## SELF-GUIDED CEMETERY TOURS

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Script for Grove Street Cemetery Tour Tape 3 W. Jack Cunningham, April 2003



Hi! I am Jack Cunningham. I am a retired professor of electrical engineering at Yale. I am now a Docent with the Friends of the Grove Street Cemetery. This is the third of several tapes that will guide you to grave sites of some of the scientists and engineers buried in the cemetery. This tape deals primarily with grave sites in the eastern part of the cemetery. The streets in the cemetery are all named for trees and are identified by signs. We begin, standing on Hawthorn Path just inside the gate opening off Grove Street.

We are now going to walk westward along Hawthorn Path, until we reach the first street branching northward, to the right, which is Magnolia Avenue. At frequent intervals along the edges of the streets small metal markers are placed in the ground carrying numbers to identify the locations. These markers are often obscured by dirt or leaves, and may be hard to find. We are going to walk northward to Number 64 Magnolia Avenue, which is the site for Henry Austin.

As we walk along, before reaching Henry Austin, you might notice the grave site for Kingman Brewster. It is not far from Hawthorn Path, and is located on the east side with the identification Magnolia, Letter H. It has a stone curb around the plot with a large gray gravestone. Kingman Brewster (1919–1988) was president of Yale (1963–1977), during the times of the Black Panther trial and the admission of women as undergraduates.

The Austin grave at Number 64 Magnolia Avenue is marked by a large, somewhat ornate, rectangular column of brownstone, with an urn on top. It was erected originally for Austin's wife, and did not carry his name. The name of Henry Austin was added much later at the very bottom of the column and in a different style of lettering.

**NUMBER 64 MAGNOLIA AVENUE** is the site for Henry Austin (1804–1891). Austin, of the Egyptian gate, was a well known architect in New Haven, a protégé of Ithiel Town. He designed many houses throughout the area, including ones on Hillhouse Avenue and Wooster Square. He designed what was originally the Yale Library on the Old Campus, now known as Dwight Hall,. One of his larger churches was in Danbury. Here he attempted the Ithiel Town feat of building the steeple inside the lower tower, and hoisting it into place. Unfortunately, a rope failed at a crucial time, and the steeple toppled, piercing the roof of the church.

In addition to the Dana House on Hillhouse Avenue, Austin designed the particularly attractive house on the west side of that avenue, second down from Sachem Street. It is an Italianate villa built for John Pitkin Norton who, along with Benjamin Silliman, Jr., started what became the Sheffield Scientific School. Austin designed the Davies Mansion on Prospect Street, now being completely renovated and renamed Betts House. John M. Davies was associated with the Winchester Arms Company.

Austin was also responsible for an ornate railroad station located where a deep cut carrying the railroad tracks passes beneath Chapel Street. The station had a tall tower with illuminated clock faces on four sides. The waiting room floor was hung by rods from the trussed roof, an unusual arrangement that served as an occasional design problem for Yale engineering students. Trains hauled by steam locomotives passed through a narrow tunnel beneath the station. The tunnel tended to fill with smoke and steam, and was very noisy from both the trains and the shouting baggage men. A story goes that a father and his young son got off a train in the tunnel for the first time. In that overly religious era the terrified boy looked up and asked, "Father, is this hell?" to which the father replied, "No, son, this is New Haven."

We are now going to the intersection of Linden Avenue and Myrtle Path. This requires retracing Magnolia Avenue a short distance to Myrtle Path, turning eastward, to the left, and going to the second cross street, which is Linden Avenue. We turn northward, to the left, until we reach Number 60 Linden Avenue, the site for Philos Blake, and Number 62 Linden Avenue, the site for Eli Whitney Blake. Both these sites are surrounded by an iron fence. Philos Blake is marked by a tall gray stone obelisk, and Eli Whitney Blake by rectangular granite block.

**NUMBER 60 LINDEN AVENUE** is the site for Philos Blake (1791–1871), and Number 62 Linden Avenue is the site for Eli Whitney Blake (1795–1886). The two Blake brothers were nephews of Eli Whitney. After the death of the elder Eli Whitney, and before Eli Whitney, Jr. became of age, the two Blake brothers managed the Whitney Armory.

After Eli Whitney Blake had set up his own factory in Westville, he received a contract to pave Whalley Avenue in New Haven. In connection with this project, he invented a special engine-driven machine to crush stone into small pieces for use in paving. This crusher, known as the Blake Stone Breaker, made possible bituminous paving and reinforced concrete with its many uses in building construction and highway paving. The trap rock of central Connecticut-a very hard igneous rock-is widely used for this purpose, and one of the largest trap rock quarries anywhere is located in North Branford.

Eli Whitney Blake was always interested in mathematics and physics, and wrote several scientific papers. One of these entitled, "A Theoretic Determination of the Law of the Flow of Elastic Fluids Through Orifices, suggested that the openings for the flow of steam into and out of the cylinder of a steam engine should be doubled in size. Some of his papers were published in a short book entitled, Original Solutions of Several Problems in Aerodynamics. Yale gave him an honorary degree, Doctor of Laws, in 1879.

The brother, Philos Blake, is said to have invented the corkscrew.

We are now going to the intersection of Maple Avenue and Myrtle Path. This requires retracing Linden Avenue a short distance to Myrtle Path, turning eastward, to the left, and going to the first cross street, which is Maple Avenue. We turn northward, to the left, until we reach Number 62 Maple Avenue, the site for Benjamin Silliman, Jr. His grave is marked by a pink granite rectangular block.

NUMBER 62 MAPLE AVENUE is the site for Benjamin Silliman, Jr. (1818–1885). The younger Silliman was a Yale chemist and geologist. He was one of two faculty members, John Pitkin Norton being the other, first appointed in 1846to start what ultimately became the Sheffield Scientific School. He was one of several chemists to study petroleum collected as seepage from hills in Pennsylvania. His twentypage "Silliman Report" of 1855 was influential in starting the petroleum industry in this country. He showed that the material was different in composition from animal and vegetable oils, that its components could be separated by distillation, that some components were useful as lubricants, and that some could be burned for illumination. The one thing he missed was showing a use for the lowboiling point component which later became known as gasoline. Its usefulness depended upon the invention of the internal combustion engine.

Silliman introduced gas lighting to New Haven. He helped form a company that produced carbureted hydrogen gas from bituminous coal, and distributed it through pipes laid in the streets. By 1850 gas lighting was being used in streets, homes, and business establishments. This continued until the coming of electric lighting about the turn of the century. He was an original member of the National Academy of Sciences and, like his father, was a popular public lecturer.

Although family plots are a feature of the Grove Street Cemetery, the younger Silliman is buried a considerable distance from his father and other members of his family.

We now go southward, crossing Myrtle Path, to Number 34 Maple Avenue, the site for Jeremiah Day. It is marked by a large rectangular block of pink granite. NUMBER 34 MAPLE AVENUE is the site for Jeremiah Day (1773–1867). Day was the Yale president who is said to have first made the remark about raising the dead if Yale needed the property. In spite of suffering from fragile health all his life, he served longer in the presidency than any other person — 29 years from 1817 to 1846. After his resignation, he was persuaded to continue as a member of the Yale Corporation for another 21 years. He had begun as professor of mathematics and natural philosophy. He wrote several textbooks on mathematics, including a well known one on algebra that went through several editions.

Samuel F. B. Morse, inventor of the telegraph, described a classroom demonstration done by Day. With the members of the class holding hands, Day administered an electric shock to all of them, probably using a Leyden jar. Morse later remarked on the fact that all had received the shock simultaneously. Incidentally, Benjamin Silliman, Jr., in his 1871 textbook, Principles of Physics, describes a French cleric, one Abbé Nollét, who had six hundred of his flock hold hands. He gave them all an electric shock, presumably using an array of Leyden jars. Again, all were said to have been affected alike and at the same instant, an assertion that may not survive close examination.

After Day's death at the age of 94, a post-mortem examination showed his internal organs were in a dreadful state, with various stony deposits and signs of several heart attacks and severe tuberculosis. He left the presidency just as appointments were being made that ultimately led to the Sheffield Scientific School. His long career at Yale coincided remarkably with the almost equally long career of the elder Benjamin Silliman. We now go to Number 33 Maple Avenue, which is the Hillhouse plot, on the opposite side of the street from Jeremiah Day. James Hillhouse, one of those responsible for founding the Grove Street Cemetery, is marked by a gray granite column. To the south and east of this column are small brownstone slabs for Henry Caner and his wife.

**NUMBER 33 MAPLE AVENUE**, the Hillhouse plot, is also the site for Henry Caner (1680–1731). Caner spelled his name with one "n", though it is spelled with two "n"s on his gravestone and on the New Haven street named for him. It is spelled with one "n" on the adjacent gravestone of his wife.

Caner was one of those buried behind Center Church on the New Haven Green. Much later his small brownstone grave marker, and that of his wife, were moved to the Grove Street Cemetery where it is now placed at the rear of the Hillhouse family plot. The Caner and Hillhouse families were distantly related. Henry Caner was born in England, and came to New Haven by way of Boston, where he had made a reputation as a carpenter in enlarging King's Chapel. He was brought to New Haven when the Collegiate School, soon to become Yale College, was being moved to that new location. He was engaged to erect its first building which was completed in 1718. This "Collegiate house" was located on the northwest corner of Chapel and College Street, facing the Green. It was a long, narrow wooden structure with three floors, and contained living, dining, and studying facilities for about fifty students. It survived until 1782, by which time Connecticut Hall had been built.

In 1722 Caner built a house for the rector (later, president) of the college. It was located on the southwest corner, fronting on College Street and facing the site of the former Hotel Taft. Funds for the house were supplied in part by the State Legislature using a "Duty of Import upon Rhum." For nearly a century this house was the chief social center of New Haven.

Caner died in 1731 leaving, according to George Dudley Seymour, a substantial estate including a monetary 1300 pounds, a musket, a sword, a cane, two "wiggs," one Bible and four other books, both leather and cloth breeches, a "bever hat," and an ample supply of table and bed linen.

We are now going to retrace our steps on Maple Avenue until we again reach Myrtle Path. We turn eastward, to the right, and go to the next cross street, which is Cypress Avenue. We then turn southward, to the right, and go to Number 44 Cypress Avenue, the site for Jared Mansfield. His grave is marked by a short ornate marble column, topped by an urn. The lettering has completely eroded so that it is unreadable. The grave of Jared's wife, Elizabeth, adjoins that of Jared. It is marked by an upright marble slab with the lettering sufficiently preserved that it can be read.

**NUMBER 44 CYPRESS AVENUE** is the site for Jared Mansfield (1759–1830). Mansfield was the son of a New Haven sea captain engaged in the West Indies trade. He entered Yale during the Revolution with the Class of 1777, but in his senior year some escapade caused his diploma to be withheld. Somewhat later Yale relented and granted him both the undergraduate degree with his class, plus the higher Master of Arts degree.

He became rector of Hopkins Grammar School, and while there, in 1801, he published Essays, Mathematical and Physical. This book is often cited as being the first original mathematical research done by a native of the U.S. It dealt with algebra, geometry, calculus, and among other topics, considered the calculation of the path of a projectile, taking into effect air resistance and the rotation of the earth.

The book of Essays led President Jefferson to appoint him captain of engineers and a faculty member of the U.S. Military Academy, then newly opened. Shortly afterward, Jefferson made him Surveyor General to create an accurate survey of Ohio, Indiana, and the Middle West. Afterward, he returned to the Military Academy as professor of natural and experimental philosophy.

Among his later mathematical papers was one entitled, "Observations on the Duplication of the Cube and the Trisection of an Angle." He retired in 1828 and returned to his birthplace, New Haven. Yale awarded him its highest honorary degree, Doctor of Laws, in 1825.

We now go southward on Cypress Avenue to Number 25, the site for Henry Farnam. The site is surrounded by a low stone wall, and Farnam's grave is marked by a large rectangular block of pink granite.

NUMBER 25 CYPRESS AVENUE is the site for Henry Farnam (1803–1883). Farnam was born on a farm in central New York state. While he had a modest education, he did study Jeremiah Day's algebra textbook by himself, and taught school several years as a teenager. At eighteen he worked on the construction of the Erie Canal, rising to become assistant engineer. In 1825 he received an offer to work on the Farmington Canal, then just beginning, and this brought him to Connecticut. Soon he became the chief engineer and superintendent, a position he held as long as the canal was in operation. The canal turned out to be less than successful, in part because of continuing water leakage but largely because railroads were proving to give better transportation than canals. In 1847, Farnam, together with Joseph Sheffield who owned much of the canal stock, and Alexander Twining, the surveyor of railroads, converted the Farmington Canal into a rail line generally following the route of the canal.

The association between Farnam and Sheffield continued, first in attempting a rail line between New Haven and New York City. The two went on to take over and complete a struggling railroad making its way across southern Michigan toward Chicago. They then built the Chicago and Rock Island Railroad, envisioned as the first link in a line to the West Coast. A key part of this link was a bridge across the Mississippi River, strongly opposed by steamboat operators. Abraham Lincoln was brought in as a lawyer to combat this opposition. For many years this bridge was the only one across the Mississippi south of St. Paul.

After retirement from the railroads, Farnam returned to New Haven. His home on Hillhouse Avenue, somewhat modified, is now the house for the Yale President.

We now go a short distance farther south to Number 21 Cypress Avenue, the site for Hezekiah Auger. His gravestone is set back from the street, and is a gray granite slab.

NUMBER 21 CYPRESS AVENUE is the site for Hezekiah Auger (1791–1858). Augur was the son of a poor carpenter. He was apprenticed to a grocer at age 9, and afterward worked in an apothecary's shop and in a mercantile store. At age 19 he became a partner in a dry goods business, acting as its manager. Shortly afterward the partnership dissolved, he became bankrupt, lost his capital and was in debt.

He had carved the wood frame for a harp, and this attracted enough attention that he set up a wood-carving shop. He had some success carving frames for mirrors and other furniture, and by 1828 had paid off all his debts. About this time he produced an improved artificial leg.

Samuel F. B. Morse suggested that he carve a head of Apollo Belvedere in marble. Its successful outcome brought more recognition to him. He was commissioned to do a bust of Oliver Ellsworth for display in the Capitol at Washington. He sculptured a group in marble for the Trumbull Gallery at Yale. In 1833 Yale gave him an honorary degree, Master of Arts. While his marble works were said to show the techniques of a wood carver, they also showed unusual imagination. He was commissioned to design bronze medals for the bicentennial of New Haven. He was on the committee planning the wall that surrounds the Grove Street Cemetery.

He invented a wood-carving machine that was used by the New England Wood Carving Company to replicate existing carvings. A model exists in the New Haven Colony Historical Society. He invented a hand saw, known as a bracket saw, that would make curved cuts. He invented a machine to make worsted lace. Financial problems in his later years served to emphasize his unassuming manner.

As you return to the main gate, walking south on Cypress Avenue to its intersection with Hawthorn Path, you might notice at the corner the small gray slab with the name, Phyllis Brown Sandine (1936–1990), and the words, "What a Woman!" This completes the third tour through a part of the cemetery.



