January 1992

Part I: Jefferson Medical College 1855 to 1865 (pages 89-124)

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This was an important year in world medical history. Manuel Garcia first performed mirror laryngoscopy; Thomas Addison published his memoir on diseases of the suprarenal glands; J. Marion Sims founded the Woman's Hospital of New York and von Graefe introduced iridectomy.

In the large graduating class of 256 members, William Thomson of Pennsylvania was destined in 1895 to become the first Chairman of the Department of Ophthalmology at Jefferson as it is known today (Fig. 56). In 1861 he began a distinguished military career in the Union Army in which 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. After serving as inspector of all hospitals of the Washington area, he contributed largely to the first descriptions of osteomyelitis and wounds of the joints for the newly organized Army Medical Museum of which John Hill Brin­ton (JMC, 1852, Fig. 51) was the first curator. He aided the establishment of a photographic bureau in the Museum which evolved into the Medical Illustration Service of the Armed Forces Institute of Pathology. He pioneered in experimental photomicrography which led to prints of microscopic fields that could be magnified 15 to 250 times. In later years he contributed to safety on railroads by developing tests for color blindness as well as acuteness of vision and hearing of the trainmen. The College of Physicians of Philadelphia houses his ophthalmoscopes, correspondence, 14 volumes of case books, and his portrait by Thomas Eakins (1907).

Another eminent graduate of 1855 was the famous Cuban, Carlos Juan Finlay, who was credited with the discovery of the mosquito transmission of yellow fever (Fig. 57). Dr. Finlay’s observations on the epidemiology of the fever in his native Cuba were carried out over several decades. As early as 1881 he had proposed the conditions necessary for its propagation. He had even during the same year pointed out that the Aedes aegypti mosquito was the responsible vector. As an independent investigator his presentation before the International Sanitation Conference in Washington (February 13, 1881) elicited little response but in 1900 his observations were proven correct when the well-known experiment of the Walter Reed Yellow Fever Board in Havana, Cuba, confirmed the Aedes mosquito as the responsible vector. Finlay was honored by Jefferson with a degree of Doctor of Science in 1902 and a commemorative symposium on yellow fever was held in 1955, the centenary of his graduation.

Edward Maris, of Pennsylvania, in addition to his medical practice became a giant pioneer in...
the field of numismatics. In 1869 he published *Coins of Large Cents of the U.S.* and in 1881 *Historical Sketch of Colonial Coins of New Jersey*.

Jacob C. Denise, a native of Ohio, settled in Nebraska and became one of its most prominent physicians. In 1869 he was a founder of the Omaha Medical College (with Dr. Victor F. Coffman, JMC, 1866, Fig. 75) which in 1902 became the Medical Department of the University of Nebraska. Dr. Denise was also a founder and President of the Nebraska State Medical Society.

Allen, Milton, PA
Allen, Thomas J., TN
Anawalt, James W., PA
Anthony, William, PA
Asch, Morris J., PA
Ashcraft, John H., PA
Backwell, Edward G., OH
Banner, Constantine L., NC
Barham, R. G., VA
Barr, Richard Rice, NC
Barr, W. F., VA

Bartolette, T. Miles, NJ
Bass, Robert E., VA
Basselleu, William F., SC
Beeler, Milton W., MS
Bell, Edwin R., OH
Bell, George B., AL
Bell, W. D., TX
Bennett, Edmund, NJ
Beveridge, John L., GA
Blackford, Ben, VA
Boies, Jeremich S., DE
Boswell, Lewis A., VA
Braford, Philip Spotswood, VA
Brandt, Eli Bainbridge, PA
Breed, William M., PA
Breitling, Joseph, AL
Brown, Bedford, MD
Brown, Martin L., NC
Brubaker, J. C., PA
Bryan, Cyrus P., VA
Buchanan, G. W., MO
Buffington, John F., MD
Buffington, John N., VA
Butler, Anselm B., OH
Cahall, Lawrence M., DE
Callaghan, Arthur, MO
Campbell, Westlee M., NC
Cato, James F., GA
Chew, Henry B., Jr., MD
Chrisman, Burke, VA
Clark, Hobson, VA
Cole, John P., NJ
Comfort, William A., CANADA
Cowan, George, KY
Cowell, J. George, MA
Craven, Edmund R., PA
Crothers, Robert W., IL
Curd, John R., VA
Dalton, George O., MA
Davies, William B., VA
Davis, James S., MS
Dean, Samuel Henry, GA
DeBarres, Ph., CUBA
Denise, Jacob C., OH

Fig. 57. Carlos Finlay (JMC, 1855) who in 1881 ascribed yellow fever to the bite of a mosquito.
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Ohl, Josiah G., PA
Osgood, William, PA
Overton, William S., VA
Park, William H., OH
Patton, Thomas, OH
Payzant, Elias N., NOVA, SCOTIA
Peeples, P. W., MS
Pinkard, H. M., VA
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Rawls, Elijah H., GA
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Riley, John G., GA
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Rogers, James Henry, NY
Rowland, William A., GA
Rucker, William P., VA
Russell, Leonidas, IN
Rutledge, Jacob I., MD
Sarver, William, PA
Scott, Christopher H., MS
Scott, Daniel S., AR
Selman, David, MS
Shepherd, James B., VA
Sherrod, John L., TN
Shreve, J. Ridgway, NJ
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Simms, H. C., DC
Sims, Joseph B., KY
Smith, Chauncey M., NY
Smith, Hosea H., NH
Smith, Joseph F., MS
Spears, Abraham Kellar, KY
Spencer, Cadwallader C., OH
Sproul, Samuel M., MO
Stavely, William R., PA
Stewart, David P., PA
Stewart, Samuel F., PA
Strachan, Joseph Blackmam, VA
Strother, Robert C., VA
Swift, D. D., PA
Tate, John M., VA
Thomas, David B., NC
Thomas, Robert Y.H., SC
Thompson, Kimbro, VA
Thompson, William, PA
Todd, William C., PA
Townsend, A. R.P., ME
Turner, Edward, Jr., VA
Turner, Thomas, Jr., VA
Upshaw, William T., TN
Vansant, John, VA
Wallace, R. S., PA
Warden, Jacob B., VA
Washington, H. W.M., VA
Weiser, Josiah S., PA
Welch, Samuel M., KY
Wells, J. Ralston, PA
Whalley, James G., GA
White, James L., VA
White, Walter T., MS
Wilkerson, William W., AL
Willcoxon, Levi J., GA
Willett, E. Miles., KY
Willis, George M., GA
Winsborough, Joseph W., VA
Wolfe, David E., DE
Wood, Sidney S., NC
Woodson, Philip T., GA
Woodward, William W., MO
Worthington, Thomas E., KY
Young, Alexander H., TN
Young, William P., DC

1855
At the Commencement Exercises held in Musical Fund Hall, 215 classmates received their diplomas. Among the members was Richard J. Dunglison who had studied under his famous father, Robley Dunglison, who was presiding as Dean at this time.

Richard J. Dunglison followed in his father’s footsteps by pursuing an editorial career, although he did not join a medical faculty (Fig. 58). He was one of the originators of the Philadelphia Medical Times, edited Gray’s Anatomy in 1884, and continued his father’s Medical Dictionary to its 22nd edition in 1900. (The final edition of Robley Dunglison’s Dictionary was published by Thomas Stedman, A.M., M.D., in 1903.) In addition to writing many medical articles, he was assistant secretary of the American Medical Association in 1876 and its treasurer in 1877. He was assistant secretary of the International Medical Congress in 1876 and corresponding secretary of the Centennial Medical Commission the same year. Like his father, he served as President of the Musical Fund Society of Philadelphia, in the hall of which he had graduated.

Another outstanding graduate of this class was William Henry Pancoast (Fig. 59) whose father was Joseph Pancoast, the Professor of Anatomy. In pursuit of a career as surgeon-anatomist he initiated courses in visceral and surgical anatomy in Jefferson’s “Summer Course” which started in 1866 and attracted students from other schools. In 1874 he succeeded his father in the Chair of Anatomy (Fig. 60). In this year (1874) Thomas Eakins studied anatomy at Jefferson under both the elder and younger Pancoasts, prior to painting the Gross Clinic (1875).
Fig. 58. Richard J. Dunglison (JMC, 1856), son of Professor Robley Dunglison, continued later editions of his father's medical dictionary. (Courtesy Historical Collections, College of Physicians of Philadelphia.)
Lunn, Lewis Thomas, OH
Malone, Joseph H., GA
Marbourg, J. L., PA
Mathews, Thomas P., VA
May, David G., VA
May, John W., NC
McCartney, J. S., PA
McChesney, Robert Aurel, VA
McClellan, Ely, PA
McClintic, H. D., VA
McCollester, John Q.A., NH
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Pryor, William T., TN
Reber, Charles T., PA
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Robertson, R. M., AL
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Sayle, Robert, TN
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Snead, John D., VA
Spencer, W., IN
St. Clair, W. P., KY
Stanley, Augustin O., GA
Sternberg, J. Herkimer, NY
Stevenson, W. Morton, IN
Stewart, Jordan, PA
Strudwick, James W., AL
Stuckslager, Cyrus R., TN
Sturdevant, S. Burton, PA
Sullivan, John M., PA
Taylor, Joseph Sheppard, VA

Fig. 59. William Henry Pancoast (JMC, 1856), Chairman of Anatomy 1874 to 1886, and son of Professor Joseph Pancoast.
Fig. 60. Professor William Henry Pancoast with his anatomy class (ca. 1870).
In the medical world at large, it was the year in which Carl Ferdinand von Graefe introduced the operation for strabismus; Eugene Bouchut performed intubation of the larynx; and the Pathological Society of Philadelphia was founded with Samuel D. Gross as a founder and first President.

Samuel W. Gross (Fig. 61), son of the world-renowned Samuel D. Gross, was the most outstanding member of this class which numbered 211. Having inherited the intellectual superiority of his father, he went on to achieve distinction in his writings, teaching, operative skill and membership in societies. He was especially interested in tumors and studied under the microscope all the ones he removed. He was one of the founders of the Philadelphia Academy of Surgery (1879) and acted as its histologist. Also, he was President of the Pathological Society of Philadelphia (1879), a fellow of the College of Physicians of Philadelphia, one of the founders of the American Genito-urinary Association and prominent fellow of the American Surgical Association which his father had founded in 1880. In 1882, upon the resignation of the elder Gross from the Professorship of Surgery, he shared the divided Chair with John Hill Brinton (JMC, 1852). In 1876 he married Grace Linzee Revere, the great-granddaughter of Paul Revere. During his last illness from pneumonia, which led to his death at the age of 52, he was seen in consultation by Dr. William Osler who later married his widow. The legacy of Grace Revere Osler endowed the Professorship of Surgery at Jefferson which bears her name.

Another member of the class who achieved prominence was Robert Battey. Following his graduation he studied in Paris for two years and then practiced in Rome, Georgia. An eminent gynecologist of his day, he was a founding member and President (1889) of the American Gynecologic Society. He served as Professor of Obstetrics in the Atlanta Medical College and was one of the most noted surgeons of the South. Other achievements were his improved operation for vesicovaginal fistula and the advocacy of iodized phenol against infection. Jefferson Medical College granted him an LL.D. degree in 1890. A monument stands to his memory in Rome, Georgia.

Austin Flint, Jr. entitled his graduation thesis Phenomena of the Capillary Circulation which had the merit to appear in the American Journal of the Medical Sciences July, 1857. For the next three years he was editor of the Buffalo Medical Journal which had been founded by his famous father. In 1858 he became Professor of Physiology in the Medical School of Buffalo. The following year he

Fig. 61. Samuel W. Gross (JMC, 1857), son of Samuel D. Gross, served as Co-chairman of Surgery (1882-89)
removed to the same position at the New York Medical College and still a year later to the same position in the New Orleans School of Medicine. He was the first physiologist in this country to operate upon the spinal cord and spinal nerves in living animals. He discovered the production of cholesterol in the physiology of the brain and nervous tissue, the elimination of cholesterol by the liver, and its discharge in the form of stercore in the feces. He was one of the founders of the Bellevue Hospital Medical College in 1861 and held the Chair of Physiology there for more than 30 years. In 1868 he published the *Physiology of Man*, an opus of eventually five volumes of 500 pages each, of which the last volume was released in 1874. He was awarded an LL.D. degree at Jefferson in 1885.

Louis Elsberg became the founding President of the American Laryngological Association in 1878. He was among the first in the nation to demonstrate in public the use of the laryngoscope in diagnostic and treatment situations, thereby launching Jefferson's great tradition in the specialty which peaked with Chevalier Jackson (JMC, 1886) and Louis H. Clerf (JMC, 1912). He also invented a tongue depressor and sponge carrier.
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1857
Art. I.—Phenomena of the Capillary Circulation.
By Austin Flint, Jr., M. D.1

The statements which I shall make from my own observation concerning the capillary circulation, are based upon examinations made from time to time during the past summer, nine of which have been carefully recorded. The recorded observations were made on the web of the frog, although I have made examinations of the various other parts where the circulation can be conveniently exhibited, to which I shall refer.

The microscope used was the large instrument of Nachet, and, unless otherwise stated, with a magnifying power of 165 diameters.

I shall first point out what I have found to be the most convenient methods of conducting examinations of the circulation in the frog, and then proceed to describe the various phenomena of the circulation as viewed by means of the microscope, and then draw my deductions from these observations.

The parts of the frog which I have subjected to examination, are the web of the foot, the tongue, the peritoneum, and the lungs. All parts but the peritoneum require to be examined by transmitted light, but, in examining the circulation in the latter situation, we are compelled to use reflected light.

It is exceedingly inconvenient to make observations while the frog has the power of motion, and in securing it to the frog-plate in a proper position, we are apt to interrupt or modify the circulation by constricting the vessels with the bands which we must use. Under these circumstances, we are not able to apply medicated solutions conveniently to the entire surface, and mechanical or chemical irritation of any part occasions struggles which greatly increase

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1 An Inaugural Dissertation laid before the faculty of Jefferson Medical College in February, 1857.

No. XLVII.—July 1857.
The emergence of the era of scientific medicine was heralded during 1858 by the publication of Rudolf Virchow's *Cellular Pathology*, a work destined to provide the basis for a new understanding of body changes incident to disease. This, together with the ferment in physiology led by Claude Bernard and Johannes Muller, would develop the background for many of the momentous biological and medical advances late in the nineteenth century.

The same year Henry Gray, age 33, a Lecturer in Anatomy at St. George's Hospital, London, and Fellow of the Royal College of Surgeons, published *Gray's Anatomy, Descriptive and Surgical*. This classic, well known to generations of medical students, was later revised by Jeffersonians Richard J. Dunglison in 1884, W.W. Keen in 1887, J. Chalmers DaCosta in 1905, and Edward A. Spitzka, Professor of Anatomy, in 1910 and 1913.

John Kearsley Mitchell (Fig. 62), Chairman of Medicine, although in failing health, held a reception for the 210 members of the graduating class at his home on Walnut Street just one month before his death. Dr. Mitchell, father of S. Weir Mitchell, had contributed greatly to the developing prestige of Jefferson Medical College as a member of the famous faculty of 1841 (Fig. 31).
Young men ought to come well prepared for the study of Medicine, by having their minds enriched with all the aids they can receive from the languages, and the liberal arts.

John Morgan (1735-1789).

“A Discourse Upon the Institution of Medical Schools in America”.
The matriculates in the College numbered 630, exceeding all records of medical schools of any country or time. The University of Pennsylvania had 528 matriculates, also its largest enrollment to that time. Jefferson’s gain in students was chiefly from the country at large, while that at the University was mainly from Pennsylvania.

An 1859 graduate, James McMaster, joined the United States Navy the same year and remained in the service until his death in 1873. He was first attached to the Naval Academy at Annapolis for one year. His career included service in the Far East and extensive experience in the Naval engagements of the Civil War. He attended Admiral David G. Farragut during the Admiral’s last illness at Portsmouth, New Hampshire.

Another class member, Aaron J. Steele, became a pioneer in orthopedic surgery, serving successively as Professor of Orthopedic Surgery at Beaumont Medical College, Missouri Medical College, and Washington University, St. Louis, Missouri.

Thomas R. Dunglison (Fig. 63), another son of Professor Robley Dunglison, graduated in this class and became a well-known Philadelphia physician. His brother, Richard J., preceded him in the Class of 1856 (Fig. 58).

A major event of 1859 was the publication by Charles Darwin of his great work *On the Origin of Species by Means of Natural Selection*, a synthesis of observations and ideas destined to revolutionize scientific and philosophic thought.

On the evening of December 23 of this year, Dr. Hunter McGuire, a graduate of Winchester Medical College in Virginia, led a body of over 200 students from Jefferson and the University of Pennsylvania to Richmond, Virginia (Fig. 64). This exodus of southern medical students was triggered by the hanging of John Brown in Charles Town on December 2, 1859, and the offer of free tuition by the Medical College of Virginia. This crucial atmosphere which polarized Northern and Southern attitudes weakened Jefferson’s enrollment, but the reputation of the triumvirate of Drs. Gross, Dunglison and Pancoast abetted its weathering of the storm.

### Class of 1859

- Adams, Martin, OH
- Alexander, Samuel L., PA
- Alexander, Eli, MS
- Almond, Andrew J., VA
- Anderson, Edwin P., TN
- Anderson, Peter E., VA
- Bankhead, Robert A., MS
- Barr, James M., VA
- Baskin, Robert H., GA
- Beadles, Percival, VA
- Beman, Edward D., GA
- Benson, Douglas B., VA
- Bibb, Alexander L., MO
- Bivins, Robert T., GA
- Blackwell, Thomas J., NC
- Blanton, William H., KY
- Bledsoe, Francis M., AL
- Blick, Joseph A., VA
- Boggs, Charles D., VA
- Boon, William C., MO
- Bowers, Thomas C., CANADA
- Brewer, William T., NC
- Brinton, J. Bernard, PA
- Brown, W. C., AR
- Brown, Thomas H. B., VA
- Brumby, G. McDaffie, MS
- Butler, Oliver H., NY
- Campbell, William, PA
- Canfield, Augustus R., MS
- Carn, Lewis M., FL
- Caruthers, C. K., TN
- Caswell, Edward T., RI
- Cauthorne, A. Hart, VA
- Cawood, J. C., TN
- Chandler, Isaac L., GA
- Cheyney, W. D., GA
- Clements, William N., TN
- Coard, William H., VA
- Comfort, Jonathan J., MI
- Cooper, Edward S., IN
Corbin, Philip S. P., VA
Cotten, James F., GA
Cox, George W., VA
Crawe, J. Mortimer, NY
Crawford, George G., GA
Crawford, James J., VA
Crews, O. L., AL
Crigler, John L., MS
Cunningham, H. Clay, KY
Davis, James F., SC
Dean, James, Jr., GA
Deloach, A. B., MS
Dickson, John H., SC
Dorset, Thomas B., Jr., VA
Drennan, Horatio, SC
Dunglison, Thomas B., PA
Dysart, Benjamin G., MO
Dysart, William P., MO
Eads, Darwin D., KY
Eckert, John N., PA
Edmonds, Nicholas C., VA
Elder, William T., VA
Fitzpatrick, William J., AL
Flagg, Samuel D., Jr., NY
Flore, Frederick B., MI
Flowers, John, PA
Foley, Thomas W., LA

Foote, Frederick, VA
Foote, George C., PA
Frame, Robert, DE
Francis, G. M., TX
Fulmore, Zachariah R., SC
Fulton, James, PA
Fussell, Benjamin L., PA
Gee, Edward C., VA
Gilkey, John H., NC
Glass, W. L., NC
Glenn, James Mallory, GA
Glover, Charles P., TN
Goodwin, Thomas W., MS
Gordan, William H., PA
Grafton, Joseph D., AR
Graham, Joseph, NC
Greene, Marshall L., MI
Gregory, Alfred B., GA
Gregory, Flavius J., VA
Gregory, Janius C., VA
Griffin, George C., GA
Grim George W., PA
Grooms, Stephen H., KY
Gunn, Silas R., MS
Gunn, William R., MS
Hall, Joseph U., CA
Happersett, John C. G., PA

Fig. 63. Thomas R. Dunglison (JMC, 1859), son of Robley Dunglison, became a well-known Philadelphia physician. (Courtesy Historical Collections, College of Physicians of Philadelphia.)
Fig. 64. Hunter McGuire, M.D. led Philadelphia medical students to Richmond, Virginia, to aid the South in the Civil War that was imminent.
The titles of theses of the graduating students underwent gradual changes during the Civil War period. Previously, titles tended toward provincial interests or appeared to relate to subjects which might have been introduced in the lectures. The changes during the early 1860's indicated more concern with infections such as typhoid fever, pneumonia, "enteric fever", yellow fever, and tuberculosis, the latter still referred to as phthisis pulmonalis, tubercular phthisis, or consumption. During the War, more of the titles related to epidemic infections such as scarlet fever, diphtheria, dysentery, and to gunshot wounds, matters of public concern and medical ethics. An increasing number of theses related to syphilis and gonorrhea as well as to methods of clinical diagnosis. Although the work of Oliver Wendell Holmes, Ignaz Semmelweis and others had led to new concepts of the prevention of childbed fever, there were surprisingly few references to this important development. On the whole, however, there appeared to be a significant change toward involvement of physicians in public issues. It would be several decades before these interests would lead to organized action.

The number of graduates of 1860 diminished sharply from 255 of the previous year to 170, largely the result of the migration of students to aid the Southern cause in the impending conflict.

Albert W. Fischer (Fig. 65) served as an Assistant Surgeon in the Union Army and was especially commended for his services in 1862 at Harrison’s Landing, Virginia. He became a member of the U.S. Pension Board of Examiners as well as Health Officer of the city of Toledo, Ohio. He served as Quarantine Officer of the port of Toledo and wrote on The Sanitary Conditions of Cities. For five years he was Dean of Toledo Medical College as well as Professor of Nervous Diseases and Clinical Surgery. In 1880 he served as President of the Toledo Medical Association.
Fig. 65. Albert Weiser Fisher (JMC, 1860) served as Dean of Toledo Medical College and Professor of Nervous Diseases and Clinical Surgery.
"I would wish the young practitioner, especially, to have deeply impressed on his mind, the real limits of his art, and that when the state of his patient gets beyond these, his office is to be a watchful, but quiet spectator of the operations of nature, giving them fair play by a well-regulated regimen, and by all the aid they can derive from the excitement of good spirits and hope in the patient."

Thomas Jefferson (1743-1826)
The Civil War brought about major changes at Jefferson Medical College. Southern medical students had constituted a large portion of the total enrollment. Even before the outbreak of hostilities, many of the southern students withdrew. In spite of the pressures, many Southerners did remain north. The Class of 1860 which numbered 170 still graduated 26 Virginians, 18 Georgians and 13 North Carolinians. In 1861 in a class of 187, there were 26 from Virginia, 12 from North Carolina, and 6 from Georgia. The major impact of the War occurred in 1862 when the number of graduates diminished to 77, and in 1863 when 82 graduated. The following year the total was 124 and soon thereafter enrollment stabilized.

It is of interest that Dr. Hunter Holmes McGuire, although not a Jefferson graduate, who led the withdrawal in 1859, became a prominent physician, President of the American Medical Association in 1893, and was awarded an honorary degree by Jefferson in 1888 (Fig. 64). An outstanding member of the class was Phineas S. Connor, a native of West Chester, Pennsylvania (Fig. 66). He was raised and educated in Cincinnati, Ohio, where he began the study of medicine at the Medical College of Ohio in 1858 but came to Jefferson in 1860 to complete his medical studies. After wartime service he returned to Cincinnati as Professor of Surgery. He also held appointments in Chemistry and Anatomy and from 1900 to 1902 served as Dean. The Medical College of Ohio became the Medical Department of the University of Cincinnati in 1887.

Abernethy, James M., NC
Alger, Luther W., MA
Alter, David, PA
Appel, Charles H., PA
Armfield, David A., NC
Atkins, T. W., GA
Baker, John A., VA
Balsbaugh, George S., IL
Barclay, John, PA
Beckham, Henry C., VA
Bell, John B., VA
Bickley, Lloyd Wharton, PA
Blackburn, Cary B., MS
Blalock, N. G., NC
Bowdon, P. M., MS
Bowers, E. D., OH
Brothers, Oscar C., MS
Brown, M. A., MO
Brown, Ignatius C., TN
Brunner, Frank R., PA
Buford, Smith, MS
Burges, Richard U., VA
Bush, Dudley, KY
Bushong, Israel, PA
Chambers, William D., KY
Clark, Patrick B., TX
Cochran, John L., VA
Coe, Thomas Upham, ME
Conkwright, Allen H., MO
Conner, Phineas S., OH
Cook, George R., FL
Covington, Thomas H., KY
Crossley, George W., IL
Culver, Lucius Pitt, OH
Daniel, Thomas W., VA
Davies, William H., VA
Davis, Nicholas E., VA
Delaney, William T., TN
Duff, Edmund, PA
Duke, James E., VA
Dupuy, Joseph T., VA
Dye, Henry, TX
Earnest, J. Tate, TN
Eaves, Spencer, NC
Elder, Samuel M., PA
Embree, John W., TX
Engelman, Joseph P., PA
Eves, Abram E., DE
Ewing, W. D., VA
Farley, John C., AL
Finney, Edward B., VA
Flint, John Felix, PA
Fox, Addison C., VA  
Frantz, John H., MD  
Fulkerson, Albert P., MO  
Gamble, Hamilton M., VA  
Garrett, Lewis T., PA  
Gidney, J. Chauncey, NC  
Gilman, Uriah, AR  
Goolrick, P., Jr., VA  
Grant, John, CANADA  
Greene, Lorenzo S.S., AL  
Gross, Chester L., PA  
Hammond, Alfred F., NC  
Hanger, Cornelius, MO  
Hanly, John A.C., PA  
Harrill, Lawson, NC  
Haughton, Richard E., IN  
Haupt, Frederick L., PA  
Hawkins, John W., MO  
Henry, David H., IN  
Herr, Ambrose J., PA  
Herrick, George H., NH  
Hetzell, David G., NJ  
Higgins, Samuel J., GA  
Hill, Lauriston H., NC  
Hitch, William S., DE  
Horton, Samuel M., PA  
Howard, Thomas Henry, VA  
Hugg, Joseph, NJ  
Jones, E. W., AL  
Jones, La Fayette J., VA  
Keely, Thomas J., PA  
Keene, Robert Wilson, KY  
King, William Coffield, TN  
Knott, Thomas M., KY  
Kuykendall, William C., MS  
Lane, Sidney W., MD  
Lea, John G., NC  
Lineaweaver, John K., PA  
Logan, P. W., KY  
Lowry, Squire M., KY  
Marley, H. B., NC  
Marsh, Joseph W., DE  
Martin, James, OH  
Massie, James W., KY  
Mathis, Aylesbury, GA  
McClarty, Hugh G., TX  
McGee, J. P., TN  
Metheny, David, PA  
Michler, William H.H., PA  
Miller, Victor Davis, PA  
Milloy, John, MS  
Miner, James, IL  
Montanye, Lester de la, PA  
Morley, J. R., TN  
Morris, John, OH  
Morrison, Joseph B., PA  
Moses, Thomas Freeman, ME  
Mosley, Benjamin J., GA  
Munford, Samuel E., IN  
Nall, Burr F., KY  
Nicholson, John, PA  
Noble, James D., PA  
Norman, John P., PA  
Notson, William Morrow, PA  
Nottingham, Severn P., VA  
O'Bryan, William R., KY  
Oldmixon, George Scott, PA  
Parker, William H.H., VA  
Parker, D. Reid, NC  
Pease, Loren H., CT  
Picot, Mitchell H., PA  
Pomerene, Peter P., OH  
Powell, H. B., OH  
Price, William Frederick, VA  
Pulliam, John D., VA

Fig. 66. Phineas S. Conner (JMC, 1861) Professor of Surgery and Dean of Medical College of Ohio.
Pyatt, K. A., TN
Quarterman, Keith A., GA
Ragsdale, Joseph, MO
Rhinehart, Alexander K., GA
Rhoads, Thomas J. B., PA
Rice, Albert R., NY
Richey, James A., PA
Riggs, David W., PA
Ritter, Nathaniel F., PA
Robbins, Joseph, IL
Roberts, William H., IN
Robertson, A. T., AR
Robertson, T. L., AL
Roller, William C., PA
Ross, Elijah W., PA
Rugeley, Henry L., TX
Sanders, William H., AL
Satterfield, Benjamin F., MO
Saunders, John B., KY
Savage, William E.F., VA
Seargeant, Henry H., VA
Senseny, William D., PA
Shackelford, William, KY
Shackleford, James, KY
Shankle, E. A., GA
Short, Wesley, IN
Simmons, Thomas W., MD
Simpson, Joseph Hawkins, NC
Slough, G. B., PA
Smoot, John H., VA
Spencer, William Canfield, NY
Stewart, Samuel Shaw, PA
Stowe, Charles H., PA
Thomas, Richard C., KY
Thompson, Thomas C., TX
Thompson, William B., PA
Thomson, James W., PA
Totten, John Baldwin, OH
Trego, Albert, PA
Tyson, Andrew R., PA
Vaughan, Joseph H., VA
Wailes, Leonard A., MS
Wallis, Walter, MD
Warren, Francis G., ME
Washington, James S., AR
Way, William Henry, GA
Webb, Charles E., VA
Weist, J. R., OH
Welch, Stanton A., PA
White, Horace M., PA
Williams, Junius S., NC
Williams, Emmet, MS
Willson, John, PA
Wilson, Lucien Strain, GA
Wilson, W. Stockton, MD
Windle, Isaac, IA
Wood, J. Bestor, AL
Woolsey, William F., PA
Wortham, John B., AL
Wymond, Richmond, IN

William Williams Keen, Jr., in the 77 graduates of this class, was destined for the Chairmanship of Surgery at Jefferson (1889-1907). He was the most outstanding graduate of the decade (Fig. 67 & 68). His medical education was interrupted by appointment as an Acting Union Army Surgeon in July, 1861, by Dr. John Hill Brinton. He returned in time to complete graduation requirements and was immediately commissioned as an Acting Assistant Surgeon to the United States Army. His innovative approach to military hospital organization was recognized by appointments to Army Hospitals in the Philadelphia area where for a time he served with Drs. S. Weir Mitchell and George Morehouse (both JMC, 1850). Experiences there resulted in their publication of *Gunshot Wounds and Other Injuries of Nerves* in 1864 and stimulated Dr. Keen's interest in neurological surgery. Perhaps his most notable accomplishment was the successful removal of an intracranial tumor, the first in America, performed in 1887. He was a member of the surgical team that operated upon President Grover Cleveland in 1893. Keen was among the most decorated and honored of Jefferson's alumni. He received eleven honorary degrees and was a fellow of numerous American and foreign societies.

John Edward Owens, a native of Maryland, became a well-known surgeon in the Middle West. In 1877 he was appointed Professor of Surgery at Women's Medical College of Chicago and two years later Professor of Orthopedic Surgery at Rush Medical College. In 1891 he was named Professor of Surgery at Chicago Medical College.

Fig. 67. William Williams Keen, Jr. (JMC, 1862), Co-chairman of Surgery (1889-1907).
Andrews, J. Charles, PA  
Angle, John S., PA  
Applegate, Joseph W., IN  
Baldwin, Louis K., DE  
Barnes, Ira Norton, NH  
Barton, J. Hervey, PA  
Beane, William H., PA  
Berg, J. Frederick, Jr., PA  
Blaydes, James E., TN  
Bower, Henry J., PA  
Brooks, Edward, NY  
Burg, S. Wesley, PA  
Burnett, Joshua U., NEW BRUNSWICK  
Cantrell, William A., PA  
Carroll, Thomas, PA  
Conklin, Gustavus, PA  
Cook, William Harvey, PA  
Duffell, Charles L., NJ  
Edwards, James L., IL  
Fitch, Pelatiah, NJ  
Gast, John Reynolds, PA  
Girvin, Robert M., PA  
Graham, Samuel, PA  
Grant, John, NOVA SCOTIA  
Hayes, Joseph H., PA  
Healy, James, KY  
Hidden, William Buffet, NH  
Hoffman, Christian N., PA  
Keen, William W., Jr., PA  
King, Cyrus B., PA  
Knipe, Jacob O., PA  
Lane, Edward G., DC  
Lewis, Edward C., OH  
Litz, Jefferson, PA  
Marchand, James I., PA  
Marchand, William King, PA  
Martin, Joseph R., PA  
Maury, Frank F., KY  
McClung, Leigh, OH  
McCormick, S. Carson, PA  
McGuigan, James A., PA  
McHenry, Thomas, PA  
Miller, Jacob M., PA  
Mitchell, H. Hedge, MA  
Montmollin, James M., KY  
Mosser, M. Breneeman, PA  
Myers, Isaac N., IN  
Neblett, Henry M., VA  
Norris, John Clements, MD  
Okie, William T., PA  
Owens, John Edward, MD  
Patterson, James B., IL  
Perry, Marshall S., MA  
Porter, George L., PA  
Purcell, Wallace M., IN  
Raker, Henry M., PA  
Reed, J. Farley, PA  
Reeves, William H., OH  
Reinholdt, John B., PA  
Robins, Lorenzo D., PA  
Rogers, Ebenezer, PA  
Rumbold, F. Frazier, WI  
Seip, George W., PA  
Shearer, James, PA  
Smurr, Thomas A., OH  
Snyder, Peter C., PA  
Steckel, Edmund F., PA  
Sternberg, A. Irving, NY  
Stewart, Jeremiah S., PA  
Strawn, Benjamin F., MO  
Strode, John T., KY  
Stubbs, Joseph H., PA  
Taylor, Brent W., KY  
Thompson, Michael, PA  
Thompson, Ebenezer, NEWFOUNDLAND  
Treadwell, Passmore, NH

A foreign war is like a scratch on the elbow; a civil war is an ulcer which eats away your liver.

Victor Hugo (1802-1885)
Fig. 68. Clinic of W.W. Keen in "pit" of 1877 Hospital.
Jerome Keating Bauduy, in this class of 82 graduates, was educated at Georgetown College in Washington, D.C. and at the University of Louvain, Belgium. He began his three-year medical education at the University of Pennsylvania but completed it at Jefferson in 1863. After Civil War service he settled in St. Louis where he became Professor of Nervous and Mental Diseases and Medical Jurisprudence in the Missouri Medical College. He was the author of a well-known work on nervous diseases and was an early member of the American Neurological Association.

William H. Ford, whose prior education included Lawrenceville School and Princeton College, served in the Civil War (author of Gunshot Wounds of the Chest) but was able to complete his graduation requirements at Jefferson this year. He then studied in Europe for three years including languages in his pursuit of medical experience at Bonn, Vienna, Heidelberg, Paris and London. He established a practice in Philadelphia in 1868 and joined the Pathological Society, the College of Physicians, and in 1874 the American Public Health Association. His medical and literary erudition was promptly demonstrated with publications and studies in vital statistics, public health, and sanitation. He served as Secretary of the Board of Health of Philadelphia during a period when many new concepts in the field of public health were developing. In 1876 he was a member of the Centennial Medical Commission and a delegate to the International Medical Congress held in association with the Centennial Celebration.

William Shaw Stewart was a graduate of Jefferson College, Canonsburg, Pennsylvania, in which Jefferson Medical College was established as its Medical Department in 1824. Following service in the Civil War as Assistant Surgeon with the Army of the Potomac, he established a practice in Philadelphia and soon became involved in medical societies as well as in cultural pursuits. He was Professor of Obstetrics and Clinical Professor of Gynecology at Medico-Chirurgical College of Philadelphia for ten years, Dean for five years and later Emeritus Professor. He was a delegate to the Ninth and Tenth World Medical Congresses and presented papers at both. Dr. Stewart was a widely experienced surgeon including skills in abdominal surgery which was just in the process of development.

William T. Beach was a typical example of the excellent community general practitioner for which Jefferson Medical College had gained such a favorable reputation (Figure 69). After service in the Union Army he entered practice in Schuylkill County, Pennsylvania, a region dominated by the anthracite coal industry. He became interested in community affairs outside his profession. In later life he conducted a drug store and also served as Secretary of the Schuylkill County Medical Society.

Fig. 69. William Thomas Beach (JMC, 1863), highly respected in practice and community affairs.
Albert, David, PA
Applegate, Frederick C., OH
Barndt, Solomon K., PA
Bauduy, Jerome Keating, PA
Beach, William T., PA
Boughman, George W., DE
Boyd, George B., PA
Bradley, John, PA
Brittain, Richard James, PA
Brown, Richard E., NJ
Cadwell, Joseph W., IL
Campbell, Thomas F., PA
Campfield, Ira D., Jr., PA
Carroll, William, PA
Clark, Vachal M., TN
Clarke, George W., NOVA SCOTIA
Coles, John W., NJ
Coover, Joseph H., PA
Corbit, William B., DE
Crawford, Cornelia C.V.A., PA
Crosby, James A., KY
Dayton, Samuel W., PA
DeWitt, John Wilson, PA
Donor, William J., CANADA
Dougherty, Matthew C., VA
Eagleson, David S., PA
Etter, D. Frank, PA
Fawcett, Charles L., OH
Foote, Herschel, PA
Ford, William H., PA
Free, Jared, PA
Gale, John Witten, OH
Gerry, James, Jr., PA
Griffith, David S., PA
Handrick, Edgar L., PA
Hays, William L., MD
Huff, Isaac, PA
Huston, John M., PA
Johnson, Charles M., NY
Kelly, William R., OH
Lehr, George Y., PA
Lightner, Samuel B., PA
Loller, William B., OH
Longwill, Robert L., PA
Loper, William E., NJ
Mackey, James W., PA
Maines, Robert G., NJ
Marshall, Robert C., PA
McCandless, Jas. Newton, PA
McCandless, Josiah G., PA
McDonough, James, PA
Miller, Oliver L., PA
Morrison, John B.G., NOVA SCOTIA
Murphy, Samuel M., PA
Pigott, Charles J., PA
Pulsifer, Horatio B., PA
Reber, William M., PA
Richards, Daniel W., PA
Rittenhouse, George W., NJ
Robinson, Charles, CANADA
Sackrider, Charles H., MI
Say, Eli J., PA
Seiler, Robert H., PA
Snively, I. N., PA
Stephenson, Robert Amasa, OH
Stewart, William S., PA
Stone, Brinton, PA
Stubbs, Charles H., PA
Terry, Henry R., PA
Townsend, Ellis P., PA
Trumbauer, Henry T., PA
Tuft, Reuben H., MD
Turnbull, John, OH
Turner, Theophilus H., NJ
Vaill, Charles H., CT
Way, Walter R., PA
Whitford, Lorenzo D., OH
Wiles, C. Hamer, OH
Williams, Abraham D., OH
Willson, David B., PA
Wilson, Charles P., OH
Woods, James M.B., CANADA
William Wallace McClure, in this class of 124, had already served for three years during the Civil War as an Assistant Surgeon. During this time he was associated with Dr. D. Hayes Agnew (later of the famous Agnew Clinic painted by Thomas Eakins in 1889). His residency at Philadelphia General Hospital led to acquaintance with Drs. Joseph Pancoast, Samuel D. Gross and Jacob Mendes DaCosta. This was followed by an appointment as Resident Surgeon at Wills Eye Hospital and studies in ophthalmology in London, Paris and Vienna. He became a noted ophthalmologist, and as Senior Surgeon at Wills he designed several instruments as well as teaching devices for use in the courses of lectures (Fig. 70).

Thomas Hollingsworth Andrews served as a Demonstrator of Anatomy from 1875 to 1879 under Professor William Henry Pancoast.

Abraham S. Raudenbush, in addition to more than 40 years in general practice, served as President of the Berks County Medical Society in 1877 and for 15 years as its treasurer (Fig. 71).

The wartime aspects of teaching at Jefferson were underlined by the comment in the 1864 College catalogue: "Great attention will be paid to instruction in all the departments of Medicine and Surgery, which have special relation to military and naval service." The same year marked the loss of another member of the famous 1841 faculty, Dr. Franklin Bache, great grandson of Benjamin Franklin and Professor of Chemistry (Fig. 34). His successor, Professor Benjamin Howard Rand (JMC, 1848), went on to equally important accomplishments in his long career.
Fig. 70. William W. McClure (JMC, 1864), noted Philadelphia ophthalmologist.

Fig. 71. Abraham S. Raudenbush (JMC, 1864), general practitioner for 40 years, served as President of the Berks County Medical Society.
Ridgway, Thomas Edwin, PA
Seagrave, Joseph S., NJ
Senseman, John, OH
Sharples, Abram, PA
Shew, Abraham Marvin, NJ
Simon, William I., PA
Smith, John R., IL
Smith, Henry A.M., PA
Smith, Jacob Jontz, IN
Steckel, Alfred P., PA
Stewart, Joseph F., PA
Stockton, James Clark, PA
Stokes, J. Spencer, NJ
Sudler, William T., DE
Taylor, Robert W., KY
Thompson, James F., PA
Thomson, A. Agnew, PA

Thomson, Benjamin F., KY
Tucker, James E., KY
Underwood, Warren J., PA
Van Kirk, Theophilus R., PA
Vannuys, D. H., IN
Verner, Chittick, PA
Wallace, James P., IN
Weaver, Charles H., NY
Webster, John R., IL
West, Theodore S., VA
White, Elisha M., MA
Wiley, Charles, NJ
Willis, Samuel W., KY
Witman, Harrison T., PA
Woods, William S., MO
Woodward, Charles E., NJ
Worthington, William E., MO

GUNSHOT WOUNDS

AND OTHER

INJURIES OF NERVES.

BY

F. Weir Mitchell M.D.
George R. Morehouse, M.D.

William W. Keen M.D.

PHILADELPHIA:
J. B. Lippincott & Co.
1864.
J. Ewing Mears, (Fig. 72), son of George W. Mears (JMC, 1827), a native of Indianapolis, Indiana, served as a military cadet and later as an executive officer in Civil War hospitals. Upon graduation in this class of 136 members he became an instructor in Dr. W.W. Keen’s Philadelphia School of Anatomy and soon organized the new surgical laboratory at Jefferson (Fig. 73). He also lectured in gynecology. From 1870 to 1898, he occupied the Chair of Anatomy and Surgery at the Pennsylvania College of Dental Surgery. Mears was a charter member of the American Surgical Association in 1880 and later its President. He was also a founding member, Secretary and in 1898, President of the Philadelphia Academy of Surgery. As an Attending Surgeon at St. Mary’s and St. Agnes Hospitals, he along with Dr. W.W. Keen were the first surgeons in Philadelphia to adopt Lister’s antiseptic method, an event commemorated by a tablet at St. Mary’s. His legacy to Jefferson was the establishment of the J. Ewing Mears Training and Research Fellowship. His portrait may be found in the Gross Room of the Philadelphia College of Physicians.

The first rumblings of a new era in medicine and surgery were signaled by the observation of Joseph Lister in 1865 (and introduced by him in 1867) that carbolic acid had merit in the treatment
of compound fractures. This first specific approach to antisepsis and later asepsis based upon the "germ theory" of Pasteur would assure the lasting fame of its discoverer even though years would elapse before these principles would gain general acceptance.

Adoniram B. Judson received a Master of Arts degree from Brown University in 1859 and started his study of medicine in the Harvard Medical School under J.H. Bigelow and Oliver Wendell Holmes. He then entered Jefferson Medical College in 1861, but was caught up in the Civil War at which time President Lincoln commissioned him as an Assistant Surgeon in the U.S. Navy. In 1864 he was promoted to the post of Passed Assistant Surgeon and subse- quently graduated from Jefferson in 1865. In 1868 he received a second M.D. degree from the College of Physicians and Surgeons of New York. In 1875 he took special training in orthopaedic surgery and devoted the rest of his professional career in that specialty. He became Assistant to the Chair of Orthopaedic Surgery in the University of New York and Orthopaedic Surgeon to the Bellevue Hospital Out-Patients, as well as Lecturer on Orthopaedic Surgery to the Woman's College of the New York Infirmary. He made significant contributions to the literature in the fields of public health and orthopaedic surgery (Fig. 74). In 1891 he delivered the President's address before the American Orthopaedic Association in Washington, D.C.

Fig. 74. Adoniram B. Judson (JMC, 1865), pioneer in orthopaedic surgery.