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CENTENNIAL SERIES

EDITOR'S COMMENT: Dr. Jerome Goldstein was impressed with this article and suggested it might be published in this Centennial Series. I agree. While many of us do not have connections with the New York Eye and Ear Infirmary, we do appreciate the proud heritage of our field. Enjoy.

Otolaryngology in America: The beginning

A historical review of the Department of Otolaryngology on the occasion of the 175th anniversary of the New York Eye and Ear Infirmary

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The New York Eye and Ear Infirmary is the oldest hospital of its kind in the western hemisphere and the third oldest hospital in New York City. New York Hospital, founded in 1769, is the second oldest hospital in the United States. Bellevue Hospital was founded in 1816, and the New York Eye and Ear Infirmary was founded in 1820.

Dr. Gerald B. Kara,[1] former Executive Surgeon and Director of Ophthalmology at the New York Eye and Ear Infirmary, set the stage depicting the period of time during which the Infirmary came into existence and expressed an appreciation of the bravado and strength of conviction displayed by the two young founders:

> Queen Victoria, was one year old. King Louis XVI was the King of France. Napoleon was languishing in exile on the Island of St. Helena. Maine was admitted to the United States as its twenty-third state. The flag of Spain was still flying over Florida. James Monroe was the President of the United States, DeWitt Clinton, the Governor of New York State. New York City had 150,000 people.[1]

Slavery existed in New York City. Many of the houses were wood, and therefore fires were frequent. There was no sewage system, and refuse was dumped into the Hudson and East Rivers, mostly at night. Philadelphia was the medical center of the country.

In Europe, Paris and Vienna had been world renowned for surgery, but in the early 1800s London became the center of world surgery. America had "inherited" English traditional medicine and surgery, and many surgeons throughout the world, including Americans, visited London to learn and perfect their skills. The major textbooks of medicine were British.[2]

No steam-powered vessel had yet crossed the Atlantic.

In this article, although emphasis will be placed on the development and evolution of the Department of Otolaryngology of the New York Eye and Ear Infirmary, it is impossible to separate the very significant achievements within the Department of Ophthalmology. In-

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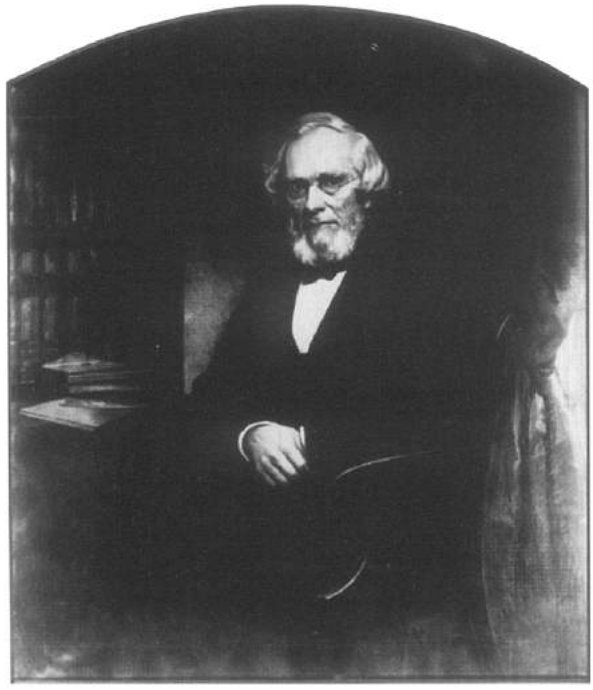

Fig. 1. Edward Delafield, MD.

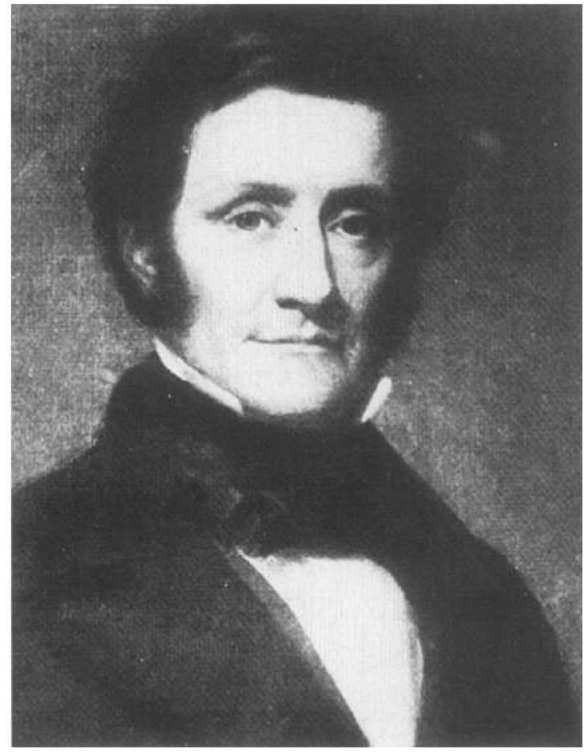

Fig. 2. John Kearney Rodgers, MD.

deed, the very beginning of the Infirmary's rich history was based on diseases of the eye. Scattered throughout will be a time line of developments in the United States to serve as a reference for activities occurring at the Infirmary.

In 1816 two young surgeons of very distinguished parentage, because they were dissatisfied with graduate medical training and because of the lack of knowledge of diseases of the eye in the United States, traveled to the London Infirmary, now the Royal London Ophthalmic Hospital (Moorfields), to study eye disease. The London Eye Infirmary was founded in 1804 by John Cunningham Saunders "out of compassion for the pitiful state of many soldiers returning from the Egyptian campaign afflicted with military ophthalmoplegia and trachoma infections."[3] The two surgeons were (1) Edward Delafield (Fig. 1), a 22-year-old graduate of Yale University and the College of Physicians and Surgeons and a medical resident at the New York Hospital; and (2) John Kearney Rodgers (Fig. 2) (the son of Dr. John R. B. Rodgers, a physician on the staff of the New York Hospital), a 23-year-old graduate of Princeton University and the College of Physicians and Surgeons and a surgical resident at New York Hospital. Remembering the blind of New York, "who are huddled together with paupers and criminals in the Alms House at Bellevue,"[3] Delafield and Rodgers resolved that on their return home they would found an infirmary, the primary objective being, in their own words, "to contribute toward the relief of the poor, who, by a diseased state of one of the most important organs of the human body, are deprived of the means of gaining a livelihood."[3]

Dr. Rodgers passed the examination and received a license of the Royal College of Surgeons before leaving London. When Delafield and Rodgers returned to New York City in 1818, they found that the two existing hospitals did not consider eye disease very important and that the poor received little or no eye care. They could not convince New York City officials of the need for an eye institution, and because they had no funds, they entered into private practice. As well as being ophthalmic surgeons, Edward Delafield was Professor of Obstetrics and Gynecology and Professor of Diseases of Children at the College of Physicians and Surgeons and later was to become President of the College of Physicians and Surgeons, and John Kearney Rodgers was a general and vascular surgeon at New York Hospital. This diversification reflects the nature and practice of medicine at that time. Specialization was not looked on with approval during the early 1800s. It was believed

that physicians and surgeons should possess general knowledge and skills.

They rented the second floor, a two-room suite, of a small, two-story brick house at 45 Chatham Square (Fig. 3), near Park Row, across from city hall, and the first patient was treated on August 14, 1820. This patient was afflicted with a fistula of the lacrimal sac.[2] To demonstrate the good to be derived from such an institution, they agreed to make the effort and to call for no public assistance until they could show results of a character and number sufficient to prove how many poor suffered from eye disease and how much could be done for their relief.

Life in the city was concentrated in the southeastern tip of Manhattan. Greenwich Village was the northern suburb of the busy seaport of New York City. Chatham Street was in the midst of the area of New York's greatest activities. Outpatient professional care and medicines were provided free of charge. Medical students from Columbia University, who were taught how to prepare medications and therapies, functioned as apothecaries. The physicians donated their services for 1 hour 3 days per week. They appointed Dr. Wright Post and Dr. Samuel Borrowe, who were surgeons at New York Hospital and "two of the finest physicians of New York City,"[4] as consulting surgeons. This appointment guaranteed respectability and credibility to their project.

The first annual report of the New York Eye Infirmary was given at the City Hotel on January 18, 1821, and stated, "1120 persons, affected with various diseases of the eye, have, in the course of little more than one year, come forward for relief, and that of this number, 801 have been cured."[5]

On March 9, 1821, a meeting was held at the famous City Hotel, on Broadway between Cedar and Thames Streets. Mr. Jennings, the proprietor, gave free use of the meeting room at the hotel. This meeting, led by Colonel William Few, resulted in the permanent organization of the Infirmary. Among the many persons at this meeting was Philip Hone, later known as the "gentleman mayor of New York," and Dr. David Hoyack, the most eminent physician in America, who was the physician who attended Alexander Hamilton after his famous duel with Aaron Burr. A committee was formed to solicit subscriptions of well-known and highly esteemed citizens of New York. A payment of $40 or more would constitute a Governor for Life, an annual payment of $5, a Governor, and an annual subscription of $3, also a Governor, but one who would only be able to "retain one patient at all times at the Infirmary, whereas the other Governors could send two sick patients."[5] A

Fig. 3. First home of the New York Eye and Ear Infirmary at 45 Chatham Square.

society was thus formed, and it consisted of more than 200 members. They reconvened on April 21, 1821, and named officers and directors of the New York Eye Infirmary from among the members of New York City's finest families. The board was called "the Society of the New York Eye Infirmary." Many were also on the board of the New York Hospital. Colonel William Few (Fig. 4) was named president and served from 1821 to 1828. He was a member of the Constitutional Congress and cosigner of the Constitution of the United States, a founder of the University of Georgia, and a former Georgia state senator. He commanded the Georgia State Militia during the Revolutionary War. Colonel Few moved to New York State in 1799 and became alderman of New York City by appointment of the Governor of New York State (Kara GB, Personal communication, September 1995). Colonel Few was a bank president who lived at 221 Broadway, in a home previously owned by Aaron Burr. He retired at the age of 79 years to Beacon, New York, and died in 1828. He is buried in Beacon, New York. To this day, it is not known how he became active in the cause of the Infirmary.

The bylaws of the New York Eye Infirmary were established and, for a large part, written by Colonel Few, reflecting very much the style of the Constitution of the United States. By an act of the legislature of the State of New York, the charity was incorporated under the name of the New York Eye Infirmary on March 29, 1822. Diseases of the ear were also treated from the beginning and recorded as "anomalous diseases." In

Fig. 4. Colonel William Few.

1824 an otology service was officially added. The 1824 Annual Report of the New York Eye Infirmary stated, "The directors are aware that during the last year, 1823, a new branch has been added to the institution; and patients have been received and put under treatment, affected with deafness and other diseases of the ear."[6] Treatment of specific diseases of the ear was first documented in 1829[7] and included otorrhea, 27 cases; otitis, 16 cases; ulcer of the external ear, 2 cases; wax, 9 cases; increased secretion of wax, 3 cases; defective secretion of wax, 7 cases; thickening of the membrane of the tympanum, 5 cases; tinea auris, 6 cases; erysipelas of ear, 3 cases; closure of eustachian tube, 4 cases; scrofula of ear, 3 cases; contusion of ear, 5 cases; fungus auris, 2 cases; and deafness, 17 cases.

The official title of the institution was changed, in 1864, to the New York Eye *and Ear* Infirmary by an act of the legislature in recognition of the services rendered, although the surgeons and directors had referred many times in their annual reports, as early as the 1840s, to the Eye and Ear Infirmary.

In 1822, because of the increasing population of New York City and the increasing awareness of the existence of the New York Eye Infirmary and its results of treatment, larger quarters were needed, and the New York Eye Infirmary moved to 1 Murray Street and Broadway, across from Columbia College. At this location, an apothecary was appointed to prepare and dispense medications. In 1824 the Infirmary moved to 139 Duane Street, near lower Broadway, a portion of a vacant building leased from, and on the grounds of, the New York Hospital. The building was formerly used to house the insane and was the former old marine hospital. The leased space consisted of a kitchen and one room on the first floor and the entire second floor. This lease was for $500 per year and was made possible by an act of relief from the New York State legislature, which appropriated $1000 a year for 2 years, for care at the New York Eye Infirmary, with the stipulation that at least one medical student from each county of the state be admitted free of charge to observe medical and surgical treatment at the Infirmary. Inpatient care, and therefore surgical capabilities, were established at this time. Private patients paid $2.50 per week. Patients from other states were required to pay for their own board.

One must wonder what would have happened had the New York Hospital made the New York Eye Infirmary a permanent part of its structure and organization. The entire surgical staff were physicians on the staff of the New York Hospital, and a large number of the Board of Directors were also on the Board at the New York Hospital. Other cities and major general hospitals would probably have followed this format, and there would not be the problem that exists today of freestanding eye and ear hospitals attempting to reaffiliate with general hospitals and universities for survival in this era of cost containment and managed care, and there would not be the duplication of services that exists between the general hospitals and specialty hospitals. But perhaps this separation helped to free ophthalmology and otolaryngology to expand to the levels they have achieved, unencumbered by the larger issues and problems of the general hospital.

John Delafield, Jr, Treasurer of the New York Eye Infirmary and brother of Dr. Edward Delafield, was charged with the task of developing a seal for the Infirmary. He and a committee put forth, and the directors adopted this seal on July 21, 1824, and depicted "the great physician restoring sight to a man born blind, the seal stands as a symbol of the religious background and piety of its founders."[8,9]

There were many other moves of the New York Eye and Ear Infirmary (Fig. 5): in 1827 to 459 Broadway, in

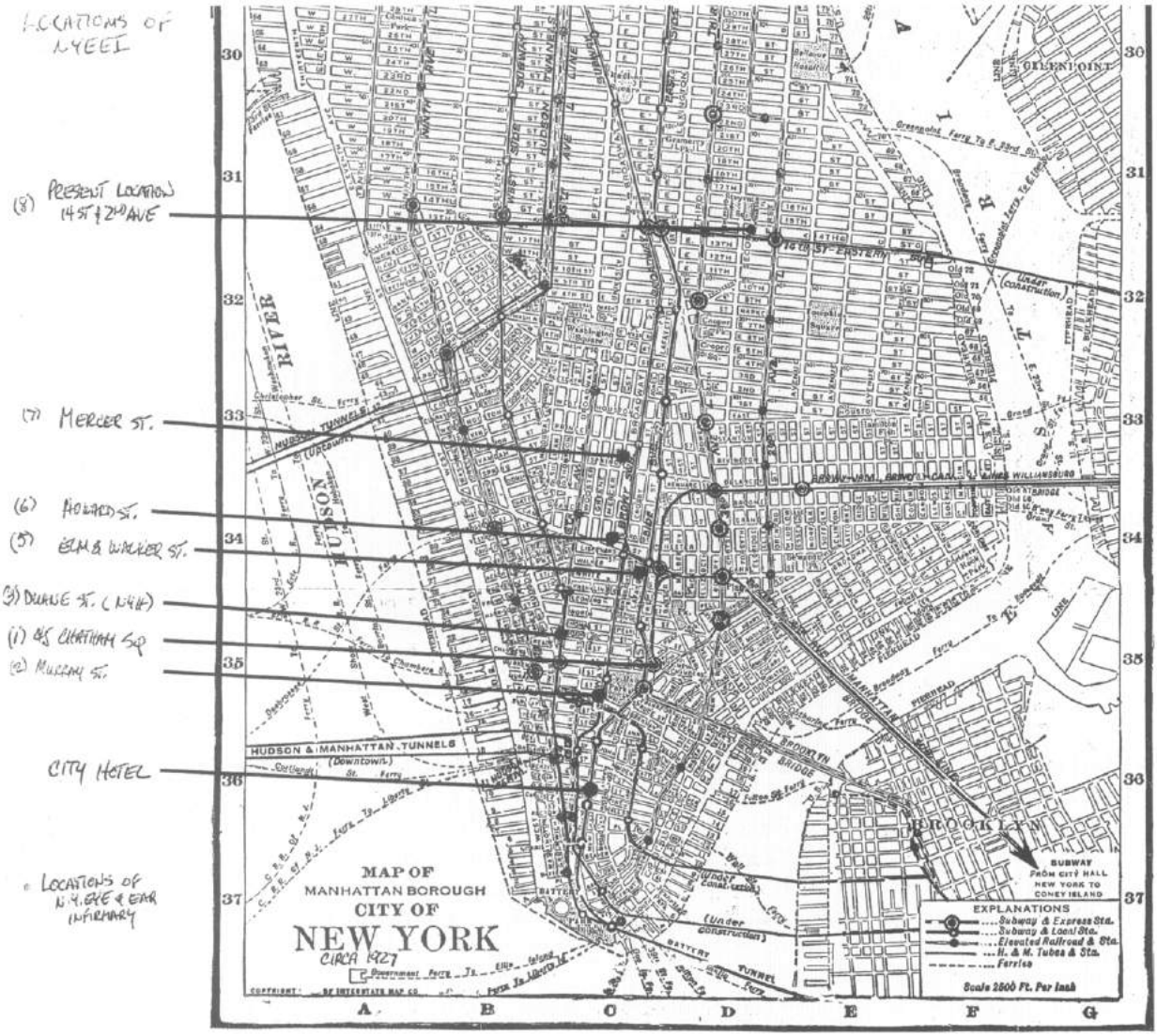

Fig. 5. Various locations of the New York Eye and Ear Infirmary (map ca. 1927—Borough of Manhattan, New York City).

1834 to 96 Elm Street on the corner of Walker Street, and in 1840 to 45-47 Howard Street near Broadway. The surgeons called to the attention of the Board of Directors and to the citizenry of New York City the need for a building erected with special reference to the wants of the Infirmary: "Besides the poor of our own city, there are patients from every county of the state, and even from other states, that avail themselves of our benefits."[10] The next year, in May of 1845, the Infirmary moved to 97 Mercer Street, between Spring and Prince Streets, the first structure purchased by the New York Eye Infirmary, and it cost $7000. The Infirmary very quickly outgrew this space because of the marked demand for services and the recognition of excellent care and results. The Board of Surgeons again appealed to the Directors in a very articulate presentation for the need for larger and more permanent quarters.[11] They stated that "this Infirmary was the first established in America, and though situated in the largest and most wealthy city of this country, its financial history presents a strong contrast with that of similar institutions in Boston and Philadelphia."[11]

Within a few years of the beginnings of the New York Eye Infirmary, because of the success of treatment

Fig. 6. New York Eye and Ear Infirmary at 13th Street and 2nd Avenue (ca. 1856).

rendered, similar institutions were established in Boston and Philadelphia. The Massachusetts Charitable Eye and Ear Infirmary was established in Boston in 1824 by Dr. Edward Reynolds, a friend and fellow student of Drs. Delafield and Rodgers. In 1850 a beautiful and commodious building was erected, and it is a lasting monument to the liberality of the State of Massachusetts and the benevolence of the citizens of Boston. In Philadelphia, the Wills Hospital similarly was constructed and stood as a monument to its citizenry. The population of New York City continued to explode, and the patients were coming to the Infirmary from all over the state and country, and several from other countries. Petitions were constantly being submitted by the surgeons and directors of the New York Eye Infirmary to the citizenry of New York and the state legislature for financial support for a new building.

At about this period, in October of 1846, Dr. W. T. Morton, a Boston dentist, administered the first ether anesthetic at Massachusetts General Hospital. It is reported that 31 days later, John Kearney Rodgers used an ether anesthetic for the drainage of a perirectal abscess and was considered one of New York's foremost general surgeons.[12] At the New York Hospital, in approximately 1848, he ligated the innominate artery, a procedure that had never been successfully performed before. Dr. Cornelius Rea Agnew (1830-1888), a surgeon at the New York Eye and Ear Infirmary, founded the Brooklyn Eye and Ear Infirmary in 1868 and the Manhattan Eye and Ear Infirmary in 1869.

Dr. Gurdon Buck, an attending physician at the New York Eye and Ear Infirmary from 1851 to 1860 and a visiting surgeon at the New York Hospital, was a founding fellow of the New York Academy of Medicine in 1847. He was well known for his facial plastic and reconstructive surgery and made enormous contributions to the development of clinical photography. He made routine use of photographs to document his surgical cases before and after operations. He was also known as the "father of intralaryngeal surgery" because of his method of laryngofissure in the treatment of laryngeal carcinoma. Before the invention of the laryngoscope, he developed a technique that reduced edema of the glottis,[13] thereby preventing suffocation. He also made contributions to orthopedic traction (Buck's extension) and anatomy of the genitourinary tract. Buck's fascia was named for him.

Ten thousand dollars was awarded by the State of New York, provided the Infirmary would be able to raise $20,000 by subscription, and another $10,000 was added for the total purchase of the land and construction costs. On April 25, 1856, a four-story brownstone on

Fig. 7. New York Eye and Ear Infirmary Clinic. (From Frank Leslies Illustrated Newspaper, New York City, April 10, 1875.)

13th Street and Second Avenue, in what was then a very fashionable neighborhood, was purchased (Fig. 6). There were first-floor clinics and 40 to 50 inpatient beds. Minutes from meetings in 1858 and 1859 mentioned the terms *outdoor patients* and *indoor patients.* In 1857 the Infirmary was open 5 days per week, with 2 days fully devoted to ear diseases. In 1862 the first house surgeon was appointed, although teaching always had been performed. Training was in both eye and ear diseases.

The arguments for the growth and existence of the Infirmary continued and were reviewed by Dr. Delafield in his address at the dedication of the new building of the New York Eye Infirmary on April 25, 1856. He said:

> The public seems to forget that the comparatively small sums necessary to sustain these charities [infirmaries and dispensaries] save thousands upon thousands [of dollars] in the way of taxes for support of alms houses, blind institutions, etc. . . . Thus the rich, in contributing to the support of this and other kindred charities, benefit not only the poor but indirectly themselves by affording opportunities to those who may one day become their own medical advisors to fully qualify themselves for their professional duties.[14]

The lectureships established at the Infirmary in 1823 were probably the first organized efforts at teaching ophthalmology in the United States, which in part helps explain why Drs. Rodgers and Delafield are often considered the "fathers of American ophthalmology," a term first used in 1850 by Dr. Edward Reynolds, their friend and founder of the Massachusetts Charitable Eye and Ear Infirmary. Edward Delafield was founder and first president of the American Ophthalmological Society in 1864.

Although Drs. Delafield and Rodgers actions since 1816 spoke for their belief in specialization, their strong convictions as to the need for specialized eye and ear care were articulated in Delafield's dedication address for the New York Eye Infirmary building:

> But I may be asked why should the surgery of the eye and ear be separated from the main body of the science? Why should a distinct infirmary be established for the relief of those who suffer under diseases of these organs? And why should a separate course of lectures be thought necessary to teach their nature and treatment? . . . Take also the general fact, which is incontestable, that no progress was made in the pathology and treatment of

NEW YORK
EYE AND EAR INFIRMARY
REPORTS

VOLUME I. PART I. JANUARY, 1893

The Knickerbocker Press, New York
(G. P. PUTNAM'S SONS)
27 & 29 WEST 23D STREET

Fig. 8. *New York Eye and Ear Infirmary Reports*, January 1893.

Fig. 9. New York Eye and Ear Infirmary (ca. 1900).

these diseases until they began to be taken up separately and distinct charities founded for their treatment.[14]

He used the London Eye Infirmary as his model:

> No human being can possibly be thoroughly versed in every part of our science and art . . . he may be an excellent general practitioner, but he cannot equally well treat every difficult case he may meet with . . . but I would by no means advocate the entire separation of this or any other class of diseases from the general practice of medicine. All experience has shown that individuals who have never pursued the general practice of medicine and surgery and who have abandoned it and devoted themselves to [eye] surgery alone . . . have generally degenerated into empiricism.[14]

In 1873 a throat department was added. The throat department received authorization to exist from the State Department of Legislature in 1874. Of relative historic interest, the first solely ear, nose, and throat institution in the United States was the Metropolitan Throat Hospital and Dispensary of New York, founded in 1873 by Clinton Wagner and Dr. David Delavan, a consultant at the New York Eye and Ear Infirmary.

The physical structure of the Infirmary underwent many modifications and additions, which were made necessary by the volume and diversity of medical and surgical diseases of the eye and ear and were made possible by constant fund-raising. In 1868 the directors passed a resolution "that any person giving the sum of $4,000 will found a permanent free bed. This bed will, during the lifetime of the donor, be occupied by such patients as he may designate. After his death, the bed will remain free for the use of poor patients and will bear the name of the donor inscribed upon it."[15] The Life Governors and Subscribers included the who's who in New York City society: Agnews, Astors, Delafields, Delavanes, Dubois, Lenoxes, Macys, Phelps, Rhinelanders, Wainwrights, Vanderbilts, and Roosevelts, to name just a few.

Construction of the Brooklyn Bridge began in

1870; it was designed by John Rogland and continued by his son 18 years later.

In 1870 the Infirmary expanded to 75 inpatient beds, 2 full-time nurses, and 23 eye and ear surgeons (Fig. 7). One house surgeon and two consulting surgeons lived in the building. In 1890 the brownstone building was torn down and replaced, and in 1890 to 1893 three floors were added to the restored brownstone.

In 1890 a state-chartered school of ophthalmology and otolaryngology (a postgraduate institute) and a school for nurses relative to eye and ear disorders were established.

The *New York Eye and Ear Infirmary Reports,* the journal of the New York Eye and Ear Infirmary, was established in 1891, and the first issue was published in January 1893 (Fig. 8). The following reports were included in that first issue: a case of suppurative otitis media, a report of 15 cases of mastoiditis, seborrheic affections of the external ear, adenoid growths as a cause of ear diseases in children, and primary chondritis of the larynx.

In 1895 Gugliamo Marconi pioneered wireless telegraphy.

In 1896 the eye and ear services were separated.

In 1896, Henry Ford produced his first car.

The annual report of the New York Eye and Ear Infirmary of 1897 stated, "Patients are to be received in the wards of the institution free of all charge for medical attendance, but in all cases where patients are able to pay, a charge of $7 per week is made to meet the expenses of board." The dispensing department is for the free medical and surgical treatment of the deserving poor, but no patient able to pay is accepted for treatment." It also stated, "In conducting the hospital work of the Infirmary, it was deemed appropriate to appoint a separate house staff, and thus the eye and ear services were divided."[16]

In 1900 (Fig. 9) the Platt Pavilion for contagious diseases of the eye was added to the restored brownstone. At this time Dr. R. Derby, Executive Surgeon Director, Otology Department, made a plea to the Board of Directors because of the growth of the aural department for "priority consideration for added space in operating rooms for aural patients." "The meager conveniences or, better said, their necessities afforded the aural department for the care of its capital operations are in painful contrast to the satisfactory accommodations provided the eye department for its cataract cases." "The average cataract patient of the clinic is old and a charge upon his relatives; the restoration of sight is, in the majority of cases, a temporary boon only, which the limitations of age must speedily terminate. The average intracranial case, on the other hand, is of middle age or younger. . . . Aural surgery today deals with questions of life and death."[17]

In 1903 the Schermerhorn Pavilion for diseases of the ear was completed.

The throat department was deleted in name only in 1902 because of the marked growth of the eye and ear sections. At this time the staff consisted of 31 surgeons, 56 assistant surgeons, and 12 house staff.[18]

Between 1820 and 1903 patients were never charged a clinic fee. In 1903 the fee was 25 cents. Only 40% of the patients paid this fee. This clinic fee lasted 50 years.

The inpatient charge was $7.50 per week for clinic patients, $15 per week for semiprivate patients, and $25 per week for private patients.

In 1902 the first electric hearing aid was invented. New York had its first subway in 1904.

The Clinical Congress of the American College of Surgeons was held at the New York Eye and Ear Infirmary in October 1924.

The first two examining boards in American medicine had their origin from the old Academy (the American Academy of Ophthalmology and Otolaryngology). The American Board of Ophthalmology was established in 1917, and the American Board of Otolaryngology established in 1924.[19] These two boards, along with the American Board of Obstetrics and Gynecology in 1930 and the American Board of Dermatology in 1932, formed the American Board of Medical Specialties in 1935, which now recognizes 24 specialty boards. The American Board of Facial Plastic and Reconstructive Surgery is currently seeking recognition.

The otolaryngologic section of the American Academy of Ophthalmology and Otolaryngology selected the New York Eye and Ear Infirmary as the site of its annual meeting in 1936.

In 1935 to 1936 the first wearable hearing aid was produced; it weighed two and a half pounds.

In 1938 an agreement was reached with the Columbia University College of Physicians and Surgeons whereby house officers of the New York Eye and Ear Infirmary could take a basic science course at Columbia Presbyterian Hospital. House officers who availed themselves of this privilege became eligible to receive a degree from Columbia University, as well as a diploma from the New York Eye and Ear Infirmary.

In 1940 all phases of expansion of the Infirmary were halted because of World War II. Intern quarters were changed to semiprivate rooms, and house officers' ac-

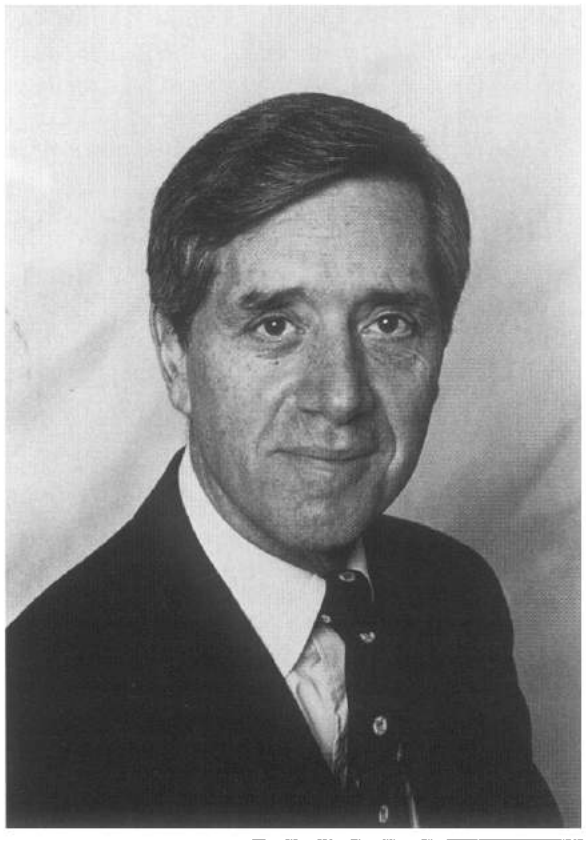

Fig. 10. Daniel Rabuzzi, MD.

commodations were moved to a residence on 14th Street.

In 1943 a new building was constructed in the courtyard to house the X-ray Department, the Bronchoscopy Department, and the Department of Research.

The patients treated since the opening of the Infirmary on August 14, 1820, represent all the nations of the Earth, white and black, free man and slave, veterans of the American Revolution, soldiers of the Duke of Wellington and Napoleon who crossed the sea, widows and orphans, all who have sought aid and have been administered to.[20]

In 1943, 132 staff physicians were in the Armed Forces, causing a shortage of staff. Therefore the entire teaching program of the New York Eye and Ear Infirmary was placed under the guidance of the College of Physicians and Surgeons of Columbia University. Dr. J. Morrisset Smith, the Executive Surgeon Director, was given the title of Professor of Otolaryngology and Executive Director of the Department.

The postwar years brought continued growth at the Infirmary. The clinics flourished, and the staff greatly expanded. In 1968 the North Building was dedicated, and the South Building was renovated. The New York Eye and Ear Infirmary at that time contained 207 beds and 10 operating rooms.

Since its founding in 1820, the New York Eye and Ear Infirmary never closed its doors, except for 3 months in 1822 during an epidemic of yellow fever, when all who could fled to the northern section of the city (Greenwich Village).

The New York Eye and Ear Infirmary is recognized as the oldest continuously existing specialty hospital in the western hemisphere. Its staff physicians were involved with nearly all ophthalmology and otolaryngology advances and organizations in New York City.

The New York Laryngological Society, the first of its kind in America, was founded October 13, 1873, by several physicians of the New York Eye and Ear Infirmary and others. To this date Infirmary physicians have been represented significantly. The New York Laryngological Society was the father society to the American Laryngological Society, which was founded in 1878.[20]

Arthur Duel (of facial nerve surgery fame) was one of the leaders at the New York Academy of Medicine and chaired the Otolaryngology Section at the turn of the century. He was influential in acquiring the site of, and in the construction of, the New York Academy of Medicine building on 103rd Street. He was a consultant at the New York Eye and Ear Infirmary.

The New York Otologic Society was founded on May 17, 1892. One of the founding physicians (Dr. Edward Dench) was a Surgeon Director at the New York Eye and Ear Infirmary.

Horace Green, a consultant at the New York Eye and Ear Infirmary in 1846, was considered by many to be the father of laryngology in New York City and one of the founders of the New York Medical College.[21]

In 1884 Karl Koller discovered cocaine and its use as a topical anesthetic. The first institution he lectured at in America was the New York Eye and Ear Infirmary.

Ed Burchell (1872-1960), who was at the Rockefeller Institute, was brought to the Infirmary before World War I.[22] For the next 50 years, he was revered throughout America for his temporal bone dissections and histologic preparations (Kara CB, Personal communication, 1980). Dr. Burchell was inducted as the *first* honorary member of the American Academy of Ophthalmology and Otolaryngology in 1944. (Weymuller EA, Personal communication, 1980).

There have been many other local, national, and international leaders in otolaryngology who have been

Fig. 11. Frank Lucente, MD.

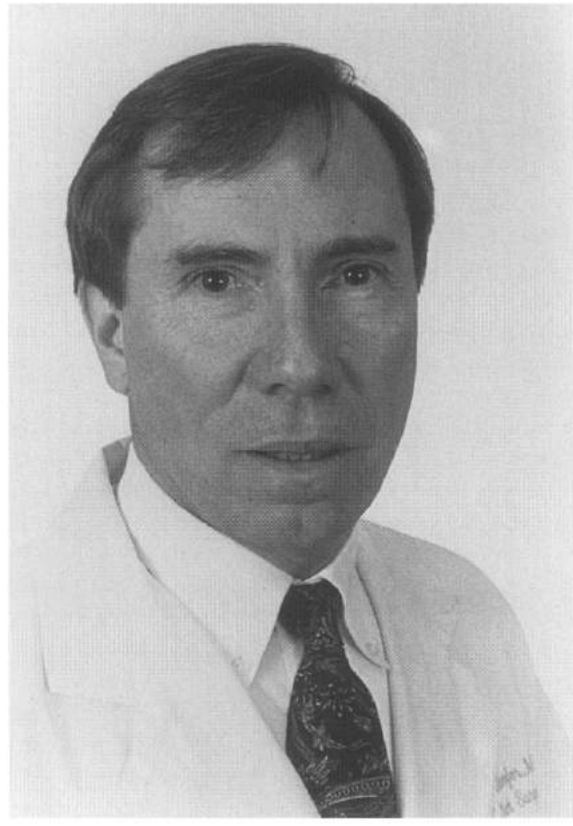

Fig. 12. Steven Schaefer, MD.

members of the staff of the New York Eye and Ear Infirmary. Time does not permit their listings and biographies.

In 1960 the New York Eye and Ear Infirmary had 104,000 total clinical visits; 29,000 ear, nose, and throat clinic patients were treated, and 2450 ear, nose and throat surgical procedures were performed. Gordon Braislin was President of the Board of Trustees. Colonel Charles E. Martin was the administrator. The Surgeon Directors, Department of Otolaryngology, were Drs. J. Swift Hanley, Earl Limbach, Greydon Boyd, Ernest Weymuller, Ward Dennison, and Arthur Cracovaner. Attending surgeons were Drs. Daryl Voorhees, Francis Fodor, Paul Chodosh, and Felix DePenies, and listed as a resident at that time was Dr. Hector Giancarlo; all were destined to be Surgeon Directors, Otolaryngology, within that decade.

The Research Department, cochaired by Dr. Godfrey Arnold, was very active and participated in many National Institutes of Health, U.S. Army, U.S. Air Force, and Deafness Research foundation investigations, and in 1960 Dr. Arnold received the Harris P. Mosher Award for his triologic thesis, "Physiology and Pathology of the Cricothyroid Muscle."

In 1961 Dr. Daryl Voorhees replaced Dr. Greydon Boyd, and in 1963 Dr. Felix DePenies replaced Dr. Ward Dennison as Surgeon Director. Clinical audiology was introduced at the Infirmary in 1945 to meet the needs of returning World War II veterans with service-connected hearing loss. This center developed into a sophisticated center for the evaluation of speech, hearing, and balance disorders. In 1961 the Department of Audiology's name was changed to the Hearing and Speech Department. The Director was Irwin Malles, PhD, who succeeded Mr. James A. DePew, Jr. The center is now the Hector Giancarlo Department of Communication Disorders.

In 1961 Dr. Watson Crick made a model of DNA.

In 1966 the Surgeon Directors, Otolaryngology, were Drs. Daryl Voorhees, Earl Limbach, Paul Chodosh, Felix DePenies, Ernest Weymuller, and Ricardo Bisi.

Satisfactory completion of the otolaryngology residency required, among other things, a 1-year basic science course, completion of the home study course of

the American Academy of Otolaryngology, and completion of an original basic clinical research project.

In 1968 there were 103,415 total clinic visits, 30,514 of which were otolaryngology visits, and 3065 ear, nose, and throat surgical procedures were performed. Dr. Ernest Weymuller, Executive Surgeon Director, Otolaryngology, appointed a full-time Director of Resident Education. The reputation of the Infirmary grew worldwide, and patients continued to come for medical attention from around the world. To meet the increased demand for services and the need for more space (the infirmary had been at the same location since 1856), the dream of decades was achieved in January 1968, when the new 107-bed modern voluntary hospital building was opened at 310 East 14th Street. A voluntary hospital operates as a nonprofit corporation, depending on contributions and endowments to cover its operating costs. As always in the past, the funds necessary had to be raised by the Board of Trustees and medical staff of the New York Eye and Ear Infirmary under the leadership of Gordon S. Braislin, President of the Board of Directors.

The New York Eye and Ear Infirmary complex consisted of three buildings: the newly dedicated north building; the historic south building, which included a ten-station temporal bone microsurgical laboratory, anatomic dissection laboratory, and historic medical library; and the 123-unit apartment building to house the house staff and nurses, which was completed in 1974.

Infirmary graduate surgeons are found throughout the United States and abroad. Many have excelled in their specialty and have occupied chairs in ophthalmology and otolaryngology in medical centers throughout the world.

In 1969 Neil Armstrong became the first man to walk on the moon.

In 1972 the computerized axial tomography (CAT scan) imaging system was introduced for medical diagnosis and research.

In 1973 magnetic resonance imaging (MRI) was developed for medical diagnosis.

In September 1980 an affiliation agreement was signed with New York Medical College. New York Medical College, owned by the archdiocese of New York and located in Valhalla, New York, is the third largest private medical university in the United States and the largest in New York State. Its affiliation with Metropolitan Hospital is the oldest continuing affiliation in the nation between a private medical school and public hospital, and it was the first medical college to own its own teaching hospital (1889), the Flower Fifth Avenue Hospital, named after Roswell Flower, who later became Governor of New York State.

In 1982 the first transplant of an artificial heart, Jarvik 7, was accomplished.

To further strengthen this affiliation and its teaching program, the Surgeon Directors, Otolaryngology (Executive Surgeon Director Dr. Kenneth Mattucci, Dr. Paul Chodosh, Dr. Y. B. Choo, Dr. Hector Giancarlo, Dr. Felix DePenies, and Dr. Stanley Blaugrund), in 1983—with the approval of the medical staff, medical board, and board of trustees—changed the Infirmary from a horizontally oriented, six-chief, surgeon director–led service, present for more than 100 years and serving the Infirmary well, to a more traditional, vertically integrated format. A search was made for the first Professor and Chairman of the Department of Otolaryngology–Head and Neck Surgery of the New York Medical College and the New York Eye and Ear Infirmary. Dr. Daniel Rabuzzi (Fig. 10), from Syracuse, was recruited and served with distinction until 1984. Dr. Frank Lucente (Fig. 11) followed and further strengthened and expanded our institution and teaching program to one of greater national prominence. In 1992 Dr. Steven Schaefer (Fig. 12) assumed the role of Professor and Chairman, Joseph Corcoran became Chief Executive Officer, and Joseph Burkart became President of the Board of Trustees.

At present the New York Eye and Ear Infirmary continues to grow and expand beyond the north and south buildings. Significant renovations of the existing structure are ongoing, providing ambulatory surgery facilities, private office space, expanded outpatient facilities, and support services. There were 57,000 ear, nose, and throat clinic visits, 2500 ear, nose, and throat ambulatory surgery procedures, and 1300 ear, nose, and throat inpatient procedures performed at the Infirmary in 1994. The total number of patients treated at the New York Eye and Ear Infirmary in 1994 was 164,500, quite a remarkable contrast to the 1102 patients treated in 1820. There are presently 37 residents, 16 of whom are otolaryngology house staff, many fellows, 544 physicians and surgeons, 81 full-time registered nurses, and 74 part-time registered nurses. In 1994 *U.S. News and World Report* ranked the Department of Otolaryngology of the New York Eye and Ear Infirmary *first* in the State of New York and *third* in the United States.[23]

With the solid base and background, with continued strong leadership and full-time and voluntary staff cooperation, I can see our continued growth and success as a nationally recognized teaching and re-

search center and provider of specialty medical and surgical care.

No historic sketch, however short, could end without reference to the illustrious laymen, our benefactors and directors, who from the days of Colonel William Few of revolutionary fame, the first President of the Board of Governors of the Infirmary, have made it possible for a long line of devoted and skillful surgeons to do such a vast deal, uninterruptedly, for more than 140 (now 175) years, for the relief of human suffering.

"Their Spirit Lives with Us for Evermore" (Annual Report of the New York Eye and Ear Infirmary, 1940).

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