UNIVERSITIES

AND

THEIR SONS

HISTORY, INFLUENCE AND CHARACTERISTICS OF AMERICAN UNIVERSITIES

WITH

BIOGRAPHICAL SKETCHES AND PORTRAITS OF ALUMNI AND RECIPIENTS OF HONORARY DEGREES

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EX-PRESIDENT OF BOWDOIN COLLEGE AND EX-GOVERNOR OF MAINE

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INTRODUCTION BY

WILLIAM T. HARRIS, PH.D., LL.D.

UNITED STATES COMMISSIONER OF EDUCATION

ILLUSTRATED

VOL. V

BOSTON

R. HERNDON COMPANY

1900

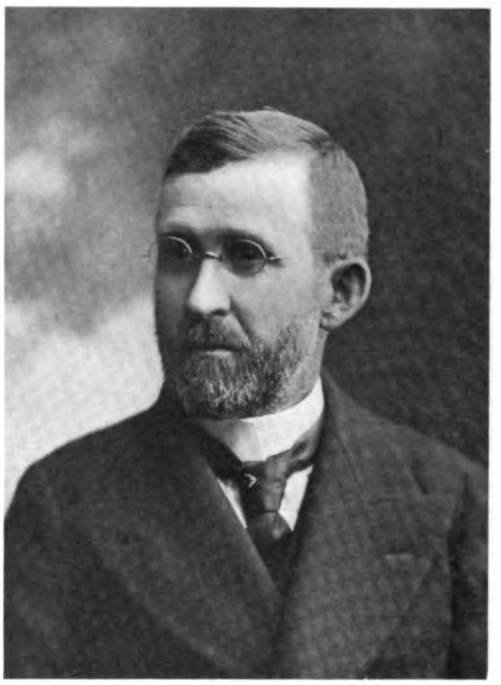
After retiring from the Senate he was elected several times to the New Hampshire Legislature, and was influential in the revision of the statutes. Later he was made President of the New Hampshire branch of the United States Bank, and conducted the affairs of that institution with great sagacity and success. In 1832 Mr. Mason removed to Boston, where he continued active practice in the courts until his seventieth year, and where he died October 14, 1848. Yale gave him the degree of Master of Arts in 1796, and he received that of Doctor of Laws from Bowdoin in 1815, from Harvard in 1817 and from Dartmouth in 1823.

MORSE, Edwin Kirtland

Yale Ph.B. 1881.

Born in Poland, O., 1856; graduated Sheffield Scientific School (Yale), 1881; studied at Univ. of Carlsruhe, Germany, 1881-82; Engineer and Contractor for Morse Bridge Co., Chicago, 1882-87; engaged in erecting the Hawksbury Bridge near Sydney, Australia, 1887-89; Engineering Contractor in Pittsburg, Pa., 1890-94; Consulting Engineer in Pittsburg since 1895.

EDWIN KIRTLAND MORSE, Construction Engineer, was born in Poland, Ohio, July 3, 1856, the son of Henry Kirtland and Mary (Lynn) Morse, both of whom come from old Puritan families. His boyhood was spent in the vicinity of his native town attending the country schools and the Poland Union Seminary and working as machinist or blacksmith in the bridge shops of the Morse Bridge Company in Youngstown, Ohio, of which firm his brother was proprietor. He entered Yale at the age of twenty-one and took up the study of construction engineering in the Sheffield Scientific School, from which he graduated Bachelor of Philosophy in 1881. He then went abroad and attended lectures in bridge construction for one year under Professor Sternberg at the University of Carlsruhe, Germany. Upon his return to America he became Engineer for the Morse Bridge Company, representing their Chicago office, in which connection he remained until 1887 when, in company with S. V. Ryland, he went to Sydney, Australia, to build the famous Hawksbury Bridge under contract with the Union Bridge Company of New York City. This work, which occupied two years, is a most conspicuous example of construction engineering on a colossal scale. In 1860 Mr. Morse settled permanently in Pittsburg, Pennsylvania, where he has accomplished much important work in the capacities of Contractor and Consulting Engineer, many of the large steel bridges in Western Pennsylvania built in recent years having been constructed under his supervision. Among these may be mentioned several which are especially notable as daring feats of engineering skill: the Elizabeth and Belle Vernon Bridge across the Monongahela River, averaging twelve hundred feet in length, the Rochester Suspension Bridge crossing the Ohio River at Rochester, Pennsylvania, with a channel span of eight hundred feet, the huge masonry piers for the Carnegie Ore Railroad to the lakes, built



EDWIN K. MORSE

across the Monongahela near Homestead and the Pittsburg, Bessemer & Lake Erie Railroad Bridge spanning the Allegheny River, said to be the highest large railroad bridge in the country. He is now Consulting Engineer with Jones & Laughlin and Laughlin & Company of Pittsburg in charge of the construction of all their masonry work, foundations, steel ore bins, etc., in the work of improvement in the production of iron and steel and has recently been appointed to the full charge of the construction of the foundations of the Carnegie Steel Company's bridge across the Monongahela at Homestead, which will be the heaviest double track railroad bridge ever built in America. He is a member of the Engineers' Society of Western Pennsylvania. Mr.

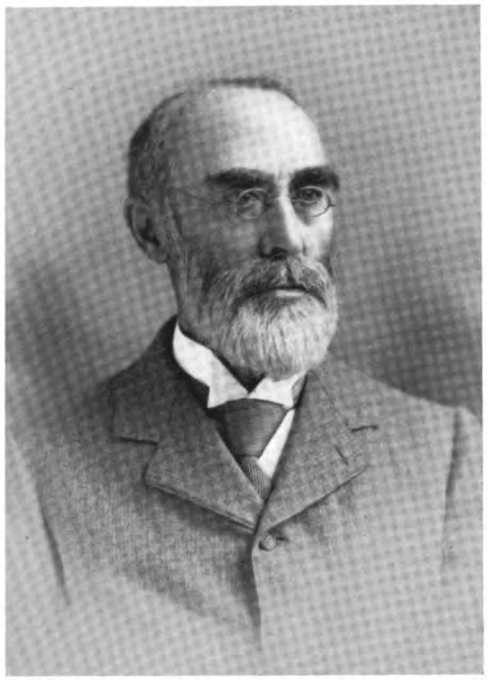
Morse was married, September 25, 1885, to Callie W. Shields of Blairsville, Pennsylvania; their children are: Edwina and Lucille Morse.

JACOBS, William Boyd

Yale B.A. 1846, M.A. 1850.

Born at Spring Grove, Pa., 1827; educated at St. Paul's School, College Point, L. I.; graduated Yale, 1846; received M.A., 1850; iron manufacturer at Spring Grove, 1852-67; in corporation business in Philadelphia, 1874-90; retired and living in Philadelphia.

WILLIAM BOYD JACOBS, Business Man, was born at Spring Grove, Lancaster county, Pennsylvania, November 1, 1827, the son



WM. BOYD JACOBS

of Samuel O. and Clara Sidney (Boyd) Jacobs. The family is of Welsh origin, the first American ancestor having come to this country about 1688. Mr. Jacobs was prepared for College at St. Paul's School, College Point, Long Island, and entering the Sophomore Class at Yale in 1843, graduated Bachelor of Arts in 1846. Four years later he received the degree of Master of Arts from the University. After graduation, he engaged in the iron-manufacturing business at the place of his birth, at the same time being occupied with agriculture on the family estate. In 1867 he removed to Philadelphia. In College Mr. Jacobs was a member of the Calliopean, the Delta Kappa Epsilon and the Scroll and Key societies, and in Philadelphia he belongs to the University Club. He was married, December 4, 1879, to Abby Bolton, who died June 24, 1885, leaving no children.

NEWHALL, William Mayo

Yale Ph.B. 1876 – Columbia LL.B. 1879.

Born in San Francisco, Cal., 1854; educated in private schools and in Hopkins Grammar School, New Haven; graduated Yale Scientific School, 1876; Columbia Law School, 1879; practised law in California for some years; has devoted himself to the management of his personal mercantile and agricultural interests.

WILLIAM MAYO NEWHALL, Lawyer, was born in San Francisco, California, October 15, 1854, the son of Henry Mayo and Sarah (White) Newhall. He received his early education in private schools in California and fitted for College at the Hopkins Grammar School in New Haven, entering Yale in 1872 and graduating in 1876 with the degree of Bachelor of Philosophy from the Sheffield Scientific School. After studying law at the Law School of Columbia, taking his degree in 1879, for some years he practised his profession in California, but of late has devoted his attention to his personal interests in mercantile and agricultural pursuits. Mr. Newhall is a member of the Pacific Union, Olympia and University clubs of San Francisco and the Burlingame Country Club of San Mateo county, California. He has never taken any active interest or part in the political struggles of the time. Mr. Newhall married, May 15, 1883, Elizabeth Slade, and has four children: Margaret Anita, Marion, Elizabeth and Mayo Newhall.

OTIS, Thomas Gould, Jr.

Yale Ph.B. 1897.

Born in Norwalk, O., 1874; prepared for College at Shattuck Military School, Fairbault, Minn.; graduated Sheffield Scientific School (Yale), 1897; engaged in insurance business in Chicago, Ill., since graduation.

THOMAS GOULD OTIS, Jr., Business Man, was born in Norwalk, Ohio, November 1, 1874, the son of Thomas Gould and Carrie (Arnold) Otis. The ancestry is traced in direct line to John Otis, the progenitor of the Otis family in America, who came from England to Massachusetts in 1640. After early schooling in Chicago, Illinois, Mr. Otis entered the Shattuck Military School in Fairbault,

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Title.	Volume.	Page.	Year.
Philip W. Moen and Emanuel Trotz, Translation of Prof. Åkerman's paper on the Bessemer Process in Sweden, .	xxii.	265	1893.

Henry Grant Morse,[5] founder and President of the New York Shipbuilding Co., died in New York City, on June 2, 1903. A man of mark, Mr. Morse was known the country over as an engineer, bridge-builder and ship-builder, of great ingenuity, tireless energy and unusual capacity for large enterprises. Born in Poland, O., April 10, 1850, he was a graduate of the Rensselaer Polytechnic Institute at Troy, N. Y., of the class of 1871, and entered upon his professional career as a civil engineer with the Pennsylvania Railroad Co., at first in charge of tunnel construction and later of stone bridge-building. From 1873, for five years he was engineer for the Wrought Iron Bridge Co., of Canton, O.; and in 1878, with his brother Charles J. Morse, formed the Morse Bridge Company of Youngstown, O. After a successful business of nine years, their works were burned, and Mr. Morse became President of the Edgemoor Bridge Works, at Wilmington, Del., where he also continued for nine years, building the very long bridge at Wheeling, W. Va., the Liberal Arts building at Chicago, and other notable edifices and structures.

At this time Mr. Morse took up an interest in ship-building, and from 1896 to 1898 was President of the Harlan and Hollingsworth Co., of Wilmington, Del., leaving them in far better condition than he found them, renewing old and buying new machinery, and inaugurating new contracts for profitable work. He then turned to what he considered the crowning labor of his life, the organization and equipment of the New York Shipbuilding Co., with works at Camden, N. J. His ambition was to make this the largest ship-building concern on the Atlantic coast; and its immense plant, its numerous novel mechanical appliances, many of his own invention, its broad foundation of capital (embracing associated interests in Pittsburg, Pa., Youngstown, O., Baltimore and New York), and

[5] Official information of Mr. Morse's death did not reach the Institute in time for an earlier biographical notice.

Mr. Morse's own indefatigable energy and personal influence, rapidly advanced it during the first four years. A number of first-class ocean steamers and other less important craft had been constructed, and contracts amounting to nearly $10,000,000 were on hand (including the U. S. cruiser *Washington*, which was successfully launched on March 18, 1905), when Mr. Morse suddenly died, on June 2, 1903. He was stricken with apoplexy on the afternoon of that day, while in the office of J. P. Morgan & Co., New York, and died within about an hour.

Mr. Morse was one of the "captains of industry" of the time, a man who, dying at the age of 53, had accomplished so much in the thirty-two years of his professional life that much more of general benefit was to have been expected from his continued activities. He was highly regarded by leaders in finance, politics and industry, an intimate of President McKinley, esteemed by President Roosevelt, and associated with the strongest financiers of the day in contemplation of further great industrial developments. He was a member of many clubs, among which were the New York Union League Club, the Rensselaer Institute Alumni Association, the American Society of Civil Engineers, the Engineers' Club, the American Institute of Mechanical Engineers, the North Woods and the Canadian Clubs, and this Institute, which he joined in 1881. The successful prosecution of his great ship-building enterprise will be his monument, yet, even had he not inaugurated this and planned other huge undertakings, he would have been famed as an inventor of admirable mechanical devices and a designer of notable engineering feats in house-, bridge- and ship-construction.

Clarence Victor Page was born in Lowell, Mass., July 2, 1866. After graduation from the engineering department of Tuft's College, Mass., and brief employment in the bridge-department of the Boston & Maine railroad, Mr. Page went to Omaha, Neb., where he worked for a time in the County Surveyor's office, and then entered upon an eight years' service with the Northern Pacific Railroad, being chiefly engaged in surveying railway-lands and lines in Montana, Idaho and Washington. In the fall of 1897 he left this position and was engaged as

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tance as well as utility, and the illustrations in this 56-page album will doubtless prove of permanent value. The text gives some interesting facts concerning the history of many of these banks, prepared by Mr. Wm. Donald Mitchell.

A concise but clear description of the Tonkin water-tube boilers is given in a new publication from the Oil Well Supply Co., Oswego, N. Y. A compact table enables the engineer to determine approximately the dimensions of a boiler of any capacity between 100 and 300 horse-power and the number of brick required for the setting, and there is a useful table of the capacity of lined and unlined steel stacks.

The Paxson-Warren sand blast machinery, including the sand blast machine, helmet for operator, system for cleaning used sand and sand-blast tumbling barrels, is described briefly in a folder prepared by the J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia.

Ten pages of useful information bound in stiff covers, pocket size, have been compiled for distribution at 25 cents, by George Cutter, maker of electric light specialties, Union and Fulton Sts., Chicago. It is a collection of those definitions, formulas and tables most needed in figuring the sizes of wire for lighting or power circuits.

The Allentown Rolling Mills, Allentown, Pa., have issued two pamphlets, giving sizes and capacities of two classes of Aldrich electric pumps, one of the vertical triplex type and the other of the horizontal quintuplex. The former is built to handle 50 to 2,240 gallons per minute under heads of 100 to 300 feet, and the latter 140 to 900 gallons per minute under heads as high as 1,400 feet.

Some interesting views of the Lower Roxborough filter work, Philadelphia, are given in a pamphlet printed by the Bonneville Portland Cement Co. Besides these and tables of tests of Star Portland cement, there is a valuable chart of tests of concrete cubes of the Star cement, in connection with its use in the construction of the filter beds.

The Norton Emery Wheel Co., Worcester, Mass., has reprinted an interesting article by Mr. Charles H. Norton on modern methods of grinding in machine shops. It is a subject which is attracting the closest attention from wide-awake superintendents, and is discussed in this brochure by a man who has spent many years in studying the capabilities of such methods of work.

The Dollar deep-well pump, described in a pamphlet from the Cannon Pump Mfg. Co., Waycross, Ga., differs from others in that its plunger is hollow and forms the pipe through which the water is forced to the surface. There is a valve opening upward in the bottom of the cylinder which forms the footpiece of the down-pipe, and a similar valve opening upwards in the bottom of the hollow plunger rod, which enables this peculiar action of the apparatus to be obtained.

One of the best collections of instructive views to indicate the value of a product has been made in Catalog L of the Kinnear Manufacturing Company, Columbus, O. Besides showing the application of the Kinnear steel rolling doors and shutters to railway barns and shops, round houses, warehouses, office buildings, boilers and core ovens, it is a valuable album of types of construction of the various buildings in this country and in countries abroad. Numerous illustrations of details will be of interest, and will add very much to the usefulness of the pamphlet.

Henry Grant Morse.

The recent death of Henry G. Morse deprives the engineering profession of one of its representatives whose career was a constant source of pride to the wide circle of people who appreciate the value of a sure and steady hand at the helm of great enterprises. He was a typical civil engineer. Born in the little Ohio town of Poland, and receiving such education as the local schools afforded, he showed at an early age his strong inclination toward engineering works, and when little more than a lad he was so proficient as to be appointed assistant city engineer of Youngstown.

Technical education he recognized as an essential to any rapid progress in his chosen profession, and he accordingly abandoned his active work in 1868 to enter the Rensselaer Polytechnic Institute. After his graduation he was an assistant engineer on the Bennett's Branch extension of the Allegheny Valley Railroad and later the superintendent and engineer of the Keystone Land & Oil Company, of Parker, Pa. It was not until September, 1872, that he entered the special field with which his name will long be identified.

Henry Grant Morse.

On that date he became an assistant engineer of the Wrought Iron Bridge Company in charge of masonry and later was appointed engineer in charge of the design and construction of steel work. His broad grasp of bridge building was speedily demonstrated and the business aspect of the work proved as easy for him to master as its technical features. Under such circumstances it is not surprising that he aspired to control a business of this class of his own, and so in January, 1878, we find him a partner in the Morse Bridge Company, of Youngstown. Here he showed such capacity as a builder of large and small work, railway and highway bridges and blast furnaces, that a few years later, in 1887, he was chosen president of the Edge Moor Bridge Works. Here he remained until 1896, and under his supervision the company built the Liberal Arts Building at the Chicago Exposition and notable bridges over the Ohio at Steubenville, Wheeling, Kenova and Cincinnati.

About the close of this period his keen business foresight assured him of the important development in American shipbuilding, which was to begin shortly. An opportunity to test the truth of his belief came in 1896, when he was elected president of the Harlan & Hollingsworth Company, of Wilmington, Del. In this position he was able to acquire a familiarity with the situation which confirmed his opinion, and led him to undertake the crowning achievement of his active, useful life. This was the formation of the New York Shipbuilding Company, of Camden. He saw that the existing yards were cramped and poorly arranged for handling work with a minimum loss of time and money, and from July, 1898, until February, 1899, he was engaged on the general design of a plant for that corporation. When everything was planned and the business features of the project worked out, he began the task of securing capital for the undertaking. In spite of its magnitude, the company was financed in a month, and Mr. Morse was elected president. For four months he turned all his attention to the preparation of the detail plans for the works and by July, 1899, he was ready to begin construction.

Long before the entire plant was completed, contracts were signed for building eight vessels, of which seven have already been delivered. The smallest was an oil tank steamer 360 feet long, and the largest were a pair of twin-screw vessels 505 feet long for the Atlantic Transport Company. Among other contracts now in process of execution should be mentioned the twin-screw "Mongolia," 615 feet long, for the Pacific Mail Steamship Company.

The construction and management of this shipyard illustrates Mr. Morse's great ability. Himself a man able to attend to any detail in his great enterprises, he had the rare gift of selecting a staff of such ability that it was unnecessary for him to pay attention to details. He could throw all the force of his strong individuality into the pushing of each branch of the work so that all parts advanced rapidly, smoothly and harmoniously toward the achievement of the desired end. He not only accomplished large undertakings but he accomplished them rapidly; as soon as one part of his plant was ready for operation, he had something for it to do.

Personally, Mr. Morse was a man who won a host of friends, even among people to whom he answered "no" more often than "yes." He was never too much engaged to observe the amenities of a business career, and he was always appreciative of the work of others. His engineering attainments were great, and his interest in engineering work was never failing. He was a member of the national societies of civil, mechanical and mining engineers. The photograph reproduced in the accompanying engraving is an excellent likeness, and the strength of character it reveals will indicate in a slight measure some of those traits which make his death such a sad loss to a wide circle of friends and to the industrial life of the country.

The Consumption of Water from the Boston Metropolitan Water Works during the year 1902 was 123 gallons per inhabitant per day. The total quantity of water used or wasted to prevent freezing during the colder months of the year was equivalent to a daily average consumption of 4,500,000 gallons for the year.

OBITUARY RECORD

OF

GRADUATES OF YALE UNIVERSITY

DECEASED FROM JUNE, 1910, TO JULY, 1915

1910-1915

NEW HAVEN
PUBLISHED BY THE UNIVERSITY
1915

course in Mechanical Engineering in the Sheffield Scientific School.

After graduation he gained experience in practical mechanics in the Continental Iron Works in Brooklyn, and was connected with the firm of F. C. & A. E. Rowland in New Haven and its successor, the Rowland Machine Co., about thirty-five years, having been secretary and treasurer of the latter since 1906.

He was a trustee of the New Haven Savings Bank, director and assistant secretary of the New Haven Colony Historical Society for twenty years, director of the New Haven City Missionary Association during the twenty-two years since it was started, and a member of its executive committee, director for many years of the Organized Charities Association, and for fifteen years its secretary, and deacon of the Center Church from 1888 to 1910. He had a summer home in Fairfield, Conn., where he was trustee of the Public Library.

Mr. Rowland died at his home in New Haven, May 7, 1912, in the 60th year of his age. He had been ill for two years. The burial was in Fairfield.

He married in Stratford, Conn., December 27, 1882, Grace, daughter of George and Elizabeth (Mills) Talbot, who survives him. They had no children. One brother was for a time a member of the class of 1871, in the Academical Department, another brother was a graduate of Princeton University in 1872, and a sister is the wife of William J. Forbes (B.A. Yale 1877).

1874

CHARLES JAMES MORSE, second son of Henry Kirtland Morse and Mary (Lynn) Morse, was born July 7, 1852, at Poland, O. His grandfather had settled in the Western Reserve, going there from Wallingford, Conn. He was a grand nephew of Dr. Jared P. Kirtland (M.D. Yale 1815), in whose memory Kirtland Hall was named.

He studied in Poland Union Seminary and worked two years with the city engineer of Youngstown, O., then entered the Sheffield Scientific School in the winter of 1871, taking the course in Civil Engineering.

Upon graduation he was Assistant in Surveying in the School for a year, and in 1877 received the degree of Civil Engineer from Yale University.

Taking up construction work in the summer of 1875 he became assistant engineer for the Wrought Iron Bridge Co. at Canton, O., and during 1876 and 1877 was engineer of the Massillon (O.) Bridge Co. With his brother, Henry G. Morse (Troy Polytechnic Inst. 1871), he founded the Morse Bridge Co. of Youngstown, O., in 1878. With this he was actively engaged for ten years, when the works were destroyed by fire. In 1889 he visited Europe with members of the American Society of Civil Engineers and other national societies. In 1890-91 he was manager of the Association of Bridge Builders, with an office in Chicago. During the latter year he became the consulting engineer and western representative of the Edgemoor Bridge Works of Wilmington, Del., and removed to Evanston, Ill. He had charge of the construction of the Manufacturers Building at the Columbian Exposition at Chicago, the Columbia River Bridge for the Great Northern Railway, the replacement of the Roebling Suspension Bridge at Covington, Ky., without suspension of travel, and many other important bridges and other structures.

In order to study oriental art, in which he had for a number of years been interested, he retired from professional work in 1897, and spent a year in Japan, visiting the great temples, museums, and private collections there. On returning home he continued his studies at Evanston, employing Japanese scholars to translate the ancient literature on the subject. In 1905 he visited Europe, and Japan again in 1907. During his years of study he collected paintings, prints, pottery, and other objects of Chinese and

Japanese art, and a library of eight thousand volumes relating to art and art history, for which he built a fireproof library and vault adjoining his home. He was a member of the Royal Asiatic Society and the Asiatic Society of Japan.

Several years after his retirement he returned temporarily to engineering work, and with Julian Kennedy (Ph.B. Yale 1875) and others, bought a large tract of coal land near Uniontown in Pennsylvania, where during the years 1902 to 1904 he constructed great coke works for the Orient Coal and Coke Co.

After years of suffering Mr. Morse died from myocarditis at his home in Evanston, December 6, 1911, at the age of 59 years.

He married at Youngstown, O., October 16, 1884, Annie Perkins Woodbridge, daughter of Dr. Timothy Woodbridge and Isabella (McCurdy) Woodbridge. Mrs. Morse survives him with their eldest son, Jared Kirtland Morse (Ph.B. Yale 1908), twin sons having died. A brother, Edwin K. Morse, graduated from the Sheffield Scientific School in 1881.

FRANCIS HILL STILLMAN, son of Paul and Lydia (Rogers) Stillman, was born February 20, 1850, in New York City. After study in a preparatory school at Milton, Wisc., and an apprenticeship with the Cottrell Printing Press Co. in Westerly, R. I., he took the course in Mechanical Engineering in the Sheffield Scientific School.

Upon graduation he entered the business of E. Lyon, who in 1883 was succeeded by the Watson-Stillman Co., manufacturers of hydraulic machinery in New York City, and of this company he had been president since its incorporation in 1904. He was also president of the Bridgeport (Conn.) Motor Co., and president of the Pequonnock Commercial Co., of Bridgeport. He organized the Machinery Club of New York and was its first president, was the first president of the National Metal Trades Association, treasurer and a director of the National