

# Daniel A. A. Buck

1839-1904

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*- The Jeweler's Circular*



The Waterbury Watch Company was the first to successfully mass-produce a reliable, affordable watch, making it possible for the average person to own a pocket watch. Their watches were made possible by inventor Daniel Azro Ashley Buck, who came to Waterbury in 1878 and helped found the company.

Buck was born August 31, 1839 in Tunbridge, Vermont, the son of a farmer and carpenter. The family moved to Massachusetts when he was six. At the age of sixteen, Buck began an apprenticeship as a watchmaker and jeweler. He established himself as a watchmaker in Worcester, Massachusetts, remaining there until he moved to Waterbury.

Buck was highly proficient in small scale mechanical work. He made a name for himself at the 1876 Centennial Exposition at Philadelphia, where he exhibited a miniature steam engine, no larger than a thimble, which he designed and constructed out of 150 parts held together by 50 screws. The following year, Buck was hired to invent a reliable pocket watch which could be manufactured and sold by Waterbury brass manufacturer Benedict & Burnham for under \$4.

Buck's first prototype watch was rejected by Benedict & Burnham, but his second design was approved and went into production in 1878. The watch consisted of 58 parts, which included a nine-foot long mainspring that took 158 turns to fully wind, giving it the nickname "long wind watch." Most of the watch's parts were manufactured using sheets of brass and a punch press, the key to the watch's affordability. As many as 200 watches were produced daily.

Buck moved to Waterbury in 1878 to oversee production of his new invention. The watch was in such high demand that Benedict & Burnham created a separate company for its production. The Waterbury Watch Company was established in 1880, with Buck being one of the principle shareholders. The company flourished for many years. It was renamed the New England Watch Company in 1898. The company merged with Ingersoll in 1914, which in turn was bought by U.S. Time (now Timex) in 1942.

While in Waterbury, Buck patented a number of inventions, including designs for watch movements, a mainspring barrel, watch cases, watch and clock hands, a portable clock, and a spirometer for testing lung capacity.

In 1882, he and his brother Carlos formed the Garrigus Manufacturing Company, which specialized in musical instruments, window blinds, doors, and mantels. The company, based in Waterbury, lasted only a few years. In 1885, Buck moved to Cheshire to work for the Cheshire Watch Company. In 1888, he founded the D. A. A. Buck Company in Cheshire, manufacturing toys and novelties based on his inventions.

At the great 1893 Worlds Fair Columbian Exposition, Waterbury Watch exhibited Daniel Buck's masterpiece, the massive Century Clock, which - designed and built in absolute secrecy over twelve years - was one of the most magnificent contributions to horology every made. *The Jeweler's Circular* reported "The clock as it stands is without doubt the most elaborate, intricate, and beautiful piece of mechanism in America, and probably in the world." It stood twenty feet high, with a case made of black walnut. The dial showed not only the time, but also the day, month, year, moon phase, and tides. Surrounding a large hand-painted portrait of the Waterbury factory were a variety of mechanical scenes celebrating American mechanical industry and history. Besides a scaled-down replica of the train room in the Waterbury Watch factory, there were scenes of the Declaration of Independence, the invention of the cotton gin, Elias Howe inventing the sewing machine, and the Confederate surrender at Appomattox. All 100 miniature figures were driven by an electric motor, and tiny electric lamps lit the scenes by night. At the time, the masterpiece was valued at \$60,000.

Buck moved to Medina, New York; where he served as president of the Medina Manufacturing Company and where he died on April 6, 1904.