



*An exterior view of the Bradford mill on East Main Street in Bennington with the workers lined up for a photograph, circa 1874.
Bennington Museum collection*

H.E. Bradford & Company: A century of knitting-mill heritage

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The knitted goods industry that dominated Bennington, Vermont, during the late nineteenth and early twentieth century had its origin in January 1858 when Henry Edwards Bradford and his brother, George, established the first knitting mill in the community.¹

Henry Bradford bought the former Wills and Fairbanks mill property in 1853 and moved to Bennington in 1854. He had worked in woolen mills in Millbury and North Amherst, Massachusetts, and was eager to start his own business. For three years Henry made woven woolen "cassimeres" in this factory, but sales were slow.² (Cassimere was a cloth popular in the 1840s; it was lower priced than broadcloth and made on special looms that produced a subtle pattern on the cloth's surface.)

George Sumner Bradford, Henry's brother, came to Bennington in 1857 after fire destroyed a knitting mill he had owned. Before having his own mill George Bradford ran the Egberts and Bailey knitting mill in Co-hoes, New York, which had the first water-powered knitting frames in the United States. The knitting industry was developing rapidly at this time,

with growing demand for knitted goods, and so the brothers decided to change from woven to knitted goods. Although the business was a partnership, the firm was known as H.E. Bradford & Company.³

Bradford's differed from the larger mills in Lawrence and Lowell, which had absentee owners and boarding houses for workers. It was similar to many of the small mills in southern New England and rural Massachusetts.⁴ "In contrast to Boston's absentee owners, southern New England mill owners lived near their establishments and took a personal interest in them."⁵ About 1860, Henry and George Bradford developed behind the mill the street known as Bradford Place, where Henry built two tenements for his workers.⁶ He also built a duplex on Main Street, adjacent to the mill, as additional workers' housing.⁷ At the same time, Henry built his own elaborate Italianate villa on Main Street directly across the street from the mill. The house is considered to be an outstanding example of the residential architecture of the period. It and the nearby house built by George Bradford helped make this part of East Main Street a desirable neighborhood that reflected the early success of the textile industry in Bennington.⁸

In 1860 H.E. Bradford & Company employed 30 men and 60 women, who made 12,000 dozen knitted shirts, stockings and drawers that year.⁹ George Bradford set up his own mill in 1861; he left the partnership with his brother in 1863.¹⁰ Henry Bradford's brother-in-law, Lyman Abbott, became the new partner.

At this time part of the production of knitting garments was done outside the mills by local women in their homes as "piece work," which consisted of such tasks as finishing garments by sewing up seams. The sewing machine had been invented in 1846 and was being successfully manufactured by the early 1850s. As the new invention moved into the mills, the women and their finishing work came in with it.

The Civil War brought business to Henry Bradford as well as to many other knitting mills because the army wanted knitted underwear for the



Bradford bobbin girls tend to a knitting machine in this circa 1899 glass negative.
Credit: Bennington Museum collection



This large framed oval photograph, in the collection of the Bennington Museum, is dated September 1862, and shows 36 women who were associated with the Bradford mills. The group includes Henry Bradford's sister-in-law, Annice Abbott, George Bradford's daughter, Eudora, and George's wife, Sarah. The others pictured are identified as Maria Allen, Jane Ayers, Caroline Bennett, Mary Bugby, Kate Casey, Lizzie Cutler, Frances Danforth, Harriet Danforth, Sallie Dench, Elizabeth Downs, Helen Downs, Ellen Gregory, Libbie Gregory, Maria Harrington, Ellen Harwood, Lucy Houghton, Emmaliza Kendall, Erin Mathers, Sarah Mathers, Emerline Moon, Lucy Moon, Lotta Morrison, Eleanor Morse, Melissa Morse, Mona Moss, Lucinda Pike, Geneve Shaw, Laura Smith, Bournice Taft, Ruth Taft, Sarah Upham, Mary Van Kleet, and Louise Warren.

soldiers. In 1862 Henry Bradford received a contract from the U.S. Quartermaster to make 10,000 undershirts at \$1.12 ½ each.¹¹ With business booming in 1863, Henry acquired a second building known as the upper mill, and he asked John Kelso, another of his brothers-in-law, to become involved in the management. Civil War soldiers' experience with woolen undergarments is credited with changing the clothing habits of the country and stimulating the growth of woolen knitting mills in the following decades.¹²

An accident in January 1867 led to major changes for Henry Bradford's business. A kerosene lamp in the carding room of the lower mill exploded, reportedly when Caleb Mowrey, the head carder, turned the lamp wick down too low. Mowrey was badly burned and a large fire resulted that destroyed the building, with a loss estimated at \$25,000.¹³ (Carding is a kind of brushing action that removes most of the impurities and short or broken fibers in yarn. Carding may be done by a machine known as a card or can be done by hand using hand cards.)

A new mill was completed in the spring of 1868. Its description shows how the mill work was organized. The building was in the form of an H with a wide center section. The left, or eastern, part of the building was used to spin wool into yarn, wind it on spindles, and then knit the garments. The west wing contained the office and finishing department where seams were sewn and other hand work done. The basement space was used for scouring, cleaning, and drying the wool prior to carding. Dyeing was done in a separate building.¹⁴

Fourteen knitting cylinders and four ribbing machines made the yarn into knitted fabric. H. E. Bradford and Company now had the capacity to make 18,000 dozen men's or women's undergarments each year.¹⁵

In 1870 Henry Bradford employed 20 men and 35 women. Although child labor was common in many small textile mills of this period, there were no children employed at Bradford's. The mill was reported to have produced that year 6,000 dozen vests with a value of \$55,000 and 6,500 dozen drawers with a value of \$63,000, using \$30,000 worth of cotton and \$12,000 worth of wool.¹⁶

On January 20, 1874, the new mill building was racked by a terrible explosion. It destroyed the west wing of the main building and the spinning and knitting room as well as the separate dye house. The explosion blew up the floor of the basement area, burst out the walls on the south end of the building and along each side, causing the roof to collapse.

The cause was determined to be "defective gas pipes leading from the 'Patent Underground Gas Works,' which furnished illumination for the mill. The gas ... had escaped in sufficient quantities to fill one of the lower rooms of the main buildings & had so impregnated the seaming room of the mill as to be plainly distinguishable and offensive to the smell."¹⁷ One report says that the pipes holding the gas were leaking in the boiler room and that a man was engaged in repairing them.¹⁸

"No sooner was consciousness restored to those who were the subjects



The Bradford bell, which called workers to the factory, is now located on grounds of the Bennington Museum. It was cast in 1878 by Jones & Co., Troy, New York.

of the shock and were picking their way out from underneath and fallen and falling roof, and the broken timbers, than they witnessed in the intervening spaces the play of lambent flames of fire of a peculiar bluish tinge. In a few moments the melancholy wreck was a blazing pile. The alarm, instantly given by the shock, was followed by the rallying cry of "fire!" the ringing of bells, the rumbling wheels of the Fire Department, and the assembling of the people. The questions of chiefest interest were: Who ... has made their escape? Who has not? Who are the wounded, and how badly, and what can be done for them?"¹⁹

J. H. Cushman, editor of the Bennington Banner, wrote: "The uninjured with remarkable promptitude, and in many instances with heroic determination attempted to assist, and if possible, save their more unfortunate companions. ... Sisters saw their sisters perishing; mothers alarmed for their daughters: friends frantic to save their friends, and only a fraction of a moment to do it. ... The houses of all the neighbors were thrown open to receive either the dead or the wounded. Drs. Goodall, E.N.S. Morgan, B.F. Morgan, Bennett, Potter, and S.W. Scott from Pownal, were soon in attendance. The burned victims, as soon as recovered, were taken to the mansion of H.E. Bradford, Esq."²⁰

"Mrs. H. E. Bradford ... immediately opened her home to all comers, and placed the large resources of their elegant mansion at the disposal of the lost, the wounded and the bereaved. In her parlors, hall and pleasant rooms, we saw gathered the blackened corpses of the victims, wrapped in sheets and other hastily improvised cere-ments which she and others had provided. ... Other ladies in the vicinity ... offered every comfort possible. Mr. Jessie H. Fields [was] taken to William A. Kelso's residence, where he was kindly attended to; Mrs. Lyman Harwood, into whose house Miss A. Wood was tak-en; Mrs. James P. Sibley, to whose house Mrs. Rhodes was assisted, and whose sister, Ruth Taft, endeavored to rescue, but gave the task over to young George Sibley, manfully succeeded in saving her life – in fact all the neighbors gave everything and did everything that kind hearts and unremitting labor could offer to assuage pain or grief, or to assist the efforts of others. The night was cold, bleak and freezing. Coffee and refreshments were constantly furnished the firemen ... all of whom were drenched to their skins, and thoroughly sheeted with ice. During all the sad evening and the night that followed the explo-sion and conflagration, Mr. L. P. Abbot, one of the partners, devoted every possible effort to alleviating the sufferings of the wounded and

relieve or assuage the anxiety and the grief of the bereaved. His lady ... was quickly at the scene of suffering and throughout the entire evening and night, labored ceaselessly among the wounded, and in caring for the lost. ... Mrs. J.V. Carney, Miss Nye and many others ... labored as glorious hearted women only can labor, throughout that terrible night.”²¹

The Bennington Fire Department, by John V. Carney, performed with outstanding efficiency. “Within ten minutes after the explosion the firemen were on the ground, and continued their heroic and perilous exertions through the afternoon, evening, and until midnight; dividing their time between helping the wounded, suppressing the fire, and searching for the dead.”²²

The explosion killed nine women: Laura (Sonburger) Vaughn, Hannah (Waldron) Gould, Mary Rudd, Augusta Buss, Serina Moon, Fannie Wood, Elizabeth (Cummings) Cunningham, Eliza Garrity and Minnie Hurley. Seven others were injured: Eliza Bissell, Sarah (Taft) Rhodes, Carrie Northup, Harriet N. Morse, Addie Morse, Annette Wood, and Lizzie Granger. Thirteen Bradford employees who worked in the damaged section of the building escaped without injury. They were: Ruth A. Brooks, Julia Tuttle, Eleanor B. Houghton, Jennie H. Clark, Caroline L. Bennett, Mary C. Myers, Florence E. Rudd, Katie A. Smith, Olive F. Martin, Ruth Taft, Jennie Thompson, Walter P. Myers, and George M. Sibley. Three of the men who worked in the basement of the building, Jessie H. Fields, Herbert Moon, and William Morse, were injured; two other basement workers, Edward Kelley and Franklin Allen, escaped without injury.

Other individuals who were in the building and remained uninjured included proprietors Lyman F. Abbot and John Kelso, who were in the office at the time; Hiram Bingham, the traveling agent for Bradford’s company who was visiting the office; and Mrs. Con O’Keefe of North Bennington, who had been making purchases at the mill.

Each of the deaths brought its own special sadness. Augusta Buss, Minnie Hurley, Serena Moon, Mary Rudd, and Fanny Wood were all young women in their late teens or early 20s with their lives before them. But the stories of two older workers stand out as especially tragic. Laura Vaughn was the widow of John Vaughn, a sergeant in Company E. of the 14th Vermont Regiment, who had been killed at the Battle of Gettysburg on July 3, 1863. Her father, George Sonburger, had died on January 25, 1857, when a sand bank in Manchester caved in on him. Laura left a daughter and an aged mother with no financial support.

Elizabeth Cunningham's husband, along with three other men, had been killed in Bennington on August 27, 1867, in an explosion at the powder mill. "She was left with seven children, and with no means of support. Labor in the factory became her chief means of gaining a livelihood. One of the most heart-rending of all sights that appalled us on the day of the disaster, was to see her children, the oldest of whom was but 16, mingling with the crowd about the burning structure in tears and agony over their mother perishing in the flames".²³

The toll could have been much worse. Only a few weeks before the calamity a group of workers had been moved out of the wing where the explosion took place into another section of the building. On the day of the explosion, the seamers who worked in this section were all out, and others who worked in the area from time to time were not then employed.²⁴

Henry Bradford was out of town on a business trip on the day of the explosion. He returned to Bennington and began to cope with the tremendous loss, which was estimated as \$10,000 for the building, \$15,000 for goods and stock, and \$10,000 in machinery.²⁵ Insurance covered only about \$15,000 of the loss.²⁶ Meanwhile, the community organized a fund-raising campaign to assist those affected by the disaster and in need of financial assistance; it raised \$1,457.60.²⁷

By 1875 H. E Bradford & Company had a new "square plan" mill.²⁸ After Henry Bradford died in April 1878, Lyman Abbott took over the company, assisted by Henry's two sons, William Henry Bradford and Edward Walling Bradford. John Kelso left the firm about 1884.



This decorative fence in front of the Bradford family home separated it from the factory across the street. It was a time when the company owners lived as close as possible to their manufactures.

Bennington Museum collection

During the 1880s, knitted goods comprised nearly the whole of Bennington's cloth industry. There were four factories employing a total of 350 people.²⁹ By 1893, this had grown to nine knitting mills: the Aldine Knitting Company, Bennington Knitting Company, H.E. Bradford & Company, the William Campbell Company, Cooper Manufacturing Company, Lasher Stocking Company, George Rockwood and Company, Tiffany Brothers, and the Valentine Knitting Mill. H.E. Bradford employed about 150 men and women. It made 25 different styles of women's and men's underwear, producing about 25,000 dozen shirts and drawers each year. It also made all-wool half-hose and produced about 60 pairs each day.³⁰

Business began to falter with the depression that began in 1893. By 1896 it was reported that:

The knit goods industry is in a depressed condition in Bennington. In all the forty years during which the industry was started and broadened into proportions that gives the town the fourth rank in the country in importance in this line of goods, the business has seldom met with duller periods than at present.³¹

As the twentieth century began, other factors contributed to the decline of Bennington's knitting mills. Central heating made woolen underwear less of a necessity. New knitting mills were being built in the South, closer to the cotton they utilized.

William Bradford tried to develop related businesses. In 1885 he went into partnership with Frank Lasher to manufacture half-hose; that partnership ended in 1891.³² Their next partnership was the Bradford and Lasher company, which started in 1901 to manufacture spring needle ribbed knitting machinery. Charles Cooper, who also manufactured knitting machines in Bennington, brought litigation saying that Lasher and Bradford's machines infringed on his patents. The suit was settled in favor of Cooper's estate in 1910.³³

In 1903 Daniel B. Keeler came to Bennington to take the position of superintendent of H.E. Bradford & Company. During the next 43 years the story of the Bradford Company featured ownership by the Bradford family and management by the Keeler family. In 1905 overseers at Bradford's included James Keeler, carder; Joseph Venable, spinner; C. Evans, knitter; Mr. Hayes, silk knitter; George Wilcox, dyer; and Edward Cook, boarder.³⁴ By 1914-15, Bradford's had 225 employees using 20 spring needle and 20 flat needle knitting machines, 80 sewing machines, and four ribbers.³⁵ World War I brought the company several military contracts. The first, in July 1917, was for 30,000 pieces of underwear at \$1.26 each. The second in ear-

ly September of that year was for 60,000 pieces of underwear at \$1.39 each, while another one later that month was for 30,000 pieces at \$1.36 each.³⁶

The company was incorporated in 1918 after the death of Edward W. Bradford; William H. Bradford became its president. It had a capital stock of \$500,000 and an annual output exceeding \$1,000,000. Officers of the new corporation included as clerk Daniel J. Keeler, the son of Daniel B. Keeler, the superintendent of the company, who continued in that position. The other corporate officers were Lyman Abbott, vice president; and Earle C. Whittaker, treasurer.³⁷ In 1923 Henry E. Bradford, William's son and namesake of the founder, entered the business; he became president of the company after his father's death in 1929.³⁸

Fire continued to be a problem at the H.E. Bradford & Co. There were fires in 1902, 1907, 1911, 1913, 1919, 1920, and 1931.³⁹ While none of these caused as severe damage as those in the nineteenth century, they created problems for the company and its business. The major concern often was water damage caused by the mill's automatic sprinkler system. Workers did their best to cope with these disasters. One report describing the 1919 fire says the women operatives "worked like Amazons" during the fire to help save the stock stored in the mill.⁴⁰

The Bradford mill provided a variety of social activities for its employees during this period. There are stories of a sleigh ride followed by a supper and dance, and an outing for a clam bake followed by a baseball game.⁴¹ The 1924 Christmas party featured speeches by company officers and employees as well as an exchange of gifts; the elaborate menu included scalloped oysters, three kinds of salad, four kinds of pie, and three kinds of cake.⁴²

Despite these pleasant events, in the years during and immediately after World War I, the Bradford employees became increasingly concerned about wages and working hours. The company provided a wage increase in the latter part of 1917 and a 10 percent increase in April of 1918.⁴³ In June 1919 Bradford's was shut down by a disagreement between management and workers. The knitters asked for a 15 percent raise in wages claiming that the wage scale at Bradford's was not as high as at other knit goods factories. When the company refused and tried to hire other knitters to keep the factory going, the spinners and winders walked out.⁴⁴ H.E. Bradford re-opened in mid-July with the employees working a new schedule that consisted of ten hours of work five days a week with Saturdays off.⁴⁵ Unions arrived in the Bennington knitting mills shortly thereafter. There was a brief strike at Bradford's in 1920 because they had hired a spinner who was not a member of the United Textile Workers of American.⁴⁶

Other knitting mills in Bennington changed in the years after World

War I. Some no longer made knitted or textile products; others continued to make knitted goods but were sold to companies headquartered outside of Vermont. H. E. Bradford & Company was becoming unique as the only locally owned knitting mill in Bennington.

Unfortunately, the quality of Bradford mill underwear began to be questioned. In 1920 the Federal Trade Commission brought charges against the company, saying that the underwear they produced and said was wholly of wool, labeled as "Men's merino shirts" and "Men's natural wool union suits," was composed partly of cotton.⁴⁷

The depression of the 1930s brought hard times to Bennington but Bradford's did its best to keep its employees happy. Superintendent Daniel B. Keeler died in 1934 and he was succeeded in this position by his son, Daniel J. Keeler, who had been serving as secretary-treasurer of the Bradford corporation and then became vice-president. Evidence of management efforts can be found in a 1937 letter of thanks the Bradford employees wrote for publication in the local newspaper. "The bonus which we received last week was indeed a demonstration of good will and appreciation on the part of the company and our gratitude is extended to them. We will endeavor to carry on as in the past and bring to attention that this gift is only one of many favors which have been forthcoming during a number of years from the company."⁴⁸

Things were not going as well in the other knitting mills in Bennington. One of the largest, owned by the Wisconsin-based Allen-A Company, closed in 1941. That building was then occupied by the E-Z Knitting Mills, a New York state firm.⁴⁹

Daniel J. Keeler, Bradford's long-time manager and corporate officer, resigned in 1946. Henry Bradford wrote that Keeler "has done a wonderful job here, especially during the difficult war years."⁵⁰ This was the end of more than 40 years of Keeler family participation in the management at Bradford's. Daniel J. Keeler was succeeded as superintendent first by George N. Wentworth, later by Lewis H. Senecal.

The local economy did not improve in the recession years following World War II. By 1950 unemployment in Bennington was so bad that the state listed it as an emergency area.⁵¹ In June of that year, H.E. Bradford & Company informed their employees there would be a temporary shutdown for a few weeks.⁵² The firm reopened but business was slow. In 1951 the E-Z Knitting Mills announced that it was preparing for a textile slump, then moved from Bennington to Cartersville, Georgia, in May 1952.⁵³

By 1953 H.E. Bradford & Company in Bennington was acknowledged to be the oldest underwear mill in the United States. "When the firm was first started, its production consisted of ribbed wool spun shirts and

drawers and union suits. In the close to 100 years of its history no change was made ... it has, without interruption, continued to supply this product to farmers and also to lumberjacks.”⁵⁴ But the end was near. On January 3, 1959, Henry E. Bradford sold the mill to the Norwegian-American Knitting Mill, ending three generations of family ownership. The mill continued as the Bradford-Norak Company, with only seven employees, until January 31, 1961, when it went into receivership and closed.⁵⁵ With that event the Bradford name disappeared from Bennington’s industrial activities.

1 *Bennington Banner*, January 29, 1858

2 Information about Henry E. Bradford's life and business career is from Lewis Cass Aldrich (Ed.) *History of Bennington County, Vt.*, (Syracuse, N.Y., D. Mason & Co., Publishers, 1889), 65-66 unless otherwise noted.

3 *Bennington Banner*, “Knitting Business”, October 27, 1870.

4 Jonathan Prude, *The Coming of Industrial Order: Town and Factory Life in Rural Massachusetts, 1810 – 1860* (Cambridge, Cambridge University Press, 1983).

5 Judith A. McGaw: *Most Wonderful Machine: Mechanization and Social Change in Berkshire Paper Making, 1801 – 1885* (Princeton, New Jersey, Princeton University Press, 1987), 35.

6 State of Vermont, Historic Sites and Structures Survey, Bennington, Bradford Place, 1987.

7 Ibid., Main Street, p. 56.

8 Ibid, Main Street, p. 56-58.

9 U.S. 1870 Census (Manufacturing), Bennington, Vermont.

10 Aldrich, *History of Bennington County*, 514.

11 *Bennington Banner*, August 26, 1862.

12 Richard M. Candee. “Socks and stockings, shirts, drawers, and sashes: Hand and machine knitting for the Union Army.” *The Chronicle of the Early American Industries Association*, Vol. 55, No.4, December 2000, 145 – 155.

13 *Bennington Banner*, January 17, 1867.

14 *Bennington Banner*, “Knitting Business,” November 3, 1870.

15 Ibid.

16 U.S. 1870 Census (Manufacturing), Bennington

17 Day Papers, Book M, 133; Bennington Museum Library.

18 *Daily Evening Traveller* (Boston, Massachusetts), January 22, 1874

19 Calvin B. Hulbert, *A Discourse Delivered in the Second Congregational Church, Bennington, Vt., on the Sabbath Following the Fatal Gasoline Explosion, January 25, 1854* (Bennington, Banner Steam Job Printing House, 1874), 23-24.

20 *Bennington Banner*, January 22, 1874

21 *Bennington Banner*, January 29, 1874

23 Hulbert, *Discourse*, 40

24 Hulbert, *Discourse*, 24

25 Hulbert, *Discourse*, 48.

26 *Daily Evening Traveller* (Boston, Massachusetts), January 22, 1874

27 Hulbert, *Discourse*, 47.

28 Warshaw, Barlow Insurance Plan #3655

29 Rush Welter, *Bennington, Vermont: An Industrial History*. (New York, New York: Columbia University School of Library Service, 1959), 18.

30 *Bennington Directory 1893-94* (Albany, NY: R.S. Dillon & Co, Publishers, 1893), 47.

31 *Tray (New York) Times*, December 21, 1896.

32 Hiram Carleton (Ed.), *Genealogical and Family History of the State of Vermont*. (New York, N.Y.: Lewis Publishing Company, 1903), 227.

- 33 History of the Patent Litigation between Charles Cooper and Bradford and Lasher on Spring Needle Rib Knitting Machines, Bennington Museum Archives, 1983. 70. 56.
- 34 *American Wool and Cotton Reporter*, January 12, 1905, 42.
- 35 *American Directory of Knitting Mills in the United States and Canada*, 1915.
- 36 War Department Hearings before the Committee on Military Affairs, Second Section, Part 2, December 18-29, 1917.
- 37 *Bennington Banner*, June 2, 1918.
- 38 Arthur F. Stone, *The Vermont of Today, Vol. II* (New York, NY: Lewis Historical Publishing Company, Inc., 1929), 786-87.
- 39 *Bennington Banner*, October 15, 1902; April 16, 1907; February 2, 1911; February 11, 1913; April 28, 1919; April 22, 1931
- 40 *Bennington Banner*, April 23, 1919
- 41 *Bennington Banner*, February 3, 1912; August 27, 1919.
- 42 *Bennington Banner*, December 26, 1924.
- 43 *Bennington Banner*, April 20, 1918.
- 44 *Bennington Banner*, June 26, 1919.
- 45 *Bennington Banner*, July 17, 1919.
- 46 *Bennington Banner*, January 7, 1920; January 9, 1920.
- 47 Federal Trade Commission v. the H.E. Bradford Co, Inc.; Docket 34C – January 29, 1920.
- 48 *Bennington Banner*, December 28, 1937.
- 49 *Bennington Banner*, September 23, 1941.
- 50 *Bennington Banner*, May 28, 1946.
- 51 *Bennington Banner*, March 13, 1950.
- 52 *Bennington Banner*, June 14, 1950.
- 53 *Bennington Banner*, July 18, 1951; May 20, 1952.
- 54 *Hosiery and Underwear Review*, May 1953.
- 55 *Bennington Banner*, February 14, 1961.