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Gail Borden

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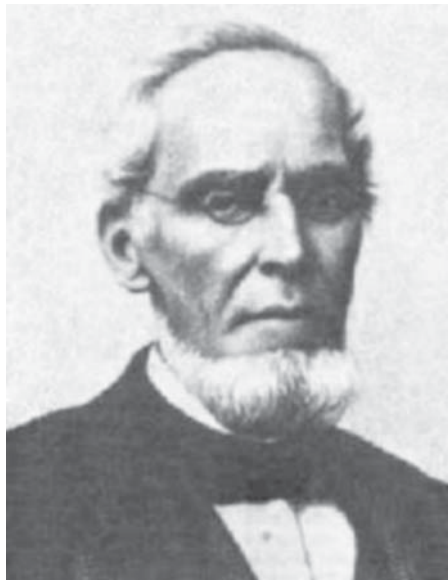
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Gail Borden

(November 9, 1801 – January 11, 1874)

Gail Borden, surveyor and inventor, was born in Norwich, New York, the son of Gail Borden, a pioneer and landowner, and Philadelphia Wheeler. The Bordens moved at least twice in the early 1800s, first to Kennedy's Ferry, Kentucky, which became Covington soon after their arrival, and then to New London, Indiana, in 1816, where Borden learned surveying. Borden attended school in Indiana during 1816 and 1817.

In 1822 Borden and his brother Thomas set out for New Orleans together but ended up in Amite County, Mississippi. There Borden surveyed land as the county surveyor. He also taught school in Bates and Zion Hill, where he was legendary for running, not walking, to school most days, sometimes even carrying a student along the way. Borden met Penelope Mercer in Amite County and married her in 1828; they had five children.

Following his father and his brother Thomas, Borden moved to Texas in 1829, where he farmed, raised livestock, and surveyed. He quickly

became involved in Texas politics, representing San Felipe in the Lavaca district. The Texas political convention of 1833 was held in San Felipe, and Borden appeared as a delegate. He contributed to the premature drafts of a Texas constitution, written before the Texas separation petition was accepted by the Mexican government. He was then called on to perform administrative duties, along with Samuel M. Williams, when Stephen F. Austin was away during much of 1833 and 1834 negotiating terms for a possible union with Mexico. Borden's surveying experience qualified him to help compile the first topographic map of Texas, which was completed in 1835.

With his brother Thomas and Joseph Baker, Borden started the first newspaper in Texas that lasted any length of time—over forty years—the *Telegraph and Texas Register*. Its first weekly issue was published on 10 October 1835. It was published originally in San Felipe, then moved first to Harrisburg (now Houston) and then to Columbia, Texas. After constant financial woes, Borden sold his portion of the paper in 1837 to Jacob W. Cruger.

That same year, Borden was chosen to be the first customs collector for Texas, at Galveston Island. He was ousted from the position in 1838, after Mirabeau Buonaparte Lamar was elected president of Texas and retaliated against Borden and ten other men who had refused to support him for president.

Borden was hired to be an agent for the Galveston City Company in May 1839. The company was responsible for city planning and nearly all real estate sales for the city. He held the position for twelve years, even while accepting another stint as customs collector from December 1841 to the spring of 1843. He left the customs post on very bad terms but busied himself with his Galveston City Company position and his new interest in inventing.

Borden's wife, Penelope, died on 5 September 1844 of yellow fever. In 1845 Borden married Mrs. A. (Augustine?) F. Stearns.

Borden is credited with attempting to create an amphibious vehicle that he called the terraqueous machine in 1848, which he did not pursue past its prototype. He began experimenting in 1849 with a condensed-beef-broth-and-flour concoction that he called a meat biscuit. It was a pemmicanlike food that could be taken into the field or on long trips without spoiling.

Even though the meat biscuit was endorsed by the U.S. Army in 1850 and awarded a gold medal at the Great Council Exhibition in London, England, in 1851, it was not profitable. Since Texas had been admitted to the Union a few years earlier, Borden felt free to move to the U.S. financial capital, New York City, in 1851 to market the meat biscuit more advantageously.

While he was promoting his meat biscuit, Borden began to experiment with condensing a number of products, including milk, coffee, tea, and cider. In what proved later to be his most successful venture, he created a commercially viable method for producing condensed milk that was consistently pure and long-lasting. His condensed milk was sweetened with sugar. Later, other manufacturers succeeded in drying milk and evaporating milk without sugar. The meat biscuit, however, commanded most of Borden's attention until 1855, when he all but abandoned it because of continued flagging sales. Then, in 1856, Borden was issued a patent for condensing milk in a vacuum over low heat.

Though Borden had a patent in hand, he did not have the funds to produce and market the product. He found partners, James Bridge of Maine and Thomas Green of Virginia, who helped him build a condensery at Wolcottville, Connecticut, in 1856. A second factory was built the next year in Burrville, Connecticut, with the financial backing of Bridge, Green, and Reuel Williams of Maine. The milk was selling enough to sustain the factories, but not enough to turn a profit.

Borden insisted on particular sanitation methods in the dairies that supplied milk to him, thereby helping to institute cleanliness standards that have persisted to this day. He used a vacuum pan in which to condense the milk, further ensuring purity. Because this was before Pasteur's discoveries and Borden was not a scientist, he did not know exactly why preventing the milk from coming in contact with the air contributed to its purity and longevity.

Jeremiah Milbank, a New York financier, met Borden in 1858. They quickly became partners, founding the New York Condensed Milk Company, and sales increased markedly.

It is not known when or where his second wife died, but Borden married Emeline Eunice Eno Church in 1860.

Borden closed the plant at Burrville and opened another at Wassaic, New York, in 1861 without Milbank's financial backing. Later he opened

plants at Brewster's Station, New York, and Elgin, Illinois. The U.S. Civil War offered a large market for the condensed milk. After the war, over-expansion threatened to overwhelm operations, but Milbank and Borden were able to contain the problem and keep the factories running.

In the early 1870s Borden spent summers in White Plains, New York, where he still presided over what was by then the Borden Condensed Milk Company. He died while wintering in Borden, Texas, which was founded in honor of the Borden family.

Bibliography: More can be found about Gail Borden in Joe B. Frantz, *Gail Borden: Dairyman to a Nation*, as well as S. L. Goodale, *A Brief Sketch of Gail Borden and His Relation to Some Forms of Condensed Food*, and, from *The Borden Eagle* (1922-1923), "The History of the Borden Company: Who Was Gail Borden?" See also Borden's U.S. patent, no. 15,553 (1856), for his method of condensing milk.

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