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ORIGINAL ARTICLES.

HONORS THAT HAVE COME TO THE MEDICAL PROFESSION IN AMERICA.

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Chairman of the Historical Committee of the Medical Society County of Kings and the Brooklyn Medical Society. Member of the Historical Committee of the Associate Physicians of Long Island.

The silent motto of a museum is, "All things come to him who waits." And so it is with the medical profession. Many years have come and gone with no silent monitor to remind the people that there ever was a physician or surgeon in the United States worthy of having his figure cast in bronze or cut in stone, or his name perpetuated by some institution of learning or hospital for the care of suffering humanity. True, there have been memorials erected in honor of those who have been at some time in their lives students of medicine, or who have practiced the healing art, and for some reason or other have adopted other professions. This does not dispose of the fact that they were at one time one of us, and we, as a profession, should ever hold them in grateful remembrance. There are those who were born in America and were honored on the other side; others came from Europe to receive their reward in the land of their adoption. A few, whose labors have been of such a high order as to command recognition on this side of the Atlantic, have received it, although they themselves have not had the opportunity to be among us.

Standing in Central Park, New York City, is a bronze bust of ALEXANDER VON HUMBOLDT. It rests upon a granite pedestal, and was presented to the city September 14, 1869. He was not a physician, as we understand the term today, but his treatise, published in 1797, "On the irritability of muscle and nervous fibres," and his work in connection with the science of botany, indicate his early training. He was born in Germany, September 14, 1769, and died May 6, 1859.

In the same park will be found a bronze bust, erected on a sandstone pedestal, of FRIEDRICH VON SCHILLER. He was known as a poet, but he began his early life as a medical student under the direction of Prof. Abel, receiving the degree of M.D. from the Academy of Stuttgart in 1780. In November of the same year he was appointed an army surgeon, but in a short time resumed the life of a poet. He was born in Germany, November 10, 1759; died May 9, 1805. The centennial celebration of the death of Schiller was attended with considerable ceremony during three days of May, 1905. At this time a heroic bust, in plaster, of Schiller was on exhibition at Carnegie Hall, New York City, the sculptor being Henry Baerer. During the celebration the following badges were in use, composed of celluloid, surrounded by a gilt border:

Friedrich Schiller, face to the left.

Friedrich von Schiller. 100th Anniversary. Face to the left.

The centenary anniversary of the birth of Schiller was celebrated in New York in 1859. A copper medal with a bust of Schiller was struck on this occasion.

Conditions connected with, or circumstances surrounding, the death of an individual lead to various expressions of admiration, which sometimes take the form of things more enduring than words. This is particularly so in the case of DR. JOSEPH WARREN, a physician by profession, a soldier by force of circumstances. Dr. Warren received the degree of A.B. from Harvard in 1759, and A.M. in 1762, and studied medicine with Dr. James Lloyde, of Boston, Mass. The first memorial erected to Warren was through the efforts of King Solomon Lodge, F. & A. M., of Charlestown, Mass. Joseph Warren was a Past Grand Master of the State of Massachusetts, and a member of King Solomon Lodge. The memorial consisted of a Tuscan pillar eighteen feet in height, made of wood, and placed on a brick pedestal eight feet square and ten feet high. The front of the pedestal contained this inscription:

Erected A. D. MDCCXCIV. By King Solomon Lodge of Freemasons. In memory of Major-General Joseph Warren. Slain June 17, 1775.

This monument was dedicated December 2, 1794. The eulogy was pronounced by Dr. Joseph Bartlett.

A statue of Warren was inaugurated by the Bunker Hill Monument Association on June 17, 1857. It is seven feet high, of Italian marble, draped in the costume of the Revolutionary period, and rests upon a pedestal of marble. A bronze statue of General Joseph Warren is to be dedicated during the year 1905, and to be erected at Roxbury, Mass. The sculptor is Paul W. Bartlett. In 1868, a bronze door was placed in the Senate Chamber at the Capitol, in Washington, D.C. The upper right-hand panel represents the battle of Bunker Hill and death of Gen. Joseph Warren. Fort Warren, in honor of Gen. Warren, is situated on an island in Boston Harbor. It contains forty-three acres, nearly the whole of which is covered by fortifications.

DR. JOSEPH-WARREN, Major-General U.S.A.

BENJAMIN THOMPSON. "Count Rumford." Born March 26, 1753, at Woburn, Mass., and died August 21, 1814, at Anteuil, France. He studied medicine with Dr. John Hay, of Woburn, Mass., and attended lectures at Harvard University Medical Department. His life was devoted to different departments of science; in 1778 he was elected a Fellow of the Royal Society, in 1785 of the Bavarian Academy of Sciences, in 1758 received the Order of St. Stanislaus from the King of Poland, in 1878 a member of the Berlin Academy of Sciences, in 1789 honorary member of the American Academy of Arts and Sciences, in 1791 the Elector of Bavaria made him a Count of the Holy Roman Empire, and gave him the Order of the White Eagle. In 1796 he was made a member of the Royal Irish Academy and the Society for the Encouragement of Arts, in 1799 he founded the Royal Institution. The first Rumford Medal of the Royal Society, 1802. The second Rumford Medal of the Royal Society, 1831. These medals are for discoveries in heat or light. Rumford medal of the American Academy of Arts and Sciences, 1831. A bronze statue of Count Rumford stands in Maximillan street, Munich. The figure is ten feet high standing on a granite pedestal eleven feet. Erected in 1867 and modeled by Prof. Casper Zumbusch, of Munich.

Inscription on front of the pedestal:

Benjamin Thompson. Graf von Rumford.

Reverse:

Errichted von Maximillian II., Koenig von Bayern.

On a scroll in the hand of Rumford:

Englische Garten Architecte.

JEAN LOUIS RODOLPH AGASSIG. Born May 28, 1807, in Switzerland, died December 14, 1873, at Cambridge, Mass. He received the following degrees: University of Erlangen, Ph.D., 1829; University of Munich, M.D., 1830; University of Edinburgh, LL.D., 1834; Dublin, 1835; Harvard, 1848; Regents of the University of the State of New York, M.D. Hon., 1847. In honor of Agassig: Lake Agassig—New York Zoological Park, New York City. Agassig Bridge—Back Bay Fens, Mass. Agassig Museum of Comparative Zoology—Cambridge, Mass. Louis Agassig Medal. Agassig Institute, Sacramento, California. Mount Agassig, of the Uinta range of mountains, Utah. The Agassig Clubhouse for Radcliffe girls in connection with Radcliffe College in honor of Elizabeth Cary Agassig, wife of Louis Agassig.

Memorial Pavilion, University Hospital, University of Pennsylvania; opened, 1896; in honor of DAVID HAYES AGNEW, born November 24, 1818; died March 22, 1892, Pennsylvania. University of Pennsylvania, M.D., 1838. Princeton, A.M., 1861; LL.D., 1876. The Agnew Surgical Society, Philadelphia, Pa.; founded, 1887.

SAMUEL GLASGOW ARMOR. Born in Washington County, Pa., January 29, 1818; died in Brooklyn, N. Y., October 27, 1885. Received from Franklyn College, A.M., 1840; Kemper Medical Medical College, M.D., 1844; Franklyn College,

LL.D., 1872. A memorial tablet in bronze with a medallion portrait, inscribed: 1818-1885. Prof. Samuel Glasgow Armor, M.D., LL.D., Dean of the Long Island College Hospital; was presented to the College by the Alumni Association at its annual meeting, March 19, 1894. The sculptor was J. Massey Rhind.

JACOB BIGELOW. Born in Massachusetts, February 27, 1787; died in Boston, Mass., January 10, 1879. Harvard University, A.B.; 1806, A.M.; University of Pennsylvania, M.D., 1810; Harvard University, LL.D., 1857; In January, 1873, the trustees of Mount Auburn Cemetery were instructed to procure a suitable testimonial in honor of the retiring President, Jacob Bigelow. After consultation a marble bust was decided upon to be placed in the Chapel of Mount Auburn. Henry Dexter, sculptor.

WARD NICHOLAS BOYLSTON. Born in Boston, Mass., November 22, 1749; died in Roxbury, Mass., January 7, 1828. He presented to Harvard University a valuable collection of medical and anatomical works and engravings in 1810.

Bronze medal of the W. N. Boylston School. "Medicine Foundator." Head to the left. Boylston Medical School, "Incorporated," was organized in 1846 in Boston, Mass. It was an active school until 1856. Connected with the school were Drs. John Bacon, Chas. E. Buckingham, Edward H. Clark, Samuel Kneeland, John B. Walker, William Henry Thayer, John C. Dalton, Henry G. Clark, George H. Gray, and Henry W. Williams.

DANIEL GARRISON BRINTON. Born May 13, 1837, at Chester County, Pa.; died at Philadelphia, Pa., 1899. Yale University, A.B.; 1858, A.M.; Jefferson Medical College, M.D., 1861; LL.D., Jefferson in 1891; Sc.D., University of Pennsylvania. A medal was struck in his honor by the Neumismatic and Antiquarian Society of Philadelphia in 1899. Head to the left.

An effort is now being made to collect funds for a proposed mural tablet in memory of the late Albert B. Craig, M.D., of Philadelphia, Pa.

WILLIAM JOHNSON DALE. Born in Gloucester, Mass., September 5, 1815; graduated from Harvard University, A.B., 1837; A.M., 1840; Harvard University Medical Department, M.D., 1840; Assistant Surgeon U. S. A., June, 1861; Surgeon, December, 1861; Surgeon-General of Massachusetts, October, 1863. Dale's General Hospital, opened September, 1865; Worcester, Mass.

JOSEPH RODMAN DRAKE. Born in the city of New York, August, 1795; died in the city of his birth, September, 1820. It is intended to honor him by naming a new park near his old home in the Bronx, "Drake Park." He is the author of "The Culprit Fay" and "The American Flag." Joseph R. Drake received the degree of M.D., from Queens College Medical Department, New York City in 1816.

WILLIAM HENRY DUDLEY was born in Ireland, October, 1811; died in Brooklyn, N. Y., October 9, 1886. Licensed by the Royal College of Surgeons, Dublin, and a Fellow of Kings College of Physicians and Surgeons, Jamaica, W. I. Received the degree of M.D. in 1842 from the College of Physicians and Surgeons, New York. The Dudley Gold Medal of the Long Island College Hospital is awarded for clinical medical work. Henry W. Maxwell made provision for a gold medal to be known as the Dudley Memorial Medal, to be awarded for clinical surgical work. The Dudley Memorial, in memory of William H. Dudley, M.D., erected by the estate of the late Henry W. Maxwell. Designed for a home for the Training School for Nurses in connection with the Long Island College Hospital.

WILLIAM ELIAS BROWNLEE DAVIS. Born, November 25, 1863, at Trussville, Ala,; died, February 24, 1902. Bellevue Hospital Medical College, M.D., 1884. The Southern Surgical and Gynecological Association erected a statue in the city of Birmingham, Ala., which was unveiled on December, 1904, in memory of William E. B. Davis, M.D. Inscription on monument: "In memory of William Elias B. Davis, Surgeon. Erected by the Southern Surgical and Gynecological Association, which he founded in 1887. Secretary, 1887-1901. President, 1902. He would have been known to the world as a patriot had he not been known as something greater—a physician." The statue is 8½ feet high and rests on a granite pedestal 9½ feet in height. It is located in a park in the city of Birmingham, Ala.

SAMUEL DAVID GROSS was born at Easton, Pa., July 8, 1805; died in Philadelphia, Pa., May 6, 1884. He received the degree of M.D. from Jefferson Medical College in 1828; D.C.L. from Oxford University in 1834; LL.D. from Jefferson College in 1861, University of Cambridge, 1880; Pennsylvania, 1883, and Edinburgh, 1884. A marble bust of Dr. Gross is in the hall of the College of Physicians of Philadelphia, Pa. A statue was unveiled at Washington, D.C., on May 5, 1897, in Smithsonian Park. The statue is of life size resting upon a pedestal supported by three steps. Inscribed in front:

Samuel D. Gross. "American Physicians have erected this statue to commemorate the

great deeds of a man who made such an impress upon American Surgery that it has served to dignify American Medicine." 1897. The Gross Medical College was established on April 9, 1887, and united with the Denver Medical Col-

SAMUEL DAVID GROSS, M.D., LL.D., D.C.L.

lege, to form a part of the University of Denver, Colorado, on June 19, 1902. The college was named in honor of Samuel D. Gross, M.D., LL.D. Gross Medical Club, at Clarence, New York. Organized.

ASA GRAY. Born November 18, 1810, at Oneida, New York; died at Cambridge, Mass., on January 30, 1888. He was a physician and botanist, having studied medicine at the College of Physicians and Surgeons at Fairfield, N. Y., graduating M.D. in 1831; the degree of A.M. from Harvard in 1844; LL.D. from Hamilton College in 1860; Harvard in 1875; McGill University in 1884; University of Michigan in 1887; University of Edinburgh in 1887; Sc.D. from the University of Cambridge in 1887; D.C.L. from Oxford in 1887. A bronze medallion portrait of Asa Gray, by St. Gaudens, was presented to Harvard University in 1884. On his seventy-fifth birthday, November 18, 1885, a vase of silver, embossed with figures of the plants identified with his name or studies, was presented to him with a note of congratulation from one hundred and eighty American botanists. A special building, provided by Nathan Thayer in 1864, containing over four hundred thousand specimens, known as Gray's Herbarium of Harvard University. In the science of botany a few plants have been named in honor of our distinguished colleague—Grayia-Polygaloides, Linium-Grayi, and Notholœna-Grayi. Even in so conservative a place, in so far as physicians are concerned, as the New York Hall of Fame, which was dedicated May 31, 1901, we find one of the tablets bearing the following inscription:

Asa Gray, 1810-1888.

I confidently expect that in the future, even more than in the past, faith in an order which is the basis of science will not be dissevered from faith in an ordainer, which is the basis of religion.

OLIVER WENDELL HOLMES. Born in Cambridge, Mass., August 29, 1809; died in Boston, Mass., October 7, 1894. He received from Harvard the degree of A.B. in 1829, and A.M. in 1889; from the Medical Department M.D. in 1836; Harvard University LL.D. in 1880; University of Cambridge Litt.D. 1886; Oxford D. C. L. 1886; Edinburgh LL.D. 1886. A bronze bust of Dr. Holmes, by Richard Brooks, is in the Boston Public Library.

JOSEPH HENRY was born on December 17, 1799, at Albany, N. Y., and died at Washington, D.C., on May 13, 1878. He studied medicine with Theodoric R. Beck, M.D., but gave his attention to chemistry and electricity. The degree of LL.D. was conferred upon him by Union College in 1829, College of South Carolina in 1838, University of the State of New York in 1850, and Harvard in 1851. A statue of bronze has been erected to his memory at Washington, D.C., in front of the Smithsonian Institute, on April 19, 1883. Also one at the World's Fair, held in 1904 at St. Louis, Mo. The erection of a memorial statue of Joseph Henry is now contemplated by the State of New York, at Albany, the place of his birth. Cape Joseph Henry, North Polar Regions, in honor of Dr. Henry.

JOSIAH GILBERT HOLLAND. Born July 24, 1819, at Belchertown, Mass; died October 12, 1881. Graduated from Berkshire Medical College, M.D., in 1844. Received the degree A.M. from Amherst College in 1851. Holland Monument in Peabody Cemetery. Bas-relief of Dr. J. G. Holland executed by St. Gaudens.

Horner Museum of Anatomy, University of Pennsylvania. WILLIAM E. HORNER. Born June 3, 1793, Virginia; died March 13, 1853, Pennsylvania, University of Pennsylvania, M.D., 1814.

JOHN T. HODGEN, M.D. Born, 1826, Kentucky; died in 1882, St. Louis, Mo. A bust of

Dr. Hodgen has been placed in one of the institutions of St. Louis.

CORNELIUS NEVIUS HOAGLAND. Born November 23, 1828, at Neshanic, N. J.; died in Brooklyn, N. Y., April 24, 1898. Received the degree of M.D. from the Western Reserve University in 1852. The Hoagland Laboratory on Henry Street, Brooklyn, N. Y., was opened October 1, 1888. A bronze tablet of the late Dr. Hoagland has been placed on the outside of the laboratory, bearing a profile of the doctor and the following inscription:

"Founder of the Hoagland Laboratory in 1887, the first laboratory in the United States erected, equipped and endowed by private means for the sole purpose of bacteriological research. His benefactions and noble charities have raised for him a monument more enduring than bronze. Born 1828; died 1898. J. S. Hartley, Sculptor, 1899."

ISAAC ISRAEL HAYES. Born in Chester County, Pa., March 5, 1832; died in New York City, December 17, 1881. University of Pennsylvania, Medical Department, M.D., 1853. Gold medal, Royal Geographical Society, 1867. Gold Medal, Societe Geographie, 1869. In honor of Dr. Hayes: Hayes Sound, Hayes Peninsular, North Polar Regions; Cape Hayes, most northerly point of Hudson's Island.

SAMUEL HAHNEMANN, M.D. Monument erected in Washington, D.C., June 21, 1900, consisting of a statue of bronze. The foundation and superstructure are built of granite, four panels of bronze, representing four periods of Hahnemann's life. Christian Frederick Samuel Hahnemann. Born April 11, 1755, in Germany; died July 2, 1843, in Paris. Graduated M.D. at Erlangen in 1779.

ELISHA KENT KANE. Born February 3, 1820, at Philadelphia, Pa.; died February 16, 1857, at Havana, Cuba. University of Pennsylvania, Medical Department, M.D., 1842. Medals in honor of Dr. Kane: Gold medal of the Royal Geographical Society, 1856; gold medal of the Societe de Geographie, 1857. Medal, Dr. E. A. Kane, Commander of the Grinnell Arctic Expedition, May 30, 1853. Bronze and white metal. Medal, Masonic, Dr. Elisha Kent Kane, The Great Arctic Navigator, U. S. N., 1859. Bronze and white metal. Presented with a sword by the citizens of Philadelphia, Pa., February 8, 1849. Kane medal, for Natural Science. Awarded by the Normal College of the City of New York. Named in honor of Dr. Kane: Kane Basin and Cape Kane, North Polar Region. Kane Sea and Kane Channel divides Hudson's Island from Lok's Land. Dr. Kane was a member of Franklin Lodge, No. 34, F. & A. M., Philadelphia, Pa. Kane Lodge, No. 454, F. & A. M., New York City, N. Y., and Kane Lodge, No. 55, F. & A. M., Newark, N. J., are named in his honor.

ALFRED LEBBENS LOOMIS. Born in Bennington, Va., October 16, 1831; died in New York City, January 23, 1895. Union College, A.B., 1851; A.M., 1856. College of Physicians and Surgeons, New York City, M.D., in 1852. University of the City of New York, LL.D., in 1882. Loomis Laboratory in New York City, organized in 1888, at 414 E. 26th Street, for medical research. The Loomis Sanatorium was established in 1894 as a memorial to the late Alfred L. Loomis for the treatment of tuberculous diseases. Situated at Liberty, N.Y. Bust of Dr. Loomis in one of the institutions of New York.

JESSE WILLIAM LAZEAR. Johns Hopkins University, A.B., 1889. College of Physicians, New York, M.D., 1892. A memorial tablet was unveiled October 5, 1904, at Johns Hopkins Hospital in memory of Dr. Lazear. He died of yellow fever while investigating that disease on the Government Commission at Quemados, Cuba, by permitting himself to be infected and contaminated by mosquitoes.

EPHRIAM MCDOWELL. Known as the father of ovariotomy. Born November 11, 1771, in Rockbridge County, Virginia. Died June 25, 1830, at Danville, Kentucky. He received the honorary degree of M.D. from the University of Maryland in 1825. Licensed by the Philadelphia Medical Society in 1807. On May 14, 1879, during the session of the Kentucky State Medical Society, a monument was dedicated to the memory of Ephraim McDowell at Danville. It it a shaft made of Virginia granite, in the center a bronze medallion of McDowell, beneath his monogram, with the motto, "A grateful profession reveres his memory and treasures his example;" on the opposite side, "Erected by the Kentucky State Medical Society, 1879." On the east side, "Beneath this shaft rests Ephraim McDowell, M.D., the Father of Ovariotomy, who, by originating a great surgical operation, became a benefactor of his race, known and honored throughout the civilized world." On the west side, "Born in Rockbridge County, Virginia, 1771; attended the University of Edinburgh, 1793; located at Danville, Ky., 1795;

performed the first ovariotomy, 1809; died 1830." The monument is located in the center of the City of Danville, in a public park. The seal of the Southern Surgical and Gynecological Society bears a profile of Ephraim McDowell.

WILLIAM OSLER. Born July 12, 1849, at Tecumseh, Ontario, Canada. McGill University, M.D., 1872. University of Edinburgh, Aberdeen, McGill and Yale, LL.D. University of Oxford, M.D., 1905. On March 4, 1905, the Charaka Club of New York City presented to each of its guests at the dinner tendered to Dr. Osler a bronze medallion bearing a profile on one side of William Osler, with the inscription on the back, "The Charaka Club to Dr. William Osler, Medico illustri, literarum cultori, socio gratissimo, March 4, 1905."

WILLARD PARKER. Born in Hillsboro, N. H., and died in New York City. Harvard University, A.B., 1826; A.M., 1830; Berkshire Medical College, M.D., 1831; College of New Jersey, LL.D., 1870. Willard Parker Hospital, foot of East 16th street, New York City, for contagious diseases, was erected and named in his honor.

WILLIAM PEPPER. Born in the city of Philadelphia, Pa., on August 21, 1843, and died at Pleasanton, Cal., on July 28, 1898. The degree

WILLIAM PEPPER, M.D., LL.D.

of A.B. was received from the University of Pennsylvania in 1862, and A.M. in 1865; that of M.D. from the Medical Department of the same institution in 1864. Lafayette College conferred the degree of LL.D. in 1881. A bronze bust of Dr. Pepper was presented to the University of Pennsylvania on his retirement as provost, June 7, 1894. The Pepper Clinical Laboratory, as a memorial to his father, was formally opened December 4, 1895. A bronze statue was unveiled December 20, 1899, in memory of William Pepper, amid the University buildings. The tablet on pedestal is inscribed as follows:

"As provost he established the following University departments: The Wharton School of Finance, the University Library and Economy, the Biological Department, the Graduate Department for Women, the Department of Philosophy, the Department of Hygiene, the Veterinary Department, the Department of Architecture, the Training School for Nurses, the Wistar Institute of Anatomy and Biology, the Department of Public Education, the William Pepper Laboratory of Clinical Medicine, the Department of Archæology and Palæontology. The following public institutions were his creation: The Free Library of Philadelphia, the Free Museum of Science and Art, the Philadelphia Museum. You and I must pass away but these things will last."

The King of Sweden made him a Knight Commander of the Order of St. Olaf, July 10, 1877. William Pepper Hall of the Arts and Sciences, University of Pennsylvania, dedicated December 20, 1899.

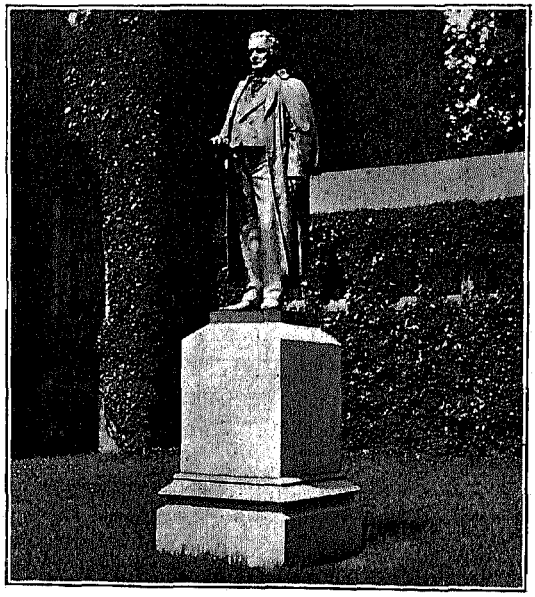
BENJAMIN RUSH was born in Philadelphia, Pa., December 24, 1745, and died in the same city on April 19, 1813. He received the degree of A.B. from the College of New Jersey in 1760, and A.M. from the same college. University of Edinburgh, M.D. in 1768; Connecticut Medical Society, M.D., Hon., 1794, and Yale University, LL.D. in 1812. A monument was unveiled at Washington, D. C., on June 11, 1904, in memory of Dr. Rush. The statue of bronze resting on a pedestal of Indiana limestone and situated opposite the U. S. Naval Museum of Hygiene. Upon the panel in front is inscribed: "Dr. Benjamin Rush, Physician and Philanthropist, 1745-1813." Of the other panels one bears the crossed swords, a wreath and the inscription: "Signer of the Declaration of Independence;" another bears a scroll, a pen, and a wreath; inscription, "First American Alienist;" the remaining panel bears the Caduceus and the inscription: "*Studium sine calomo somnum.*" The Rush Hospital for Consumptives and Allied Diseases, Philadelphia, Pa.; established, 1890. Two medals of Dr. Rush in bronze, bust to the left, date, 1808, are in the collection of the Boston Medical Library. Rush Medical College, chartered February, 1837, by the

BENJAMIN RUSH, M.D., LL.D.

State of Illinois; in 1898 it became the medical department of the University of Chicago.

BENJAMIN SILLIMAN. Born August 8, 1779, in Conn., died November 13, 1864, at New Haven, Conn. Yale University, A.B., 1796; A.M., 1799; Bowdoin College, A.M., 1818; M.D., 1818; Middlebury College, LL.D., 1826. Statue erected of bronze and situated in the grounds of Yale University, New Haven, Conn., in 1884. Front inscription on pedestal: "Benjamin Silliman. Professor of Natural Sciences. Yale College. From 1802-1858. Born, Aug. 8, 1779. Died, Nov. 14, 1864."

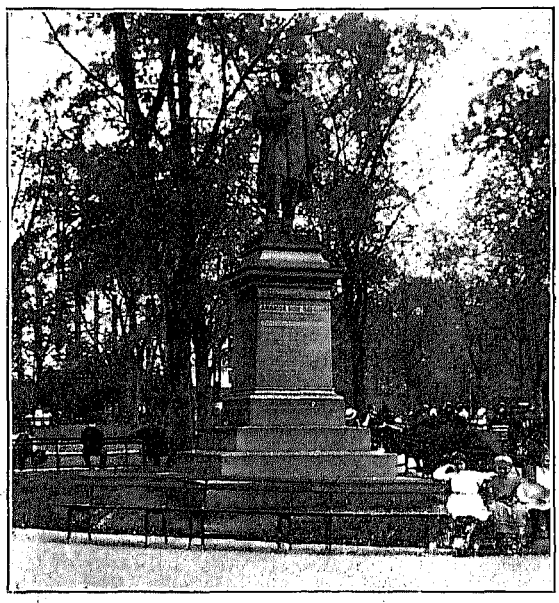
JOHN SWINBURNE. Born in Denmark, N. Y., May 30, 1820; died at Albany, N. Y., March 28, 1889. Albany Medical College, M.D., 1847.



BENJAMIN SILLIMAN, A.M., M.D., LL.D.

Swinburn Island, so named by an act of the legislature in 1872. Situated 3½ miles below the Narrows. The Hospital for Contagious Diseases is situated on this island, and all suspects are transferred to this island to await development of disease.

JAMES MARION SIMS. Born January 25, 1813, at Lancaster District, South Carolina; died in New York City, November 13, 1883. Received the degree of A.B. from the South Carolina College in 1832, that of M.D. from Jefferson Medical College in 1835, and LL.D. from Williams College in 1874. Marion Sims College of Medicine, organized in 1890, at St. Louis, Mo., in 1901, it became a part of the St. Louis University. A marble bust of J. Marion Sims is now in the Library of the Medical Society of the County of



JAMES MARION SIMS, M.D., LL.D.

Kings, presented by the family of the late Alex. J. C. Skene, M.D., LL.D. A statue of J. Marion Sims, by Meyer of Munich, erected in Bryant Park, New York City, and unveiled October 20, 1894. The statue is of bronze resting upon a granite pedestal. Inscription in front: J. Marion Sims, M.D., LL.D. Born in South Carolina, 1813. Died in New York City, 1883. Surgeon and Philanthropist. Founder of the Woman's Hospital, State of New York. His brilliant achievement carried the fame of American surgery throughout the civilized world. In recognition of his services in the cause of science and mankind he received the highest honors in the gift of his countrymen, and decorations from the governments of France, Portugal, Spain, Belgium and Italy. Inscription of back of pedestal:

"Presented to the City of New York by his

professional friends, loving patients, and many admirers throughout the world. Dr. Sims received the following decorations: Knight of the Legion of Honor, France; Knight of the Order of Leopold I., Belgium; Iron Cross of Germany; two medals from the Italian Government; decorations from the Spanish and Portugese Governments. The seal of the Marion Sims College of Medicine bears a face view of J. Marion Sims.

ALEXANDER JOHNSTON, CHALMERS SKENE. Born in Aberdeen, Scotland, June 17, 1838, and died at Highmount, N. Y., July 4, 1900. He received the degree of M.D. from the Long Island College Hospital in 1863, and LL.D. from the University of Aberdeen in 1897. In memory of Dr. Alex. J. C. Skene, library at Griffins Corners, N. Y. Building erected by Andrew Carnegie, 1901. Peabody brothers subscribed $50,000 to establish a room, to be known as the Skene Memorial Operating Amphitheatre, in the Long Island College Hospital in 1901. Skene memorial library fund. To assist in completing the stack-room of the Medical Society, County of Kings, by the Alumni of the Long Island College Hospital. Amount, $480, year 1902. Bed endowed in the President Street Sanitarium by Mrs. Henry K. Sheldon in 1902. Amount, $1,000. Memorial window to Dr. A. J. C. Skene, St. Paul's P. E. Church, Flatbush, March, 1902. Inscribed, "To the glory of God and in loving memory of Alex. J. C. Skene, M.D., LL.D." Tablet in memory of Alex. J. C. Skene, M.D., LL.D., Building of the Medical Society, County of Kings. Memorial to Alex. J. C. Skene, M.D., LL.D., amount $5,000, to the Library of the Medical Society, County of Kings, 1904. Monument in memory of Alex. J. C. Skene, M.D., LL.D., Prospect Park Circle.

LEWIS ATTERBURY STIMSON. Born in Paterson, N. J., 1844. Yale University, A.B., 1863. Bellevue Hospital Medical College, M.D., 1874. Yale University, LL.D., 1900. Stimson Hall, Cornell Medical College, Ithaca, N. Y., in honor of Lewis A. Stimson, M.D., LL.D. A gift of the late Dean Sage, 1902.

CASPAR WISTAR. Born in Philadelphia, Pa., September 13, 1761; died in the same city, January 18, 1818. Philadelphia College of Medicine, M.D., 1784. University of Edinburgh, M.D., 1786. Wistaria vine named in honor of Dr. Caspar Wistar. Wistar Institute of Anatomy, University of Pennsylvania.

HORACE WELLS. Born in the State of Vermont, January 21, 1815, and died in New York on January 24, 1848. His name is intimately connected with the discovery of anesthesia. The degree of M.D. was conferred upon him by the French Academy in 1847, and on January 12, 1848, he was elected an honorary member of the Paris Medical Society. A monument consisting of a bronze statue resting upon a granite pedestal in honor of Horace Wells has been erected by Truman H. Bartlett, at Bushnell Park, Hartford, Conn., inscribed, "Horace Wells, who discovered anesthesia, November, 1844."

The Ether monument in the public square (Gardens) at Boston, Mass., is composed of granite and red marble and is intended to commemorate the discovery that the inhaling of ether causes insensibility to pain. It was given by Thomas Lee, and dedicated in June, 1868. It is surmounted by figures illustrating the story of the "Good Samaritan," the marble base reliefs representing a surgical operation, a patient under the influence of ether, Angel of Mercy descending to relieve suffering humanity, a field hospital with a wounded soldier in the hands of a surgeon, and an allegory of the triumph of Science. The monument is the work of J. Q. A. Ward.

The Warren Anatomical Museum, Harvard. Founded by JOHN COLLINS WARREN. Born August 1, 1778, died May 4, 1856, Boston, Mass. Harvard University, A.B., 1797; A.M. and M.D., 1819.

A bust of Dr. John C. Warren made in 1838 by Horatio Greenough and placed in the lecture room of Harvard Medical College.

Wood Pathological Museum of Bellevue Hospital. Founded 1857. JAMES R. WOOD. Born September 14, 1813, died May 4, 1882, New York. Castleton Medical College, M.D., 1834; Geneva College LL.D.

Library of the New York Academy of Medicine. A marble bust of DAVID HOSACK, M.D., F.R.S. Six inches high, resting on a round pedestal; presented by Mrs. William H. Draper. The main hall of the Academy is called Hosack Hall.

Bronze medal in the writer's collection, DAVID HOSACK, M.D. Head to the right. 1769-1837. Arts and Sciences.

Marble bust of T. SPENCER WELLS, Bart., M.D. Born 1818, died 1897. England.

Marble bust of HORACE GREEN, M.D., LL.D. Died November 29, 1866. Age, 63 years.

Marble bust of WILLIAM T. WHITE, M.D. Born July 27, 1829, died September 17, 1893. New York City.

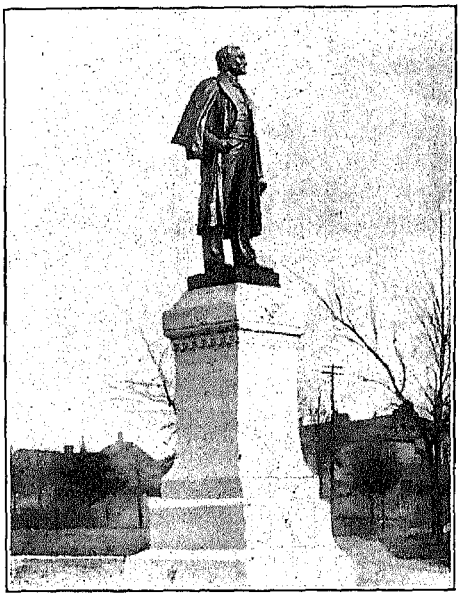
Marble bust REUBEN D. MUSSEY, M.D., LL.D.

Born June 23, 1780, died June 8, 1866. Boston, Mass.

Library of the Medical Society County of Kings. Marble bust of J. MARION SIMS M.D., LL.D. Born January 25, 1813.

Plaster bust of FORDYCE BARKER, A.M., M.D., LL.D. Born May 21, 1817; died May 30, 1891, New York City.

Marble bust of THOMAS KEITH, M.D. Born May 20, 1827; died October 9, 1895, Scotland.



WILLIAM ELIAS BROWNLEE DAVIS, M.D.

Medals: VALENTINE MOTT, M.D., LL.D., head to the right. Reverse: University of New York, Medical Department. Founded in 1856.

NATHAN SMITH DAVIS, A.M., M.D., LL.D., head to the right. Reverse: American Medical Association. 1846.

JOSEPH PANCOAST, M.D., Prof. Anatomy, Jefferson Medical College.

Medical Colleges: Harvey Medical College, incorporated in 1891, Chicago, Ill.

Jenner Medical College, organized in 1892, Chicago, Ill.

WILLIAM JAMES MACNEVEN, M.D. Born in Ireland, March 21, 1763 and died in New York City, July 12, 1841. University of Vienna, M.D., 1784. Monument in St. Paul's Churchyard, New York City Square, about thirty-five feet high, brown stone with a granite base,with a medallion profile in bronze of Dr. Macneven in front. Dr. Macneven was Professor of Midwifery, Chemistry and Materia Medica in the College of Physicians and Surgeons, New York, from 1808 to 1826 and Professor of Materia Medica and Therapeutics in Rutger's Medical College, 1826-1830.

The front inscription reads as follows: "Who in the cause of his native land sacrificed the bright prospects of his youth, and passed years in poverty and exile,, till, in America, he found a country, which he loved as truly as he did the land of his birth."

To the service of this country which had received him as a son, he devoted his high scientific acquirements with eminent ability.

THOMAS ADDIS EMMET. Born April 24, 1764, Cork, Ireland; died in New York City, November 14, 1827. University of Edinburg, M.D., 1784; admitted to the Irish bar at Dublin in 1791; New York bar in 1804; Attorney General of the State of New York, 1812. A monument of white marble, surmounted with a bust of Thomas Addis Emmet, M.D., was erected in the court room where he was seized with his fatal illness. Monument in St. Paul's Churchyard New York City. An obelisk of white marble, about thirty-five feet in heighth, on the front near the top is a medallion in bronze of Dr. Emmet in bas-relief. Below the following inscription: "In memory of Thomas Addis Emmet, who exemplified in his conduct, and adorned by his integrity, the policy and principles of the United Irishman. To forward a brotherhood of affection, a community of rights, an identity of interests, and a union of power among Irishmen of every religious persuasion, as the only means of Ireland's chief good, an impartial and adequate representation in an Irish parliament. For this (mysterious fate of virtue) exiled from his native land, in America the land of freedom, he found a second country, which paid his love, by reverencing his genius. Learned in our laws and the laws of Europe, in the literature of our tmes, and in that of antiquity, all knowledge seemed subject to his use. An orator of the first order: clear, copious, fervid, alike powerful to kindle the imagination, touch the affections, and sway the reason and the will; simple in his tastes, unassuming in his manners, frank, generous, kindhearted and honorable; his private life was beautiful, as his public career was brilliant; anxious to perpetuate the name and example of such a man, alike illustrious by his genius, his virtues, and his fate, consecrated to their affections by his pupils, his sacrifices and the deeper calamities of his kindred, in a just and holy cause: his sympathizing countrymen erected this monument and cenotaph."

HUGH MERCER. Born in Aberdeen, Scotland, in 1720, wounded at the battle of Princeton, and died January 12, 1777. He was a physician and assistant surgeon at the battle of Cullodon, on

the side of the Pretender, and came to America in 1747. He was a captain in the French and Indian wars, and a brigadier-general in the Revolutionary War.

Fort Mercer, a strong work on the New Jersey shore of the Delaware, was named in his honor.

HEAD INJURIES IN CHILDREN.*

BY WM. A. NORTHRIDGE, M.D.,

In the short time at my disposal this evening, I can but touch upon some of the most important points of this most interesting subject, as they relate to the pediatrist in his every-day work.

Young children are constantly falling. The number of falls, the distance fallen, the force with which they fall, and the general severity of these accidents at times, appals one.

Of course, in the vast majority of cases nothing comes of these injuries.

I am writing principally to impress all of us with the neccessity of being fully alive to the possible grave danger which may arise from even the slightest fall.

The amount of injury done depends upon what structures the greater part of the force is expended. In certain cases, indeed, in the vast majority of the cases, the injury is entirely external, and an ocular demonstration may be had of it.

In other cases the larger part of the force is transmitted either directly or by *contre coup* to the delicate structures within the skull, and grave lesions occur. The following case sent to me by Doctor Dickinson illustrates this point perfectly. A little girl, three years of age, had fallen, striking her right temporal region. At the time of the accident she had suffered an incised wound at the point of impact, which the doctor stitched up and which healed kindly. She had no other symptoms except complete aphasia, for which the doctor sent her to me.

This was a case where the force had been expended but partially upon the external surface, and the rest had been transmitted through to the centres of speech in the brain and had there been expended. She recovered after over a year's treatment, learning to talk word by word, very slowly. Her speech is now perfect. Here we undoubtedly had laceration, localized hemorrhage, compression and slow absorption.

A child may fall a great many times and with force and yet not sustain anything more serious than transient hurts; again simply a fall to the ground from the feet may prove most disastrous.

In my experience falls backward striking the occiput and blows upon the back of the head are apt to be serious.

Five years ago, a boy four years old, fell out of a third story window to the stones in the yard below. I attended him directly, found him suffering moderately from shock which passed away in twenty-four hours. The next day he was somewhat stiff, but that passed promptly, and he remains well to this day. Another boy, three years old, fell a much shorter distance, from the second-story front window to the stone stoop below, sustained a fracture of the skull and died in 48 hours.

Yet another boy, 30 months old, fell over backwards from his tricycle, striking his knee and presumably his head, although no appreciable injury could be discovered after careful search at the time, except the well-marked synovitis. On the fifth day the child developed persistent emesis which lasted thirty-six hours and was evidently cerebral. Tonic general convulsions followed and lasted seven hours, the child becoming deeply comatose, and death occurred. An autopsy could not be obtained, but the cause of death was undoubtedly the brain lesion.

Children are more apt to recover from tremendous injuries to the head than adults owing to the fact that the brain in the child is but partially developed. The younger the subject the more putty-like the brain. Nature should be given full chance in these cases, and surgical interference should not be resorted to until absolutely necessary; for the recuperative powers of the young are great.

Owen reports a case where the side of the skull of a child had been deeply indentated by the kick of a horse, and where complete recovery was made without interference.

A case occurred in my practice. A girl baby, 14 months old, was thrown from a baby carriage, striking on her head. Except a concussion, there was no sign of injury externally. She had strong general convusions daily; some days a great many, for over six months, yet she recovered completely in a year's time.

Among the first injuries to which the head is liable may be mentioned pressure effects from prolonged labor; falls to the floor on to head in precipitate labor and injuries from maladroit use of the forceps. While the forceps skillfully applied in certain difficult cases, would do far less harm than prolonged labor, if they did any harm; unskillful instrumentation; the force applied out of the axis of the pelvis; the kind where the obstetrician sits

* Read before the Section on Pediatrics, May 24, 1905.

on the floor, puts his foot on the side of the bed and pulls against the pubic bone until something gives way; frequently causes grave injuries to the skull, its contents or both. Osler reports nine cases of paralysis following forceps delivery, and I presume there is not a man present who has not seen similar cases. Besides the above, the common conditions and injuries to the head following the aforementioned, are fracture, hemorrhage, idiocy, face and scalp wounds, laceration, impaired cerebral development, epilepsy, cephalhaematoma, caput succedanum and ecchymoses.

Careless mothers and nursemaids and missile-throwing boys are responsible in many cases of head injury. Some of the worst cases are caused by falls from perambulators, buildings, beds, roller skates and tricycles. Falling backwards to sidewalk is a common and peculiarly dangerous accident. Falling down-stairs, tripping over obstructions on the floor, colliding against articles of furniture are common occurrences and not on the whole so dangerous.

A little girl was brought into me on the sixteenth of this month. She had been struck upon the head with a stone thrown by a boy. The occiput and the skull to the right of it, was contused; but she complained bitterly of a severe headache, could not collect her thoughts, and had considerable vertigo. Under treatment by May 19th, the headache and vertigo had disappeared, and the pupils which had been contracted were responding. Her mother brought her in yesterday, and I found the pupils normal and the other symptoms had not returned. I ordered her mother to keep her from school, to take her down to the country and have her live quietly. I hope she has fully recovered.

In May, 1902, I saw an interesting case with Doctor Neilsen. A little girl, seven years of age, had fallen from a picket fence to the ground, striking the head in the occipital region. The only ocular demonstration of injury was a contusion over that region. She lay unconscious for five days, when she gradually improved and made a complete recovery. There was no paralysis whatsoever. At this writing the doctor informs me that the child is a large, healthy, well-developed girl.

On the 15th of the present month a girl baby, twenty months old, was brought to me with the history of having fallen from a swing on April 30, 1905, striking the left temporal region and suffering a contusion as the external manifestation.

She was sleepless, had temperature of 102°, and appeared to have severe pains in the head. She had had two general convulsions and was extremely restless. Her pupils were irregular and sluggish. Her mother was instructed to place the child in a cool, dark, quiet room, and to give her cream and whey alone for nourishment. Chloral, bromide and fluid Dover's powder were given as a sedative, mustard baths ordered night and morning. May 17th, child much better. Treatment continued. May 19th, much more restless, some screaming, pupils still sluggish. Dose of sedatives and brain anemics increased, other treatment continued. May 22d: The baby appears perfectly well. Temperature normal, eyes normal, no screaming; sleep natural, and she appears to be free from pain. The trouble is, no man can say that this baby is surely past all danger, although she probably is.

This mother was very anxious about this baby, because, as she informed me, she had lost a child eight years ago by a fall on the back of its head from a stoop. She states that the child was paralyzed, screamed a great deal, had convulsions, became unconscious and died four days after the accident. She states that her sister had lost two children by falls on the head.

In these cases, of course, the main danger is that the delicate structures of the brain may be injured. We may have present concussion, compression, congestion, laceration, irritation, meningitis, traumatic encephalitis or intra-cranial suppuration.

Often two or more of these conditions are present in the same case, and this fact often renders the clinical picture, which is presented, quite complex.

Symptoms of concussion are most commonly found after not only blows or falls upon the head, but also at times after falls upon the feet or buttocks. There is commonly present in these cases emesis, faintness, depression, pale face, confusion of ideas and speech and contracted pupils, or at least some of these symptoms.

Sometimes the patient is unconscious for a longer or shorter period. All cases where the patient is unconscious, even for a short time, are serious.

Where concussion alone occurs, a few children die of it. The majority promptly recover, and the rest suffer for a time, recovering more slowly.

In the slight cases, the child is weak, giddy, confused, often falls asleep to awake well or very much improved. The patient should not be awakened or disturbed when thus asleep.

There is a condition found in many of these cases where the circulation of the brain is so disturbed that intense headache occurs, eliciting high piercing screams and simulating the cry of meningitis. These cases are quite amenable to treatment when no true inflammation is present.

In the more serious cases where there is pressure upon the brain, we find paralysis, fever, full, slow pulse, stertorous repsiration and dilated or irregular pupils. Sometimes, as the symptoms of concussion disappear, the symptoms of compression come to the front. Occasionally we see nystagmus, gyrospasm, strabismus and muscular twitchings.

Generally, in head injuries, are seen externally cuts, contusions, abrasions, swellings and more or less dirt, if the case be recent, and discolorations of the skin if the injury be more remote: all pointing to the fact that force has been expended upon the part.

In cases where laceration, hemorrhage, serum, pus or fracture are present we generally get pressure symptoms.

In cases where traumatic encephalitis is present we get the signs of brain inflammation familiar to all of us. Where the inflammation is subacute it may be many weeks before it appears. The following case of traumatic encephalitis I attended last July. A little girl, five years old, fell out of bed striking her head. She suffered no appreciable external injury, but her temperature ran up to 104°, and she complained of excruciating headache, her pupils were irregularly contracted, she could not stand the light, she was sleepless and most of the time delirious and extremely restless. On the fifth day she developed hemiplegia; she became gradually more and more unconscious and died on the eleventh day, comatose.

Exact, full diagnosis of brain injuries is sometimes difficult or impossible owing to the fact that the symptoms of one condition run into, overlap or hide the symptoms of another which may be also present.

As to the exact cause of pressure symptoms, it is sometimes hard to decide. Compression may arise from depressed bone, pus, blood or foreign body.

If abscess of the brain supervene the chances of recovery are small.

Pyæmia is generally fatal and accounts for the abscesses of lungs or liver which are seen in these cases.

In cases of coma and compression the question of the prompt relief of the pressure is a serious one.

Aseptic surgery has made it easier, and the trephine and elevator may be used, provided the situation of the foreign body can be discovered. In the majority of cases death follows.

Rest in a cool, dark, quiet room is the best treatment in head injuries. A great many of them will clear up without other therapeutic measures. The ice cap is of value where there is inflammation.

All excitement must be avoided. As Jacoby puts it: there must be "absolute protection against external disturbances."

Brain anæmics are far and away the best medicaments to use in these cases. Chloral and the bromides are easily the best.

The bowels should be well moved. Calomel holds ancient prestige.

Chloroform should be used in case of convulsions.

The mustard bath, ʒii of mustard to each gallon of water for babies, is of value.

The period of time in which injuries manifest themselves varies greatly. No patient is absolutely safe until one year after a severe head injury.

Severe lesions of the brain are occasionally attended for a time by slight symptoms only.

Finally, let us remember to teach parents the necessity of guarding the young against falls as much as possible, because of the serious character often assumed by falls upon the head.

Let us remember the axiom of Hippocrates, "that no injury to the head is too trivial to be despised or too serious to be despaired of."

21 Hanson Place.

THE CHOICE OF A UTERINE HEMOSTATIC.*

BY CARROLL CHASE, M.D.

The subject will be considered from a general standpoint, no attempt being made to take up each cause and variety of uterine hemorrhage and the treatment therefor. The scope of the article does not include any operative procedure, even such mild ones as tamponade or strapping of extremities, nor does it include postural methods of treatment. The paper naturally divides itself into two general parts: Uterine hemostasis by systemic remedies, and hemostasis by local applications.

The first attempt to stop uterine hemorrhage is many times made by giving medicine by mouth or hypodermically; and frequently (and occasionally much to our surprise) the effort is successful, and local or operative treatment avoided.

* Read June 2, 1905, before the Brooklyn Gynecological Society.

Just here let me state, as emphatically as I may, that I always strongly insist on careful local examination before treating irregular, and perhaps but slight, hemorrhages occurring between the ages of forty and fifty, especially if there is pain or slight watery or offensive discharge; for I most thoroughly believe that the time uterine carcinoma is curable is during its incipiency, and that the way to discover these cases is to watch for them, and warn patients that slight symptoms at this stage of life should not be thought of too lightly.

Uterine hemostatics given internally act in various ways, though principally in two—by producing vasomotor contraction throughout the body and hence in the uterine blood vessels as well, or by causing contraction of the uterine muscular tissue, thus to a certain extent cutting off the blood supply. There are remedies used, such as gelatine, by injection, which increase the coagulability of the blood, but these are of minor importance. It is nearly impossible to classify the remedies this way for consideration because many have complex action, or the authorities disagree as to the exact physiological effect.

There are three or four drugs used for this purpose which stand out as particularly useful, to wit: Ergot, hydrastinin (not hydrastin), cotarnine hydrochlorate (named stypticin for sake of brevity by its discoverer, Freund, of Frankfort-on-Main), and adrenalin. The indications for and actions of ergot are so well known that I will pass it with the statement that it is without doubt the most useful of all remedies of this class. Its action is both vasomotor and oxytocic. When ergot is to be given for any length of time I much prefer as a preparation, ergotin (Bonjean) in chocolate coated tablets.

It is of stypticin and hydrastinin that I wish to speak in particular. Both are artificial alkaloids, the first made by the oxidation of narcotin, an alkaloid making up from 1% to 10% of opium. The clinical formula $C_{12}H_{13}NO_3H_2O$ is remarkably like that of hydrastinin $C_{11}H_{11}NO_2H_2O$. The latter drug is formed from hydrastin (the white alkaloid of hydrastis canadensis) by a similar process of oxidation. As would naturally be expected, the action of the two is similar, the chief difference being that while both are cardiac stimulants stypticin acts very similarly to digitalis, slowing the heart and increasing arterial tension, while hydrastinin acts more as does camphor or ether. Hydrastinin acts quickly, while stypticin has a slower but more prolonged effect. Both are oxytocic. A study of the constantly growing literature on these two drugs shows that they frequently have a remarkable power to stop various forms of uterine hemorrhage. The concensus of opinion seems to be that they are most valuable in (first) menorrhagia, especially of young and other nulliparæ; (second) climacteric hemorrhages not due to malignant disease; (third) metorrhagia due to shock, or following operative procedures such as curettage, and (fourth) frequently in the hemorrhage following miscarriage. Some report excellent results in uterine myomata or fibromata, but I have had little personal experience with these drugs in these last named conditions.

My most gratifying experiences have been with cases of hemorrhage following abortion, where a curettage seemed inevitable, but where (sometimes at the patient's suggestion, because of fear of operation) I tried in every way to avoid the operation. Just one case as an example. Mrs. X., aged 37, mother of four children at term, had an abortion at about seven weeks. Cause not determined. She had no medical attendance at the time, trusting nature to see her through. There had been a steady and rather abundant flow for over two weeks when I saw her, and she was fast becoming exsanguinated and weak. Several years previous she had had a similar experience, followed by curettage. Either because of her existing condition or because she was infected at the time of the operation (she believes because of the latter), she had become septic and had been in bed some months. Because of this she greatly feared another operation. I gave ergot for two days in fairly large doses, without result. I then used hydrastinin, ⅛ gr., and stypticin, ¼ grs., in combination every two or three hours. The result was as gratifying as prompt. In three days the hemorrhage had ceased entirely, and the patient has been in good health since. This occurred about two years ago. I have had similar experiences since, these drugs, without doubt, several times having saved recourse to operation.

About the only objection to these two drugs that I know of is their expensiveness, stypticin costing the druggist $6.25 per ounce, and hydrastinin from $15.20 to $52.00 per ounce. But a prescription as follows:

℞ Hydrastinin hydrochlorat .....gr. i.
Stypticin .....gr. vi.
Syrup. Rub. Idæ .....ʒ ii.
Elix. Simplic .....q. s. ʒ i.

costs the druggist about 25 cents and should re-

tail for 40 to 60 cents, allowing the druggist a fair profit. If a prompt action is necessary, either alkaloid may be given hypodermically. I like to use the two together because one acts quickly and the other more permanently, and because one will occasionally act when the other will not.

Another drug that has received much favorable mention given internally for uterine hemorrhage, but with which I have had no personal experience, is adrenalin. Its action is due to powerful vasomotor contraction.

Although there are numerous other drugs used for this purpose, I wish to mention but two more. One is ustilago maydis, or corn ergot, which is said to have a somewhat different action from ordinary ergot in that the uterine contractions are less tonic and more clonic or intermittent than are those caused by the ergot of rye. The other remedy is mistletoe, which has a somewhat similar action. These two, while undoubtedly of value in hemorrhage, are of more value given in small doses to increase labor pains.

Local hemostatics, generally speaking, act in one of two ways, either directly on the muscular coat of the blood vessels, or by coagulating the blood in the vessels and the albuminous fluids around them.

Those most commonly used locally for their action directly on the vessels are cold water, hot water, from 110° to 125° F., dilute acids, alum, or other aluminum salts, in solution, hamamelis, and most powerful of all preparations of the suprarenal gland. Cold or hot sterile water douches—the simplest of all these remedies—are often very efficacious. It should be remembered that cold water should not be used for any length of time because the reaction that comes quickly with prolonged use dilates the vessels and the good effect is lost. Hot douches may be used with less danger of reaction. They should be large, several gallons if necessary, and the temperature may at first be but 110° F., gradually increasing, if necessary, to 120° or 125° F.

Dilute acids—especially acetic—are of great value. I prefer this acid in a 37% dilution (half the strength of the dilute acid of the U. S. P.). I have repeatedly seen it produce effect in the hemorrhage following curettage after hot intrauterine douches have failed. Hamamelis has met with favor by some, but other remedies are much superior.

Within recent years the preparations of the suprarenal gland—best represented by the active principle adrenalin—have been brought before the medical profession in a most forceful manner, and the results reported make it seem sure that a most active and useful vasomotor constrictant has been discovered. The gynecologist has not been slow to grasp its advantages. Theoretically it should be of the utmost value in any uterine hemorrhage that could be stopped by the action of a vasomotor constringent. It would be of little value in the hemorrhage from uterine carcinoma where the new low-grade tissue lacks blood vessels with walls thick enough to respond to stimulation. Its greatest disadvantages are the danger of absorption of any large amount, and—as is true of all of this class—danger of reaction. Other local hemostatics acting by vasomotor contraction have been used, but those above mentioned seem the most valuable.

The number of drugs that act by coagulation of the blood in the vessels and the albuminous fluids around the vessels is numerous, and perhaps those most used are as follows: Tannic acid and drugs that depend upon it for their action (such as krameria, kino, hematoxylin, and to a certain extent hamamelis), and the solutions of salts of the various metals as silver, zinc, aluminum, and most important of all of this class, preparations of iron. It will be noted that some in this class—notably alum and hamamelis—were mentioned as acting directly as vasomotor stimulants. It seems probable that they act to a certain extent by both methods.

Tannic acid, if used, is preferable in solution alone, rather than as one of the drugs which depend upon it for its action. But tannic acid, alum (or one of the simpler aluminum salts, as aluminum acetate) and other metallic salts, are much inferior in value to iron, which is perhaps best represented by liquor ferri subsulphatis, or Monsel's solution. This preparation, used pure or diluted with from one to four volumes of water, is a most eligible and efficient uterine hemostatic. White (author of a well-known work on materia medica) goes so far as to say it is the most valuable of all local astringents. It is of particular value in checking hemorrhage from carcinoma. One great advantage of this class is absence of reaction, but to offset this there is the disadvantage of the formation of clots, more or less tough, that unless thoroughly removed, make excellent culture media for bacteria.

To briefly summarize: For a systemic uterine hemostatic, ergot is the main reliance, but hydrastinin and stypticin are of great value and will make unnecessary a certain number of operations. They should be used much more commonly than

at present. Adrenalin is a powerful vasomotor constrictant and should not be forgotten. For a local hemostatic the simple remedy of hot intrauterine douches may be first used and followed, if not successful, by a 3% dilution of acetic acid. If the cervix is patulous and clots may be easily removed, liquor ferri subsulphatis is of great value. This preparation is also of particular value in the bleeding from carcinoma, and whenever a remedy without reaction is required. Where the surface of the endomatrium is not large, adrenalin solution, the most powerful of all vasomotor stimulants, may act when all other means have failed.

1045 Prospect Place.

SERUM THERAPY.*

BY EDWARD G. HYNES, M.D.

The progress of scientific study and research during the last quarter of a century has been made memorable by what increased knowledge with application and practical skill have done for surgery; by what Roentgen and his wondrous rays have seen and taught; by what Finsen and his light have done; by what Monsieur and Madame Curie with radium have accomplished, and by many other notable therapeutic discoveries.

It is with some hesitation that I have ventured under the title of Serum Therapy to wander somewhat backward for a moment and review this subject, which it seems to me has done far more to alleviate and lessen human suffering, more to protect the individual and to preserve life than any other branch of therapeutics. The value of serum therapy, tested now by years of experience and use, extends not only into the domain of medical but also of surgical conditions, and to-day as we look forward into the future, the outlook for blood-serum therapy and antitoxin looms up with an ever-increasing and more promising aspect.

In the preparation of this paper I have made use of Krieger's book on "Blood Serum Therapy and Antitoxins," articles by Park, Schauffler, Schmidt, and others.

So much experimental work has been and is being done in the department of bacteriology and its relation to toxins and antitoxins that it would require a knowledge far more extensive than mine and a paper of greater length than the following to even epitomize the subject of serum therapy as it stands to-day in relation to smallpox, diphtheria, tetanus, rabies, cholera, dysentery, plague, yellow fever, scarlet fever, pneumonia, pyemia, septicemia, erysipelas, typhoid, snake-bite, and more recently, rheumatism and exophthalmic goitre.

In writing, then, on this subject which naturally embraces that of antitoxins, I have thought it well to first to consider it as to a definition, and what we understand when we use the term, then, for a moment to examine its history, and finally to close by viewing serum therapy as it applies to the different infectious diseases of to-day.

The fundamental principle of all serum diagnosis and serum therapy is the blood. When we speak of this therapy of blood serum we understand that the serum of the blood of an animal organism which has been rendered immune is capable and has it in its power, if injected into another living body, to protect the latter against disease, or to cure it if already infected with disease. It is this condition of immunity on which serum therapy rests as well, too, on the bactericide property of the human blood. Immunity is defined as that condition of the body wherein it resists the development of morbid processes. This immunity may be one of two kinds: It may be congenital or active, with which every individual is born, or it may be acquired or passive immunity as that conferred by the introduction of antitoxins or vaccines. Active or congenital immunity is that property found in certain of the white blood cells or leucocytes, which are called phagocytes. To-night, however, we are concerned only with the acquired immunity as found in the subject of serum therapy and antitoxins.

In the strict sense of the word the therapy of blood serum is not a new discovery of the last twenty-five years, but it has been during that time that it has assumed its greatest growth and risen to the prominent position it occupies to-day as a therapeutic agent. The birth of serum therapy was announced to the world when Edward Jenner, an English physician, in the year 1796 established the practice of inoculation with vaccine, or the virus of cowpox, as a preventive of smallpox. This practice was called vaccination, and in its broad sense it meant the inoculation or introduction into the body of the virus of a specific disease. The Standard Dictionary defines vaccination as "inoculation with the attenuated or modified virus of a disease to produce a mild form of it and so prevent a virulent attack; specifically and originally inoculation with cowpox

*Read before the Alumni Association of St. Mary's Hospital Jan. 1905.

as a preventive of smallpox." Earlier than the days of Jenner it is said to have been practiced from time to time in other countries than England, and as early as 1713 and again in 1765 we are told attention had been called to the wonderful properties of vaccine. But it was left for Jenner, at that time a young man associated with a surgeon at Bristol, England, to notice that many of the people of the surrounding districts and neighboring country in which he was practicing, who acquired cowpox while milking cows, seemed to escape the dreaded disease known as variola or smallpox. It was in 1768 that he first noticed this, and during the thirty years following he made a thorough and exhaustive study, and after these long years of labor and observation, when he was no longer an assistant to the surgeon at Bristol, but a man well on in years himself, he confided to his friend, Dr. Gardiner, the long-cherished hope that in cowpox he had discovered the protection against smallpox. Shortly after this he published his first article on the subject, entitled "An Inquiry Into the Causes and Effects of the Variolæ Vaccinæ, a Disease Discovered in Some of the Western Counties of England, Particularly Gloucestershire, and Known by the Name of Cowpox." The first vaccination was made by him in 1796, 109 years ago, and it was four years later, in 1800, that the practice was first introduced into the United States. The New England States were the first to make use of it, and a few months later Thomas Jefferson, at that time President, urged its adoption in the south.

I have gone rather at length into the history of vaccination, because with its introduction in 1796 really begins the history of all serum therapy. The discovery proved that the blood serum of one animal, the cow in this case, could protect by its inoculation a like disease in man. The debt the human race owes to this painstaking and observing student is immeasurably great, and it is only when we stop for a moment and realize the wonderful good vaccination has accomplished, and the lives without number that it has saved, that we place the credit where it rightly belongs, beside the name of Edward Jenner.

Under the stringency of the vaccination laws in vogue at the present time the mortality from smallpox has decreased to a minimum. The number of public vaccinations performed every year, besides those done in the private practice of physicians, is estimated at 30,000,000. Here in our own country, surprising to say, the proportion of vaccination to births is smaller than in each of the European countries of Scotland, Holland, Germany, Austria, Japan and England. As to what vaccination has accomplished in the way of statistics, we find that for the twenty-four years before it was introduced into Sweden (which was in 1801) there were 2,050 victims annually out of each million of the population, and since its introduction in the worst epidemics it has averaged 158 a year to the million. Here in our own country epidemics of it were frequent in the early history of the colonies, and in 1620 it appeared both among the whites and Indians in Massachusetts. Again, too, in 1631, 1633, 1639, 1677, 1678, 1702 and in 1721 out of 5,989 cases of smallpox in Boston there were 850 deaths. In 1730, with only a population of 15,000, Boston again had another outbreak, and 500 out of 4,000 died. Again, in 1751, out of 7,653 cases there were 545 deaths.

I quote these figures merely to show you the high mortality during these epidemics in Boston before the days of vaccination. After the year 1800, when Dr. Waterhouse, of Cambridge, introduced vaccination, the percentage of deaths became appreciably less. Boston, from 1811 to 1820, had six deaths, from 1821 to 1830 there were eight deaths, and from 1891 to 1900 there were 32 deaths.

Comparing the percentage of deaths in our greatest epidemics since vaccination was introduced, with the percentage of deaths in the lightest epidemic before the time of vaccination, we find it is much less now and is less than three to every thousand of our population. The protective power of vaccination is again shown when we compare the records of the vaccinated and those who have not been vaccinated. In France from 1816 to 1841 the death rate among the unvaccinated was 16.1%, among the vaccinated it was 1%. In the London Smallpox Hospital, from 1836 to 1856, the mortality among the unvaccinated was 35%, and among the vaccinated it was 7%. In the Vienna Hospital, from 1837 to 1856, among the unvaccinated it was 30%, and among the vaccinated it was 5%. In lower Austria during the year 1835 it was 25% among the unvaccinated and 1% among the vaccinated, and without quoting further figures, it has been computed that the mortality during outbreaks of smallpox is from five to seven times greater among the unvaccinated than among the vaccinated.

Alfred C. Smith, in the *Medical Record* of April, 1904, reports treating smallpox successfully with antistreptococcus serum. Under this treatment he claims the disease runs a shorter

and a milder course, no pitting follows afterwards, and all symptoms are far less aggravated. He concludes his paper by regretting the fact that the profession "is so slow to give the patients the benefits of these life and suffering saving means that science has placed at its disposal."

Again, too, in Glasgow during a recent epidemic, cases were treated with a serum obtained from immunized heifers. The results, however, were not very encouraging.

The story of vaccination during the many years since 1796 has been one long successful prophylactic onslaught on smallpox. True, it has been interrupted now and then by epidemics, but it does not require a great amount of thought nor the recital of further statistics to prove its wonderful results or to testify to the lessened mortality it has brought about. To-day we find it universally accepted as a protective agent in all our large cities and towns throughout the world, where because of dirt and overcrowded conditions outbreaks of this dreaded disease are more apt to take place. In these cities we find the Departments of Health not only countenancing its use but making it compulsory among the school children, tenement house population and factory employees.

England to-day has its compulsory vaccination laws; Italy supports fourteen vaccination stations for its poor at Rome, Venice, Milan, Genoa and other cities. Norway made it obligatory in 1811. Austria, Roumania, Turkey and Greece assume the right, if they so desire, to vaccinate all those unvaccinated. Holland, like Italy, supports vaccination stations for its poor though not making the operation compulsory. Germany compels it; so, too, does Denmark, and so, too, does Japan since 1874. We meet with physicians at times who look with sort of doubt and skepticism on its practice, but fortunately we come across them but rarely.

Vaccination, then, was the first great triumph of serum therapy, and it certainly has proven a worthy precursor for the others that have followed since. Years elapsed before serum therapy was again brought forth as a therapeutic agent, but as time proved, they were not all idle years, for stimulated by Jenner's example and what he had accomplished, other investigators were working along the same lines of thought, and at last their labors were crowned with success.

DIPHTHERIA.

A writer once said, and it is certainly true, "that by far the greatest interest shown by the medical world, as well as by the laity, to those discoveries and experimental results in blood serum therapy relates to the subject of Diphtheria."

From the time of the early Greeks, from that period in the world's history which we call the "Homeric," an affection of the throat had been noticed and frequently described by Galen and others. Outbreaks of it had occurred in Switzerland and along the Rhine, and in 1821 Brettoneau, a Frenchman, published his first essay on the subject and gave to the disease its present name—diphtheria.

It was Klebs, in 1883, who first demonstrated the presence of bacilli in this membrane, but it was Loeffler who, a year later, in 1884, not only showed the presence of the bacilli but produced by inoculation a like membrane in susceptible animals. Even before the time of Klebs-Loeffler bacilli it had been noted that one attack of diphtheria was seldom, if ever, followed by another in the same person within a short time. This being so, the thought suggested itself that perhaps by its infection an antitoxin was formed in the blood which protected against further infection of the disease at least for a time. The object, then, of the investigators working on the subject was to find a serum treatment which would be protective at all times and curative when required. The names of Fraenkel, Behring, Ehrlich and Wernicke are all closely linked in the history of diphtheria with those of Klebs, Loeffler and Brettoneau. Pre-eminent among those who made a study of the toxin of diphtheria in search of its antitoxin was Behring, who showed that the blood of immune animals contains a substance which neutralizes and renders inert the diphtheria toxin.

What this antitoxin has done to not only protect and prevent from an attack but likewise to cure it, is a story familiar to all of us. Since the general introduction of antitoxin in 1894 and 1895 a marked change has taken place in the death rate. Previous to that time the mortality ranged from 25% to 40%. In Massachusetts, from 1891 to 1894 it was 28.3%, but from 1895 to 1891 it had decreased to 13.1%, and in 1891 it had decreased still further to 10%. These figures mean, so the Massachusetts Board of Health states, that 10,967 lives have been saved in seven years. In general the mortality is said to be reduced from 45% to 16%.

Osler gives the following: The mortality in Berlin in 1894 was 39%, after the introduction of antitoxin it was only 2.1% in 1,390 cases.

The mortality of Baginsky's clinic in Berlin for four years before antitoxin was introduced was 41.1%. During the four years after it was introduced the mortality in 525 cases was 15.81%.

The Chicago Health Department in one of its late reports says of antitoxin: "Since the introduction of antitoxin in the treatment and prevention of diphtheria its mortality rate has been reduced by almost one-half, that is from an annual average of 625 in every 10,000 of the population in the seven years before its use, 1889 to 1895, to an annual average of 324 in the seven years, 1896 to 1902, of antitoxin treatment.

During 1902 the New York Health Department furnished free antitoxin to 15,792 cases. Of this number 1,860 died, a mortality of 11.8%. Of the number who died 722 were already moribund when injected, which really reduces the death rate to 7.5%. Of 1,702 injected on the first day, only 85 died, a mortality of 4%.

This, then, was the second victory won by serum therapy, and a greater one in some ways than even vaccination. Here in antitoxin we find the cure as well as the prophylaxis. The general application of this remedy to diphtheritic conditions, while not being made compulsory, as in the case of smallpox, has been so extensive throughout the world as to give silent though convincing testimony to the efficacy of Behring's serum and its wonderful therapeutic value. Severe as the disease is, and high as the mortality remains, we have reached a stage in the treatment of this condition when we no longer have the same dread of it we had years ago. As I said, the mortality has not yet been reduced to the minimum, but it is as near that desired goal as time will permit. There are times, too, it is true, when antitoxin responds better in one case than in another, but this seeming lack of benefit is often due to a tardy and delayed administration, when the toxins have already so weakened the heart and general organism as to preclude the possibility of recovery. Or, again, if used early in the disease with little benefit, the case is likely one of mixed infection of the streptococcic and Klebs-Loeffler bacilli, and the presence of the former we are told both stimulates the effect of the bacilli and adds to the infection its own deteriorating properties.

Intubations and tracheotomy, good as they are, are no longer the necessary implements they were of old, and the membrane now appearing first on the tonsils does not have the same tendency to spread downward to the larynx it did before antitoxin.

Dr. Francis Quinlan, of New York, said some time ago at the New York State Medical Association meeting in Buffalo, "that since the introduction of antitoxine the danger from diphtheria has been reduced to almost a minimum." Before antitoxin was discovered, in one year he did 116 intubations. Shortly after that, he says, the general use of antitoxin took its place. At the same meeting Everard T. Ferguson, of Troy, said that before the introduction of antitoxin he had had 75 intubations without a single recovery. After antitoxin he treated successfully five cases of primary laryngeal diphtheria.

TETANUS.

About the same time as Klebs and Loeffler were making their discovery, two other scientists were examining into the causes of tetanus, and in 1884 Carle and Rattone came forth with a proof that tetanus was an infectious disease by inoculating a rabbit with the pus taken from a case and producing a like disease. A short time after this a Dr. Nicolaier, who was engaged in examining the germs of the soil, remarked that he often found a bacillus like unto that of Carle and Rattone, and he observed that by inoculating guinea pigs with this soil it caused spasms and death. The infectious nature of the disease having been established, naturally stimulated the desire to find something which would be antagonistic to the toxins formed, or, in other words, to discover an antitoxin which would have the same tendency as diphtheria antitoxin and nullify the effects of the poisonous products of the tetanus bacilli. The name of Kitasato is associated largely with this study, who was most zealous, not so much to find an antitoxin to kill the microbes as one which would paralyze and render inert their poison.

The first case of tetanus treated with antitoxin was in 1891, under the attendance of an Italian physician, a Dr. Gagliardi, of Mollinelli, and the antitoxin used was prepared by Tizzoni and Cattani, two investigators who had been most industrious in its study. A brief report of that first case may not be out of place here. The patient, a man 45 years old, had been cut on the foot May 11, 1891, was seen by Dr. Gagliardi the next day, the wound was dressed antiseptically with carbolic, and on May 16th it was healed. May 19th symptoms of trismus developed, which became marked by May 24th. By June 3d opis thotonos and all the other symptoms of tetanus were marked, and 0.25 centimetres of Tizzoni's

antitoxin, which had been obtained from a dog, was injected, and this was followed by slight improvement. In a day or so symptoms became marked again and two injections were made. The patient did well after this and was discharged cured July 5th. Less than one cubic centimetre of antitoxin had been required to neutralize the poisonous effects of the toxins. In December of the same year, 1891, the second case was reported favorable after antitoxin, and since then antitoxin has been generally used in all our hospitals and in the private practice of many physicians with relatively good results. Not without some mortality, it is true, but with a much lower one than was the case before Tizzoni and Cattani made their now famous discovery. According to the statistics of Reckter of 717 cases, and the records of another writer who has collected 2,072 cases, the mortality was 88% before antitoxin, and now has been reduced to 20%. Grieger remarks that "A therapy which can cause such a decrease in mortality is certainly wonderful and ought to be cheerfully welcomed, especially by those who have occasionally to witness the agony brought on by this disastrous malady.

At the present time the departments of health of many of our cities, as in New York, are preparing antitoxin, but it is Behring's serum that is used mostly. The subarachnoid method of injection, while still largely in use, has been superseded somewhat by the intracerebral, because it is generally held now that the antitoxin has a more powerful and quicker influence when brought into direct contact with the nerve centers. Not to appear too optimistic, it is but fair to quote from an article by Edward W. Schauffler, who has recorded 233 cases of intracerebral injections, with 96 recoveries and 137 deaths, a mortality of 58.7%. In the same article he advises restricting the intracerebral method and using more frequently the subarachnoid and subcutaneous. At a recent congress of surgery in Paris a Lyons surgeon reported 373 cases, with 145 deaths, a mortality of 39%. High as this death rate is, it is small when compared to the days before antitoxin, when we are told it varied between 70% and 90%. Another report by Cabot, of Boston, gives the mortality with Behreng's serum of 52.7%, and with Tizzoni's serum in 88 cases a mortality of 36.3%. Though less brilliant by far than diphtheritic antitoxin, we cannot but admit that it has accomplished much more than any other known remedy for the disease. It is only fourteen years since it was first introduced, so that we must not be disappointed should it fail at times, but let us be thankful for what it has already done and look to the future expecting greater results.

DYSENTERY.

Long before the time of Hippocrates dysentery was one of the best known diseases, but it was around 430 B. C. that it was first described by him and the difference between it and diarrhea were pointed out. But in spite of its long years of recognition and the great amount of literature written on the subject, besides long and diligent inquiry as to its cause, it remained for the Japanese Shiga in 1897 to first isolate and describe the bacillus which seemed to have all the requirements to act as a causative agent. Up to this period the ameha was always looked upon as the responsible cause. Shiga discovered his bacillus then in 1897 in an epidemic in Japan, when there were 22,300 deaths, out of 89,400 cases, or a mortality of 24%. In 36 cases he found the bacillus in the intestinal contents, in the walls of the intestine and in the mesenteric glands. Flexner substantiated Shiga's claim in his study of dysentery in the Philippines in 1899. So, too, did Storey and Musgrave, working under the Surgeon General of the United States Army, in their study of 1,328 cases in Manila for one year. As to the serum therapy of the disease, there is now being used in Manila and Japan an antitoxin prepared from the bacilli of Shiga by Kitasato, and in its results they claim it is second only to the serum used in diphtheria. While definite results are wanting and no statistics are obtainable, we are told "that enough work has been done in this country to make it evident that the outlook is not at all unpromising." Dr. William H. Park, in his paper read before the New York County Medical Association, May 18, 1903, spoke at some length as to serum therapy in this disease. He was not over-enthusiastic, and reported fifteen cases in which up to that time the serum had been used in New York, and while the results were not marked, he thought that possibly this might be due to a mixed infection. He said further that Shiga claimed that when the serum was used early the symptoms abated so promptly as to leave no doubt as to its wonderful efficacy. Let us hope that this claim of Shiga's may prove true.

HYDROPHOBIA.

With the subject of rabies or hydrophobia there are no names more prominently identified

than those of Pasteur and Gibier. To their untiring efforts and study we are indebted for the antihydrophobia serum, and though we are still working in the dark as to the particular microorganism responsible for this disease, our results thus far with serum therapy treatment have been uniformly good and encouraging. In order that the result be good it is necessary that the Pasteur treatment be begun immediately; that is, during the stage of incubation. The object in this treatment is the rapid production of immunity in the patient as early as possible, because it has been shown that immediately after infection the poison is present in the brain, spinal cord, nerve trunks and saliva. The prognosis with serum therapy and hydrophobia is uniformly good if immunity can be established before the period of incubation. The Pasteur Institute, from 1886 to 1894, treated 13,817 persons who had been bitten by supposedly rabid animals. Out of this large number the mortality was only 0.5%. Compare this mortality of 0.5% with the mortality of 60 to 80% without the Pasteur serum treatment, and not only must we conclude that in the case of hydrophobia serum therapy has been most successful, but that Pasteur and his associates have reduced the mortality to a surprisingly low figure.

CHOLERA.

This disease of the gastrointestinal tract, endemic in certain portions of India, and epidemic in other countries, from time to time has at all times been most fatal in its results. Koch proved it to be infectious, and its spirillum is known as the Spirillum of Koch or *Spirillum Cholerœ Asiaticœ*. It was in 1884, when diphtheria antitoxin was being prepared and the tetanus bacilli were first being described, that Ferran, a Spanish physician, read a paper before the Academy of Barcelona on July 16th relative to the inoculation against cholera. During the following year 1885, when cholera was epidemic throughout Spain, he used an anticholera serum on 25,000 cases. This was the first attempt at serum therapy with this disease, but unfortunately the results were hardly equal to his claims and expectations. It was a beginning though, and since then, through his example, others have been encouraged to take up the work with the results at times no better than his. Metschinkoff in 1893 published his results. Haffkine, between 1893 and 1895, subjected 40,000 people in India to his prophylactic treatment, and his results were good, being entirely preventive and not curative. These injections of Haffkine had not been of an antitoxic substance but merely graduated cultures of moderate virulence, and to-day it is but little in use. His records, though, for that time were quite encouraging. In one town of 340 uninoculated forty-five got cholera and thirty-nine died, of 181 inoculated only four contracted the disease, and they died. Of eighteen people living in one house eleven were inoculated, and no cholera developed in any of them; of the seven who were not inoculated four contracted the disease and three died. As to a curative serum, there is none, and the best we can claim to-day is the serum therapy of Haffkine as a prophylaxis.

TYPHOID FEVER.

At the present time another disease that we hope may respond to serum therapy is that caused by the bacillus first described by Koch, Gaffky and Eberth, and known as typhoid fever. The use of the antityphoid serum up to the present time has been so limited that we are hardly in a position to state just what its future promises. Chantenesse is quoted in the *Journal of the American Medical Association* as having treated 514 cases with the serum, and having a mortality of twenty-two deaths or 4%. The mortality from typhoid in fourteen other hospitals at Paris at the same time with 3,199 cases was 581 or 18%. Serum treatment has been practised to quite a large extent among the British troops in India and South Africa. The sera used have at times been obtained from horses and from convalescent cases. In the *British Medical Journal*, 1901, Wright reports that among 2,669 uninoculated and 720 inoculated soldiers sixty-eight of the former and only one of the latter who were inoculated contracted typhoid. In diphtheria the more severe the case the larger the dose, whereas in typhoid, the worse the case the weaker the strength of the serum used. Again, in the *British Medical Journal* of January 11, 1902, there is a report of 947 cases not previously inoculated with a mortality 14.25%, and of 203 cases, all of whom had been inoculated from six to eighteen months before with a mortality of 6.8%. Osler quotes E. Fraenkel as having had fairly good results in fifty-seven cases treated with serum, and says that the fever is more remittant and defervescence takes place sooner, sometimes by crisis instead of as ordinarily by lysis. Osler also says that Lambert claims to have found benefit in fifteen out of twenty-eight cases. From observations made by Josias in the Paris hospitals for children, from March 1, 1902, to March 1, 1903, the mortality without serum treatment was

14.2%. At the Brettonean Hospital, where the serum was used, the mortality was only 4%. Just now we must withhold judgment because the reports and statistics as to its use are not sufficiently numerous, and the future alone can tell us what the results will be.

SCARLET FEVER.

As yet we are entirely ignorant as to what the contagion of scarlet fever is, but in spite of this enthusiasts are ready to go ahead, and since 1896 serum therapy has from time to time been suggested and tried. Its results are scarcely more definite than those of typhoid. The serum has been used at irregular times during the past summer and fall in some of our city contagious hospitals, and in speaking recently with one of the internes, he told me the only result noted was that the disease seemed to run a more rapid course, and that the rash and desquamation seemed at times to disappear sooner than in the cases where it was not used. No statistics were kept, and the results were altogether uncertain and indefinite, and it is seldom resorted to now. Serum, as a rule, is now prepared from the streptococcus found in the organs of scarlet patients. This appearance of the streptococcus with scarlet has sort of revived the subject of serum treatment lately, and Baginsky, of Berlin, who claims priority in the discovery of the association of the streptococcus with the as yet unknown scarlet germ, has full confidence in the antiscarlet system which has been prepared by Aronson. Moser, who has also prepared a serum, reports 84 cases. Seventeen of these 84 cases were mild, and there was no mortality. Sixty-two of the 84 cases were severe and apparently hopeless, but 46 of that number recovered and 16 died. The dose was from 30 to 180 c.c. In the *Medical News* of October 29, 1904, Henry L. K. Shaw says that during the past four years all severe cases of scarlet fever at the Annakinderspital in Vienna have received the Moser antiscarlet serum with no less surprising results than seen with the diphtheria serum. This, as we said, is an antistreptococcic serum, and Moser claims that in the blood taken from the heart immediately after death he has shown the presence of the streptococcus in 63 out of 99 examinations. I remark this merely parenthetically because his statement seems to carry with it the evidence of the proof of the association of the streptococcus with the germs of scarlet if there is any other causative factor. Shaw's statement is certainly favorable to the use of the serum. In a few hours after its inoculation the temperature drops to normal, there are no signs of collapse, the pulse becomes slower and of better quality, and the symptoms of any toxemia which may have existed disappear, sequelæ and complications are less frequent, and when they do occur are less severe. The mortality for four years before its use was 14.5%, in the last four years at the Annakinderspital in Vienna it has been only 8%. In the same four years in the other hospitals of Vienna where the serum was not used the mortality was 13.1%.

PYEMIA AND SEPTICEMIA.

The results of antistreptococcus serum injections in cases of pyemia and septicemia, while not at all times of the best, have been in many cases most marked and beneficial. It is in this connection that serum therapy has exerted its influence in the line of surgery. Packard and Wilson collected 117 cases treated from 1900 to 1902, and of this number 114 showed signs of improvement or fully recovered. They make the following statement: "All of these reports tend to convince us of the fact that antistreptococcus serum will at least do no harm, and that in cases in which the streptococcus alone is involved it will eliminate that micro-organism and control the symptoms caused by its toxin unless used too late for any remedy to be of avail. G. H. Sherman in the *American Medicine*, October 17, 1903, reports good results from antistreptococcus serum in erysepelas, particularly when given early. In pyemic and septicemic conditions it is peculiar to note that the serum apparently does wonders in one case, and again in another case presenting similar symptoms it has but little if any effect. Bacteriology has not as yet, we are told, discovered all of the many forms of this coccus, and it is because of this that the serum may be fatal in one case to the toxins and in the other indifferent or lacking in its results. In the London *Lancet* of July 16, 1904, T. J. Horder says, "that the ideal serum for the treatment of any particular patient suffering from streptococcus infection must be one obtained by the use of the organism actually causing the disease in that patient, for this serum can alone be guaranteed to be specifically associated with the causal agent of the disease."

SYPHILIS.

De Listo claims to have treated one hundred cases of syphilis with the serum, but the results could not have been much, as the report is indefinite and uncertain.

PLAGUE.

The credit of isolating the bacillus of plague is again due to the Japanese Kitasato, who, in 1894, during an outbreak of the disease in Hong Kong, made his successful investigations. Almost coincidently with Kitasato Yersin and Roux discovered the same micro-organism. Serum therapy has again come to the front here with quite wonderful results, both from the use of Haffkine's prophylactic serum and Yersin's antipest serum. All authorities are one in agreeing that both sera are of great value. Wyman lays much stress on the lines that must be drawn between a serum for preventing, or prophylaxis, and one that is curative, and he says the prophylactic may not have the least beneficial effect when once infection has taken place. He concludes by saying that "for bubonic plague there is but one accredited remedy, and that is the antipest serum of Yersin and Roux." A French commission which has examined into the Yersin-Roux antipest serum reports that the results are incontestible. The mortality among cases treated with it was 14%, and among those not treated with it it was 70%. The results of Haffkine's prophylactic serum in Bombay have been good. At one time 8,142 persons were injected; only 18 contracted the disease and two died. At another time 4,926 people were inoculated, 45 contracted the disease and 15 died, while among 3,387 of those who were inoculated the second time only two became infected. During this same period, among those who refused to be inoculated the death rate varied between 667 and 1,000 every week. Lord Curzon, the Viceroy of India, has remarked "that a measure which changes the death rate of from 70 to 80% into one of 15 to 20%, even in those who are attacked after submitting to it, to say nothing of the large proportion who are completely protected by it, is one which no sensible person can afford to neglect." Major Charles B. Ewing, of the United States Army, in the *Medical Record* of April 4, 1903, in an article on the plague in India and the Philippines, after speaking encouragingly about the Haffkine prophylactic serum, says that the value of the Yersin-Roux serum, aside from the claims of its discoverers, is incontestible. In one epidemic in India, he says the mortality was reduced from 70 to 14%. There is a third serum, which has been used with good results, though not so extensively. This is the Lustig antipest serum. Haffkine reports that the difference in the mortality of those inoculated and those not inoculated is from 80 to 90%. The record then of serum therapy in relation to plague is more than an encouraging one. Its use since it was first introduced in 1894 (eleven years ago) has changed a mortality formerly 80% into one that is now from 15 to 20%. Antitoxin has certainly in this instance accomplished wonderful results.

TUBERCULOSIS.

At the International Medical Congress held in Berlin in 1900, Koch first described the serum known as tuberculin. As a means of diagnosis, particularly among cattle, it is largely employed at the present day, and at times it has been used for this purpose in man. In certain early cases of tuberculosis, and when used most judiciously, it has exerted a curative effect, but Councilman concludes his article on the subject by stating that "it is a very dangerous agent when considered as a general remedy for the disease." Osler says that its use had been in great part abandoned. Modifications of it, he adds, are under trial by several trustworthy investigators, whose results may justify its adoption in suitable cases. In one of the German medical papers Freymouth advises the use of tuberculin as a means of diagnosis. He concludes his article by stating that there is no doubt that when used properly tuberculin is the best test yet devised for the diagnosis of tubercular trouble. Most of the literature is rather opposed to its use. It often reacts in cases which on autopsy show no lesion—it fails at times in well marked cases, and there is no positive proof that it will not react when some other trouble is present.

YELLOW FEVER.

As regards yellow fever, very little can be said, except that a French commission claims to have immunized individuals with a yellow fever serum, saying it was both prophylactic and curative.

EXOPHTHALMIC GOITRE.

The serum treatment of this condition merits nothing more than a passing mention. The serum used is one obtained from thyrodectomized sheep.

RHEUMATISM.

One of the French journals, speaking of the discovery of Menzer of a curative serum for the treatment of articular rheumatism, adds that it seems full of promise. Menzer is at work on the theory that this condition is the result of a streptococcus infection. Sherman, in the *American Medicine*, October, 1903, reports having treated

inflammatory rheumatism for some time with antistreptococcus serum with good results. In one of the German journals Schmidt reports fifteen cases of rheumatism, some of which responded fairly well to serum treatment even after all other remedies had failed. Of these fifteen six showed marked improvement, four were doubtful, and in five there was no change. Schmidt's conclusions are that the serum is not a specific one in the same sense as diphtheria antitoxin, but we must admit it produces favorable results in many cases.

Attempts from time to time have been made to produce an antipneumococcic serum with results, however, which up to date have not been very encouraging.

As to actual results, blood serum therapy has reduced the mortality in smallpox at least 15 to 25%, it has changed the mortality in diphtheria from 40% to 10% to 15%. In tetanus it has made a mortality formerly 88% now 20%. In hydrophobia the mortality without serum therapy is 60% to 80%, and with early serum treatment it is only 0.5%. In plague it has changed a mortality of 80% into one of 1.5% to 20%, and let us hope that a like report is waiting for typhoid, scarlet fever, dysentery, septicemia and pneumonia. At the present time serum therapy is hardly more than in its infancy. It presents as yet many complicated problems, many unsolved questions, and many unexplained results, but from day to day its possibilities are becoming more encouraging, its application more general, and its value more appreciated, and there rises up before us the conception of an almost illimitable field which offers itself for research and study to the medical profession. What it has accomplished in the past is to the future what the surgery of one hundred years ago was to the surgery of to-day, and it is no vain hope, I think, to feel that further study and knowledge of serum therapy in relation to toxins and antitoxins will revolutionize our conceptions of disease, their cause and cure. The dawn of the past century little dreamed of the X-ray, never thought of radium, and little hoped for the advances made in all branches of medicine and surgery, and so too this, the beginning of another century, little knows what its future years are to bring forth. My object has been accomplished if in this repetition of an oft-told story and review of serum therapy I have but reminded you of what we owe to the names of Jenner, Behring, Tizzoni, Koch, Yersin, Haffkine and others, and caused you to realize that it is to these men and others like them that medicine owes what it has to-day, and its promises of greater triumphs yet to follow. What wonder is it then that as we look back upon the past and see smallpox, diphtheria, tetanus, pyemia and septicemia and other diseases responding to serum therapy we are tempted to view the future with hope and give credence to the possibility of discoveries which twenty-five years ago we would have considered the vagaries of man's imagination. It was once said by a writer, and with his words I beg to close my paper: "It is good to stop and look back now and then, especially when the course passed over is such that the difficulties mastered in it are so many pledges of greater triumphs yet to follow. A retrospect, brief though it may be, shows us how much we may hope for in the future. It helps us to realize how mighty a harvest may be reaped from a handful of seed when there are faithful husbandmen near to watch over the growth. What results time will bring about we know not, but surely, with the marvels of the past before us, we may look up to God and allow our hearts to be filled with unspeakable hope."

A CASE OF MASTOIDITIS INVOLVING THE ENTIRE MASTOID PORTION OF THE TEMPORAL BONE IN AN INFANT THREE MONTHS OF AGE.

BY WILLIAM C. BRAISLIN, M.D.
Surgeon, Brooklyn Eye and Ear Hospital.

Most cases of mastoiditis in infants are of the subperiosteal abscess variety, the infection usually extending through the masto-squamosal suture or other indifferently ossified parts of the bone or subperiosteally by way of the posterior superior canal wall. This was stated in a recent paper on the subject of "Mastoiditis in Infants." At the time of writing that paper no case of mastoiditis of the type about to be described had been met by the writer.

The case is likewise of some interest from the fact that it conclusively demonstrates that such extensive damage to the bony structures as was here found can occur in so short a time; since when cases of mastoiditis in adults are met with in which every part of the bone is necrotic or filled with granulated material and pus, one is apt to regard it as of some considerable time standing. It is evident that such a lesion may occur in a child in a very short time, since in the case herewith related the disease must have developed after birth; the history of the case carries the case back a month, the extreme limit

in point of time of the existence of the inflammation could certainly not have been greater than twelve weeks, the entire extrauterine life of the child.

A female child, three months of age, was presented at the Brooklyn Eye and Ear Hospital March 7, 1905, with a history of discharge from the ear during the preceding month. It had appeared to the parents quite ill during this time, and part of the time very ill. One week ago a swelling appeared suddenly behind the ear. The child had been regularly treated by the family physician until he referred the case to us. On examination the child was found to be a well-nourished, breast-fed infant, objecting vigorously to examination. The swelling behind the ear which had brought the child to us was a narrow, cresentic well-defined tumor, not prominent. The auricle was not displaced outward and downward. *No lop-eared deformity existed.* Both auditory canals were obstructed with thick pus. The flow of pus appeared to be sluggish. The left ear-drum (the side exhibiting the swelling over the mastoid) was observed with difficulty. It was regarded as perforated at the superior periphery of the membrane at a small pouting point. The child was referred to the children's ward and next day was operated upon under chloroform.

Pus was encountered at the first incision. It had not previously escaped from beneath the periosteum. Under the periosteum the entire mastoid portion except the inner (cortical) plate was a soft, pulpy mass of necrosed bone, pus and granulation tissue. The thin, bony plate covering the dura and sinus had remained firm and intact. The removal of the diseased area represented rather well the operation on the region as recommended by Dr. Whiting. The space resulting was a shallow, gently shelving cavity including all the mastoid. The deepest part of the cavity thus formed was the space previously occupied by the antrum. This and the canal were lightly packed with gauze. At the first dressing, six days later, the canal was dry. Healing of the wound progressed very rapidly, but later, when the child was allowed to be taken home, suppuration from the canal reappeared and continued for some weeks. This is now, however, well again, and the drum has healed with no apparent damage. In a considerable operative experience with mastoiditis in infants this is the first one of this type met with. Complete riddling of the mastoid without any outward displacement of the auricle is certainly contrary to rule. The writer records the case because of its interest to him, and also that in its description there occur some particulars not noted among those given in a paper in the BROOKLYN MEDICAL JOURNAL, August, 1904 (Braislin, "Mastoiditis in Infancy and Childhood.")

TRANSACTIONS OF SOCIETIES.

THE BROOKLYN SURGICAL SOCIETY.

REGULAR MEETING, APRIL 6, 1905.

ILEUS CAUSED BY THE APPENDIX ACTING AS A CONSTRICTING BAND.

DR. F. C. PAFFARD said that the appendix may act as a constricting band, causing ileus, is mentioned in most text-books. There are not as many cases reported as might be expected.

Richardson reports three cases. McWilliams reports eleven cases. Dr. Rushmore one case.

The history of the following case is typical of this condition.

John H., age 47, very stout and overfed, was previously healthy, except for occasional constipation, and, on two occasions, attacks of pain in the right iliac region. He did not stop working during these attacks, and did not consult a physician. They were three in number, about six months apart, the last about four months before present illness. They did not last for more than a day or two.

Present illness began October 1, 1904. He was awakened from his sleep about 3 A.M. by a violent pain in his abdomen. He began to vomit soon afterward, felt chilly, and was covered by a cold perspiration. Dr. Spafford saw him at three in the afternoon. Temperature 100, pulse 84, respiration 23. The abdomen was much distended. There was a small tumor in the median line about three inches above the umbilicus, apparently a preperitoneal lipoma. He vomited at intervals a bile-stained fluid. His bowels had not moved since the pain began.

On palpation the abdomen, while very tense, showed no rigidity of the abdominal muscles. There was no essential point of tenderness, neither could any mass be felt in the abdomen.

A high enema containing turpentine and magnes. sulfat was then given, and some gas and feces passed. Some magnes. sulfat was now ordered, to be given by mouth. Vomiting stopped, bowels moved twice during the night, and when Dr. Wunderlich saw him the next day with Dr. Paffard, he refused operation, saying he felt much better. The distension, however,

did not diminish. Vomiting began that night, and patient consented to operation Tuesday morning. He was then removed to St. Peter's Hospital.

A four-inch incision was made in median line just above the umbilicus, as it was thought that a hernia might be behind the preperitoneal lipoma. There was none. The small intestines were much distended, but the transverse colon was quite small. Gall bladder was apparently normal, but, on passing the hand down toward the appendix, this organ could be distinguished as a thick hard band, passing from right to left, attached to the posterior wall of the abdomen at its distal extremity. Behind the band thus formed, a loop of small intestine was tightly constricted. The adhesions about the end of the appendix were broken by the fingers. As it was impossible to remove the appendix through the median incision, this was quickly closed, and the appendix removed through an ordinary McBurney incision. The intestine that had been constricted was then examined. It proved to be ileum, and while somewhat discolored at first, regained its color after a few minutes. It was then returned to the abdomen, and the wound closed. The patient was then returned to ward in a state of considerable shock. That evening the bowels moved freely, and much gas was passed per rectum. The distension decreased. Pulse remained rapid and feeble. Temperature did not go above 100. Patient died on the fourth day after operation, apparently from intestinal toxæmia.

TRIFACIAL NEURALGIA TREATED BY OSMIC ACID INJECTION.

DR. A. T. BRISTOW presented a female patient, 57 years of age, whom he had treated for trifacial neuralgia by injecting osmic acid into the nerves, as described recently by Dr. J. B. Murphy, of Chicago. The patient had suffered from the neuralgia for four years. At first the pain came on only during the winter, but latterly the attacks of neuralgia continued into and through the summer. The location of the pain was that supplied by the infra-orbital nerves. The pains were shooting in character and lasted fifteen to twenty minutes at a time. The expression of patient was typical of extreme suffering. She was unable to eat solid food, but took fluids by the teaspoonful between the paroxyisms of pain which even fluids excited.

Three weeks ago the infra-orbital nerve was exposed and injected with 15 minims of a 1½ per cent. solution of osmic acid. A second incision over the mental foramen was also made, and this also injected. Subsequent to the operation the pain stopped in the infra-orbital and submental divisions, but the patient still complained of pain which was restricted to the area supplied by the left anterior palatine nerve. After about a week's interval this suddenly disappeared for several days, and then reappeared, but in very mild form. It was determined to inject the anterior palatine nerve in the foramen. This was done with complete and immediate relief.

The cessation of the pain in the anterior palatine nerve before injection may be explained by supposing that the osmic acid injected into the infra-orbital nerve finally found its way into Meckel's ganglion, and interrupted the sensory impulses sufficiently to materially modify the neuralgia, without entirely relieving it.

The patient is entirely free from pain, but still has sensation over the area supplied by the nerves injected. She complains that the face on that side feels cold.

Discussion.

DR. W. C. WOOD said, in reference to the case of injection with osmic acid, it seemed to him a matter of extreme interest. He had not seen or had experience in that regard, and he wondered if it would not be indicated in well-marked sciatica. He noticed a few days ago that Leonard, of Philadelphia, says that these cases of facial neuralgia can be cured by X-ray treatments. He would like to ask if any of the gentlemen had any good results from the X-ray for relief of the neuralgia or sciatica.

DR. BRISTOW answered Dr. Wood's question with reference to the use of osmic acid in sciatica by remarking that the sciatic is a mixed nerve, and if osmic acid were injected into such a nerve there would follow a paralysis of the motor fibres, and if the motor paralysis was as permanent as we wish the sensory paralysis to be, it would be a rather awkward predicament for the patient. Therefore he did not think it could be used for that purpose.

EXSECTION OF AURICULO-TEMPORAL NERVE FOR NEURALGIA.

DR. A. T. BRISTOW reported another case of facial neuralgia, a rare one, because the pain was restricted to the auriculo-temporal nerve. This neuralgia was of seven years' duration. For the past two years the patient has had a chronic otitis

media, which is being treated. As the neuralgia antedated the otitis media by five years there did not seem to be any relation between the two affections. The location of the pain corresponded exactly to the atomical distribution of this nerve The reporter had intended to inject the nerve with osmic acid, but on finding the nerve, it was perfectly evident that it was entirely too small for the introduction of a needle, and he contented himself with following the nerve down into the spheno-maxillary fossa and avulsing out two inches of it. The patient has had complete relief for several months. The nerve can best be found where it leaves the artery and plunges into the spheno-maxillary fossa.

SUTURE OF FACIAL NERVE ONE YEAR AFTER OPERATION.

DR. A. T. BRISTOW presented a little girl whose facial nerve he sutured one year ago. This nerve had been divided by another surgeon in the course of an operation for tubercular glands, and the child had a total paralysis of the facial muscles of that side. At the operation the nerve was apparently intact, except that about the middle of the loop there was a nodule entirely crossing the nerve. He found by electric current that all conduction ceased on the distal side of the nodule. It was evident the nerve had been divided and that a bit of the tubercular tissue had gotten in between the ends of the nerve and interrupted conduction. The nodule was excised and the ends of the nerve united by fine black silk. At the end of the year, while there is still some muscular weakness on the affected side, still the child has control of the facial muscles. One must not, therefore, be disappointed in these cases if it takes a long time for regeneration to take place in the axis cylinders of a nerve which has been divided and sutured after a considerable interval, during which there has occurred not alone degeneration of nerve tissue, but atrophy of the muscles supplied by the nerve.

REMOVAL OF BULB OF ŒSOPHAGEAL PROBANG FROM A CONTRACTURED ŒSOPHAGUS BY MEANS OF A WOUND IN THE NECK, WITHOUT OPENING THE ŒSOPHAGUS.

DR. A. T. BRISTOW reported a case which he thought to be important because of the unusual and unexpected nature of the accident which brought the patient to his care.

About two months ago he was called in consultation by a physician who had been treating a little girl ten years of age for a strictured œsophagus, due to swallowing lye several years before. The physician had been dilating the stricture with an œsophageal bougie, with interchangeable bulbs, changing from one size to another as occasion required. It had been necessary to give the child a little chloroform always, as she resisted when conscious. On this occasion the bougie had been passed through the stricture, but on endeavoring to withdraw it the physician found that the bulb had slipped off and remained below the stricture. It took three and a half complete turns of the bulb to screw it on the staff, and the doctor assured him the bulb was fully screwed on the staff before being used. Nevertheless, during the manipulation it became unscrewed and became imprisoned below the stricture.

The X-ray showed that the bulb was at the sternal notch. Dr. Bristow sent the child into St. John's Hospital, and having been placed in an exaggerated anatomical position with the head thrown far back, the usual incision for the exposure of the œsophagus was made and the œsophagus brought into view. It was then possible to palpate the bulb and by good fortune to express it with the finger through the stricture and into the pharynx, from which it was easily extracted by the mouth. The child subsequently contracted a broncho-pneumonia and was quite sick for ten days, but recovered entirely. Dr. Bristow returned the child to the physician who had her in charge, advising him not to use removable bulbs for the purpose of dilatation, but to employ solid instruments of different sizes.

Discussion.

DR. W. C. WOOD said that a similar case had occurred in his experience. A gentleman, who was an artist, had suffered from tubercular disease in the cervical region for some time, and an abscess in the neck had produced cicatricial contractions in the œsophagus. That case was being treated by a throat specialist with œsophageal bougies. One of them became loose and completely lost in the œsophagus. This was followed by an inflammatory process, which shut off the œsophagus absolutely. The man was in a weak condition; could not even swallow fluid. At that time the doctor put him on rectal feeding and rectal enemas of salt solution. The patient regained somewhat in strength. On account of the mass of scar tissues in the œsophagus and in the neck in connection with the tubercular disease, it seems best to him to resort to gastrotomy. He attempted to do that, but the man died from the first inhalation or two of chloroform before he was touched with the knife. Dr. Bristow's case was interesting as being a second ex-

ample, showing that these bulbous bougies do become unfastened in the œsophagus, even in the hands of men who are skilful and careful.

PLASTIC OPERATION FOR WEBBED AND CONTRACTED FINGERS FROM ELECTRICAL BURN.

DR. A. T. BRISTOW presented a man who came to him with webbed and contracted middle and third fingers of left hand from an electrical burn, received from contact with the third rail in the subway. The third finger was bent down into the palm of the hand by the cicatricial contraction, the middle finger being less strongly flexed but closely connected to the third finger by a web extending beyond the second phalanx. The following operation was done for the relief of the deformity: First, all the cicatricial tissue was exsected, exposing the flexor tendons. The web was then divided and a palmar flap of sound skin turned into the gap between the fingers and sutures. The remaining raw surfaces were covered with Thiersch grafts, and the hand secured to a dorsal splint.

The fingers are now entirely straight, the webbing has not recurred, and flexion is rapidly increasing so that there is every prospect that the hand will be as useful as before the accident. and the result speaks for itself.

Discussion.

DR. W. C. WOOD congratulated Dr. Bristow on his excellent result in this finger case. He saw the man before Dr. Bristow did. The man had been out of work for some time. The doctor thought it wise to remove one of the fingers and straighten the other, believing the scar tissue produced would not be sufficiently firm for his work as an electrician. However, Dr. Bristow had succeeded in obtaining a much better result in the hand than he had anticipated doing and although the man is going to be delayed from work longer than if he had submitted to amputation, he thought the course pursued by Dr. Bristow was the wiser one. He believed the doctor had obtained a better plastic result than we have a right to expect in a case of that kind.

OPERATION FOR RE-FRACTURED PATELLA.

DR. R. S. FOWLER presented a man whom he had operated on for fractured patella about August 19th. Re-fracture took place subsequently. The man, an acrobat, during one of his exhibitions noticed pain and tenderness in his knee. This kept on for four weeks, during which time he still kept on the stage performing. At the end of four weeks, when trying to jump up on a table, he felt something snap, and it was found that his patella was broken by muscular action.

He entered the German Hospital August 12th. The fibrous tissues around the patella were sutured with very fine silver wire sutures. He was in the hospital until October 11th, and went out with an apparently perfect result, not wearing any apparatus and with a fair degree of motion. About a week after he went home. While walking along the sidewalk, he stepped into the street and was run into by a bicycle. He was thrown down and re-fractured the patella. He was taken to the German Hospital a second time October 23d, when a silver wire suture was passed through the patella itself. Two weeks later an apparatus was applied which would limit the motion of the patella. The amount of motion was gradually increased until a few weeks ago the apparatus was removed. He now has practically normal motion. He is engaged in gymnasium work and expects to reappear on the stage soon.

OPERATION FOR OLD FRACTURE—DISLOCATION OF THE HUMERUS.

DR. R. S. FOWLER presented a boy, 17 years of age, who came to the German Hospital, June 24th, with an old fracture-dislocation of the head of the left humerus. Four weeks previously he had fallen from a wagon and received a fracture of the anatomical neck with a displacement of the head under the coracoid process. The speaker tried to reduce the dislocation under an anesthetic without incision, but found it impossible, and then made an incision through the deltoid, exposing the head of the humerus and the joint, and by the use of a hook managed to get the head of the bone into the glenoid cavity, but could not secure apposition with the shaft of the humerus. In order to secure the bone in place, a steel drill was used to nail the fragment in place. This drill was left in for four weeks, the arm held in the Velpean position, and after five weeks the drill was removed. The boy was in the hospital ten days. About six or seven weeks after the operation he could use his arm. It is now impossible to distinguish the injured from the sound shoulder joint except by the scar.

A CASE OF PRIMARY TUBERCULOSIS OF FLOATING CARTILAGE IN THE KNEE JOINT.

DR. B. B. MOSHER reported the case of Miss S., 25, who came under his care about November, 1902, with the following history: Nearly

two years before she had fallen off a bicycle, striking on her right knee, the leg flexed. There were very marked local symptoms following, such as pain, tenderness, swelling, etc. She was treated for several months with rest, plaster of Paris casts, elastic knee-cap, ichthyol, etc., which resulted in an apparent cure, but every few weeks or so, while walking or while arising from the sitting to the standing position, she would get what she called a kink, which meant trouble in the knee-joint of varying degrees, but would subside only to recur. When he saw her, two years after the original injury, she was a plump, healthy-looking young woman, 25 years old, though perhaps a trifle pale. The knee, which had just had another kink, was swollen, fluctuating, tender, painful, etc., and in the outer side of the joint could be felt a body about the size of a silver quarter of a dollar, very freely movable within the joint. This, with the history, led to the diagnosis of floating cartilage in knee joint.

For about a year, from June 1, 1902, to June 1, 1903, she got along comfortably well, using care, casts, knee-caps, etc., but from June 1, 1903, to June 1, 1904, she became more and more disabled, and the symptoms that had heretofore been intermittent were now constant, and the floating cartilage had increased in size, and was very tender and now stationary. The X-ray showed nothing. It was decided to use surgical measures, so June 1, 1904, an operation was undertaken having for its object the removal of this floating cartilage. A longitudinal incision about two inches long was made on the outside of the joint, directly over this now adherent cartilage. On reaching this mass it was much softer than had been anticipated, and as soon as the incision was through the capsule of the joint, the mass gave way, and quite a considerable amount of broken down tissue and pus gushed into the wound, leaving the mass hollow, but without any connection with the joint itself. In order to protect the joint a few deep mattress sutures were placed through the skin and capsule, then out on the other side of the wound, going behind the cartilage, so when they were drawn tightly it approximated the capsule surfaces behind. Thus the mass was delivered through the incision. It was carefully dissected out, but was so soft that it came away in small pieces. The wound was closed completely and plaster of Paris applied; primary union was obtained, and she made an uneventful recovery, and only a few days ago, ten months after the operation, wrote that her knee was perfectly well.

The report of the pathologist was *tuberculosis of cartilage.*

Discussion.

DR. R. W. WESTBROOK said that primary tuberculosis of the cartilage of joints is a rare occurrence and something unknown to him. In adults, of course, tuberculosis originating in the synovial membrane of the joint, following an injury, is a comparatively common thing. It did not seem to the doctor that one could assume that this case was one of primary tuberculosis in this so-called floating cartilage. It is not an uncommon thing, too, to find in tubercular synovial membranes, especially, cartilaginous masses forming, and the floating cartilage Dr. Mosher spoke of, it seemed to him, might very well have been of that character. Tuberculosis originates usually in the epiphyses of bone or in the synovial membrane, and in adults, as a rule, in the synovial membrane, and he should feel this case followed the usual rule rather than what is practically unknown at the present time, originating in cartilage, and a floating cartilage at that.

EXCISION OF ELBOW JOINT FOR COMPOUND COMMINUTED FRACTURE.

DR. J. B. BOGART presented a patient to show the result, after partial excision of the elbow for badly comminuted compound fracture. At the operation the amount of bone that was removed was something like an inch and a half of the lower extremity of the humerus, with the head of the radius. The patient was brought into the Bradford Street Hospital the latter part of last November with a compound comminuted fracture and considerable hemorrhage. He enlarged the incision and found several loose fragments of bone, which he removed, and it was impossible to so arrange the fragments as to hope to get anything like their natural apposition in case they should unite. He was disposed to leave quite a large part of one of the condyles still attached, but thought it was better to remove that for fear the remaining portion would have a tendency to cause a displacement of the elbow joint, which would be more awkward than the loose joint, so he removed that also.

The wound was closed with drainage, and no infection having occurred, repair was prompt and uneventful, resulting in perfect function of all joints and structures, except at the elbow, which exhibits in only a moderate degree the

usual phenomena of flail joint, a result which, in Dr. Bogart's opinion, is much more satisfactory than a stiff elbow would have been, supposing such a result possible in this case.

ACUTE PERITONEAL INFECTION, AND ITS IMMEDIATE RELATION TO INTESTINAL OBSTRUCTION.

DR. J. P. WARBASSE read a paper on this subject, showing that in acute peritonitis the inflammation causes a paralysis of the muscular coat of the intestine, giving rise to intestinal obstruction. Such obstruction as this, while mechanically very different from obstruction in the ordinary sense, was pathologically and clinically very similar. Paralyzed bowel gives rise to the same symptoms as occluded bowel. Intestine which cannot propel onward its contents is the seat of intestinal obstruction, it matters not whether the contents are a constricting carcinoma, foreign body, or gas. Furthermore, the great absorptive power of the peritoneum has practically no bearing on the subject of peritonitis. Peritoneum which is the seat of an acute inflammation is so altered that it resembles granulative tissue more closely than it does normal peritoneum; and it is doubtful if pus or septic material resting on the inflamed peritoneum is absorbed any more readily or is responsible directly for any more general septic symptoms than would be the case were the same septic material confined under the same pressure in any other part of the body. Fatal peritonitis is fatal becaue of intestinal obstruction, unless the character of the infection is so severe that it would have caused death had it existed in another part of the body with the same area exposed to absorption.

Discussion.

DR. M. FIGUEIRA understood Dr. Warbasse to claim that death from peritonitis is due usually to intestinal obstruction (intestinal paralysis) and not to septic infection from the peritoneal cavity. This proposition was so novel and startling and upset previous theories so much, that he thought one has to stop a minute to see what to make of it. What does kill people in intestinal obstruction? Is it due to absorption of intestinal contents? Does the patient die previous to the infection of the peritoneum? If we look at cases of intestinal obstruction at autopsy, we find marked and characteristic peritonitis, due to the infection of congested peritoneum, especially the venous congestion, which, as we know, prepares the ground for bacterial infection. When there is a volvulus or constriction by a band or any other cause of intestinal obstruction, there is venous congestion of the bowel, caused by interference with return circulation. This is the ground for the development of bacterial infection and of the peritonitis that results from it, produced by migration out of the bowel of the *bacillus coli communis* and others into the peritoneum. And as a result of this we have an infection that eventually kills the patient. The patient from intestinal obstruction dies, not from stercoraceous absorption, but from septic infection. In the same way patients die from peritonitis, and it was not necessary, in his experience, for a patient that dies with peritonitis to have intestinal paralysis. He has seen patients die with peritonitis in whom fecal evacuations had taken place from time to time, and supposed this is the experience of others. Then, again, we see clinically cases of chronic intestinal obstruction, in which the contents of the bowel have been retained for a very long time, and yet these cases do not die with septic infection.

Then, again, in cases of peritonitis the same bacteria infecting the peritoneal cavity have been found in the blood itself. The *bacillus coli communis* has been found in the blood and peritoneum; so has the streptococcus.

Dr. Figueira maintained that Dr. Warbasse had presented no proofs of his contention. Dr. Warbasse said this is so, but what proof does he give? How does he demonstrate that the fatal cases of intestinal obstruction die from intestinal obstruction? Is not the paralysis of the intestines in these cases the result of absorption of septic material caused by peritonitis, rather than the way the essayist claims it to be? In the speaker's way of thinking, the obstruction is the cause of the symptoms. Both in peritonitis and intestinal obstruction patients die from septic absorption, partly may be from the intestines, but mostly from the peritoneal cavity. The intestinal paralysis of peritonitis is a consequence, not a cause.

DR. L. S. PILCHER believed there was something to be said on both sides of the question. He remembered very distinctly a gentleman, prominent in the community, who suffered from intestinal obstruction, which operation determined to be due to a contracting carcinoma of the colon, in which, as the result of the obstruction, the cæcum and ascending colon had become very largely distended. The obstruction was excised and the continuity of the intestinal canal was re-

established. Naturally one would have supposed that the symptoms of sepsis, of exhaustion, of general disturbance, which had begun to be manifested before the removal of the obstruction, would have begun to subside. On the contrary, the over-distended cæcum and ascending colon did not propel its contents, and the obstruction remained to all intents and purposes the same. The thing to have been done in such a case evidently, if the condition had been appreciated, would have been to have re-exposed this paralyzed and distended bowel and to have emptied it. This, however, was not done; the real state of affairs not having been appreciated until it was too late. A progressive general septic condition followed, and within three days the gentleman died, not from peritonitis, but from the absorption of septic material from the unemptied overdistended fecal reservoir, which, from the paralysis, the cæcum and ascending colon had been converted into.

The contention of Dr. Figueira, that cases of intestinal obstruction, as a rule, do not begin to produce their serious symptoms until the bacteria from the bowel have transuded through the overdistended and paralyzed intestinal wall and a condition of peritonitis becomes developed, seemed to the speaker, however, to be the general experience, and Dr. Figueira's description of the condition was perfectly true.

It seemed to Dr. Pilcher, further, that the reasoning and contention of the writer of the paper was such as required considerable thought before it could be satisfactorily discussed by those who listened to it, and the fact that the members did not hasten to discuss it was not so much because they did not appreciate the importance of the views expressed, but rather because they did appreciate their importance and desired to have a greater amount of time for their consideration before they began to express their views with regard to them.

Harking back on former experience, he was inclined to think the paper expressed not all of the truth, but a part of it, a truth perhaps imperfectly appreciated and only but feebly expressed before, but if the idea is that it is to cause us to throw aside all previously accepted views of the dangers of peritonitis, possibly it may not receive general acceptance. In the clinical experience which presents itself to the surgeon, there are examples of both methods of development of peril in connection with infection of the peritoneum and of the infection from the cavity of the intestine itself.

Dr. J. P. Warbasse expressed disappointment in not having the benefit of the opinion of some of the other members of the Surgical Society on this important subject. He did not take the time to present an elaborate thesis, but he assured the gentlemen that what he had said had been uttered not without proper consideration, and while Dr. Figueira very properly stated that he did not present absolute confirmation of his statement, he would say that he presented the results of a not inconsiderable clinical observation and experience. He had taken pains to try and find out from experimental physiologists and pathologists the causes of death from intestinal obstruction, and at the present time the most enlightened information which we could secure on that subject failed to explain why these cases die.

Dr. Figueira was thoroughly incorrect in attributing death in these cases to stercoral absorption for the most advanced experimentation showed that death is more probably due to disturbances of the sympathetic nervous system of the intestine than with the stercoral absorption or with the later peritonitis. It is curious that the absorption of intestinal contents in these cases really has so little to do with the matter. A person may have a paralyzed bowel, such as he had illustrated on the board, and die from that condition without peritonitis, just as from paralysis or an obstruction from a foreign body; yet another individual may go the same length of time, or much longer, without a movement of the bowels, with fecal material impacted in that same place, and still have none of these symptoms which we are in the habit of recognizing as the symptoms of intestinal obstruction.

He had not presented reference, but was able to do so. He did not wish to be understood as minimizing the importance of septic absorption from the peritoneum. The peritoneum has a large surface, and often we see a very considerable surface involved; but in rebuttal to Dr. Figueira's statement that these cases die without intestinal obstruction, he contended that cases of infection of other parts of the body die without intestinal obstruction. They die from septic absorption, and septic absorption may occur from the limbs, from the joints, from other parts of the body, and cause death just as it may from the peritoneum; but the peritoneum, when inflamed, it seemed to him from his clinical experience, does not furnish any greater amount of absorption than other parts. He knew of no proposition in recent surgery so unsurgical and so contrary to our experience as the proposition eman-

ating from Johns Hopkins Hospital concerning the absorption of materials from the upper part of the peritoneum, which resulted in the suggestion to elevate the foot of the bed in peritonitis in order to secure drainage to the parts of the peritoneal cavity, from which absorption could take place the most readily. As he had stated, absorption in peritonitis must take place from the inflamed peritoneum. Even if we could dump into the noninfected peritoneum the products which we desire to have absorbed immediately, we would have quickly developed there an inflammation, and the changes in the peritoneum which convert it into a surface similar to the lining of an abscess. If one would take the pains to make a section of acutely inflamed peritoneum, as the speaker had done, he would be unable to discover endothelial cells, excepting with great difficulty; in fact, there is often no suggestion of endothelial cells. You find so rich a deposit of new connective tissue, of new round connective tissue cells, that there is present a picture which is similar anatomically to the granulations and the tissues which line an ordinary abscess cavity; it is the same and is no more absorbent.

The matter of pressure has a great deal to do with this thing. When an appendix becomes inflamed and surrounded by pus which is retained under pressure, there is a higher temperature than when the same amount of pus is unconfined in some part of the free peritoneal sac. That is a condition which holds true in abscesses or in collections of pus in any other part of the body.

He had seen such cases as Dr. Pilcher has spoken of. He had seen cases in which an operation is done for mechanical obstruction of the bowel; a carcinomatous segment of the bowel is removed; the two ends of the intestine are joined; a peritonitis develops; and the patient goes on with symptoms similar to those which existed before obstruction was relieved. There are present the symptoms of mechanical obstruction with the addition of muscular rigidity which characterizes peritonitis.

The speaker recalled very distinctly as a hospital interne seeing cases with his attending chief illustrating these points. A case of peritonitis, with its peritoneal expression, with the stercoral vomiting, the distention, the thready pulse and a not high temperature, lies dying, and the surgeon calls his attention to the picture of profound septic poisoning from absorption from the peritoneum. We have always been taught that this picture is due to the absorbing of septic products from the peritoneum. In the next bed might lie a case of mechanical obstruction of the bowel; and still that case would have the same expression, the same rapid pulse, the same stercoral vomitng as the case of peritonitis, the latter case differing from the first only in the absence of the muscular rigidity of peritonitis. Both of these cases, as a matter of fact, were suffering from intestinal obstruction; the one case, the peritonitis case, had added to it the slight sepsis from peritoneal absorption; but, as he had said before, he did not believe that that absorption amounts in such cases to any more than it would amount to if the same amount of septic material were confined, under the same degree of pressure, with the same area of abscess wall, in any other part of the body.

THE BROOKLYN PATHOLOGICAL SOCIETY.

HENRY G. WEBSTER, M.D., Editor.

457TH REGULAR MEETING, MARCH 9, 1905.

The President, J. C. MACEVITT, M.D., in the Chair.

REPORT OF CASE AND PRESENTATION OF SPECIMEN: TUBERCULAR ULCERATION OF INTESTINE.

DR. JOSEPH presented a specimen which he had obtained some four months ago at the autopsy room of the Kings County Hospital. The clinical diagnosis was typhoid fever; in fact the patient presented all the symptoms of typhoid with the exception of the rose spots. His temperature was markedly typhoid. He had a persistently high leucocyte count. The Widal was three times negative. He died in coma. When Dr. Joseph came to open the abdomen he found a greatly hypertrophied omentum, which he exhibited. The diameter of the thickest part was one and a half inches and that was at the larger curvature of the stomach. The intestines were in what Dr. Van Cott is pleased to call a state of complete synechia. The tubercular ulcers were plentiful throughout the gut on cut section. The stomach also showed five or six ulcerations of various shapes and sizes. The right lung contained an original tubercular process, and the smallest of the retro-peritoneal glands was as large as a lima bean. The patient was ill for four weeks at the hospital and for three weeks before he came in. He was not emaciated. A remarkable condition

was that his heart was filled with fluid blood completely; there was no sign of clotting.

PAPER: ACUTE PERITONEAL INFECTION AND ITS RELATION TO INTESTINAL OBSTRUCTION.
BY DR. JAMES P. WARBASSE.

Discussion.

DR. A. MURRAY, opening the discussion, said that Dr. Warbasse had presented a most interesting paper, and had managed to disturb some of his former ideas about peritonitis. Of course, Dr. Murray approached the subject, he said, from the laboratory standpoint entirely; he had not been interested particularly in the surgical aspect of the matter as to how the peritoneum protects itself from invasion. Dr. Warbasse's paper was a little different from what he expected, as he thought the Doctor might take up the subject more particularly as relating to the pathology of peritonitis. While there is a good deal of theory as to how the peritoneum protects itself against invasion, there are experiments which had been made lately that give us one or two new notions, if they are true.

When an animal is injected with a pathological micro-organism, the body probably protects itself because it can form in itself a substance which is called the immune body, and this is supposed, according to this theory of Ehrlich, to attach itself to the bacterial protoplasm, and in the process of its attachment it permits another body, called the complement, to act upon the bacterium with a fatal result to the micro-organism. The complement is supposed to exist in the leucocytes, to be locked up in the leucocytes, and it is not brought out unless the blood is shed or certain fluids are injected, we will say, into the peritoneal cavity. Then it is set free in the serum and can act.

There are two kinds of complements; one is supposed to be derived from the polymorphonuclear leucocytes, that is, a bactericidal serum, the other comes from the large mononuclear cells, and that is supposed to have a specific action on the blood—hemolytic. The blood in the vessels possesses no very marked bactericidal properties, because the bactericidal substances are supposed to be locked up in the leucocytes. As the power of the peritoneum to resist infection is supposed to be due to these complements, it is of some interest to investigate how they exist and where they exist; whether they circulate in the body fluids as a continuous secretion of the leucocytes, or whether they originate from the alterations which the leucocytes undergo. It has not been exactly decided. Metchnikoff believes the serum arises only when the leucocytes are damaged.

In the experiments which he would detail, Briscow thinks he has decided the question this way: he injected rabbits and guinea pigs with certain fluids in their peritoneal cavities,—milk, peptone water, salt solution, bouillon,—and then portions of these fluids were withdrawn at varying periods from one-half to twenty-four hours and examined to see what kind of cells were present. He found that during the first thirty minutes there were no polymorphonuclear leucocytes present and sometimes for a longer time. Between thirty and sixty minutes the polymorphonuclear leucocytes began to arrive, and they increased up to about the sixth hour. At that time the lymphocytes or the large mononuclear leucocytes, so-called, came upon the scene and increased proportionately and continued to increase up to the end of the reaction, which is about the fifth day.

Dr. Murray said that that agrees with our modern ideas that the polymorphonuclear leucocytes are the most active in the early and acute stages of an inflammation, but their effect is not lasting, and they give place to the large mononuclear leucocytes. The eosinophiles have no definite course, no rule as to what they do.

According to these experiments, Metchnikoff's idea that the bacterial complement arises from the destruction or the alteration of the leucocyte would not hold, because it could not be in the unattached peritoneal cavity, since Briscow has shown there were no polymorphonuclear leucocystes there, but when he came to inject a virulent cholera culture, then he found that the bacterial complement was present in the normal peritoneal cavity, and yet there were no polymorphonuclear leucocytes there. At the same time he proved that there was no relation between polymorphonuclear leucocytes and the bacterial complement. The experiments proved apparently that the bacterial complement is there constantly in the normal peritoneal cavity without the presence of the polymorphonuclear leucocytes at all times, and if this is not so, why, of course, Ehrlich has disproved Metchnikoff's theory.

Dr. Murray wanted to ask Dr. Warbasse one question: he spoke about granulation tissue and young fibro-blasts. Dr. Murray had not determined where they came from in the adhesions, that is to say, the peritoneal cells of endothelium are not supposed to take any part in the formation of adhesions. They play a negative rôle apparently, and where the fibro-blasts come from that go

to make this fibrous formation he had yet to find out.

DR. J. D. SULLIVAN thought that Dr. Warbasse's theory was very plausible and was sure in some cases it is true, but it did not satisfy him as to a condition of affairs that he had met with on several occasions in which this state of affairs did not exist. If he understood the principal idea in Dr. Warbasse's paper it is this: that acute septic peritonitis produces its great mortality by reason of intestinal obstruction and not by reason of the septicæmia which accompanies it. In a great many cases we find this intestinal obstruction, this acute septic peritonitis, but he had seen cases in which there was no distention of the bowels whatever, in fact, the abdomen was flat, flabby and soft, and yet the abdomen contained a large quantity of pus when opened. Dr. Warbasse might be able to explain that condition of affairs. To the doctor it did not appear that the intestinal obstruction alone is the cause of the death in a large proportion of the cases; at least he deemed it was not in some. It appeared to him that the condition of the patient at the time of the onset of the disease has a great deal to do with it. Probably Dr. Murray might be able to explain what Dr. Sullivan meant by vital resistance or vital depression. He knew as a matter of experience that some people in good health may be afflicted with a very serious attack of septic peritonitis and yet go through safely. He knew equally well that others in a poor condition at the time of the onset of the disease may be taken with a similar form, so far as we can see, and the disease go on to a fatal issue. The only explanation that he could give to distinguish between these two is that one individual had a greater vital resistance than the other. Whether the power to resist the toxines was in the leucocytes or nervous system generally, he did not know. In some cases of perforative appendicitis, for instance, as soon as the region of the appendix becomes infected, Nature will throw out an inflammatory product, wall off the remainder of the abdomen and protect it, and the case goes on to an abscess, and when that has happened the patient recovered. In other cases, the contents of the perforated appendix leaks out, and no plastic material is formed, the inflammation rapidly extends over the abdomen, and you get a septic peritonitis with or without intestinal obstruction. If Dr. Warbasse's theory is true it will throw a great light on the question of drainage after operations on the abdominal cavity. There was a time when he favored drainage; there was a time when he opposed it; and now he was in many times in doubt, but rather favored it. His great objection to leaving a drain in the abdominal cavity is that under certain circumstances there is an exudation thrown out about the drain, and the drain was walled off from the remainder of the abdominal cavity, and only absorbed that portion of the fluids in immediate contact with the absorptive material. At other times it will drain the whole abdominal cavity, if you get the position correctly.

Dr. Sullivan, in closing, asked Dr. Warbasse as to his opinion of the efficacy of drains after opening the abdominal cavity.

DR. H. G. WEBSTER believed the paper was so revolutionary in many of its aspects that one could hardly be expected to digest it all at once. At first blush it certainly seemed there are a great many cases of peritonitis that hardly seem to be explainable on the grounds of Dr. Warbasse's paper. Dr. Sullivan had mentioned one class of cases of that sort where the patient dies without the presence of any distended intestine, at least any that is noticeable, and he, for one, was hardly ready to accept all that Dr. Warbasse had stated without time to consider it a little bit more carefully. He was inclined to doubt whether the distention theory as applied to all cases is admissible, or whether we might not better say it is confined to a few, and ask the doctor to explain it more fully on some subsequent occasion.

DR. J. C. MACEVITT agreed with Dr. Webster that Dr. Warbasse's ideas were so revolutionary, it would require some thought and investigation to coincide with him. The diagram the doctor had drawn upon the board struck him most forcibly as delineating conditions where you expect death to result. With that explanation the ground that the doctor took was tenable, but it would have been most instructive if he had gone a little further and brought up the therapeutics of the differential diagnosis in these cases. The whole matter hinges on the differential diagnosis, particularly in cases of appendicitis, he thought.

The cause of the dilatation of the intestine in certain abdominal operations is due to the attack by the bacterial elements upon the localized parts effected, and with a certain portion of the intestine effected, we can get the intestinal obstruction described. In the vast majority of cases of peritonitis that he had met with he had not found this condition of intestinal obstruction. We will often get the premonitory symptoms of peritonitis, we get the fever not very high, the disten-

tion, the vomiting the hippocratic expression, and yet the cases will recover.

If Dr. Warbasse's theory holds good, with this condition described, with the paralysis of any portion of the intestinal tract, recovery is not so apt to occur, so what his views are regarding the mortality of cases where you will get that distention producing a certain amount of paralysis is a query he would like to have answered. He did not feel that he was capable of discussing the paper, but the few suggestions he made were for the purpose of further investigation from Dr. Warbasse.

Dr. J. P. Warbasse, concluding the discussion, said there seemed to be some misunderstanding. He had propounded no theory; he had presented a statement of some facts; these facts are based upon his personal experience and observation. If there was any one thing which he had endeavored to demonstrate, it was that the absorptive power of the peritoneum in peritonitis has been greatly exaggerated and is a great bugaboo. That as far as its absorptive power goes, in inflammatory conditions the peritoneum is in no more hazard than any other part of the body, and that the ordinary case of peritonitis, when it does present the series of symptoms which we are in the habit of recognizing, and which he had described, are not symptoms of septicæmia, but are the symptoms of intestinal obstruction. Dr. Sullivan had cited cases in which, and Dr. Webster also referred to such cases, there is a peritonitis without intestinal obstruction and still the patients die. That is true—such cases do occur. He called attention to such cases in his paper and referred to the high mortality in puerperal peritonitis and gave a reason for that.

He also saw cases of peritonitis in which there is pus in the abdomen without a distention which amounts to a paralyzed bowel. That is so in certain mild infections, which he believed have usually been found due to such micro-organisms, which seem not able to penetrate through the peritoneum and to involve the muscularis of the bowel.

The point which he would like to impress upon the Society was this: That as far as septic absorption goes, a given amount of pus, the product of a given micro-organism in the peritoneum is no more serious, gives rise to no more septic symptoms than that same amount of pus would in any other part of the body.

In reply to Dr. Sullivan he would say we see cases die with pyæmia in which there is pus in the chest, in the thigh, in the back. The same cases would have died of sepsis, if the same amount of pus, the product of the same micro-organism, had existed in the peritoneum, and here we would have had a similar condition. So the cases which he had illustrated by that drawing were a different class of cases, it is true. They are the fatal cases of peritonitis, the cases with intestinal paresis, and these cases are practically all of the fatal cases of acute infection of the peritoneum. He was not dealing with the chronic cases. The illustrations of chronic peritonitis did not concern us at all in the discussion; that had not been taken into account. It was the acute conditions which produced a paralysis of the bowel; and his paper was a protest against confusing these symptoms of intestinal obstruction with the symptoms of peritonitis. In all his medical experience he had seen cases dying of acute peritonitis, in which such a condition as this existed, in which the patient was not dying of septic infection, but dying actually of intestinal obstruction such as he had illustrated on the board, and he had heard these cases referred to as cases presenting the profound sepsis of peritonitis. It was not the symptoms of profound sepsis of peritonitis which these patients presented; it was the symptoms of intestinal obstruction, and these are the conditions which we see clinically.

Dr. MacEvitt asked, with the exception of the symptoms of fecal vomiting, how Dr. Warbasse would differentiate between conditions of peritonitis in which paralysis existed and in which it did not exist. The Doctor also asked if you will get the same subjective symptoms.

Dr. Warbasse replied no.

Dr. MacEvitt again asked for the differential diagnosis. Take a patient, he said, after laparotomy, how are we to know we have the condition Dr. Warbasse described, that we have the intestinal obstruction of the septic peritonitis where all the symptoms are in common?

Dr. Warbasse said the question was easily answered, but was out of the line of the paper. Take a case of infection of the peritoneum, he said, before intestinal obstruction has developed. We have first the initial symptoms of peritonitis with which we are all familiar, and which have no relation to intestinal obstruction. We have first the rigidity of the abdominal muscles, the slight rise of temperature indicative of an inflammatory process developing and leucocytosis, and the increased pulse rate, increasing even out of proportion to the febrile movement. The absence of distention, which is not present in the beginning, is characteristic of the initial stage. Gradually distention begins and this condition insensibly runs into the condition which he described on the

board, so insensibly that there is no point where it can be differentiated. There is a paresis of the bowel even before micro-organisms have penetrated into the muscularis. We are familiar with the inhibition of peristalsis which takes place in the intestine, even in the neighborhood of peritoneal irritation. When there is a non-infective irritation of the peritoneum in the case of a ruptured bladder or a rupture of a dermoid cyst or some other viscus, and irritating fluid is emptied into the abdominal cavity, we have the inhibition of peristalsis which is due simply to peritoneal irritation without any involvement of the muscularis of the bowel at all. For that reason it is impossible to draw a line of difference between the time when the actual complete intestinal obstruction exists. Really we may say, if we would draw an arbitrary line, complete intestinal obstruction exists as a result of inflammation when the distention of the bowel has reached a point from which it cannot recover after the inflammation has subsided. Frequently we open the abdomen in a case of acute peritonitis and find so great a degree of distention that we know from seeing it, that whatever may happen to that patient the bowel cannot recover itself, this distention being to the point of paralysis, from which it cannot recover, so that we can draw no more arbitrary line than that. The intestinal obstruction exists actually when the fecal current ceases to pass. The fecal current ceases to pass when such a condition as that (pointing to drawing) has developed. Such a condition develops thirty-six hours, forty-eight hours, three days after the onset of the invasion of the muscular coat of the bowel with infective micro-organisms. There are points of differentiation, however, which we can recognize clinically.

In regard to the point of Dr. Murray, the new connective tissue which develops in the peritoneum when the peritoneum becomes acutely inflamed is entirely independent of the specific serosa cells of the peritoneum. They play an entirely passive part as a result of the irritation of the micro-organisms and their ptomaines. A dilatation of the blood vessels underneath the serosa takes place, cells emigrate from the dilated walls, all the phenomena of inflammation are active there. New connective tissue cells are deposited beneath and between the endothelial cells, new blood vessels spring up until they become surrounded and encroached upon everywhere by deposits of new connective tissue, just the same as occurs on a raw surface anywhere in the body. In the peritoneum they are the result of a continually acting irritation. In a wound they are the result of the same thing. The difference is in the wound the irritation is briefer.

Microscopically we find an inflamed peritoneum anatomically the same thing as granulation tissue in any other part of the body with the exception that in most of these new cells we find the relics of endothelial cells. When we attempt to put a needle into acutely inflamed peritoneum, it tears out just as easily as out of new granulation tissue. In all of our text-books on peritonitis the first thing we encounter is a description of the enormous absorptive powers of the peritoneum, and figures are given that the peritoneum is capable of absorbing so much per cent. of the body weight of fluid in a given time. That has absolutely nothing to do with peritonitis. The normal peritoneum is not present at the site of a peritonitis, excepting, as he said, in the rare exceptions where pus formed abscesses in the peritoneum or fluid breaks through and invades the normal peritoneum. Pus contained in the so-called peritoneal cavity gives rise to no greater general septic absorption or septicæmia than the same amount of pus produced by the same micro-organisms would in any other part of the body under the same pressure.

DR. MACEVITT asked if Dr. Warbasse found reversed peristalsis and fecal vomiting in this condition.

DR. WARBASSE replied, always. When a peritonitis has developed and caused a paralysis of the bowel involved, there is just exactly the same degree of fecal vomiting as we see when there is a complete obstruction due to carcinoma, volvulus, bands or any other completely obstructing condition. All of us who see these frightful cases of peritonitis which come to the hospital too late are familiar with the fecal vomiting, and all of us have made mistakes of diagnosis and opened the abdomen in these cases for acute obstruction when it turned out to be peritonitis, and we all know how difficult it is in a case which we have not seen develop under our own eyes, when it has reached this state of peritonitis with obstruction to say whether there was an obstruction which preceded the peritonitis, or whether the peritonitis preceded the obstruction and is the cause of it. In both cases there is fecal vomiting, and every one of the classical symptoms of acute obstruction. A few days after the inception of the conditions it would be difficult to determine from outward inspection whether a case had had a string tied around the intestine, or whether it was a case of acute peritonitis—the clinical picture would be the same in these two cases.

SECTION ON PEDIATRICS.

DR. GEORGE F. LITTLE, Chairman.

JOHN R. STIVERS, Editor.

The fifty-seventh regular meeting of the section was held at 1313 Bedford avenue on May 24, at 8.30 P. M.

DR. ARCHIBALD SMITH exhibited a patient, a child seven years of age, in which a diagnosis of tumor of the brain had been made. Syphilis had been acquired from a wet nurse. Under mixed treatment the brain symptoms were rapidly disappearing.

DR. L. C. AGER gave a brief review of the cases reported in the French *Journal of Medicine.*

The paper of the evening was on the subject of "Head Injuries in Children," by Dr. Wm. A. Northridge.

There was a general discussion of the subject following the paper.

THE BROOKLYN GYNECOLOGICAL SOCIETY.

STATED MEETING, JUNE 2, 1905.

The President, W. J. CORCORAN, M.D., in the Chair.

DYSPNŒA OF CARDIAC DISEASE DURING LABOR RELIEVED BY BLOOD LETTING.

DR. J. O. POLAK related the case of a woman, 30 years of age, married, and supposedly eight months pregnant. During her entire pregnancy careful watch was kept of the urine by her husband, a physician, and the quantity kept up to 50 ounces. The specific gravity ran along at 1018 to 1022, no albumin. This patient has suffered for the last four years from a mitral stenosis, which at one time was non-compensatory. She was obese.

Ten days ago she developed the following train of symptoms: Precordial pain, great dyspnœa, epigastric pain, nausea, puffing of the face and edema of feet. The urinary secretion continued at 50 ounces, but albumin appeared in considerable volume; the specific gravity remained high. The heart, which up to this time had been fair, suddenly became extremely rapid and irregular; she was bathed in profuse perspiration and had all the symptoms of cardiac failure. He saw her in consultation with her husband and another physician that morning; they decided that the thing to do was to empty the uterus. While they were down stairs she had a labor pain and the membranes ruptured. The pains continued, and they decided to stimulate her and allow the labor to go on. This was about ten o'clock in the morning. Under the use of hypodermics of strychnia and morphia she was carried along until the afternoon, having good, regular pains, and about 5.20 the cervix was fully dilated. It was a breech presentation. They had little difficulty in getting down a foot, but the trouble came in delivering the patient, that is, she could assume no posture except the upright one, with comfort. The recumbent posture was attendant with cyanosis and collapse that was appalling. The doctor remarked that if any one had ever tried to deliver an aftercoming head in the upright posture he could appreciate the difficulties that were experienced in handling this case. When Dr. Polak reached the house in the afternoon to meet these gentlemen, one leg was well down and the breech was pretty well out, and the woman was being held up in a semiupright position. Her respirations were 70, her eyes were absolutely fixed, she could see nothing, and her extremities were bathed with cold perspiration and she was pulseless at the wrist.

The point Dr. Polak wished to bring out was the benefit derived from blood letting in this particular case. He made a transverse incision in the cephalic vein and removed several ounces of blood. This with inhalations of oxygen permitted them to lay the woman down, and changed the whole picture of the case. Instead of her extremities being bathed with cold perspiration she had dilated vessels in her extremities and her respiration dropped from 70 to 52 a minute. The attendants were then able to finish the delivery, and the woman made an uneventful recovery.

The doctor stated that in these mitral heart lesions there is a very great danger in letting the women go to term. They do not die during the first stage, but they show bad signs during the second and particularly during the third stage of labor. You can anticipate that by inducing labor a month beforehand in the first place and relieve the overloaded right heart by blood letting, after the expulsion of the body, and so prevent the collapse that occurs so frequently during the third stage.

(Continued in September number.)

Brooklyn Medical Journal.

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BROOKLYN–NEW YORK, AUGUST, 1905.

HYGIENIC TOPIC EMPHASIZED BY PRESIDENT ROOSEVELT.

The meeting of the Associated Physicians of Long Island at Oyster Bay on July 10, was a well attended convention.

It was held in the home village of President Roosevelt, and, accepting the invitation to be present, he seized this opportunity to generously commend the work of Major-General Leonard Wood at Santiago de Cuba. He also referred to the part performed by doctors in the prosecution of the work of the canal on the Isthmus.

It is a mark of the President's versatility that he has already at this early stage of the work on the Isthmus, recognized the vast importance of that phase of it which comprises the prevention of disease and the preservation of the health of the men employed in the digging of the canal.

Serious epidemics of disease there would be a serious drawback; they would likely cause a great outcry of mismanagement; but the President's idea seems to be to prevent every possibly preventable case of illness.

The surgeons in charge at the Isthmus will find many problems to face in the course of their work, some of them new and, as yet, unsolved. The occasion which the work will afford to American surgeons is, therefore, of unusual attractiveness, and there will be unsurpassed opportunities for the first-hand investigation of tropical diseases, at present, nowhere else obtainable.

The physicians on the Panama Canal will, no doubt, meet with discouragement at times. It may not be supposed that such a work can be effected without loss of life from diseases endemic in a tropical climate. The work has to be done; portions of it in a rough and ready way. The heavy loss of life, however, which is occasioned by progressively increasing malignancy, with which tropical diseases sometimes attack the unacclimated white man, can doubtless be prevented. The knowledge of tropical hygiene and locally endemic fevers will be greatly broadened before the canal is completed; it may be that chairs of tropical diseases will eventually find place in our college curriculums. But, for the present, the deliberate and conscientious application of the knowledge of these diseases now possessed by our surgeons will prevent the epidemics of disease which have proved so fatal in former times.

In connection with the work of the American army surgeon in Panama, it is necessary to consider the field record established by the performances of the Japanese army surgeons in preventing diseases. It will be difficult for our surgeons to match this record in their work in Panama. It is not only that the tropical service is more difficult, in that, in the latter case, the fight with disease is one within a practically permanent camp, but that the morale of the men employed in an industrial capacity is unlike that of men engaged in a national campaign of aggressive warfare. More, the authority of our army medical man is, apparently, much less absolute than that of the Japanese surgeon; in fact, his authority is comparative, merely. This constitutes the weakest point in the present army medical service. The surgeon's authority upon matters of hygiene and the prevention of disease should be absolute at all times, except in the case of such details as might interfere with the duties of the men as workmen or as soldiers.

Almost every drawback can be overcome, however, in spite of red tape, except the quality of *preparedness* of which the Japs have shown themselves so appreciative. The surgeon on the Isthmus who can show in his monthly records the smallest number of cases of death and illness among the men under his charge will probably be he who has gone there with the most thorough preparation and knowledge of the conditions he is likely to meet with.

The Government might, with wisdom, demand that its surgeons sent to Panama have had special training which would best fit them for their positions.

A POSSIBLE SOURCE OF CONTAGION IN THE EXCHANGE OF MINERAL-WATER BOTTLES.

It has, recently, repeatedly happened that harm to the consumer of mineral waters and bottled beverages has resulted through the carelessness of manufacturers.

For example, the refilling of a bottle with ginger ale which had been used by a photographer for a poisonous developing solution and resulted in the death of one person and the illness of several, caused a one-day scandal. The manufacturer, in his own defense, claimed that the photographer was at fault in leaving poison in the bottle. Responsibility for the absolute cleanliness of bottles used for the storing of potable liquids *was not assumed* by the manufacturer.

Carelessness in this regard may be more widespread than is generally supposed. Unless the makers exert themselves to secure cleanliness of the containers there is cause for considerable alarm, since not only the inside but also the outside of bottles imperfectly cleaned may prove harmful. Vichy and seltzer bottles, for example, are often carried into sick-rooms where contagious illnesses exist, and should invariably be thoroughly sterilized between each refilling. The condition of the paper label on the outside of these bottles often shows, however, that this has not been done. We take the liberty of referring this matter to the local Boards of Health, since the examination of the conduct of bottling establishments falls within their jurisdiction.

OBITUARY.

WALTER BRYAN, M.D.

WALTER BRYAN, A.M., M.D. Born in the city of Brooklyn in 1867 and died in New York City on June 26, 1905. His early education was received in the schools and colleges of this city; his medical education was conducted at the University of the City of New York, receiving the degree of M.D. in the class of 1890. Engaged in private practice in Brooklyn until 1903 when he removed to New York City. Dr. Bryan was married on September 4, 1895, to Miss Carrie Browne, of Brooklyn, N. Y. The doctor was on the staff of teachers of the College of the City of New York and at the Brooklyn College of Pharmacy. He held the following positions, 1896-1900: Instructor in materia medica, botany and pharmacognosy, assistant professor, 1900-1903; 1903-04, professor of physiology and hygiene; 1904-05, professor of physiology and toxicology. Dr. Bryan was a member of The Medical Society, County of Kings, 1891-1905; New York State Pharmaceutical Society, and the American Association for the Advancement of Science. Medical papers: 1899, "A Science Crippled by Wards;" 1900, "Botanical Nomenclature;" 1901, "The Digestibility of Artificial Emulsions."

WILLIAM SCHROEDER, M.D.,
Chairman of the History Committee.

MEDICAL NEWS.

EDITED BY CLARENCE REGINALD HYDE, M.D.

It is earnestly hoped that all members of the profession possessing news concerning themselves or their friends, which would interest others, will communicate the same to the News Editor before the 9th of each month. Items for this department should be sent promptly to Clarence Reginald Hyde, M.D., 126 Joralemon Street.

Dr. P. Chalmers Jameson, of Montague Street, has gone abroad.

Dr. Charles P. Frischbier, of 865 Halsey Street, announces his marriage to Miss Anna Stagg, the twenty-second of June, 1905.

Dr. Algernon T. Bristow, of 234 Clinton Street, sailed for Europe, July 8, with his family. He will return September 18th.

Dr. Charles Jewett, of 330 Clinton Avenue, is at present touring the West, and intends to be present in Portland, Oregon, during the meeting of the American Medical Association.

Dr. William F. Campbell also attended the meeting at Portland, incidentally stopping on the way to view the Yosemite and Yellowstone.

Dr. William E. Butler is summering at Huntington, L. I., instead of Shelter Island, coming to the city Tuesdays and Fridays for office hours here.

Dr. and Mrs. John O. Polak, of 287 Clinton Avenue, will sail August 12th, on the Steamship New York, for a two months' trip in Switzerland. The Doctor will resume practice October 20th.

Dr. John A. McCorkle recently journeyed to Ohio to visit relatives. On his return to Brooklyn he sailed for Sweden, where he will spend August, touring and sightseeing. Drs. George McNaughton and Gordon Hall will accompany him.

Drs. Frank West, R. L. Dickinson, R. H. Pomeroy and W. F. Dudley have cottages at Westhampton Beach for the summer. Dr. Dickinson has built a very unique Japanese house on the dunes, which he has artistically furnished à la Japanese, a jinriksha even being included in the appointments.

Baron Gustave Tosti, M.D., L. I. C. H. (1904), who, as vice-consul and for the past two years Italian consul, has been a resident of New York City for ten years. He recently went to Boston to take charge of Italian consular interests there. The Baron has passed the State Medical Examination but does not intend to practice as he wishes to devote himself to psychological researches. He is a member of the County Medical Society of New York and of the Neurological Society. He is well known through his articles in the *North American Review* and other periodicals, and is one of the founders of the Dante Society in America. His is an unusual record for a foreigner.

On the advice of the Mexican Board of Health, the government has issued an order for the daily disinfection of confessionals in all the churches of the capital. Priests neglecting the order are subject to fine and imprisonment. It would be difficult to say whether any of our contagious epidemics have been propagated by means of the confessional. Yet it would not be unwise to occasionally disinfect them, especially in churches in thickly populated tenement districts, where quarantine is bound to be lax.

The State Board of Regents has made the following appointments to State boards of examiners:

Medical—Dr. George R. Fowler, of Brooklyn, and Dr. A. Walter Suiter, of Herkimer, representing the Medical Society of the State of New York; Dr. W. B. Gifford, of Attica, and Dr. John L. Moffat, of Brooklyn, the State Homeopathic Society; Dr. Arthur R. Tiel, of Matteawan, and Dr. John P. Nolan, of New York, the State Eclectic Society.

Dental—Dr. William C. Deane, of New York City, and Dr. A. M. Wright, of Troy.

Veterinary—E. B. Ackerman and C. E. Clayton, of New York City; Thomas F. O'Dea, of Saugerties; William H. Kelly, of Albany, and A. G. Tegg, of Rochester.

Miss Annie Damer, of New York City, was appointed a member of the Board of Nurse Examiners, and Henry R. M. Cook and Arthur W. Teele, of New York City, were appointed to the State Board of Examiners of Public Accountants.

At its recent commencement, Yale conferred the degree of Doctor of Laws on Dr. Abraham Jacobi, of New York City. To Dr. Samuel W. Lambert, '80, and Dean of the Medical Department of Columbia University, was given the degree of Master of Arts.

The J. H. Williams Co., makers of drop forgings, whose large factory is in the Red Hook Point district, has completed its new building. One point in the construction of this new building will interest medical men. A good-sized room has been selected for a "hospital room" and elaborately fitted up with all necessary medical and surgical appliances for the treatment of minor wounds. Dr. William M. Hutchinson, of Clinton Street, has had the supervision of the fittings of this room, which is distinctly a place to which emergency cases can be brought. As is well known, injuries are common in this large factory, owing to the nature of the work. The company thought that nothing was too good for its injured men, and that at least they could be properly cared for during the arrival, if necessary, of the ambulance.

"Surgery, Gynecology and Obstetrics" is the name of the new magazine which is to be published monthly by an organization of Chicago medical men. Its editorial staff contains the names of such men of note as Nicholas Senn, John B. Murphy, J. Clarence Webster, E. C. Dudley, and John C. Hollister. The journal is financed by a stock company of Chicago physicians and has no connection with any other commercial enterprise. It will be published solely in the interests of the medical profession.

The death of Dr. A. Palmer Dudley, of New York City, in London, removes one of our best-known gynecologists. His death from phthisis was a surprise to his many friends. Dr. Dudley possessed a most genial and lovable manner which won for him his deserved popularity. He was an exceedingly independent thinker in his own specialty and an ardent advocate of conservative work on uterus and adnexa. His presence will be much missed at the meetings of the Woman's Hospital and New York Obstetrical Society's meetings, where he took an active part in the program of all meetings and enlivened the discussions with his breezy method of debate.

At the annual meeting of the State Board of Medical Examiners of New Jersey, held at Long

Branch, N. J., July 5, the following resolution was adopted:

WHEREAS, The educational and examining standards for the medical license of New Jersey are at least equal in all respects to those of New York, and in some respects higher, and

WHEREAS, The degree of unreasonableness in the matter of interstate endorsement on the part of New York cannot be further ignored, therefore be it

Resolved, That on and after October 16, the date of the next regular meeting of this Board, the endorsement of medical licenses issued by New York will be suspended until further notice.

Members of the Board for 1904-1905 are: President, William H. Shipps, M.D., Bordentown; Davis P. Borden, M.D., Paterson; Treasurer, Charles A. Groves, M.D., East Orange; Edward Hill Baldwin, M.D., Newark; John J. Baumann, M.D., Jersey City; John W. Bennett, M.D., Long Branch; Armin Uebelacker, M.D., Morristown; Wm. Perry Watson, M.D., Jersey City; Secretary, E. L. B. Godfrey, M.D., Camden.

The new United States Pharmacopœia, published by J. B. Lippincott Company, has been recently issued. Changes in strength of tincture of aconite, tincture of veratrum and tincture of strophanthus, occur as follows:

The strength of tincture of aconite has been reduced from 35 per cent. to 10 per cent., and that of tincture of Veratrum from 40 per cent. to 10 per cent. The strength of tincture of Strophanthus has been icreased from 5 per cent. to 10 per cent.

These changes have been made in order to conform to the standards adopted by the International Conference on Potent Remedies held at Brussels in September, 1902, the object being to make uniform the strength of potent remedies in all parts of the world.

BOOK REVIEWS.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1905. Under the editorial charge of George M. Gould, M.D. Vol. 2, Surgery. Phil., Lond., W. B. Saunders & Co., 1905. 696 pp., 8 pl., 8 vo. Price: Cloth, $3.00.

This year-book has long held a leading position among the works of this character. Its distinguished editor and his corps of colaborators guarantee the contents of this volume.

We note some changes in the editorial staff. Dr. J. Leslies Davis will have charge of the Department of Laryngology, and Dr. John S. Fulton, of Baltimore, the Department of Hygiene and Public Health. These additions maintain the high standard of editorial efficiency which characterize this work.

It is impossible to review in detail the many important features of this volume. Suffice it to say that among the year-books it easily maintains its position of leadership. WILLIAM FRANCIS CAMPBELL.

PROGRESSIVE MEDICINE. Vol. vii., No. 1, March 1, 1905. Phil. and N. Y., Lea Bros. & Co., 1905. 298 pp. 8 vo. Price: Paper, $1.50; Cloth, $2.25.

This volume treats of surgery of the head and neck, the thorax, acute infectious diseases and diseases of certain organs of special sense. The general plan followed in the discussion, review and criticism of these subjects is familiar to all who have had the pleasure and satisfaction of perusing progressive medicine and learning of its inestimable value to the progressive physician who is desirous of acquiring the latest information, but whose time makes it imperative that the great mass of medical facts shall be condensed, sifted, selected. *Progressive Medicine* does this, and does it well. WILLIAM FRANCIS CAMPBELL.

GALL-STONES AND THEIR SURGICAL TREATMENT. By B. G. A. Moynihan, M.S. (Lond.), F.R.S.C. Phil., W. B. Saunders & Co., 1905. 13-386 pp., 9 col. pl., 8 vo. Price: Cloth, $4.00.

No author is better equipped by nature and experience to write on this important phase of surgical work than Mr. Moynihan. He has produced a work of rare excellence, and made a real and important contribution to surgical literature.

On page 51 is found an epigram both terse and timely, "It is in surgery as in finance—much poverty and much paper may co-exist."

The author has given the profession a work that disproves his own epigram, for this volume will be found neither redundant or vacuous, but rich, replete and satisfactory. WILLIAM FRANCIS CAMPBELL.

KIRKE'S HANDBOOK OF PHYSIOLOGY. By W. D. Halliburton, M.D., F.R.S., *Nineteenth Edition*. Phil., P. Blakiston's Son & Co., 1904. xix., 902 pp., 3 pl., 8 vo. Price: Cloth, $3.00.

This nineteenth edition of Kirkes' Handbook of Physiology has been so extensively revised, practically rewritten, in fact, by Halliburton, that it essentially is, and should be entitled, Halliburton's Handbook of Physiology. It is one of the best of our smaller manuals, and is well suited to serve as a text-book for medical students. It covers the whole subject as taught in the medical schools of this country and of England, and even includes considerable material which is not, strictly speaking, physiology, but which is closely related thereto, and of value to students of physiology. I refer to the morphology (chiefly histologic) making up the greater part of Chapters II. to VII. (inclusive), as well as to that distributed through other chapters of the book, and to Chapter LIX., which is really a summary of embryology.

The book presents no notably original features, but, its histologic and embryologic portions aside, is a clear, matter-of-fact account of what is commonly taught as human physiology, though it is really, for the most part, derived vertebrate, with some invertebrate physiology.

Very few, if any, teachers of physiology are willing to endorse, *in toto*, any text-book, save perhaps their own; but, though in this one, as in most others, there are, here and there, statements to which some physiologists would file an exception, it is safe to say that most teachers would not hesitate to recommend it as a text-book.

The make-up of the book is all that can be desired for such a work, and the illustrations have been well chosen, are amply numerous, and very well executed.

J. C. C.