

Waddell, Charles Edward ^[1]

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by Eleanor Waddell Stephens, 1996

1 May 1877–20 Apr. 1945

Charles Edward Waddell, civil and electrical engineer, was born at Moorefields near Hillsborough, the son of Francis Nash and Anne Ivie Miller Waddell and a descendant of Colonel [Hugh Waddell](#) ^[2]. With his parents and younger sister Maude he moved to Asheville, where he attended city schools and was graduated from [Bingham Military School](#) ^[3] in 1894. Self-taught in [electricity](#) ^[4], he became superintendent of the [Asheville](#) ^[5] fire alarm system at age fourteen. After training in engineering in the shops of the General Electric Company in Schenectady, N.Y., he became assistant superintendent of the electrical system of Bangor, Maine, during the year 1895–96.

One of his earliest achievements after opening an office in Asheville was the design and installation of a pioneer electrical heating system for George W. [Vanderbilt](#) ^[6]'s Biltmore House. From 1901 he was the consulting engineer for the [Biltmore Estate](#) ^[7]. In the forefront of [hydroelectric development](#) ^[4] in the South, he built power plants in 1903 and 1910, and later the steam plant of the Weaver Electric Company (afterwards the North Carolina Electric Company), of which he was also a director from 1908 to 1923.

This was a period of rapid development and [industrial growth](#) ^[8] for western North Carolina, and Waddell worked in several branches of engineering involving reservoirs, roads, dams, street railways, street lighting, and heating and water systems. His bridge over the Swannanoa River at Biltmore was one of two that withstood the flood of 1916, the greatest flood of memory in the area. Bee Tree dam, built for the city of Asheville's water supply, was the highest semihydraulic fill dam in the East at the time. Among his projects for industry were the steam plant of the Champion Fiber Company at Canton and the filter plant for the American Enka Corporation at Enka. He also served as consultant on the water system for the city of Medellín in Colombia, South America.

For the state of North Carolina he was founder and chairman of the Board of Engineering Examiners (1921–25), engineering member of the Board of Health (1922–23), and a member of the Ships and Water Transportation Commission (1923–25). During World War I he was consulting engineer for the power section of the Council of Defense for the southern states, the North Carolina director of fuel conservation, and a consultant to the Quarter-master Department of the Army for construction of the Kenilworth and Oteen hospitals. In 1925 [North Carolina State College of Agriculture and Engineering](#) ^[9] conferred on him the honorary degree of doctor of science for electrical engineering. Waddell was a member of the American Society of Civil Engineers (president of the North Carolina section, 1923–24), American Society of Mechanical Engineers, and American Society of Electrical Engineers of which he was a Fellow. He was president (1919–23) of the Biltmore Hospital, a trustee of the Western North Carolina Diocese of the [Episcopal church](#) ^[10], vestryman for twenty years of All Souls Church in Biltmore, president (1923) of the Asheville [Civitan Club](#) ^[11], and an early member and president of the Pen and Plate Club of Asheville.

He married Eleanor Sheppard Belknap of Louisville, Ky., in 1904, and they were the parents of Eleanor Belknap (m. George M. Stephens) and Charles Edward, Jr.

During the final ten years of his life he was unable to walk and often in pain as the result of an operation for a brain tumor, but he continued to practice his profession from a wheelchair. It was during this period that he built the Sunburst dam for the Champion Fiber Company. He was buried in Riverside Cemetery, Asheville.

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