American Industrialist, Inventor, Community Activist (1840-1926)

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Oberlin Smith

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Ferracute Machine Co.

Oberlin Smith was born in Cincinnati, Ohio on March. 22, 1840 to George R. and Salome (Kemp) Smith. Both his parents were natives of England, and his father was a leader in the early anti-slavery works of Salmon P. Chase and operated a link in the Pre-Civil War "underground railroad". Oberlin Smith's unusual first name likely reflected his parent's abolitionist sentiments, and to honor a friend of his father's who had founded Oberlin College. Oberlin was the older of four siblings, having a brother Frederick, and two sisters Emily and Mary. His first cousin was Robert Longsdon, partner of Sir Henry Bessemer, and co inventor of the Bessemer process of steel manufacture.

Young Oberlin displayed an early mechanical aptitude, and built a working steam engine at the age of fifteen, most likely while learning metalworking at one of the city's riverboat engine yard, while being educated in the public and technical schools of Cleveland.

At his father's death in 1857, the family relocated to southern New Jersey to live with his mother's sister and brother in law, George and Louisa Howell, on their large farm in Stow Creek, NJ. Smith's family apparently possessed sufficient resources so that Oberlin could attend the West Jersey Academy in nearby Bridgeton. During his off-school vacations, he worked on local farms and also learned carpentry. Later, Oberlin took evening engineering classes at Philadelphia's Polytechnic College, before entering the employ of the **Cumberland Nail and Iron Works** in his new hometown of Bridgeton, New Jersey.



Former office of the Cumberland Nail and Iron Works, Bridgeton, NJ

During his tenure at the Cumberland Nail and Iron Works, Smith applied for and received a patent for a device that would cut and ream pipe at the same time. Smith was rewarded with a fifty-dollar bonus. Five years later, Smith started a tiny machine works and repair shop at 21 North Laurel Street in Bridgeton. Soon, a talented Philadelphia cousin from his father's side, J. Burkett Webb, joined Oberlin as a partner in 1863-64.

The partnership of Smith & Webb initially did a general jobbing shop trade, making wrought-iron fence and railing, plumbing and gas fixtures, and refitting or reworking broken machines and parts. Some of their repair business came from the numerous food-canning outfits in the district, and Smith determined that he could design a better foot operated press for shaping can top and bottoms than those he was called upon to fix. Only four of these sold in the next five years, but in 1869 - 71 the partners recorded eighteen purchases, then nineteen in 1872 alone. Some shipped to clients as far removed as Tennessee, Maine, California, and Washington Territory.

By 1873, Webb amicably left the partnership to pursue his career in academia, starting as a professor of mathematics at the University of Michigan, and later an engineering professor at Indiana, Cornell, and Stevens Institute. Smith and Webb crossed professional paths several times until Webb's death in 1912. Smith brought in his younger brother Frederick as a replacement partner, and committed his facilities to the manufacture of foot-driven presses for canning enterprises, and began advertising in industrial periodicals. Within three years, he designed a version for belt-power hookup; seventy-two machines of both varieties and in four models sold during 1874-76, three of which went to international customers in Canada, Australia, and Sweden.

Oberlin Smith met Miss Charlotte E. Hill while she was teaching at the **Ivy Hall School for Girls** in Bridgeton. They were married on Christmas Day, 1876 in Bernardston Mass. Two children were born to Oberlin and Charlotte Smith; Winifred Hill in 1878 and Percival Hill in 1880.



In 1877, the small business was incorporated as the Ferracute Machine Company and moved to an old brick factory site on the eastern shore of East Lake in Bridgeton. The company engaged in the manufacture of various forms of machinery, including many of his Smith's own inventions. Ferracute Machine Co. specialized in the manufacture presses for working metals. Over the sixty-three years of Oberlin Smith's tenure as chief engineer and president of Ferracute, he designed over five hundred kinds and sizes, and obtained over fifty patents on these designs alone. While most of Mr. Smith's inventions related to presswork, there were several in entirely outside fields. Among them were such widely divergent lines as improved looms, dump carts, keyless locks, automatic garage door openers and egg boiling. In 1883 he achieved considerable publicity through the invention of a magneto-electric phonograph. Citizens of Bridgeton bear witness to Mr. Smith's having frequently driven through the streets of town in a motor propelled vehicle long before the days of automobiles.

Oberlin Smith was a prolific writer and lecturer, his works covering science, fiction and even theology. He published two books, "Press Working of Metals" still considered to be an authoritative work on the subject, and a metaphysics work, "Tho Material, Why Not Immortal?" Other interests that Oberlin Smith enjoyed were rowing, motoring, dancing, and golf, most of which he was active in well in the later years of his life.



Oberlin Smith was one of the early and active members of the American Society of Mechanical Engineers (ASME), joining the society in 1881, within a year of its founding, and in 1889 was elected its ninth president. In 1901 he was appointed New Jersey Commissioner to the Pan-American Exposition in Buffalo New York. In addition to the ASME, he belonged to several other clubs and societies. He was a member of the American Institute of Mining and Metallurgical Engineers, the American Institute of Electrical Engineers, the American Society of Civil Engineers, the American Institute, the Franklin Institute, the American Association for the Advancement

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of Science, and the Engineer's Clubs of both New York and Philadelphia. He also belonged to the American Automobile Association, the Philadelphia Art Club, The Atlantic Union, the New York Lotus Club, the Luther Burbank Society, the National Academy of Political and Social Science, the National Geographic Society, and the Advisory Counsel of the Simplified Spelling Board, and had served as vicepresident of the Men's League for Woman Suffrage. He also made several European tours for the purpose of engineering observations. His acquaintanceship was very wide; among his intimate friends he numbered such well know individuals as Thomas A. Edison and Henry Ford.

Oberlin Smith passed away at the age of eighty-six, early in the morning of Monday July 19th, 1926 at his Lochwold estate in Bridgeton New Jersey, following an attack of heart failure. He was predeceased by his sister Mary who passed away at the age of seven. The funeral of Oberlin Smith was held at Lochwold at 2:30 on Wednesday afternoon, July 21, the Rev. A. B. Collins of the First Presbyterian Church of Bridgeton, officiating. Oberlin Smith was interred at the Smith family plot at the Old Broad Street Church in Bridgeton.



Combined excerpts from the "National cyclopaedia of American Biography" - Volume 12, "ASME Transactions" - Volume 48, "Endless Novelty" – Philip Scranton "Oberlin Smith for Yong Adults" – Arthur J. Cox, Joan McAllister 2011

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