

Mount Auburn Cemetery and Its Importance to the History of Anesthesia*

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Background

Boston, Massachusetts, is home to many sites related to the first public demonstration of ether, including the Ether Dome, the Ether Monument, and several homes in which William T. G. Morton lived.^{1,2} Notably, many of the participants in Morton's successful demonstration of ether are buried in nearby Mount Auburn Cemetery in Cambridge, Massachusetts (Figure 1).³ Here we explore how changing burial customs in early 19th-century America brought so many of these individuals to rest in one location. We explain how Mount Auburn Cemetery was established, the difficulties it faced, how it evolved, and the role it plays today. Moreover, we describe some of its remarkable features and explore some unusual structures located within this institution so very closely associated with the history of anesthesia.

Existing Burial Practices

Early 19th century customs in the United States were similar to those of England and Europe and reflected the deep religious, social, and political beliefs of the times. In many cities and towns, graveyards were located near churches. Rural cemeteries, often owned by patrons, were found on the outskirts of cities. There were a few lawn cemeteries away from towns, and these were usually managed by professional superintendents and owned by private corporations.⁴ Lawn cemetery graves are covered by grass and marked with a small horizontally placed commemorative plaque.

The crowded and impersonal graveyards

of 19th century Boston were a convenient and necessary place for the disposal of the dead, while also serving as a constant reminder to the living, not only of their own fragility but also of an urgent need to prepare for death.^{3,4} Death was considered not merely the termination of earthly existence, but equally (or more importantly) the beginning of life in heaven. To remain in good standing with the Church was essential, and prayers were regularly offered for the collective dead. Eternal damnation could be avoided by charitable actions, after which one could expect the reward of heavenly bliss. Temporal life was devalued and de-emphasized, while simplicity dictated that gravestones, if any, were engraved with simple epitaphs such as *memento mori* (remember your mortality) or *fugit hora* (the hour flies). Due to the scarcity of land in cities, it was not uncommon for many bodies to share one grave or tomb, a practice called 'stacking.' This often took place beneath or on the side of a church, making it difficult for family members to clearly locate the spot where their loved ones were buried. Communal burials emphasized the importance of the group over individual autonomy. While wealthy families had the option of building a graveyard or chapel on their property, the masses had to make do with crowded city graveyards. Burial at a significant distance away from churches was reserved for individuals and families considered undesirable: the excommunicated, executed individuals and their families, and those who had committed suicide.

An Urgent Need for Change

Several factors caused a shift away from church-administered graveyards to secularized cemeteries. Attitudes amongst members of the educated upper class and the popularity of the Unitarian movement brought

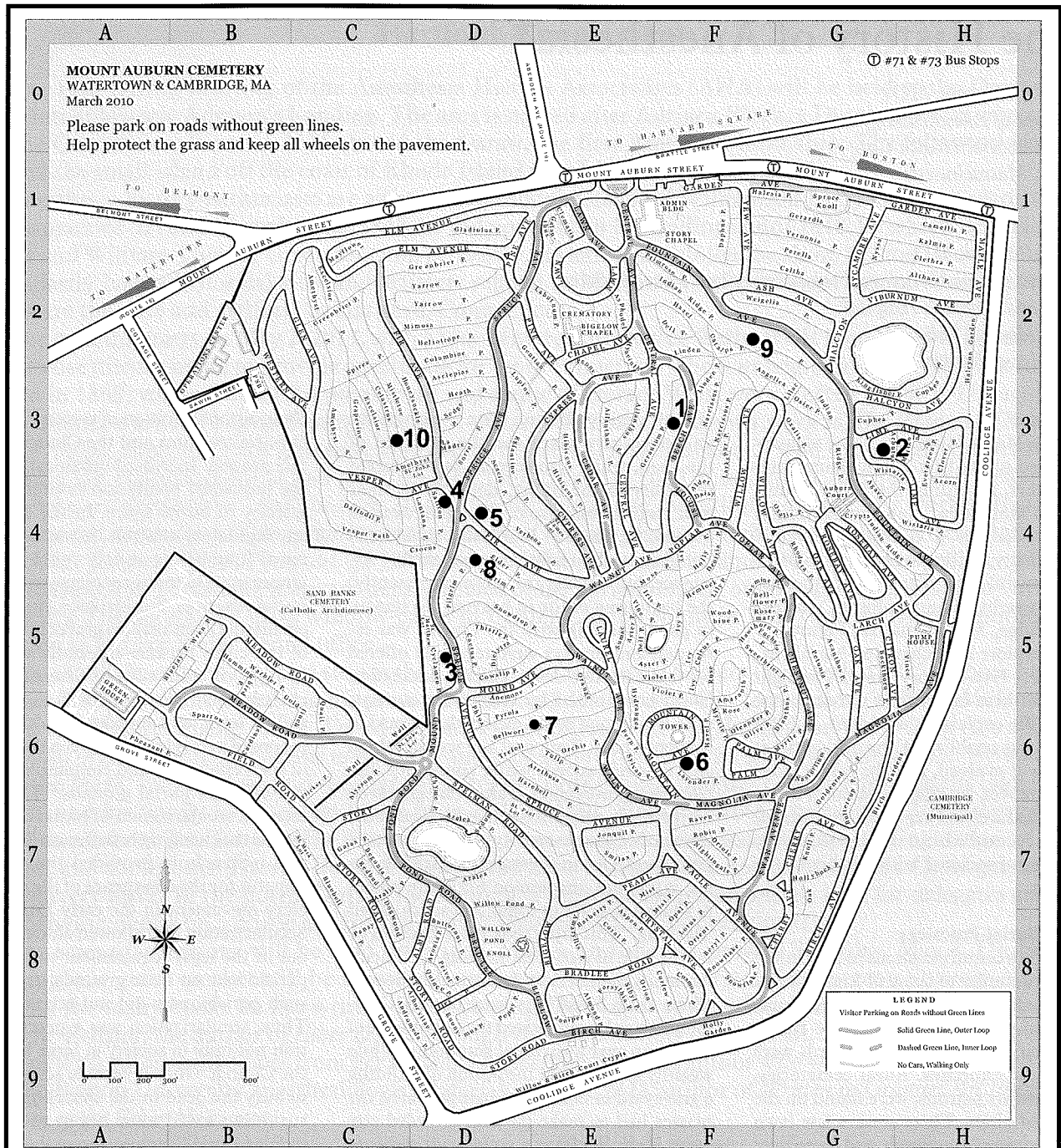
about reconsideration of society's approach to burial customs and the Church's role in this process. Increased urbanization due to the industrial revolution brought about a scarcity of burial space. In the absence of any regulatory controls, it was only a matter of time before society could no longer ignore some obvious problems with current burial practices. For instance, the foul odor emanating from shallow graves in the center of the cities became especially worrisome in light of epidemics of diseases such as cholera, small pox, diphtheria, scarlet fever, yellow fever, and measles. Health officials proposed a correlation between the outbreak of such epidemics and contaminated water run-off from burial grounds.⁴ The recommended secularization of burial customs as well as the changing beliefs regarding nature and melancholy provided the necessary impetus for the emergence of the rural cemetery movement in the early 19th century. Secularization also allowed churches to opt out of the legal requirement to bury every parishioner on their grounds, especially if such parishioners did not attend services. Thus, secularization was a practical solution not only to society at large but also to the Church. Once it became acceptable not to bury the dead in the church graveyards, surviving loved ones began to return to secular burial sites to remember, mourn, reminisce, and meditate on the departed. This was not always possible in the crowded, malodorous church graveyards of mostly anonymous graves. However, the idea about how best to design secular graveyards came from Europe.

Père Lachaise Cemetery

The need for a new approach to burial practices had already been realized in many European cities. The French were the first to

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Grave Locations within Mount Auburn Cemetery

- | | |
|---------------------------------|--|
| 1 - Jacob & Henry Jacob Bigelow | 6 - Charles Thomas Jackson |
| 2 - Oliver Wendell Holmes | 7 - Charles Bulfinch |
| 3 - William Thomas Green Morton | 8 - Joseph Milnér Wightman |
| 4 - Charles Frederick Heywood | 9 - Frances & Henry Wadsworth Longfellow |
| 5 - Augustus Addison Gould | 10 - Mary Sawyer Tyler |

Fig. 1. Map of Mount Auburn Cemetery. Numbers show the location of graves as follows: Henry Jacob Bigelow and Jacob Bigelow [1], Oliver Wendell Holmes [2], William Thomas Green Morton [3], Charles Frederick Heywood [4], Augustus Addison Gould [5], Charles Thomas Jackson [6], Charles Bulfinch [7], Joseph Milnér Wightman [8], Henry Wadsworth and Frances Longfellow [9], and Mary Sawyer Tyler [10]. Modification of map provided by Mount Auburn Cemetery, Cambridge, Massachusetts. Reproduced with permission.

adopt the style of the English garden estate to design landscaped cemeteries. A prime example of this is Père Lachaise Cemetery, created on a large estate east of Paris in 1804.⁴ It is the largest cemetery in Paris and reputed to be the world's most visited cemetery. Functioning also as a park, it is the resting place of such eminent people as Claude Bernard, Oscar Wilde, Molière (Jean-Baptiste Poquelin), Joseph Louis Gay-Lussac, and Guillaume Dupuytren. Although it was slow to gain acceptance during its first decade, little by little it became the most desirable cemetery in France. The burial of notable figures here helped popularize the cemetery and foster a sense of patriotic melancholy. It became a refuge for the living as much as for the dead, and a new pleasure of the melancholy surrounding death supplanted the old fear of it. Père Lachaise contrasted the living and the dead, the city and the country, the present and the past.⁴ Moreover, its magnificent view of Paris spurred a characteristic that was to be adopted in the US.

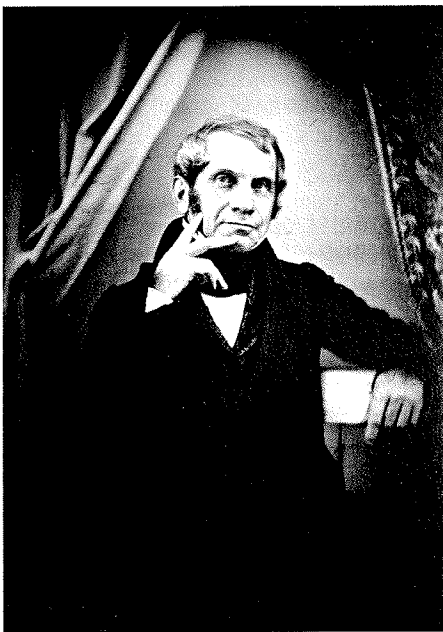


Fig. 2. Jacob Bigelow (1787-1879). Francis A. Countway Library of Medicine, Boston, Massachusetts. Reproduced with permission.

Jacob Bigelow (1787-1879)

Horticulturist and physician Jacob Bigelow (Figure 2) was impressed by Père Lachaise Cemetery during a visit to Paris. Wishing to duplicate such an effort in his native Boston, he was informed by municipal officials that funds did not exist for obtaining suitable land for such a project. Not to be deterred, Bigelow and his friends founded the Massachusetts Horticultural Society in

1829 to improve the quality and diversity of plants in New England. The nation's first horticultural society had been established two years earlier in Philadelphia.

Other Founders

General Henry A. S. Dearborn, the Society's first president, had grand plans to transform a piece of land adjacent to the Charles River into an area of refinement similar to Père Lachaise. He wished to enrich it with nature to effect an appreciation of the harmony that ought to exist between man and his environment. It was while planning the design of the proposed park that Jacob Bigelow met George W. Brimmer, a merchant who was willing to sell a large plot of land at cost (for \$6,000) to the Horticultural Society. Officers of the society voted to purchase the land contingent on selling enough family burial plots to cover the cost.³ Bigelow felt that starting the cemetery using the Horticultural Society as an affiliated umbrella organization would ensure public acceptance of this innovative concept.

The public religious consecration ceremony of Mount Auburn Cemetery on September 24, 1831, was attended by a crowd of almost 2,000. Joseph Story, a Unitarian, spoke eloquently at the ceremony and was elected to serve as Mount Auburn's first president. Mount Auburn would become a nondenominational but spiritual institution in line with Story's beliefs. Having lost several children, his first wife, and his father, Story had managed to find a controlled expression of mourning, permitting him to get on with his life and work. His address was sentimental and invoked great emotion.^{3,4}

Cemetery Evolution

Mount Auburn Cemetery derives its name from the local custom of calling this serene and tranquil area 'Sweet Auburn.' Local residents borrowed this title from Oliver Goldsmith's poem *The Deserted Village*, in which city migrants fondly reminisce about Auburn, the idyllic village they had deserted in their quest for work.⁵ Père Lachaise offers panoramic views of Paris from its grounds, and Jacob Bigelow wished no less from Mount Auburn Cemetery. A hill on the property was used as the base for constructing 125-foot Washington Tower in celebration of the nation's birth, and visitors to its top are rewarded by majestic views of Boston, Charlestown, the Boston Harbor, Harvard University, the Blue Hills in nearby Milton, Wachusett Mountain in central Massachusetts, and New Hampshire's Mount Monadnock. Mount Auburn Cemetery became a popular final resting place for many well-known literary figures,

politicians, physicians, artists, religious leaders, and architects. Representing a novel approach to burial and offering the pleasant ambience of a landscaped garden, Mount Auburn Cemetery remained a must-see for visitors to Boston. Partly as a result of this prominence, it has a special link to many participants in the first ether demonstration, as depicted in the famous painting by Robert C. Hinckley.⁶ The cemetery founders predicted that the public would "delight in these tributes of respect, and the place may gradually become the honorary mausoleum for the distinguished sons of Massachusetts."³

Bigelow made his claims evident:

We regard the relics of our deceased friends and kindreds for what they have been, and not for what they are. We cannot keep in our presence the degraded image of the original frame; and if some memorial is necessary to soothe the unsatisfied want which we feel...it must be found in contemplating the place in which we know their dust is hidden...The human heart clings...and seeks consolation in rearing emblems and monuments and in collecting images of beauty over the disappearing relics of humanity. This can be...done, not in the tumultuous, harassing din of cities, not in the gloomy and almost unapproachable vaults of charnel houses...but amidst the quiet verdure of the field, under the broad and cheerful light of heaven where the harmonious and ever-changing face of nature reminds us, by its resuscitating influences, that to die is but to live again.³

Ether Day Participants Buried at Mount Auburn Cemetery

Henry Jacob Bigelow (1818-1890) (Figure 3) was the son of Jacob Bigelow and a graduate of Harvard Medical School. Trained as a surgeon, he detested suffering. Bigelow had helped arrange the demonstration after reading about Morton in a newspaper article describing a painless tooth extraction performed on September 30, 1846.⁷ He was present during the ether demonstration and is depicted in Hinckley's painting.⁶ He described Morton's demonstration in the *Boston Medical and Surgical Journal*, a predecessor of the *New England Journal of Medicine*.⁸ He remained a staunch proponent of Morton's claims to the discovery of anesthesia. He later specialized in orthopedic surgery and described the structure and

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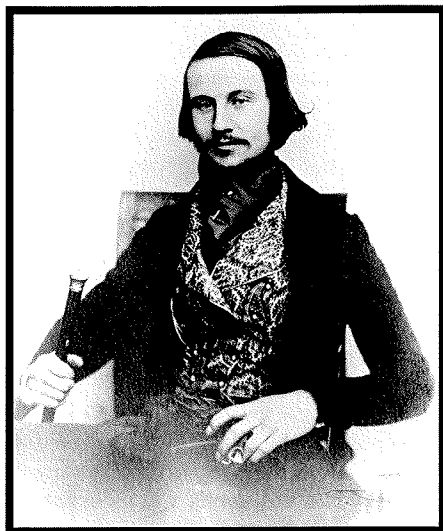
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Fig. 3. Henry Jacob Bigelow (1818-1890). Francis A. Countway Library of Medicine, Boston, Massachusetts. Reproduced with permission.

function of the eponymous Y ligament of Bigelow, which is the iliofemoral ligament of the hip.⁹ The Bigelow family graves are located off Beech Avenue (Figure 1).

Oliver Wendell Holmes, Sr. (1809-1894) (Figure 4) though a physician of renown, is more widely known for his literary accomplishments.¹⁰ Educated at Harvard College and Harvard Medical School, he also trained in Paris and taught medicine, initially at Dartmouth Medical School and later at Harvard. His principal medical contribution was advancing the idea that physicians transmitted puerperal sepsis from one patient to another. In a letter to Morton on October 21, 1846, he stated: "Everybody wants to have a hand in a great discovery. All I will do is to give a hint or two as to the names, or the name, to be applied to the state produced by the agent. The state should I think be called 'Anaesthesia.'"¹¹⁻¹³ Holmes is buried off Lime Avenue (Figure 1).

William Thomas Green Morton (1819-1868) (Figure 5) conducted the first public demonstration of ether as an anesthetic and is most closely associated with the discovery of anesthesia. He died at the age of 49. His life after the ether demonstration was consumed by attempts to secure financial rewards and recognition as the discoverer of anesthesia. He pursued these endeavors with maniacal vigor, destroying his clinical practice and bringing financial ruin to himself and his family. He died without any significant resources, and it was Morton's friends who erected the grand monument over his grave.^{4,14} The fluted column topped by a

draped urn reads: "On behalf of the 'Citizens of Boston' the Inventor and Revealer of Anesthetic Inhalation/Before whom in all time surgery was agony/By whom pain in surgery was averted and annulled/Since whom science has control of pain." A year earlier philanthropist Thomas Lee, who as a patient had received the "miracle anesthetic," honored Morton's public demonstration of ether by proposing and funding the Ether Monument, which was sculpted by John Quincy Adams Ward and is located in the Boston Public Garden.^{15,16} The monument was in recognition of Morton's demonstration and did not specify which individual deserved credit for the discovery. The inscription of the 1868 monument read, "In gratitude for the relief of human suffering by the inhaling of ether," simply proclaiming the discovery but not attributing it to anyone in particular. The Morton family graves are located off Spruce Avenue in Mount Auburn Cemetery (Figure 1).

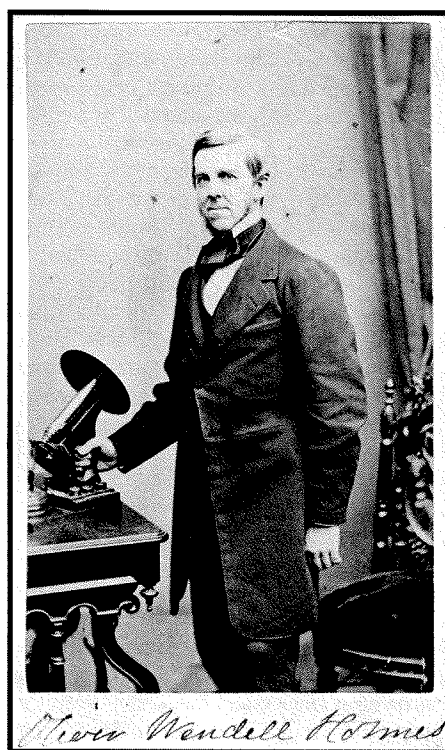


Fig. 4. Oliver Wendell Holmes, Sr. (1809-1894). Francis A. Countway Library of Medicine, Boston, Massachusetts. Reproduced with permission.

Charles Frederick Heywood (1823-1893) was born in Boston to a prominent family. He attended Harvard College and graduated from Harvard Medical School in 1846. He then was appointed at MGH as house surgeon. One of his duties was to be an intermediary between the surgeon John



Fig. 5. William Thomas Green Morton (1819-1868). Francis A. Countway Library of Medicine, Boston, Massachusetts. Reproduced with permission.

Collins Warren and W. T. G. Morton, who received the following invitation written in Heywood's handwriting on October 14, 1846.¹⁷

Dear Sir

I write at the request of Dr. J. C. Warren, to invite you to be present on Friday morning at 10 o'clock, at the hospital, to administer to a patient who is then to be operated upon the preparation which you have invented to diminish the sensibility to pain.

Yours respectfully

C. F. Heywood

House Surgeon to the General Hospital

After three years as a house surgeon at MGH, Heywood went to Paris for further studies and then returned to practice at St. Luke's Hospital in New York City. Heywood died at age 70 and is buried in the cemetery's southwest, off the intersection of Fir Avenue and Spruce Avenue (Figure 1).

Augustus Addison Gould (1805-1866) (Figure 6) graduated from Harvard College and Harvard Medical School, was a visiting physician at MGH, and later became president of the Massachusetts Medical Society. Though a physician by training, he was world famous as an expert conchologist and malacologist (sea shells and mollusks, respectively), an interest he developed as a youngster combing the beaches of New

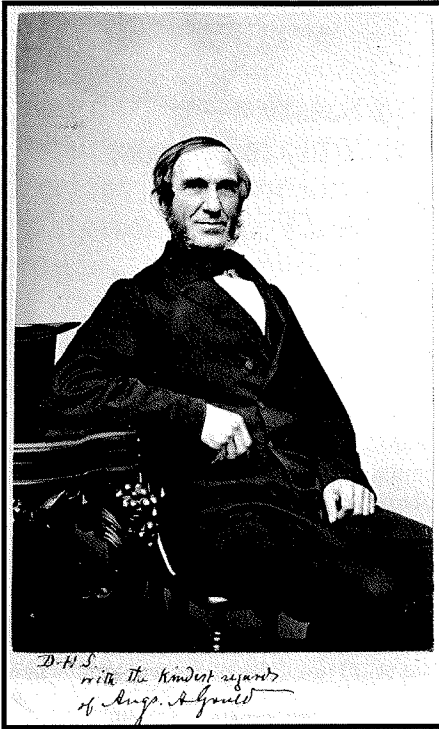


Fig. 6. Augustus Addison Gould (1805-1866). Francis A. Countway Library of Medicine, Boston, Massachusetts. Reproduced with permission.

Hampshire. Morton was Gould's houseguest at the time of the ether demonstration. The night before the demonstration, Gould recommended that Morton consider using valves to prevent the asphyxia caused by rebreathing exhaled gases.^{18,19} Gould was present at the demonstration and went on to a successful career as both a physician and a scientist.^{20,21} He died at the age of 61 in Boston and is buried off the intersection of Fir Avenue and Spruce Avenue (Figure 1).

Charles Thomas Jackson (1805-1880) (Figure 7) was a prominent physician, chemist, mineralogist, and geologist who claimed also to have introduced Morton to ether and its potential uses.²⁰ This was the basis for his role in the ether controversy, a bitter dispute that has never been resolved. Jackson has been accused throughout his life of taking credit where others made the primary contribution. He spent the last few years of his life at McLean Hospital after suffering a stroke. His gravestone is inscribed with the following epitaph:

Eminent as a chemist, mineralogist, geologist and investigator in all departments of natural science. Through his observations of the peculiar effects of sulfuric ether on the nerves of sensation, and his bold

deduction therefore, the benign discovery of painless surgery was made. Thy Godlike crime was to be kind, to render with thy precepts less, the sum of human wretchedness, and strengthen man with his own mind.

He died at the age of 75 and is buried in the cemetery off Mountain Road, near Washington Tower (Figure 1).

Other Notables Buried at Mount Auburn Cemetery

Charles Bulfinch (1763-1844) is considered the first native-born American to train and work as a professional architect. He designed the Massachusetts State House in Boston, the Old State House in Hartford, Connecticut, and the Bulfinch building in which the ether demonstration was performed.²² He died at the age of 80 and is buried in the cemetery off Bellwort Path (Figure 1).

Joseph Milner Wightman (1812-1885) was the machinist and mechanic consulted by W. T. G. Morton as he worked on a delivery system for ether vapor. Wightman later served as Mayor of Boston for four years. He died at age 72 and is buried in the cemetery off Elder Path (Figure 1).

Henry Wadsworth Longfellow (1807-1882) was a poet and educator who spent most of his life in New England writing the famous poems *Paul Revere's Ride* and *Song of Hiawatha*.^{20,23} His second wife, Frances Elizabeth Appleton, was the first woman



Fig. 7. Charles Thomas Jackson (1805-1880). Francis A. Countway Library of Medicine, Boston, Massachusetts. Reproduced with permission.

to receive an anesthetic (ether, on April 7, 1847) for labor and delivery in the United States. Henry and Fanny Longfellow are buried in the cemetery off Indian Ridge Path (Figure 1).

Mary Elizabeth (Sawyer) Tyler (1806-1889) is the girl about whom the "Mary had a little lamb..." nursery rhyme was composed by a classmate.²⁴ Many years later, Mary and her husband, Columbus Tyler, worked at McLean Hospital, she as matron and he as general superintendent. It is likely that she was matron at McLean Hospital during Jackson's last few years. Both Tylers are buried in the cemetery off Mistletoe Path (Figure 1).

Mount Auburn Cemetery Today

Mount Auburn Cemetery is an arboretum of national importance, housing an inventory of 5,300 trees from more than 630 taxa. As the nation's first landscaped cemetery, it has been expanded and updated, being preserved and restored by the Friends of Mount Auburn Cemetery. The now paved avenues bear tree names, while walking paths through the intricately landscaped grounds have been named for flowers. The scarcity of land for burials led to community mausoleums. Mount Auburn Cemetery has also become an outdoor museum and classroom to many. It remains an active cemetery, and the original intentions of Bigelow and Dearborn to provide fine landscape architecture, monument design, and horticulture are still evident. A full 175 years after Mount Auburn's inception as a retreat and memorial to the deceased, it allows us, the living, to travel back in time. Amidst the verdant beauty of nature, its various trees, shrubs, flowering plants, ponds, and gentle hills, one is also rewarded by the sight and sounds of many species of resident and migrant birds.

Conclusion

There are several reasons that so many participants in the ether demonstration are buried at Mount Auburn Cemetery. Scarcity of land and public health hazards demanded a new approach to burial, while secularization led to a secondary role for the church. However, these factors alone could not have produced Mount Auburn without the leadership, perseverance, and vision of its founder and main architect, Jacob Bigelow. This first and premier landscaped cemetery in the country began a tide of reform, and similar cemeteries emerged throughout the nation. In the serene ambience of these cemeteries, loved ones reminisce and meditate on the lives of loved ones lost to accident, illness, or old age. As the leading cemetery

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in the Boston area, it is not surprising that Mount Auburn shelters for eternity so many prominent statesmen, physicians, lawyers, and other notable members of society.

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triumph and tragedy that anesthesiologists often tread. This is a varied and engaging book, dealing with anesthetic practice in a manner that is appropriate to the subject. As Friedrich Nietzsche opined: "Perhaps I know best why it is man alone who laughs: he alone suffers so deeply he had to invent laughter." Or maybe the effective juxtaposition of tears and laughter to describe anesthesia is better captured by Woody Allen: "I am thankful for laughter, except when milk comes out my nose."

Waterton... *Continued from Page 31*

Wouralia, would be rewarded for its ordeal. He promised, "Wouralia shall be sheltered from the wintry storm; and when summer comes she shall feed in the finest pasture. No burden shall be placed upon her, and she shall end her days in peace."

Waterton was a friend of Joseph Banks, who set sail with Charles Darwin on the Beagle in 1831. It is likely that Waterton influenced both scientists. There are hints of Darwinism throughout *Wanderings*. In one of many instances, Waterton said of the South American birds (including finches), "Nature has not known where to stop in forming new species and painting her requisite shades." After clearing out an abandoned building for use as a laboratory, he wrote, "The frogs, and here and there a snake, received that attention which the weak in this world generally experience from the strong, and which the law commonly denominates an ejection." He likened the sticky tongue of an anteater ("ant-bear") to that of a woodpecker. Of the formidably clawed ant-bear, he added, "As his habits and haunts differ materially from these of every other animal in the forest, their interests never clash, and thus he might live to a good old age, and die at last in peace, were it not that his flesh is good food." The first

edition of *Wanderings* may have set Darwin to thinking even before the Beagle left port.

Waterton's writing and exploits have been excerpted in various forums,²⁻⁸ but this entire book is well worth perusing.

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