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Part III: Clinical Departments and Divisions Continued --- Chapter 42: Department of Otolaryngology; Chapter 43: Dentistry and Division of Oral and Maxillofacial Surgery (Otolaryngology); and Chapter 44: Department of Ophthalmology (pages 671-706)

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“Yet it was not possible for me to say to men: speak louder, shout, for I am deaf. Alas! how could I declare the weakness of a sense which in me ought to be more acute than in others—a sense which formerly I possessed in highest perfection, a perfection such as few in my profession enjoy, or ever have enjoyed.”

—LUDWIG VAN BEETHOVEN (1770–1827)

The invention of the modern laryngoscope in 1855 by Manuel Garcia, a Spanish singing teacher in London, led to the early development of laryngology as a specialty both abroad and in America. One year earlier, Samuel D. Gross, destined to be the Professor of Surgery at Jefferson in 1856, published A Practical Treatise on Foreign Bodies in the Air Passages. It was a pioneer work, two years in the making, which consisted of 468 pages with 159 woodcuts, giving full reports of 200 instances and attempting to systematize all current knowledge upon this subject. It was to be made obsolete by the later work of Chevalier Jackson. It is of further interest that Gross in his System of Surgery (1859) devoted 33 pages to diseases of the ear. The Japanese used the Dutch translation to retranslate this section for their first reference book on otology.

The Early Years

The Department of Otolaryngology was not created at Jefferson until 1954. It developed from a
fusion of the Departments of Laryngology (1904), Otology (1904), and Bronchoesophagology (1924). This evolution is best understood in terms of the pioneers and early Professors who contributed to Jefferson's stature in this field.

Richard J. Levis, M.D. (1867)

Richard Levis (Figure 42-1) was born in Philadelphia in 1827. The son of Dr. Mahlon Levis, he attended Central High School (the degree at that time was equivalent to that from a Junior College) and graduated from Jefferson in 1848. In 1859 his appointments included Surgeon to Blockley (Philadelphia General Hospital), Pennsylvania Hospital, and Wills Eye Hospital. During the Civil War he volunteered in the Union Army. Upon completion of his military service as Surgeon he was appointed at Jefferson as Clinical Lecturer in Ophthalmology and Aural Surgery in 1867. In 1877 at the opening of the first Jefferson Medical College Hospital on Sansom Street, Levis was promoted to Professor of Aural Surgery.

In addition to his special interest in the eye and ear, Dr. Levis was an outstanding general surgeon. He modified numerous operative procedures and invented surgical instruments and orthopedic appliances. His lectures were "clear and concise," and he was a prolific writer. In 1879 he aided Dr. Samuel D. Gross in founding the Philadelphia Academy of Surgery and was an original member of the American Surgical Association. His leadership was also manifested in his Presidency of the Philadelphia County Medical Society (1885 and 1886) and of the Pennsylvania Medical Society (1888).

Jacob da Silva Solis-Cohen, M.D. (1868)

One of the most distinguished laryngologists in the nineteenth century was Dr. Jacob Solis-Cohen (Figure 42-2). He was born in New York in 1838 and educated in Philadelphia at the Central High School and the University of Pennsylvania Medical School, where he received his M.D. degree in 1860. After serving as a Surgeon during the Civil War, Dr. Solis-Cohen returned to Philadelphia and became associated with Jefferson. In 1867 he was appointed Lecturer on Electrotherapeutics. In 1869 he became Lecturer on Laryngoscopy and Diseases of the Chest. This was the era of the generalist, and there was much derision of anyone specializing; Samuel D. Gross, in introducing Dr. Solis-Cohen to the class, criticized him for leaving the ranks of legitimate practitioners to become engaged in a narrow specialty: "He devotes most of his time to a cubic inch of the human anatomy. Some day I suppose we will have specialists confining themselves to diseases of the navel."

Like most of his colleagues at Jefferson in the last half of the nineteenth century, Dr. Solis-Cohen wrote many papers and books. In 1867 he published *Inhalation: Its Therapeutics and...*
His most important book was *Diseases of the Throat and Nasal Passages—A Guide to the Diagnosis and Treatment of Affections of the Pharynx, Esophagus, Trachea, Larynx and Nares* (1872). No other book published in the United States has ever had a greater influence in disseminating a wide and thorough knowledge of laryngology. In 1874 a monograph was published on *Croup in Its Relations to Tracheotomy*. This was based on a study of 5,000 recorded cases.

Dr. Solis-Cohen considered himself “a physician with a specialty, always stressing the importance of a well-grounded knowledge of general medicine.” As a surgeon he was a pioneer and innovator. In 1867 he performed the first successful laryngotomy in the United States for removal of a cancerous growth. In 1892 he performed a closed field laryngectomy, which was successful.

As an organizer and leader, Dr. Solis-Cohen was a founder of the American Laryngological Association in 1878 and the *Archives of Laryngology* in 1880. He was President of the Philadelphia County Medical Society (1887–1888) and also a member of many civil and military organizations. “He was a prime mover, an original investigator, an artist in his specialty. He is one of the brightest stars in the galaxy of American laryngologists.” His portrait hangs outside the Solis-Cohen Auditorium in Jefferson Alumni Hall in company with his physician brother Solomon (Jefferson, 1883) and his lawyer nephew, D. Hays Solis-Cohen, a member of Jefferson’s Board of Trustees (1951–1970).

Laurence Turnbull, M.D. (1877)

Laurence Turnbull (Figure 42-3), born in Scotland in 1821, emigrated to this country at the age of 17 and was apprenticed to a drug manufacturer, Mr. John Bringhurst. He graduated from the Philadelphia College of Pharmacy and eventually took up the study of medicine in the office of Professor John K. Mitchell. Soon after graduation from Jefferson in 1845, Turnbull became resident physician at Blockley (Philadelphia General Hospital), and subsequently outdoor physician to the Guardians of the Poor for the district of Moyamensing, as well as vaccination physician for the same district. In 1857 Dr. Turnbull was elected one of the physicians to the Department of Diseases of the Eye and Ear of the old Howard Hospital (at Broad and Catherine Streets). In 1859 he visited Europe, where he studied diseases of the eye and ear. On his return he specialized in aural surgery.

In 1877 Dr. Turnbull was appointed Aural Surgeon and Chief of the Ear Clinic of the newly opened Jefferson Medical College Hospital on Sansom Street. “He was the first surgeon in the United States to perform the operation of perforation of the mastoid for disease in that region.” His textbook *A Clinical Manual of the Diseases of the Ear* (1872) went through two
editions. *Artificial Anesthesia: A Manual of Anesthetic Agents and Their Employment in the Treatment of Disease* (1878) had four editions. In addition to memberships in various medical societies, he presided over the Section of Otology of the AMA (1880) and the British Medical Association (1881).

Dr. Turnbull had many other interests outside of medicine. He was a member of the St. Andrews Society (a Scottish ethnic organization) from 1842 until his death in 1900. He frequently lectured at the Franklin Institute on such varied topics as *Chemistry Applied to the Arts and The Electromagnetic Telegraph.*

Generous with his earnings, Dr. Turnbull was a large contributor to the founding of the 1877 Jefferson Hospital. His pioneer clinical work, teaching, writing, and innovations make him a worthy contender for the title of "Father of American Otology."

David Braden Kyle, M.D.; First Chairman of Laryngology (1904–1916)

As was the fashion in the last half of the nineteenth century, the next Professor of Laryngology, David Braden Kyle (Figure 4-2-4) had a varied career before entering the practice of otolaryngology. Born in Cadiz, Ohio, in 1863, he graduated from Muskegon College and then from Jefferson in 1891. While at Jefferson he took private courses from Professor William Coplin in bacteriology and pathology, and from Professor John Chalmers DaCosta in nervous diseases.
anatomy, and surgery. In his senior year he was an office student of Dr. W. Joseph Hearn in surgery. At graduation he was awarded the gold medal by Dr. W.W. Keen for the best essay *The Pathology and Treatment of Tetanus*. He then became Assistant Demonstrator of Pathology. Upon beginning his practice he developed a private laboratory for instruction in clinical microscopy, bacteriology, and pathology. By 1896 Dr. Kyle had developed a practice devoted to diseases of the ear, nose, throat, and chest to such a degree that he was appointed Clinical Professor of Laryngology at Jefferson. He became full Professor in 1904.

Kyle was an active member of many medical organizations and was President of the American Laryngological, Rhinological, and Otological Society in 1900. He was author of *A Textbook on Diseases of the Nose and Throat* published in 1899 with five subsequent editions until 1914. Like most energetic surgeons, Kyle started in the operating room at 6:30 A.M. so that he could personally observe his patients after their surgical procedures. This was a habit following the custom of his predecessor, Dr. Solis-Cohen.

Dr. Kyle died suddenly in 1916 at the age of 53 from an attack of pleuropneumonia.

Seth MacCuen Smith, M.D.; First Chairman of Otology (1904–1929)

Seth Smith (Figure 42-5) was born in Hollidaysburg, Pennsylvania, in 1863. His father, Dr. G. W. Smith, was a physician who obviously inspired his son in the choice of a career. Dr. Smith graduated from Jefferson in 1884 and was resident physician at Germantown Hospital, where he became interested in diseases of the ear, nose, and throat. In 1886 he became Clinical Chief of Otology at Jefferson Hospital under the supervision of Dr. Laurence Turnbull.

Dr. Smith became Clinical Professor in 1894 and full Professor in charge of the Department in 1904. He wrote extensively, mostly on otology. His chapter on diseases of the ear was included in the *Harris System of Practical Therapeutics*. He edited the English translation from the German of the Bruhl-Politzer *Atlas of Otology*. He was on the council of the Triologic Society as well as various other national and international organizations. Upon his death in September, 1929, he left his entire library of over 1,000 volumes to Jefferson.

Chevalier Jackson, M.D.; Second Chairman of Laryngology (1916–1924), First Chairman of Bronchoesophagology (1924–1930)

Chevalier Jackson (Figure 42-6) was born in Pittsburgh in 1865, educated there for his college
degree, and graduated from Jefferson in 1886, just old enough to get a license to practice. He was much influenced by Professor Jacob Solis-Cohen, and on his return to Pittsburgh he began his practice of laryngology. As most ambitious young men of his time, he studied in Europe, visiting the clinics of Morrell Mackenzie in London and Gustav Killian in Germany. With the development of the tungsten electric light bulb, adequate vision of the esophagus and tracheobronchial tree became possible. Dr. Jackson, as a good mechanic, invented and improved the instruments used for the removal of foreign bodies from the food and air passages. Under skillful management the mortality of these cases was reduced from over 80% to fewer than 5%. In 1916 Dr. Jackson accepted the Chair of Laryngology at Jefferson, and in 1924 a new Department of Bronchoscopy and Esophagoscopy was created for him.

In 1930 Dr. Jackson reached the mandatory age of retirement at Jefferson. He was not ready to retire, so he moved the Jackson Clinic to Temple University while continuing as Professor at Woman's Medical College and the Graduate School of the University of Pennsylvania. One more career lay ahead. He became the President of the Woman's Medical College in 1935 and held that position until 1941.

One of Dr. Jackson's greatest contributions to humanity was the passage of a federal caustic poisons law in 1927. He was greatly influenced by the many tragic patients that he treated for lye ingestion. Jackson spent a large amount of time and energy contacting politicians all over the country to ensure the enactment of this legislation.

Dr. Jackson was a prolific writer, contributing hundreds of articles and 12 textbooks that have been translated into five languages. His textbook, Bronchoscopy and Esophagoscopy: A Manual of Peroral Endoscopy and Laryngeal Surgery (1922), became a bible in its field. He was at some time the president of every organization having to do with laryngology and a member of a multitude of foreign medical groups, and he was honored with medals and awards throughout the world.

Jackson was delicate in health and small in stature. Most meticulous with details, and never leaving anything to chance, he once stated: "I would be greatly distressed if a situation arose which I had not anticipated and not already provided for." His interest in medicine and people continued until his death on August 6, 1958, at the age of 93.

There is no large medical facility in the world that has not been touched by Dr. Jackson’s teachings of the art and science of bronchoesophagoscopy. His name is honored on Jefferson's Winged Ox column, and his portrait was presented to the College in 1956.

Fielding O. Lewis, M.D.; Third Chairman of Laryngology (1924–1934)

Fielding Lewis (Figure 42-7) was born in 1879 in Henderson County, Kentucky. He graduated from
the Philadelphia College of Pharmacy in 1901, was President of his graduating class at Jefferson in 1906, and interned there. He became the assistant to Dr. David Braden Kyle and associated with the Philadelphia General Hospital. During World War I he served as a surgeon with the rank of Captain.

Dr. Lewis was appointed Professor of Laryngology in 1924. He unfortunately had a severe “stroke” in 1934, which forced his retirement at the peak of his career. He retired to Chester County where he lived until his death in 1965. It was said that “surgery was done by him with the skill and thoroughness of a master craftsman.” He was one of the first in the United States to perform a wide-field laryngectomy.

Among the many organizations to which he belonged were The Triologic Society, American Academy of Ophthalmology and Otolaryngology, and the Philadelphia Laryngological Society. He was the author of over 20 papers including one on President Washington’s last illness.

Joseph Clarence Keeler, M.D.; Second Chairman of Otology (1930–1935)

Joseph Keeler (Figure 42-8) was born in Doylestown, Pennsylvania, in 1871 and after college...
graduated from Jefferson in 1896. Following internship at his alma mater he became the assistant to Dr. S. MacCuen Smith. During World War I he served in the Army Medical Corps. He also was associated with the Germantown Hospital, where he was Chief of Otology.

In 1930 Dr. Keeler was appointed Professor of Otology at Jefferson. He wrote a number of scientific papers including a review of 1,500 cases of mastoid surgery. He was the author of a popular textbook Modern Otology (1930), which he dedicated to his mentor, Dr. S. MacCuen Smith. He was a member of the American Otologic Society, the American Laryngological Society, the College of Physicians of Philadelphia, the Philadelphia Laryngology Society, and the American Academy of Ophthalmology and Otolaryngology.

Dr. Keeler was a very caring physician and treated his house staff and personnel with kindness and understanding. He was stricken with a heart attack while performing a mastoidectomy at Jefferson in September, 1935. 12

Horace J. Williams, M.D.; Third Chairman of Otology (1937–1950)

Horace Williams (Figure 42-9) graduated from Jefferson in the Class of 1912. Following internship there he served in the Army Medical Corps during World War I. On return from military service he became associated with the Children's Hospital and Germantown Hospital, where he worked with Dr. Joseph Keeler. At Jefferson he rose through the ranks to Professor and Chairman of Otology in 1937.

Dr. Williams was a skilled surgeon and excellent teacher. It was said that “to watch him operate with hammer and chisel and curette was to watch a great artist.” 12 During most of his career, which preceded the antibiotic era, he often performed five to ten mastoidectomies a week.

Dr. Williams was a member of the American Otologic Society, College of Physicians of Philadelphia, the Philadelphia Laryngological Society, the American College of Surgery, the Triologic Society, and the American Academy of Ophthalmology and Otolaryngology. He died June 5, 1950.


Louis Clerf (Figure 42-10) was born in Ellensburg, Washington, in 1889. He always spoke with pleasure of his youth on his father's cattle ranch. After graduating from St. Martin's College in Olympia, Washington, he attended the University of Oregon Medical School. Since most of the

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textbooks he used were written by Jefferson men, he transferred to Jefferson Medical College for his last two years, graduating in the Class of 1912. After two years of internship at Jefferson he became Chief Resident of the Hospital. During World War I he served in the Navy Medical Department, continuing his association in the reserves until he retired with the rank of Captain.

After the War he attended the New York Eye and Ear Infirmary until he returned to Jefferson in 1922 as Instructor in Bronchoesophagoscopy under Dr. Chevalier Jackson. When Dr. Jackson reached mandatory retirement age in 1930, Dr. Clerf was appointed Chairman of Bronchology and Esophagology. In 1936, after the early retirement of Dr. Fielding O. Lewis, Clerf was also appointed Chairman of Laryngology. In 1954 he became Emeritus Professor.33

Dr. Clerf gave himself fully to his profession. He was a member of over 25 medical organizations and gave talks in all the 48 states of the Union of his time. He became President of the Philadelphia County Medical Society, American Broncho-Esophageal Association, Philadelphia Laryngological Society, Triological Society, and New York Laryngological Society. He was also on the American Board of Examiners in Otolaryngology and the American Board of Chest Physicians. He received the honorary degrees of Doctor of Laws, Villanova University; Doctor of Science, St. Martin’s College; and Doctor of Letters, Jefferson Medical College. In addition to these activities he contributed over 200 papers to the literature. He always carried several pencils, almost too short to use, in his pocket to make notes.

At Jefferson, Dr. Clerf reorganized the Alumni Giving Campaign and headed the Alumni contributions to the Pavilion (Foerderer) Building. His portrait was presented to the College by the Class of 1949, and he was the first recipient of the Alumni Achievement Award in 1964. He was truly one of those recognized as a “Mr. Jefferson.”

Fred Harbert, M.D., Sc.D.;

Fred Harbert (Figure 42-11) came to Jefferson as Chairman of Otology in 1951 after an illustrious career in the United States Navy. Born in Detroit in 1905, Harbert received his B.S. degree from Wayne State University in 1928 and within a year his M.D. degree from the same University. After internship at the Philadelphia Naval Hospital he continued on active duty in the Navy until his retirement as Captain in 1954. During his tour of duty he continued his academic career with a year in otolaryngology at the Graduate School of the University of Pennsylvania and received his certification in otolaryngology in 1958. In 1943 he had a residency in ophthalmology at the Illinois Eye and Ear Infirmary and passed his boards in ophthalmology in 1946. He was one of the last eye, ear, nose, and throat specialists.4,15
Dr. Harbert succeeded Dr. Williams as Chairman of the Department of Otology in 1951. In 1954, on Dr. Clerf's retirement as Professor of Laryngology and Bronchoesophagoscopy, he was appointed Professor of Otolaryngology and Chairman of the unified Department.

Dr. Harbert's first love was teaching. His lectures were always clear and to the point. The student or resident who came to a session unprepared or who tried to "cover up" was treated in such a manner that it did not occur a second time. Dr. Harbert authored more than 60 scientific papers. He received a Master in Science (Medicine) in 1942 and Doctorate of Science (Medicine) in 1943. He was an examiner for the American Board of Ophthalmology for many years and a member of many national societies. He received the Distinguished Service Citation from Wayne State University.

Following his retirement in 1970 as Emeritus Professor, Dr. Harbert moved to the Eastern Shore of Maryland and remained as a consultant to the Veterans' Administration Hospital in Wilmington, Delaware. His portrait was presented to the College in 1978 by his many friends.


James Leonard was appointed Professor and Chairman of Otolaryngology in 1970. He received his undergraduate education at the University of Iowa, graduating with a B.S. degree in 1955. He graduated from the Medical College of Virginia in 1959. His residency in otolaryngology at Johns Hopkins was completed in 1965. He resigned in October 1972.


Dr. O'Keefe (Figure 42-12) was a Philadelphian who attended parochial schools and graduated from St. Joseph's College in 1933. Four years later he received his M.D. degree from Jefferson. After two years (1937–1939) in a rotating internship at Jefferson, he received the Ross V. Patterson Fellowship in Bronchoesophagology while acting as assistant to Dr. Louis H. Clerf. His career at Jefferson was then interrupted by three years in the United States Air Force Medical Department during World War II.

Shortly after resuming his career at Jefferson, O'Keefe became a Diplomate of the American Board of Otolaryngology (1946). He also joined the staff of Our Lady of Lourdes and Nazareth Hospitals. At Jefferson he continued through the academic ranks until appointed Acting Chairman upon the resignation of Dr. Leonard in 1972, and Chairman of Otolaryngology in 1973. This position he held until his retirement in 1975.

Dr. O'Keefe was a Fellow of a number of national organizations including the American Academy of Ophthalmology and Otolaryngology;
American Broncho-Esophagological Association; American Laryngology, Rhinology, and Otology Society; American College of Chest Physicians; American Society of ENT Secretaries; American Thoracic Society; Aero-Medical Society; American College of Surgeons, and American Laryngological Association.

His regional organization memberships were legion. He spoke frequently at the national and local societies and was the author of over 50 papers, including one on the development of bronchoscopy at Jefferson. He died from complications of cardiovascular disease on November 9, 1985.

Lindsay L. Pratt, M.D.; Fourth Chairman of Otolaryngology (1975–1977)

Lindsay Pratt (Figure 42-13) was born in 1926. He graduated from Muhlenberg College and received his M.D. degree from Jefferson in 1953. After a residency in otolaryngology at Temple University, he received a Master of Science (Medicine) in 1961. He then became Assistant Professor of Otolaryngology at Washington University School of Medicine in St. Louis.

Dr. Pratt came to Jefferson as Chairman of the Department in 1975. He held memberships in all the important local and national societies of his specialty and had an impressive bibliography. He added strength to the Department through his intense interest and expertise in surgery for cancer of the head and neck. He was well liked and eminently successful as surgeon, teacher, and administrator.
Unfortunately, limitations on the extent to which Dr. Pratt could be allowed to expand his staff and facilities caused frustrations that led to his resignation in 1977.

Diran O. Mikaelian, M.D.;
Acting Chairman of Otolaryngology (1977–1979)

Dr. Mikaelian (Figure 42-14), of Armenian origin, was born in 1938. He received his college (B.S., 1950) and medical (M.D., 1954) degrees at the American University of Beirut, Lebanon. After continuing with an internship (1954–1955) and residency in otolaryngology (1955–1958) at the American University of Beirut, he took a fellowship in otology and laryngology at Johns Hopkins (1962–1965). From 1958 to 1962 and 1965 to 1970 Dr. Mikaelian taught at the American University of Beirut and carried out research in auditory neurophysiology, otoneurology, and problems of laryngo-esophagology. He came to Jefferson in 1970 as Assistant Professor of Otolaryngology and became a full Professor in 1975.

In addition to his clinical expertise, Dr. Mikaelian held memberships in the prestigious societies of his specialty and was a prolific writer in the basic sciences as well as surgical aspects of otolaryngology. In 1978 he was honored with the coveted First Prize of the Fowler Award from the American Otological, Rhinological, and Laryngological Society (Triological Society) for his thesis on Development and Degeneration of Hearing in the C57/B16 Mouse.

With the appointment of Dr. Louis Dale Lowry as Chairman on January 1, 1980, Dr. Mikaelian continued his active professorial role in the Department as clinician, teacher, and researcher.

Louis Dale Lowry, M.D.; Fifth Chairman of Otolaryngology (1980–)

Louis Dale Lowry (Figure 42-15) was born in Fort Scott, Kansas, on March 1, 1937, and was raised in Vernon County, Missouri, on a tenant farm. He received his A.B. in Chemistry (1958) and M.D. (1962) at the University of Missouri. During his internship at the Great Lakes Naval Hospital, he met Dr. George Connor, with whom he had an elective in otolaryngology. At that time Dr. Lowry had planned to become a general practitioner, and since he had had no otolaryngology in his medical school training, he felt that this elective would be important. Dr. Connor’s influence became pervasive. Immediately after internship, Dr. Lowry served in the submarine service as a Navy Medical Officer, but upon completing his tour of duty in 1967, Dr. Lowry returned to the University of Chicago for his residency in surgery and otolaryngology. He then became a full-time member of the Department of Otorhinolaryngology at the University of Oklahoma Health Sciences Center in 1971. In 1973 he left Oklahoma for the University of Pennsylvania, where he rose to Associate Professor of Otorhinolaryngology and Human
Communication by 1979. At this time, Dr. Lowry was actively looking at Departments of Otolaryngology for a possible Chairmanship. The appointment at Jefferson was fortuitous in that he did not have to leave Philadelphia. He was appointed in the fall of 1979 and began actively on January 1, 1980.

Dr. Lowry has been on the faculty of the American Board of Otolaryngology and has lectured and taught many courses at national meetings. He has an impressive bibliography of at least 60 articles, along with many presentations at local and national meetings. He belongs to many societies in his field and was President of the Philadelphia Society of Facial Plastic Surgeons (1979–1981). His major contribution has been the development of an artificial larynx by which speech is generated electronically within the oral cavity.

- Epilogue

The Department has changed greatly since World War II. Up to that time the professors made their living from their practice and received nothing or only a modest stipend from the College. When residency programs expanded after the War, it became obvious that the Chairman of a Department had many more administrative duties. Until 1950 the number of residents and fellows in the Department was never more than four, usually one or two. This number increased until the mid-1970s when there were 12 residents; in recent years the number has been reduced to nine (three each year). The residency at Jefferson became so well known that at last count there were approximately 140 applicants, 50 of whom were interviewed and three selected.

Although the full-time members shoulder much of the administrative burden, credit must be given to the large number of volunteer otolaryngologists at Lankenau, Bryn Mawr, West Jersey, Methodist, and Veterans (Wilmington) Hospitals who greatly broaden the experience of the residents.

Finally, although this narrative has been limited to the early pioneers and successive Chairmen, there were a large number of superb clinicians and teachers who gave their best to the Hospital and College. Among these were: Austin T. Smith, A. Spencer Kaufman, H. Hunter Lott, Arthur J. Wagers, C. Calvin Fox, Floyd J. Putney, Kelvin A. Kasper, Robert M. Lukens, Davis H. Solo, Joseph Sataloff, Lawrence J. McStravog, Russell J. Brennan, Arthur S. McCallum, Edward C. Britt, William H. Baltzell, Sidney S. Lerner, August P. Ciell, and James E. Brennan. Many others who have worked or trained at Jefferson have gone across the nation and the world to bring honor to the Institution. Internationally known Dr. Jo Ono (Jefferson, 1928) established otolaryngology as a specialty in Japan and received the Alumni Achievement Award in 1976.
Problems in breathing, swallowing, speech, hearing, and cancer still remain. The Department is committed to their better solution.

References

Dentistry and Division of Oral and Maxillofacial Surgery (Otolaryngology)

Lionel Gold, D.D.S.

“Every tooth in a man’s head is more valuable than a diamond.”

—MIGUEL DE CERVANTES (1547–1616)

From its inception, Jefferson Medical College has had an interesting albeit convoluted relationship with dentistry. A graduate of Jefferson’s second class (1827), Samuel S. Fitch, M.D. (Figure 43-1), practiced as a surgeon-dentist and published a System of Dental Surgery in 1829 (Figure 43-2). This book, sophisticated for its time, was all the more remarkable because the first College of Dental Surgery was not established in the United States until 1840 in Baltimore, Maryland.

John Hugh McQuillen, M.D., D.D.S., graduated from Jefferson in 1852 while he was also studying dentistry. His D.D.S. degree was honorary. Doctor McQuillen was interested in education, and principally through his efforts a charter was obtained for the Pennsylvania College of Dental Surgery in 1863. He served as Dean and Professor of Physiology at that institution until his death in 1879. Dr. Samuel D. Gross was President of the Board of Trustees of the Pennsylvania College of Dental Surgery from 1880 to 1882. Its
building, located at Eleventh and Clinton Streets, became Jefferson’s Daniel Baugh Institute of Anatomy in 1911 (Figure 43-3). Dr. Gross included a chapter on *Diseases and Injuries of the Jaws, Teeth and Gums* in his *System of Surgery*, first published in 1859 and expanded it in his final sixth edition (1882).³

Another Jefferson graduate, Emile Blaise Gardette, D.D.S., M.D. (Jefferson, 1838), became the fourth President of the Board of Trustees of Jefferson from 1875 to 1888. Dr. Gardette first had been trained in dentistry by his father before beginning his medical training, and he practiced as a surgeon-dentist.

Dentistry at Jefferson Hospital had its official beginning in 1917 with the establishment of a dental clinic under the direction of Joseph Head, D.D.S., M.D. Dr. Head served as Director until 1930, when he was succeeded by Emerson R. Sausser, D.D.S. The dental clinic, located on the second floor of the Thompson Annex, was rebuilt in 1939 through the generosity of the Dietrich Foundation at the solicitation of Dr. Sausser. Serving as clinic staff at that time were Drs. Harry Best, William Bestor, Conrad Hellwege, Aaron Finkelman, Anthony Torre, and Charles Garver, all prominent in Philadelphia dentistry. Mr. Rush Kress, a patient of Dr. Sausser, donated $150,000 through the Samuel Kress Foundation to establish the Emerson Sausser Dental Clinic. This facility was built in 1950 in the Curtis Clinic (Figure 43-4). Its purpose was to give dental treatment to indigent children in a medical setting. Dr. Rodolfo A. Colella (Figure 43-5) was named Director in 1950 and was succeeded by Dr. Edward Cherkas in 1973.
Meanwhile, the Clinic in the Thompson Annex was functioning separately as an oral surgery training facility. Dr. Aaron Finkelman succeeded Dr. Sausser in 1955 as Head of this Clinic. In 1959, the Clinic became the Division of Oral Surgery in the Department of Surgery. Dr. Finkelman invited Dr. Lionel Gold, a young oral surgeon, to join the staff in order to obtain American Dental Association accreditation for the oral surgery training program. This was accomplished in 1960 and a fully accredited graduate program in oral surgery was started (Figure 43-6). In 1961 Dr. Gold was succeeded by Dr. Leonard Reichman. The Division of Oral Surgery was transferred to the Department of Otolaryngology in 1970. Dr. Reichman succeeded Dr. Finkelman in 1972 as Head of the Division.

Earlier in 1969, Jefferson Medical College became a component of Thomas Jefferson University. As part of his plan to make a multicollege health institution, President Peter Herbut with the concurrence of the Board of Directors, Jefferson Hospital, the School of Nursing, the School of Social Work, the School of Allied Health Sciences, and the School of Dental Medicine became a part of Thomas Jefferson University. This had been the wish of President Kauffman, who devoted much of his time and energy to this idea.

Fig. 43-4. Dedication of The Sausser Clinic (1950). Looking on as the dentist examines the first child patient are (left to right) President Kauffman, Mr. Rush H. Kress, Emerson R. Sausser, D.D.S., and Dr. Rodolfo A. Colella.
Trustees appointed a committee in 1971 to study the feasibility of establishing a college of dental medicine at Thomas Jefferson University. Among those appointed to the committee was Henry S. Brenman, M.S., D.D.S., a practicing periodontist who was also an Associate Professor of Physiology in the Medical College. Dr. Brenman had been a member of the Dental Clinic staff since 1960.

A Department of Dentistry was created in the University Hospital in 1972, and Dr. Brenman was appointed Chairman. Under his guidance, the separately functioning dental and oral surgical units were gathered into one Department. The Department was divided into three subdivisions (oral surgery, orthodontics, and general dentistry) and began operation in the Edison Building in a new facility. The proposed plan to establish a dental school as part of the Thomas Jefferson University was put aside for many practical reasons.

In 1975 Dr. Gold was appointed Chairman of the Division of Oral and Maxillofacial Surgery, which progressed from a two- to a four-year training program. After Dr. Brenman's resignation as Chairman in 1982, Dr. Gold has acted as Chairman of the Hospital Dental Department and Director of Oral and Maxillofacial Surgery.

Oral and maxillofacial surgery, along with
dentistry, at Jefferson have served the public well and will play an increasingly important role in the total care of the patient.

References


CHAPTER FORTY-FOUR

Department of Ophthalmology

Austin P. Murray, M.D.

“The light of the body is the eye.”

—Matthew 6:22

Dr. George McClellan, the acknowledged founder of Jefferson Medical College, was also responsible for masterminding the first eye clinic in Philadelphia. After a few abortive attempts, he was aided by 13 prominent citizens as managers to found the Philadelphia Dispensary for Diseases of the Eye and Ear in March, 1821. On April 14 of that year an advertisement was inserted in the American Medical Recorder and in one of the daily “prints” of the city announcing its formation and inviting the poor to partake of its benefits. In the same journal in March, 1822, McClellan published a report of 51 cases for the previous year with his results. It is interesting to note that of 18 cataracts treated, seven were cured, two were “relieved,” eight “remained,” and one failed. The clinic closed in 1824. Some attributed its demise to the redirection of McClellan’s energies to the founding of Jefferson. Several of his colleagues founded the Pennsylvania Infirmary for the Diseases of the Eye and Ear in 1822, but it also had a short life, closing in 1830.

In 1825 a bequest was made to the City of Philadelphia in the will of James Wills, Jr., for the “relief of the indigent blind and lame.” Because of a contesting of the will and the time necessary to complete the edifice, the hospital did not open its doors until March 3, 1834.

Early Jefferson Eye Surgeons

The best known general surgeon of that time who practiced ophthalmology was Philip Syng Physick (1768–1837). He trained in London, where he was a favorite of John Hunter, whose influence enabled him to obtain a position on the house staff of St. George’s Hospital, where it is said he obtained much of his surgical skill. Physick, “The Father of American Surgery” and a pioneer in American ophthalmology, began his lectures in the Pennsylvania Hospital in 1800 and became Professor of Surgery at the University of Pennsylvania in 1805. He was a skillful eye surgeon.
who did cataract extractions without the benefit of anesthesia and with both himself and the patient in the sitting position. Among his pupils was George McClellan, who was a graduate of the University in 1819. McClellan very early in his career became keenly interested in eye surgery and usually had excellent results. Unfortunately, one case would forever haunt him. In 1828 McClellan had to face a lawsuit because of a failure in cataract surgery. It arose when Dr. Francis Beattie, a disgruntled former colleague, spread rumors that McClellan had mistreated a Mr. William Davis. The latter had had both eyes operated upon by Dr. Joseph Parrish (1779–1840), with loss of the left eye, and after he developed postoperative complications following surgery on the right eye had been told never to let anyone reoperate. Dr. McClellan did so in the confines of Davis’s boardinghouse bedroom and lost the second eye. At the trial Dr. Parrish testified that he had previously only once carried out a cataract procedure similar to the one on Davis and because of the poor result never attempted another of the same nature. Dr. Physick also gave testimony in which he pointed out that Barron Wenzel, a famous German surgeon, had lost a hatful of eyes before he became proficient in the extraction technique. Dr. McClellan was fined $500. This was the first eye malpractice suit in Philadelphia and one of the very first judgments levied against a physician in the United States. McClellan’s methods were characterized by brilliancy and dash rather than by cool calculation. It was very hard for him to submit to authority or to control the impulses of his ardent temperament. Thus one can easily see why the lawsuit may have been instigated by a colleague. It has also been said that at the time of his death he had virtually no physician friends.

Joseph Pancoast succeeded McClellan as Professor of Surgery from 1839 to 1841 and then became Professor of Anatomy until 1874. In 1844 he published his Operative Surgery, in which he devoted 46 pages to operations on the eyeball and its accessory organs. There was very little that he added to the slowly expanding literature on this subject, and he espoused most of the theories and operations of choice that his colleague, Thomas Dent Mütter, promulgated. Nevertheless, the book had many excellent illustrations that emphasized some of the fine points of the surgery.

Thomas Dent Mütter, successor to Pancoast as Professor of Surgery in 1841, devoted 62 pages to eye surgery in his edition of Liston’s Lectures on the Operations of Surgery. The publication of this book also in 1846 probably accounts for the similarity of hypotheses and modes of treatment. Mütter covered plastic surgery of the lids fairly well, but strabismus was still poorly understood, and knowledge of the anatomy of the eye and its adnexa was spotty. It would not be possible to deal accurately with strabismus until research on the physiology of the eye unlocked its secrets. Both Mütter and Pancoast condemned intracapsular cataract extraction and preferred the couching procedure. This consisted of dislocating the lens into the vitreous. It usually gave immediate visual return if the postoperative inflammation was minimal. Unfortunately, even with good return of vision these patients were prone to glaucoma with later loss of sight.

Even until the latter part of the nineteenth century most surgeons included ophthalmology in their practice. Samuel D. Gross was no exception and excelled in this field. Although he was not personally present at the first International Congress of Ophthalmology in Brussels in 1857, his report on Ophthalmology in America was presented. He was one of the first to do strabismus surgery. In his System of Surgery he revealed an advanced understanding of the anatomy and function of the extraocular muscles. In the 1859 first edition of this famous book he devoted 110 pages to diseases and injuries of the eye.

Addinell Hewson (Figure 44-1) (Jefferson, 1850) was another general surgeon especially interested in ophthalmology. He was the first member of the Wills Hospital Staff from Jefferson; before 1854 all had been graduates of the University of Pennsylvania. In 1855 he edited Mackenzie’s treatise, Diseases of the Eye, and was credited with introducing the ophthalmoscope to Wills. He was an unsuccessful candidate for the Chair of Anatomy at Jefferson in 1874; his father, Thomas Tickell Hewson, had been an unsuccessful candidate for the Chair of Surgery in 1839.

Richard J. Levis (Figure 44-2) was appointed Clinical Lecturer in Ophthalmology and Aural
Surgery in 1867. This was the first recognition of ophthalmology as a specialty at Jefferson and presaged the later development of a full-status Department. The invention of the ophthalmoscope by von Helmholtz in 1851 accelerated its development into one of the earliest of the specialties.

Levis, a native Philadelphian, was born in 1827, the son of a physician. He went to Central High School, was an office student of Professor Thomas Dent Mütter, and graduated from Jefferson in 1848. He became prominent as a surgeon, with appointments at Philadelphia, Jefferson, Pennsylvania, Jewish, and Wills Eye Hospitals. During the Civil War he was Surgeon-in-Chief in two U.S. military hospitals in Philadelphia. While at Wills Eye Hospital from 1864 to 1872 he introduced the well-known wire loop used in cataract extraction. He also developed a lacrimal probe that was graduated in caliber from its tip, which dilated stenotic punctae and canaliculi. Variations of both these instruments are used in ophthalmology today. Levis modified numerous operative procedures and devised surgical instruments and orthopedic appliances. On the top floor of his home he maintained a well-equipped workshop for this purpose.

Levis was a fastidious man, extremely well dressed, who would enter the operating room fully clothed even to the tie and French cuffs that were his usual attire. These somehow remained unblemished during his operations. When finished, he washed his hands, bowed to those in attendance, and hastened to greet and treat his private patients, apparently spotless. Always especially considerate of younger physicians, he

FIG. 44-1. Addinell Hewson, M.D. (1828–1889), introduced the ophthalmoscope to Wills Eye Hospital

FIG. 44-2. Richard J. Levis, M.D. (1827–1890), the first Clinical Lecturer in Ophthalmology (1867).

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claimed he could learn more from them than from older men. Aside from The Treatment of Fractures of the Patella and Traditional Errors in Surgery, his literary contributions were few. Nevertheless, many of his lectures were recorded by his students and have been preserved in the library of the Pennsylvania Hospital.

Levis resigned his lectureship in ophthalmic and aural surgery at Jefferson in 1875 but continued as an attending physician and lecturer in clinical surgery. He was the first President of the Board of Trustees of the Philadelphia Polyclinic and College for Graduates in Medicine, President of the Philadelphia County and Pennsylvania State Medical Societies, and original member of the American Surgical Association. He aided Samuel D. Gross in the founding of the Philadelphia Academy of Surgery in 1879, the oldest surgical society of its kind in the United States today.

After Dr. Levis’s retirement from practice, he traveled in Egypt, where he performed some cataract extractions. It is said that rising early one day to see the sunrise, he met an Arab he had operated upon the day before who was walking around with his head thrown back peering through the crevice between his lids. He also wanted to see the sunrise after his period of blindness. Dr. Levis died at Cedarcroft, Pennsylvania, in 1890 at the age of 63.

William Thomson, M.D. (1833–1907); First Chairman of Ophthalmology (1895–1897)

Dr. William Thomson (Figure 44-3) joined Levis at Jefferson as Lecturer on Diseases of the Eye and Ear in 1874 and succeeded him the following year. This Jefferson graduate of 1855 was destined in 1895 to become the first Chairman of the Department of Ophthalmology we know today.

Dr. Thomson was born in Chambersburg, Pennsylvania, in 1833, a descendant of Scotch-Irish settlers in America from the early eighteenth century. After his preceptorship, six months of study in pharmacy, and obtaining his M.D. degree, he started private practice in a suburb of Philadelphia. In 1861 he began a distinguished military career in the Union Army. He was complimented by President Lincoln for his work at the battle of South Mountain where he took sole charge of 2,500 wounded men. He improved the supply system of field hospitals, reorganized the Douglas Hospital in Washington, and was appointed Inspector of all hospitals of the Washington area. In the newly organized Army Medical Museum, of which Dr. John Hill Brinton (Jefferson, 1882) was the first curator, Thomson contributed largely to the first descriptions of osteomyelitis and wounds of the joints. He aided the establishment of a photographic bureau in the museum that evolved into the Medical Illustration Service of the Armed Forces Institute of Pathology. He took part in experimental photomicrography that led to prints of microscopic fields that could be magnified 15 to 250 times. This work stimulated his interest in

![Figure 44-3. William Thomson, M.D., First Chairman of Ophthalmology (1895–1897).](image-url)
optics and a medical practice limited to ophthalmology. On return to civilian life in Philadelphia in 1868, Thomson became an Assistant Surgeon at Wills Eye Hospital and was elevated to full Surgeon in 1872. In the following year he established a daily clinic at Jefferson for diseases of the eye, and then a weekly clinic for instruction of the medical students, which always attracted a full attendance. In 1877, when the first detached Jefferson Hospital was established, he was appointed to the staff as Ophthalmic Surgeon, and in 1880 was advanced to Honorary Professor of Ophthalmology. In that year he also became Ophthalmic Physician to the Pennsylvania Railroad and later the Reading Railroad to apply his method for detection of color blindness by using colored wool and lanterns. This was of importance to the trainman whose ability to see colored signals was vital to railroad safety. He also examined for acuteness of vision and hearing, and his methods were adopted by many other railroads.

As one of the early workers in refractive problems, Thomson designed the ametrometer in 1878, used in diagnosing and correcting ametropia (refractive errors). He wrote on the connection between astigmatism and posterior staphyloma (bulging of the cornea) as well as correction of conical cornea by convex cylindrical glasses. He was among the first to call attention to the hypothesis that headaches could be caused by eyestrain and be corrected by glasses. The Use of the Ophthalmoscope in the Diagnosis of Intracranial Lesions, written in collaboration with S. Weir Mitchell, was coupled with History of the First Brain Tumor Diagnosticated with the Ophthalmoscope in Philadelphia. Thomson edited the American edition of Nettleship’s Diseases of the Eye, and revised the chapter on diseases of the eye and ear in the 1872 fifth edition of Samuel D. Gross’s System of Surgery, as well as “Detection of Color Blindness” in Norris and Oliver’s System of the Diseases of the Eye.

The College of Physicians of Philadelphia, of which Thomson was a member, houses his ophthalmoscopes, correspondence, 14 volumes of case books, and his portrait by Thomas Eakins in 1907.

Thomson served Jefferson as Professor and Chairman of the Department of Ophthalmology with a seat on the faculty from 1895 to 1897. Upon resigning, he was appointed Emeritus Professor and was succeeded by Dr. George E. de Schweinitz. He died in 1907 at the age of 74.

George Edmund de Schweinitz, M.D. (1858–1938); Second Chairman (1897–1902)

George Edmund de Schweinitz (Figure 44-4) was born in Philadelphia in 1858 of distinguished Huguenot and Silesian ancestry. In 1876 he received an A.B. degree from Moravian College, of which his father was President. For the next two years he taught in the Military Academy of Nazareth, Pennsylvania. He then entered the Medical School of the University of Pennsylvania, from which he graduated in 1881 at the head of his class. After several years as a brilliant and popular quizmaster in therapeutics at the University, he became attracted to anatomy and general surgery. In the pattern of the anatomist-surgeons of that era, he became a Prosector of Anatomy for the

FIG. 44-4. George E. de Schweinitz, M.D., Second Chairman (1897–1902).
internationally famous Joseph Leidy from 1883 to 1885. With acceptance of the position as Assistant to Dr. William F. Norris, Professor of Ophthalmology at the University, he became enamored with the field and devoted the rest of his life to it. Private practice with referral of difficult and unusual cases followed quickly.

Early in his study Dr. de Schweinitz paid particular attention to the effects of systemic diseases upon the eye and how examination of the eye revealed clues to systemic disease. In accord with this habit he required a meticulous general physical and neurologic examination, including examination of the urine, in each new clinic patient. His professional advancement was meteoric, with appointment as Ophthalmic Surgeon to the Children's Hospital, the Philadelphia Hospital, and the Orthopaedic Hospital and Infirmary for Nervous Diseases. He also became Lecturer on Medical Ophthalmology at the University of Pennsylvania and Professor of Ophthalmology in the Philadelphia Polyclinic and College for Graduates in Medicine in 1891. In 1892 he published the first edition of his Diseases of the Eye, which was written at the suggestion of his friend, Dr. William Osler, and went through ten editions. Osler in the same year brought out his own magnum opus The Principles and Practice of Medicine, in which later editions were carried on by his nephew through marriage, Dr. Thomas McCrae, the first Magee Professor of Medicine at Jefferson.

Dr. de Schweinitz was appointed Clinical Professor of Ophthalmology at Jefferson in 1892 and Professor with a seat on the faculty at the resignation of Thomson in 1897. His Department at Jefferson then embraced Thomson as Emeritus Professor; Howard Hansell, Clinical Professor; Clarence Veasey, Demonstrator; and William Sweet, Assistant Demonstrator. He resigned in 1902 to succeed his former mentor, Dr. William Fisher Norris, at the University of Pennsylvania for the next 22 years.

The career of de Schweinitz continued at the University. In 1902 he was one of the first to list the symptoms common to glaucoma, a disease with multiple subdivisions and aspects, and one of the first to use the tonometer for routine detection of that disease. His interest in pituitary disease began in 1887, culminating in 1923 when he was the first American to deliver the Bowman Lecture in London; he titled it Ocular Aspects, Especially Field Defects, of Pituitary Body Disorders. As an ophthalmic surgeon he was described as cautious and thorough, admired for his judgement, but not an impressive technician. Honors, awards, and degrees were heaped upon de Schweinitz. From 1910 to 1912 he was President of the College of Physicians of Philadelphia, and Sir William Osler at Oxford in 1918 used the auspices of de Schweinitz to present his pomander cane to the collection in the Philadelphia College. He served as President of the American Ophthalmological Society in 1916, the American Medical Association in 1922, and the International Congress of Ophthalmology in the same year. He received honorary degrees from the University of Pennsylvania, Moravian College, the University of Michigan, and Harvard. He belonged to the American Philosophical Society and was on the Board of Trustees of the University of Pennsylvania and the Library Company of Philadelphia. After a period of failing health, he died in 1938 at the age of 79.

Howard F. Hansell, M.D. (1855–1934); Third Chairman (1902–1925)

Howard Forde Hansell (Figure 4-4–5) succeeded de Schweinitz in 1902. He was born in Philadelphia in 1855 of English lineage. He graduated from Central High School in 1873, from Brown University in 1877, and from Jefferson in 1879. His preceptorship was taken with Dr. James C. Wilson, who in 1891 would occupy the Chair of the Practice of Medicine. Hansell was quiet, reserved and studious. After graduation he joined the medical clinic of Professor Jacob Mendes DaCosta as an Assistant, as well as the ophthalmology clinic of Professor Thomson. Hansell followed the custom of those who sought the ultimate in medical education by going to Europe for additional study. In Germany he took ophthalmologic training under such masters as Hirschberg, Arlt, Fuchs, and Stellway. On return to Philadelphia in 1881 he entered private practice.
and was given an appointment as Attending Ophthalmologist at the Philadelphia General Hospital, which he held for more than 20 years. As a Professor of Ophthalmology at the Philadelphia Polyclinic Hospital, he was elected President of the faculty for four successive years.

In 1894, Hansell became associated with Jefferson Medical College as Chief Clinical Assistant and the following year was made Clinical Professor of Ophthalmology. He succeeded George de Schweinitz in 1902 and held the Chairmanship until his retirement in 1925, when he was made Emeritus. His lectures were always carefully prepared and well attended by the students. He was an original coeditor of the section on ophthalmology in the *American Year Book of Medicine and Surgery*. Books that he coauthored were: *Clinical Ophthalmology*, with James H. Bell (1892); *Muscular Anomalies of the Eye*, with Wendell Reber (1898); *Diseases of the Eye*, with William Sweet (1903); and *Ocular Muscles*, with Wendell Reber (1912).

In the College of Physicians of Philadelphia, Hansell served as Chairman of the Section on Ophthalmology from 1907 to 1908. In 1920 he was a member of the committee appointed by the Section on Ophthalmology of the American Medical Association to report on the selective investigation concerning the extraocular muscles. He was also active in the American Ophthalmologic Society and belonged to other local and national societies. He died in 1934 at age 79 shortly after a return from Europe.

William M. Sweet, M.D. (1860–1926); Fourth Chairman (1925–1926)

The successor to Dr. Hansell in 1925 was Dr. William Merrick Sweet (Figure 44-6). A native Philadelphian, born in 1860, he received his preliminary medical education at Central High School, from which he graduated in 1878. For financial reasons he was unable at first to pursue his ambition to become a physician and obtained employment in an iron and steel company. He also worked for a newspaper and became acquainted with the printing art. Both of these experiences were assets in his later work on foreign bodies in the eye and as editor of the *Transactions of the American Ophthalmological Society*.

Sweet matriculated at Jefferson in 1884 and graduated in 1886. After visiting some of the leading medical centers of Europe he was appointed as Assistant in the eye clinic of Jefferson Hospital and later elected as Ophthalmologist to the Southern Dispensary.

Shortly after Roentgen’s paper in 1895 on a new form of light rays, Dr. Sweet began experiments with the rays in an effort to localize intraocular foreign bodies. A description of these experiments
and the apparatus employed was reported in 1897 before the Section on Ophthalmology of the College of Physicians of Philadelphia. Some of the pioneer work was done with Dr. Willis F. Manges, later to be the first Professor of Radiology at Jefferson. They worked with biplane x-rays to determine the exact location of opaque foreign bodies in the eye or surrounding structures, permitting their removal by the shortest distance to the surface, especially if they could be drawn out by a magnet. He devised a portable hand electromagnet before 1910 that was successfully used in many of the leading hospitals in the country.

Sweet was appointed Attending Surgeon in the Wills Eye Hospital in 1911 and served until his resignation in 1919 to become a Consulting Surgeon. From 1914 to 1918 he was the first roentgenologist of that hospital.

The membership of Dr. Sweet in the American Ophthalmological Society was of long duration and benefit to the society. First a member in 1900, he subsequently served as the Secretary-Treasurer from 1908 for ten years, Vice President in 1920, and President in 1921. He edited the Transactions and gave most of his papers at the annual meetings.

Dr. Sweet was an able clinician and teacher. In addition to his papers he coauthored Diseases of the Eye with Howard Hansell in 1903 and in 1912 edited the second American publication of Ophthalnic Surgery by Joseph Meller of Vienna. His appointment as Head of the Department at Jefferson came at the age of 66 and lasted only one and a half years. After a week's illness, lobar pneumonia claimed his life on December 24, 1926.12,13

Charles E.G. Shannon, M.D., Sc.D. (1875–1965); Fifth Chairman (1927–1948)

Charles Emery Gould Shannon (Figure 44-7) was appointed Head of the Department in 1927. He was born in Maine in 1875 as one of over 1,000 descendants of Robert Gould, who came to Massachusetts in 1623. His cousin, Dr. George Milbry Gould (Jefferson, 1888) was a noted ophthalmologist, editor of the widely used Gould Medical Dictionary, and author of the 1904 two-volume history of The Jefferson Medical College of Philadelphia. Shannon received a B.A. degree from Colby College at Waterville, Maine, and in 1902 his M.D. degree from Jefferson.

After an internship at the Pottsville Hospital in Pennsylvania, he pursued postgraduate study in ophthalmology at the Massachusetts Eye and Ear Infirmary. On returning to Philadelphia he became the office assistant to Professor Hansell with an appointment at Jefferson Hospital. In time he was promoted to Chief of the Eye Clinic and Associate in Ophthalmology. In 1911 Shannon was appointed Assistant Ophthalmologist to the Philadelphia General Hospital and Attending Ophthalmologist when Hansell resigned his post in 1919.
Dr. Shannon was a quiet, lovable man and the acme of modesty. He claimed that he was elected to the Chair because he was the only candidate with a college degree, and that the Senior Class of 1948 presented his portrait only because his final examinations were easy. In his lectures he had a way of making the students feel that each topic was a possible examination question and he would clearly indicate the correct answer. By careful study of his notes one could take his examination with a feeling of security but also a balanced knowledge of practical ophthalmology. Although he made no major contributions to operative technique or the literature, he was active in the ophthalmologic societies and commanded the highest respect.

Upon resigning his Chairmanship in 1948 at the age of 73, he moved to Waterville, Maine, where he resumed private practice. Colby College awarded him an honorary degree of Doctor of Science in 1954. He died in 1965, not quite 90 years of age.

Arno E. Town, M.D. (1901–1967); Sixth Chairman (1948–1956)

Arno Emerson Town (Figure 44-8) was appointed Professor and Head of the Department in July 1948. He was born in Ohio in 1901, the youngest of seven children. Despite financial hardships he obtained his undergraduate B.S. from the University of Akron and graduated from Jefferson
in 1926. After a one-year internship at St. Mary's Hospital in Philadelphia he earned a Master of Medical Sciences in Ophthalmology at the Graduate School of the University of Pennsylvania in 1929. During the following two years he took a residency in ophthalmology at the Bellevue Hospital in New York City. In 1931 he was appointed to the teaching staff of the New York University College of Medicine and the New York Eye and Ear Infirmary. From 1933 to 1943 he became Chief of Clinic and Assistant Visiting Surgeon at St. Vincent's Hospital, Chief of the New York University Division of Ophthalmology at Welfare Island Hospital, and Ophthalmologist to the City Cancer Hospital and Clinic. Just before World War II he was Acting Chief of Ophthalmology at Bellevue Hospital and Acting Head of the Department at New York University College of Medicine.

During World War II Town entered the Navy, where he achieved the rank of Commander. He was Ophthalmologist at the National Naval Center at Bethesda and also on the Hospital Ship, U.S.S. Benevolence. After discharge from the service in 1946 he was appointed Clinical Professor of Ophthalmology at New York University.

While at Jefferson from 1948 to 1956 Town established the first basic research program in ophthalmology in collaboration with the Department of Physiology. He was an excellent clinician and teacher. His contributions to the literature included his thesis on retinitis pigmentosa, bacteriophage in ophthalmology, cyst of the uveal layer of the iris, contact lenses for correction of refractive errors in monocular aphakia, injuries of the eye and eyelids, first aid for eye injuries, a metal eye protector, treatment of various types of conjunctivitis and endophthalmitis with antibiotics, and radioactive phosphorus in the diagnosis of ocular tumors. His textbook, *Ophthalmology*, was published in 1951.

Upon resignation as Chairman and appointment as Emeritus Professor in 1956, Dr. Town retired to private practice in New York City. He retired entirely in 1965 and moved to Florida where he died in 1967 after a long illness.14-15


Carrol Richard Mullen (Figure 44-9) was born in the same year as his Chairman predecessor, Dr. Town, and was also his Jefferson classmate (Class of 1926). Son of a physician and born in Illinois, he received his B.A. degree from Creighton University in 1922.

Following his internship at the Philadelphia General Hospital, Mullen continued on the ophthalmologic service and became its Chief in 1936. He later resigned this position but remained as an active consultant. He also became associated with Jefferson and Wills Eye Hospital, in which he advanced rapidly. At Wills Eye in 1939 he was appointed the youngest Attending Surgeon and in 1949 the Executive Surgeon. He was the first to occupy the latter position after its reestablishment by the Board of City Trusts.
Dr. Mullen was a charter member of the Fitzgerald Mercy Hospital in 1933 and became Chief of the Ophthalmologic Service. For ten years he was associated with Dr. Charles Heed at Girard College in the Department of Ophthalmology.

While not a prolific writer, Dr. Mullen contributed articles on causes of blindness, infections of the eye and their treatment, “jaw winking (the Marcus Gunn phenomenon),” and read papers on several occasions in South America. He belonged to all the important local, national, and international ophthalmological societies. In 1960 he received an honor award from the American Academy of Ophthalmology and Otolaryngology for his long service as a teacher. He was President of the Jefferson Alumni Association in 1953–1954 and served as Chairman of the Annual Giving Fund Committee. In the year before his death he conducted the drive that topped all previous records.

Dr. Mullen was the last of the Chairmen of Ophthalmology to have a full-time private practice. It was his unique organizational ability that enabled him to juggle successfully so many “hats.” While Chairman he was also Attending and Executive Surgeon at Wills Eye, including the Clinic, and a member of the Board of City Trusts. With boundless energy, diplomacy, and delegation of authority to wisely handpicked associates he faithfully carried out his responsibilities. The brilliant staff that supported him consisted of Gerald M. Shannon, later the Director of the Oculoplastic Service at Wills; Dr. Turgut N. Hamdi, who along with Dr. Warren S. Reese inserted the first intraocular lenses in this country; and Dr. Cyril M. Luce, who was as talented musically as he was surgically. These three men unfortunately died at the peak of their careers. Other members of this distinguished staff were Dr. Joseph Waldman, with special interest in neuro-ophthalmology; Dr. David Naidoff, whose prime involvement was motility; Dr. William T. Hunt, Jr., whose specialty was refraction and whose philanthropy enabled the purchase of one of the early ophthalmic lasers; Dr. Charles G. Steinmetz, III, who was the ophthalmic pathologist and later the interim Acting Head; and yes, Sidney G. Radbill, William J. Harrison, J. Scott Fritch, Sidney L. Olsho, Albert Merlin, Milton J. Freiwald, Alvin W. Howland, J. Robert Fox, Edward J. Donnelly, and Bernard C. Gettes.

In 1961, with swiftness, acute leukemia claimed Dr. Mullen at the age of 60. \(^\text{16,17}\)


Dr. Charles G. Steinmetz, III was the Acting Head from February 1961 to February 1962. He graduated from Jefferson in 1948, took his internship there until 1950, and completed his Residency at Wills Eye Hospital in 1953. He rose in ranks at Jefferson from Assistant Professor in 1956 to Acting Head in 1961.

Thomas D. Duane, M.D., Ph.D. (1917–); Eighth Chairman (1962–1981)

Thomas David Duane, M.D., Ph.D. (Figure 44–10) assumed the Chair in 1962. Born in Illinois in 1917, he received his B.S. degree from Harvard in 1939 and M.D. from Northwestern in 1943. At the latter institution he developed a deep interest in physiology under the tutelage of Professor Andrew Conway Ivy (1893–1978).

After three years of residency at the University of Iowa he remained there to obtain a Ph.D. degree. His thesis was on metabolism of the cornea. A subsequent private practice in Bethlehem, Pennsylvania, was interrupted by the Korean conflict. Upon entering the Flight Surgeon Program, Duane was assigned to the Naval Air Development Center at Johnsville, Pennsylvania, because of his research interest in physiology. There he did some of the original study of blackout in determining the etiology to be retinal hypoxia rather than cerebral ischemia.

While resuming private practice in Bethlehem, Dr. Duane traveled weekly to Philadelphia for teaching at the Graduate School of the University of Pennsylvania.

One of his first duties upon appointment to the Chair at Jefferson in 1962 was to oversee the construction of a new clinical facility for the Department on the fourth floor of the Curtis
The Eye Clinic had remained essentially unchanged since completion of the Curtis Building in 1931. A description of how things were before the major facelift is historically interesting.

The patient entered a central room where the current appointment card was presented to a clerk, and where, upon leaving, the next appointment card would be given (Figure 4-4-11). In the front of this room to the left of the main door was the lane for visioning of the patients by Mr. James Lavelle, a veteran octogenarian. Immediately behind the visioning lane, further to the left, was a large room with two refracting lanes where the first-year resident refracted the patients every morning (Figure 4-4-12). In the front right corner of this room was a small room where outpatient surgery and suture removal were carried out. To the right of the main room was the darkroom where fundoscopic examination, indirect retinoscopy, and slit-lamp biomicroscopy were carried out. Further to the right, behind this room, was a conference room. A field room was located to the right of the main room adjacent to the door, directly to the right of the visioning lane. The waiting patients and family members that might be accompanying them sat in the hall on long benches that resembled the sturdy wooden benches that were ever-present in the old railroad stations. At the time of its design it represented the latest and best of everything.

The new clinic incorporated the advances of the previous 30 years, replete with five superbly equipped examining rooms, a room for fundus photography and fluorescin angiography, and a modern library that also served as a conference room. The new quarters were occupied in April 1964.

Dr. Duane's first appointment to his staff was Dr. William C. Frayer, who took charge of Resident teaching. Dr. Frayer received his A.B. degree from Brown University in 1943, his M.D. at the University of Michigan in 1945, and his residency in ophthalmology at the University of Pennsylvania, where he also received the M.M.Sc. in 1952. He was Assistant Professor of Ophthalmology at the University of Pennsylvania when he came to Jefferson in 1962, and was promoted to full professor in 1964.

Dr. Frayer was an excellent surgeon, superb teacher, and productive researcher in ocular pathology. In 1972 he returned to the Scheie Institute of the University of Pennsylvania, where he carried on his multiple activities and served for a time as Acting Head of the Department.

During his first few years at Jefferson, Dr. Duane conducted the first survey of ophthalmic research in the United States. Through the 1970s he served as Secretary of the Section Council on Ophthalmology of the American Medical Association. He was a member of the Board of Directors of the American Academy of Ophthalmology, the American Board of Ophthalmology, Association of University Professors in Ophthalmology, and the National Advisory Eye Council.

Among at least 70 scientific papers, Dr. Duane first described microwave cataracts, the G force origin of blackout, Valsalva retinopathy, and the histopathology of white-centered hemorrhages. He served as editor of Clinical Ophthalmology and edited a three-volume set of Biomedical Foundations.
The latter became a standard text.

Dr. Duane, in addition to his Chairmanship at Jefferson, was appointed Ophthalmologist-in-Chief at Wills Eye Hospital in October, 1973. He promptly became involved in plans for a new Wills building that was to be constructed at Ninth and Walnut Streets. In view of the close relationship that existed for many years between the two institutions, eventuating in an affiliation agreement on October 1, 1980, the staffs were amalgamated.

James Wills, Jr., a Quaker merchant, died in 1825 with a legacy of $108,396.35 for the establishment of “The Wills Hospital for the Relief of the Indigent Blind and Lame.” When the hospital, located at Nineteenth and Race Streets, opened in 1834, it was the first in the Western Hemisphere especially devoted to the eye. The provision for the lame was carried out only sporadically and the last such case was treated by the late 1870s. The management of the hospital was vested in 1870 in the newly created Board of Directors of City Trusts, which since then has continued its responsibility to guide its destiny.18

In 1927 the Board of Trustees of Jefferson was aware of the mutual benefits of an affiliation with the Wills. At a meeting of the Board on June 20 of that year, President Alba B. Johnson stated that he had been in conference with Dr. Hobart A. Hare and Mr. Elmer Greenberg of the Board of City Trusts, relative to advisibility of having the Wills Eye Hospital located in the Curtis Clinic, a nine-story building that was later to open on November 21, 1931. After discussion it was decided that change in the general plan of the new Clinic could not be made at this date, but that it was highly desirable to establish the closest relations...
with Wills Hospital. With increasing demands for more patient space, surgical suites, and laboratories, a new Wills Hospital was opened in 1932 at Sixteenth and Spring Garden Streets. Many Jeffersonians served on the staff not only as ophthalmologists but as consultants for all other conditions that could affect the patients concomitantly.

Again because of growth and scientific progress, another new Wills Eye Hospital was completed and occupied at Ninth and Walnut on April 1, 1980, and dedicated on April 23. It was an architecturally award-winning eight-story structure, nearly doubling the old Spring Garden facility. With 120 inpatient beds it was equipped with such modern equipment as ceiling-mounted microscopes and an audiovisual production center. The ground floor of the 230,000-square-foot building was a reception area and concourse, with a cafeteria in the basement. The first three levels contained the outpatient services, the fourth the laboratories and offices, the fifth the operating suites and ancillary services, and the top three the inpatients. There were eight research laboratories, eight operating rooms, a minor surgery room in the emergency area, and double the previous space for outpatient facilities. Other unique features included the Glaucoma Service Diagnostic Laboratory, the second of its kind in the United States; nuclear medicine and ultrasound testing equipment; and the nation’s largest diagnostic photography center for the eye. An audiovisual production center enabled operations to be videotaped and played back simultaneously on television sets in the auditorium and conference rooms for teaching and monitoring purposes. The Lions Eye Bank of Delaware Valley, housed within the Hospital, conducted the collection and
distribution of tissue for corneal transplants for Wills and other area hospitals.

The Wills Day Surgery Unit was expanded, a low-vision center developed, the contact lens service increased, and a center for study of eye movement disorders in children established. Researchers worked in immunology, cell biology, molecular chemistry, biochemistry, oncology, histology, virology, pharmacology, and micromanipulative techniques. The Glaucoma Service Diagnostic Laboratory, as one of only two centers of its kind in the world, was linked with Baylor College of Medicine in Houston as the hub of future worldwide networks.

The affiliation agreement of October 1, 1980, in essence amalgamated both staffs, but with preservation of autonomy and visible identity of each. After the prescribed ten years the agreement would be on a year-to-year basis. The Board of City Trusts still controlled the management of Wills.

Dr. Duane resigned his combined posts at Jefferson and Wills Eye on October 5, 1981, but continued actively in research. His portrait was presented at Wills Eye in 1982. In 1984 he was honored with the American Academy of Ophthalmology’s Distinguished Service Award, and on April 12, 1985, the Thomas David Duane Professorship in Ophthalmology was established.


Robert Dale Reinecke (Figure 44-13) was appointed Chairman of the Department at Jefferson and concurrently Ophthalmologist-in-Chief at Wills Eye on October 5, 1981. He was born in Kansas in 1929, the youngest of four children. While attending public high school he became an apprenticed watchmaker. After two years in the United States Army, he attended Kansas State College for two years. He then switched to the Illinois College of Optometry, where he obtained a Doctorate in Optometry in 1949. Returning to the University of Kansas he obtained a B.S. degree in 1955 and M.D. degrees in 1959, followed by internship at the University Medical Center. After a postgraduate course in ophthalmology at Harvard Medical School he took a residency at the Massachusetts Eye and Ear Infirmary from 1961 to 1963. During some of the earlier years he worked in Summer Research Fellowships in the U.S. Public Health Service and Harvard Medical School.

Dr. Reinecke pursued an academic career as a Teaching Fellow at Harvard Medical School (1963–1964) and until 1969 was associated with the Massachusetts Eye and Ear Infirmary, attaining the rank of Assistant Professor. In 1970 he became Chairman of the Department of Ophthalmology at Albany Medical College of Union University until his appointment at Jefferson.

As a prolific writer since 1958, Dr. Reinecke wrote more than 150 articles on a wide spectrum
of eye disorders. One of his outstanding contributions was the report that smooth muscle involvement in temporal arteritis was the initial pathologic change, with fragmentation of the elastic fibers and giant cell reaction being secondary. Another important innovation was his development of the random-dot stereogram for ambylopic (dimness of vision) screening, which was more reliable in the young patient than previous circles tests.

His activities in societies at the administrative and advisory level were numerous. He served as President of the American Association for Pediatric Ophthalmology, Editor for the Internal Strabismological Association, and Co-Chairman of the National Eye Institute's panel on sensory and motor disorders of vision. Dr. Reinecke resigned his dual appointment on June 30, 1985, and became Director of the Foerderer Eye Movement Center for Children at Wills Eye Hospital and Jefferson.

William S. Tasman, M.D. (1929–); Tenth Chairman (1985–)

William Samuel Tasman (Figure 44-14) succeeded Dr. Reinecke as Ophthalmologist-in-Chief at Wills Eye Hospital and Chairman of the Department of Ophthalmology at Jefferson on July 22, 1985. He is a native Philadelphian, born August 9, 1929. He graduated from Germantown Friends School (1947), Haverford College (A.B. degree in 1951), and Temple University School of Medicine (1955). After internship at the Philadelphia General Hospital (1955–1956) and a course in ophthalmology at the Graduate School of the University of Pennsylvania (1956–1957), he served a tour of duty as a Captain in the U.S. Air Force Hospital in Wiesbaden, Germany (1957–1959).

On returning to Philadelphia, Dr. Tasman became a Resident at Wills Eye Hospital (1959–1961) and then took a Fellowship in Retina at the Massachusetts Eye and Ear Hospital (1961–1962) under the tutelage of Dr. Charles L. Schepens, a world-renowned retinal surgeon. Under the stimulating parental influence of Dr. Isaac S. Tasman, who had been an Attending Surgeon at Wills from 1939 to 1960, he initially joined his father in private practice until the latter's failing health necessitated retirement.

In the subspecialty of retinal surgery, Dr. Tasman was appointed Associate Surgeon at Wills Eye Hospital (1962–1974) and Attending Surgeon (1974) and Co-Director of the Retinal Service (1976). He also became Attending Surgeon at Chestnut Hill Hospital (1965) and Consulting Surgeon at the Children's Hospital of Philadelphia (1977).

Dr. Tasman was made Associate Professor at Temple University School of Medicine (1966–1971) and Professor of Ophthalmology and Director of the Department at the Medical College of Pennsylvania (1979–1981). In 1974 he became a Professor of Ophthalmology at Jefferson, a
position he held until his appointment as Chairman in 1985. He served as member and officer in the numerous local and national organizations in his field and was active in founding the Club Jules Conin Retina Society and was one of the founding members of the Retina Society. His editorial positions include *Survey of Ophthalmology*, since 1971, *AMA Archives of Ophthalmology* (1972–1976), and member of the editorial board of *Ophthalmic Surgery*, since 1983. Over a 14-year period he obtained large grants for retinal clinical research at Wills Eye Hospital and significant contributions to the Retina Research and Development Foundation.

Dr. Tasman has contributed approximately 100 publications as articles or chapters in textbooks, including an authoritative treatise on diabetic retinopathy in conjunction with his partner, Dr. William E. Benson, in *Clinical Ophthalmology*. He was the editor of *Retinal Diseases in Children* (1971), coauthored, with Jerry A. Shields, M.D., *Diseases of the Peripheral Fundus* (1979), and coauthored *Congenital Anomalies of the Optic Disc* (1983), with Gary C. Brown, M.D. In 1980 he published *The History of Wills Eye Hospital*.

The large size and rapid growth of the Department occasioned the omission of many names associated with its progress. From 1946 to 1982, 79 residents were trained. A rough estimate would indicate that over the years perhaps four million eye patients have been treated. In the increasingly sophisticated technology and basic research of ophthalmology, Jefferson is dedicated to retaining a forefront position for the improved eye care of young and old.

References

1. *American Medical Record*, 4:4-10, 1821.
8. Ibid., p. 83.