Timothy Porter was born in Waterbury, Connecticut in 1792 to a prominent family, which included several generations of doctors. He was a farmer and an entrepreneur, operating several small businesses over the decades. During the 1820s, he operated a small factory for carding wool. Throughout the busy season, the factory's machines ran day and night to keep up with business brought by customers from Waterbury and surrounding towns. When demand for wool carding petered out, Porter converted his factory for manufacturing buttons made out of horn and bone.

In 1829, Porter began a brick-manufacturing business, using clay found near Carrington Brook (north of present-day Hamilton Park). The following year, he used bricks from his business to build his own house, an elegant Greek Revival style building on East Main Street, close to Carrington Brook. His brick business flourished for two decades, providing all of the bricks used in Waterbury during the 1830s and '40s. When the supply of clay ran out in 1850, he started an ice business, becoming the first person in Waterbury to offer a regular supply of ice for refrigeration. He retired in 1862, selling his ice business to the Hall & Upson Company, which continued the ice operation into the twentieth century.

Although raised as an Episcopalian, Porter became a Baptist as a young man and served as a deacon in Waterbury's first Baptist church on East Main Street near Frost Road. The completion of the building by a group of volunteers in 1818, was celebrated with a game of baseball nearby. Porter was one of several prominent members of the church to join in the game, scandalizing older generations who thought baseball was too frivolous for an event as important as building a church. Following the death of the church's pastor in 1827, Porter volunteered as preacher for eight years, during which time baptisms were performed by visiting ministers. Porter oversaw the fundraising for and construction of a new, larger church downtown on South Main Street in 1835.

Originally a member of the Whig Party, Porter joined the Liberty Party in the 1840s. Formed at a national convention in Albany, New York in 1840, the Liberty Party was the country's first anti-slavery political party. During the 1840s and '50s, Waterbury was a conservative town with relatively few abolitionists and many more supporters of Southern slavery. Although publicly supporting the abolition of slavery could lead to harassment and a loss of business, Porter was firm in his convictions and even engaged in a memorable public debate about slavery with Green Kendrick, a former slave owner from North Carolina who had become one of the most powerful men in Waterbury. When Waterbury's First Congregational Church hired an anti-slavery minister in 1841, Kendrick led a campaign to have the minister dismissed, harassing him for three years until he finally agreed to leave.

Timothy Porter established his East Main Street home as a refuge for the abolitionist movement, housing anti-slavery lecturers who toured New England during the 1840s and '50s. He also offered temporary refuge to fugitive slaves, making his home a station on the Underground Railroad. People who escaped slavery via the Underground Railroad traveled ten to twenty miles at night, resting during the day at stations in barns, basements, and other hiding places. Abolitionists such as Timothy Porter served as stationmasters for the Underground Railroad.

Porter was married to Polly Ann (Todd) Porter and had six sons and two daughters. He died on August 28, 1864, several months after the 13th Amendment, abolishing slavery, was passed by the U.S. Senate, but before it was approved by Congress and ratified by the states. His widow remained in the house until her death in 1882, after which time their son, Nathan T. Porter, lived there until his death in 1914. The former Underground Railroad station still stands today, serving as a doctor's office.