turbinals have an abundant and complex nerve-supply, especially in the subepithelial area, where several varieties of nerve-endings are found, including a plexus formed by flashes of nerve-fibrils, best seen towards the anterior part of the turbinal.

A number of valuable researches have been carried out by British authors on the physiology of the nose, especially in relation to its respiratory functions. Although Aschenbrodt, of Würzburg (1886), was the first to examine the temperature and hygrometric conditions of the air after passing through the nose, Greville Macdonald (4) in 1888 made original observations on the same subject and obtained very similar results. He found that whatever the atmospheric temperature, the inspired air on passing through the nose alone was raised or lowered