

NEW YORK MARBLE CEMETERY, INC.

SECOND AVENUE ABOVE SECOND STREET
ESTABLISHED 1830



RESTORATION OF THE GATES

APRIL, 2001

Many cemeteries are identified by their gates: visitors to Mount Auburn in Cambridge pass through its famous Egyptian Revival entrance, built in 1843; Richard Upjohn's Gothic gatehouse at Green-Wood in Brooklyn has been an attraction since its construction; the Tokugawa shoguns of several generations are interred behind the ornate kara-mon gateways of 17th-century Nikko. These are all cemeteries built on a grand scale. The half-acre New York Marble Cemetery, though less grand, still has memorable gates.

On the west side of Second Avenue between 2nd and 3rd Streets is a 10-foot by 100-foot alleyway. A pair of heavy wooden gates was originally installed at the inner end of the passage. Then, in 1853, a \$5 assessment levied on each vault made possible some ornamental iron gates near the street. When an endowment was raised in 1906, the Cemetery was in a position to add another pair. The wooden ones were discarded so that the older iron gates could be moved to the inside, and a new pair was placed on the street.

No record has yet been found of the builder of the earlier gates, but we know that the later ones were forged by the William R. Pitt Composite Iron Works on West 24th Street. Both pairs were dismantled and transported to Vermont last December so that Bob Barrett, a metalworker in Hartland, could restore them. The outer gates will be back in place by May 7; the inner gates will follow this summer.



Courtesy of the New York Public Library

The outer gates as they looked in 1938, before the upper ornamentation was lost.

No decision has been made on replacing the ironwork above the arch or the urns on the pillars, all of which disappeared long ago.

The central decoration is not a cherub, but a pair of wings under a scallop shell. In Christian iconography, the wings represent the soul ascending. The shell has two meanings: it is best known as the symbol of St. James, particularly Santiago de Compostela, and by extension, pilgrimage, but also represents rebirth, baptism, and resurrection. Though the dead could be considered the ultimate pilgrims, the second interpretation is more likely.



The Cemetery gates are made from both cast iron and wrought iron. Wrought iron is produced by heating, refining, and rolling the first pig iron from a blast furnace. The process reduces carbon and removes most of the impurities. Its fibrous nature allows it to be easily hammered into shapes. The first rusting produces scale, a protective film, that reduces further corrosion. Modern steel is a mixture of iron and .1% to 1.7% carbon. It rusts in incoherent layers which easily flake off, exposing fresh area of the metal to further attack. Wrought iron was last produced in the United States in 1969, so Mr. Barrett has been working with material imported from Europe.

Cast iron is made from pig iron by remelting and pouring it into molds. It contains from 2% to 4% carbon and is quite brittle. Cast iron has long been the ironworkers' choice for repetitive decorative elements because the detail work has to be done only once and can then be reproduced as often as needed. The casting process entails some shrinkage, so Mr. Barrett must pad out his models to compensate. The actual casting of replacement sections is being done at the Cumberland Foundry in Rhode Island.

1908 GATES

The gates on Second Avenue are made from various sizes of wrought-iron bar stock, bolted into geometric configurations and embellished with both cast and forged elements.

The top-plates on the posts, the rosettes, and the lock box are castings. The large sliding bolt mechanism shown here was added in mid-century and has now been removed. The top and bottom latches are back in working order and the original lock could be repaired.

Forged parts on the newer gate include floral details on the tops of the pickets and the circles in the panels. The term "forged" implies wrought barstock that is reheated in a blacksmith's forge and hammered into artistic shapes or welded together by hammer blows.

Structural problems had to be corrected. Most post legs and many picket bottoms had rusted away. Some pivots had frozen, forcing their sockets to rotate.

2000 photo



The 1908 outer gates just before restoration.

The bronze plaque on the left side reads "Enclosed within this block is the oldest public non-sectarian cemetery in the city. Descendants of the original owners may still be buried here. The 156 solid marble vaults were built completely underground as a health precaution. Though no markers are on the ground, names of the original owners from each family are on marble tablets in the surrounding walls. The cemetery is a New York City Landmark and is on the National Register of Historic Places."



1999 photo

The original gates, placed on Second Avenue in 1854 and moved to the inside of the alley in 1908, should be returned by mid-summer.

1854 GATES

The gates that open into the Cemetery itself are similar in scale and overall appearance to the ones on Second Avenue, since both have pillars with the same wrought-bar leg structure. Their construction differs, though, because the base sections on this gate are separate. Many of the joints are mortise-and-tenon.

The legs were nearly all rusted off, causing both halves to lean against the wall and preventing either gate from swinging freely. Despite its decrepit appearance, repairs to the older gate are expected to be much less complicated than those made to the newer one.

The distinguishing feature on the inner gates is the extensive use of cast iron for the beautiful infill panels and spearheads. New pieces will be cast to replace those that are missing.

Iron. f. (iren, Saxon.)

A metal common to all parts, and of a small price. Though the lightest of all metals, except tin, it is the hardest; and, when pure, naturally malleable: when wrought into steel, or when in the impure state from its first fusion, in which it is called cast iron, it is scarce malleable. Iron is very capable of rust, very sonorous, and requires the strongest fire of all the metals to melt it. The specific gravity of iron is to water as 7632 is to 1000. Iron has greater medicinal virtues than other metals.

A Dictionary of the English Language... by Samuel Johnson, A.M. Seventh Edition, London, MDCCLXXXIII.



THE CRAFTSMAN

About five years ago Mr. Barrett combined his experience as a sheetmetal worker, machinist, blacksmith, and welder to start his own business. Special commissions take up most of his time. This current project is presenting enough new challenges to keep him interested. Under all the coats of paint on the outer gates there were some surprises waiting: the letters on the scroll bearing the Cemetery's name revealed themselves as solid bronze; the variety of rivets and tenon joints was far greater than expected; and the pieces of one panel, which Mr. Barrett wished he had marked during disassembly, turned out to have been numbered by chisel by the original ironworker.

Most of the repair work is being done by braze-welding, using an oxygen-acetylene torch. Areas with large cavities (Mr. Barrett refers to the "New York Effect") are filled with bronze to return them to their original dimensions. Wrought iron bars that are completely rusted off are having new portions added. With the exception of stainless steel bolts in the structural connections, no steel is being used. Forge-welded joints were used for decorative, not structural, parts. All of them that have been examined so far appear as sound as when they were first made.



2001 photo

Bob Barrett working on the scroll at his forge in Hartland, Vermont.

Making a new scroll proved more difficult than expected because curled sections on the edges, probably representing paper frills, were rolled outward on the top and bottom edges and rolled inward on the ends. The Cemetery extends its thanks to Mr. Barrett not only for his fine metal work, but also for providing much of the foregoing text.



Christopher Neville, an Anson G. Phelps descendant and professional historian, has recently uncovered some old photographs of the gates, including the one on the first page, taken when the long-lost ornamentation above the arch and on top of the pillars was still intact. Mr. Barrett will install a receiving plate on the top of the arch so that it will be possible to add something later, as interest and finances allow. It could be either a replica of the original decoration or a simplified variation of similar mass that would provide the same balance. Whatever the final decision, we hope that the gates beneath will be opening to visiting descendants with greater and greater frequency.