

Ebenezer Hopkins Frost (1824–1866)

William T.G. Morton's First Identified Patient and Why He Was Invited to the Ether Demonstration of October 16, 1846

Ryan LeVasseur, M.D.,* Sukumar P. Desai, M.D.†

ABSTRACT

Although he was not the first to use ether as an anesthetic, it was not until William Thomas Green Morton's demonstration of the efficacy of ether anesthesia that its use spread rapidly throughout the world. Full identities of the first anesthetized patients of William Edward Clarke and Horace Wells are not known, but we are quite certain that Crawford Williamson Long correctly identified James Venable as his first patient to receive anesthesia. Using municipal records, historical accounts, and recent analyses of Morton's unsavory side, we undertook this study to explore three questions. First, we examine how Morton refined the technique of administering anesthesia based on Wells' failed attempt. Second, we describe the circumstances under which Morton encountered his first patient to receive anesthesia. Third, we offer an explanation as to why Morton insisted on bringing along this patient to attend the grand event we celebrate as Ether Day. This is an essay about William Thomas Green Morton and Ebenezer Hopkins Frost.

* Resident in Anesthesiology, Brigham and Women's Hospital, Boston, Massachusetts, and Clinical Fellow in Anaesthesia, Harvard Medical School, Boston, Massachusetts. † Anesthesiologist, Brigham and Women's Hospital, and Assistant Professor of Anesthesia, Harvard Medical School.

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Address correspondence to Dr. Desai: Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, 75 Francis Street, Boston, Massachusetts 02115. sdesai@partners.org. Information on purchasing reprints may be found at www.anesthesiology.org or on the masthead page at the beginning of this issue. ANESTHESIOLOGY's articles are made freely accessible to all readers, for personal use only, 6 months from the cover date of the issue.

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WILLIAM Edward Clarke (1819–1898) used ether clinically in January 1842 in the presence of his preceptor, Professor Elliott Mott Moore (1814–1902), while dentist Elijah Pope extracted the tooth of a Miss Hobbie.¹ Although she is believed to be related to one of two fellow medical students Joseph C. Hobbie or Allen Hobbey, no further information about Miss Hobbie has been found.^{1–3} After administering ether to James Venable on March 30, 1842, Crawford Williamson Long (1815–1878) delayed publishing his experience until 1849.^{4,5} We are fairly certain that Venable was his first patient to receive general anesthesia. Horace Wells conceived of using nitrous oxide as an analgesic during a demonstration by Gardner Quincy Colton at Union Hall in Hartford, Connecticut, on December 10, 1844.⁶ Wells persuaded his colleague John M. Riggs (1811–1887) to remove one of Wells' own teeth the next day, while Colton administered nitrous oxide.^{7–9} Thereafter, Wells administered nitrous oxide on innumerable occasions, but the identity of the first patient he anesthetized is not known.

The first patient to receive anesthesia at the hands of William Thomas Green Morton (1819–1868) has previously been identified as Eben Frost.^{10,11} We examined municipal records and historical accounts to learn more about Frost. In addition, we provide detailed information about circumstances on the night of September 30, 1846, the fateful day their paths first crossed.

Vandam has suggested that Frost was present during the ether demonstration to reassure the patient, Edward Gilbert Abbott (1825–1855).¹² We suggest an alternate hypothesis based on information from Morton's past that would suggest a less noble motive. We begin by highlighting undesirable traits displayed by Morton since childhood, and comment on his interactions with Wells and Charles Thomas Jackson (1805–1880). Next, we describe how Morton began and continued work with ether. We establish, with partial success, the identity of Morton's first patient to receive topical anesthesia with ether, and then describe the events of September 30, 1846. We conclude by examining the life of Frost and briefly review the salient details of Ether Day.

The Unsavory Morton

Morton's childhood years were divided between chores on the family farm and attending classes in a small dilapidated schoolhouse.¹⁰ Morton eventually attended three different schools (academies) in central Massachusetts: Oxford, Northfield, and Leicester. During his time at Oxford, he was falsely accused of breaking school rules by a classmate. He refused to confess to an offense he had not committed, but this resulted in his tragic expulsion for refusing to admit involvement and accepting punishment.¹⁰ Thus began his antipathy toward authority.

During his teenage years, Morton's parents sold the farm and became storekeepers. Financial difficulties forced Morton to leave school and return to his home and help his family. Shortly after he began work at a tavern in Charlton, Massachusetts, he was caught embezzling money. As a condition for leniency, the local sheriff demanded that Morton leave town and never return.¹³ Subsequent business ventures took Morton to Rochester, New York; Cincinnati, Ohio; St. Louis, Missouri; New Orleans, Louisiana; and Baltimore, Maryland. In each of these cities, he conducted illegal activities and cheated business partners who unfortunately placed trust in him.^{13,14}

Morton, Wells, and Jackson

Upon returning home, Morton confidently presented himself as an honest man of business instead of openly admitting his past unethical behavior. At around this time, Horace Wells visited the Morton family home to see Morton's father. This coincided with the younger Morton collecting money from an inheritance. Morton decided to take up dentistry, and after a brief stint as Wells' student, Morton established a successful practice in Farmington, Connecticut.¹⁵ Marrying into a rich family was very important to Morton, and Elizabeth Whitman, daughter of a wealthy and well-educated family, would ensure his path to financial security. However, her parents consented to this marriage only if Morton committed to becoming a doctor, since they did not consider dentistry a sufficiently noble profession. Although Morton and Wells had recently opened a joint dental office in Boston, Morton agreed to the conditions of the marriage, and began preliminary, rather unstructured studies in medicine under the direction of Jackson. On May 29, 1844, Morton married Whitman, and the newlyweds moved in with Jackson at his Boston home.^{13,14,16}

Having learned of the analgesic properties of nitrous oxide in December 1844, Wells contacted Morton and the pair approached John Collins Warren (1778–1856), the chief of surgery at Massachusetts General Hospital, with a request for permission to demonstrate the efficacy of their mixture during a surgical operation. Warren allowed Wells to administer the gas to a patient, but while extracting the tooth, the silence was broken by an agonizing scream from the young patient. Perplexed and embarrassed by this unfortunate turn of

events, Wells stood shocked for a moment, and then ran from the building humiliated as "the spectators laughed and hissed." Morton recalled later that "the meeting broke up and we were looked upon as having made ourselves very ridiculous."¹¹ Wells never recovered from this failure, and committed suicide in New York in 1848, but not before he too had laid claim to the discovery of anesthesia.⁹

The Elusive Miss Parrott

During the summer of 1844, Jackson told Morton about "tooth ache drops" which consisted of ether that a patient could apply directly to the bothersome tooth. Morton recalls, "I made an experiment with this ether in destroying the sensibility of a valuable tooth of a patient, Miss Parrott, by direct application ... I was obliged to apply it several times, but in the end sensibility seemed to be removed, and the tooth is now, to my knowledge, in a useful condition."¹¹

Little is known about Miss Parrott, except that she was from Gloucester, Massachusetts; her first name was never discovered.^{2,10,11,14,17,18} Public records show that the only Parrott family residing in Gloucester during 1844 was established by the father, William Walker Parrott, and mother, Eliza Pearce Parrott. William Walker Parrott (1773–1858) was originally from Portsmouth, New Hampshire, but had moved to Gloucester and married Eliza Pearce on April 16, 1809. The couple had six children, three daughters and three sons: William Pearce (b. March 2, 1810), John Pearce (b. December 3, 1811), Mary Georgiana (b. August 2, 1813), Thomazine Pearce (b. December 24, 1815), Elisabeth Eleanor (b. August 22, 1817), and George Brackett (b. June 11, 1819).¹⁹

Based on the patient being referred to as Miss Parrott, we assume she was not married, but marriage records could not be located for any of the daughters. Thus, based on the limited information available, it is impossible to identify which of the three daughters went to visit Morton for relief, but she would have been in her early thirties.

Improving on His Techniques

Morton began experiments with inhaled ether on animals, and ultimately on himself, and became confident in his ability to induce unconsciousness. In the spring of 1846, two students came under his tutelage, Thomas R. Spear and William P. Leavitt. In August 1846, he convinced both of his students to try ether; however, the results were discouraging as "they were much more excitable and less insensible."¹¹ Morton and his students concluded that better results would be obtained by using pure ether. Consequently, the students were sent down to the wharves of Boston to find a subject. As Leavitt recalls, "If I would find a man who would have a tooth extracted and have an experiment tried upon him which was perfectly harmless, he would give me five dollars, and he sent me out with Thomas R. Spear for that purpose."¹⁰ The pair returned empty-handed.

The Night of September 30, 1846

Morton and his students waited for a patient willing to submit to inhaling ether and becoming part of their trial. They got their wish when the doorbell rang at 9:00 PM, September 30, 1846. According to Mrs. Morton, at the door stood a caller with a heavily bandaged face, stating to her husband in great distress, “Doctor, I’ve got the most frightful toothache, and my mouth is so sore I am afraid to have the tooth drawn. Can’t you mesmerize me?” Morton replied, “I have something better.”^{10,17}

Frost would have consented to anything that provided relief – precisely the circumstance Morton required. He pulled a handkerchief from his pants’ pocket, saturated the cloth with the sickeningly sweet smell of pure sulfuric ether, and brought the wet cloth to the nose and mouth of the patient and “gave him something to inhale.”¹⁰ Frost “became unconscious almost immediately.” Morton proceeded, working under the dim light of a lamp held in the hands of Grenville G. Hayden, who “trembled visibly” as Morton inserted forceps into Frost’s mouth. Morton secured hold of the tooth, wrenched and pulled, and finally “extracted a firmly rooted bicuspid tooth.” Amazed at the sight, all watched silently as Frost “made neither sign nor sound but remained immobile.” Worried about the patient not waking up, Morton filled a glass of water and, as Mrs. Morton recounts, “emptied it full into the face of the unconscious man, who presently opened his eyes and looked about him in a bewildered way.”²⁰ Morton then watched as Frost opened his eyes, and excitedly asked him, “Are you ready to have that tooth out?” Frost replied, “I’m ready.” It was then that Morton pointed at a tooth lying on the floor, telling Frost the tooth was out already. Frost exclaimed at his freedom from pain, “Glory! Hallelujah!”^{20,21} Frost was still unaware of his role in this medical discovery, unaware he was the first subject to have inhaled ether for the purpose of abolishing pain during a painful procedure. So little was thought of his contribution, either by himself or others, that it was not even deemed worthy of mention in his obituary.^{22–24}

Aware of the significance of this momentous occasion, Morton ushered Frost to the front room and obtained his signature on the following sworn statement:

“This is to certify that I applied to Dr. Morton at nine o’clock this evening suffering under the most violent toothache; that Dr. Morton took out his pocket handkerchief, saturated it with a preparation of his form which I breathed for about half a minute, and was then lost in sleep.

In an instant more I awoke, and saw my tooth lying upon the floor. I did not experience the slightest of pain whatever. I remained twenty minutes in his office afterwards and felt no unpleasant effects from the operation.”

The certificate was witnessed by Dr. Hayden and A. G. Tenney of the Boston *Daily Journal*. Specifically, Hayden wrote the following:

“We witnessed the above operation and the statement is in all respects correct; and, what is more, the man asked where his tooth was, or if it was out.”^{11,21}

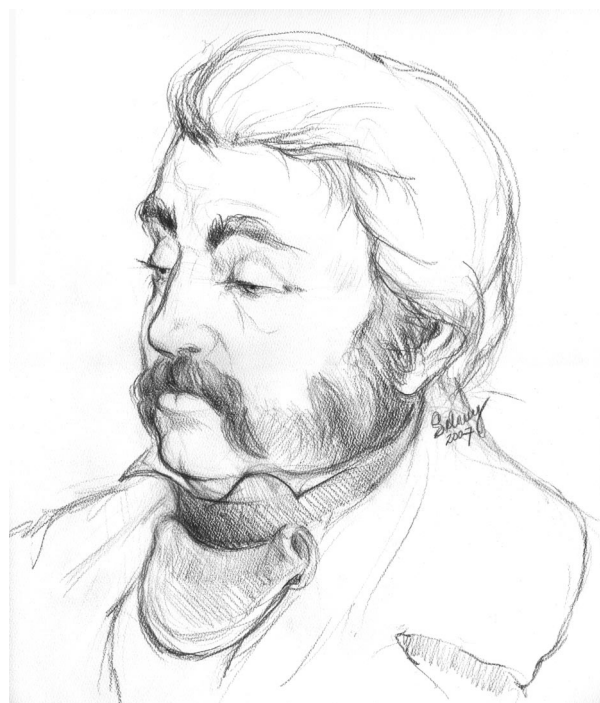


Fig. 1. Ebenezer Hopkins Frost (1824–1866). From the collection of the author, S.P. Desai.

The Life of Ebenezer Hopkins Frost (1824–1866)

Frost’s ancestry can be traced back several centuries to rural England.²⁵ It begins in the 1600s with Edmund Frost, born in County Suffolk, England, who married a girl by the name of Thomasine (unknown maiden name). A very pious man and a respected elder in his church, he followed the Rev. Thomas Shepard to the United States, taking his family aboard either the *Great Hope* or the *Defense*, and landed in Cambridge, Massachusetts in the autumn of 1635.

Edmund Frost’s great-great-grandson Solomon was born on February 3, 1797.²⁵ Solomon married Dorcas Hopkins on September 24, 1822, and the second of five children, Ebenezer Hopkins Frost, was born in Groton, Massachusetts, on December 7, 1824.²⁶ Throughout his life, and in all other public documents, he went by the shortened form of his name, Eben H. Frost. (fig. 1).

Frost worked as a wood sawyer and a baker, striving to provide for his family. His gifted voice enabled him to accomplish his dream of becoming a professor of music. Eben married Frances Heard, his first and her second marriage, but we could not obtain a record of the marriage certificate. Census data suggest that the marriage occurred before 1850. Frances Heard married her first husband, Samuel F. Dow, on September 16, 1844, and bore a son Samuel W. Dow, on September 16, 1844. Frances married Eben after she had been widowed.^{25,27} Eben and his wife never had children together, but Eben took on her son Samuel as his own, providing for all his necessities.

Through records in the Boston Directories, we can trace the life of Eben H. Frost, where he is listed as a baker in 1848 and 1849, boarding at 52 Friend Street at the home of William Heard, his father-in-law.

Frost successfully made a career transition to music sometime between 1849 and 1852, since the 1852 directory lists him as a professor of music at 2 Hull Street, a date after which his profession and address remain unchanged. Unfortunately, we lose track of him between 1860 and 1866, when he died.

At the time of his death, Frost was acclaimed as a singer, a professor of music, a member of the Händel and Haydn Society of Boston, and the late husband of Frances C. Heard. Frost's death record states that he died in Fitchburg, Massachusetts, of a "liver complaint," and that he was a professor of music, married, aged 41 yr and 9 months.²⁸ An announcement of his death was reported in both *The Boston Transcript* and *The Daily Spy* of Worcester, Massachusetts, on September 8, 1866.^{22,23}

His obituary, printed by *The Daily Spy*, read as follows:

"Prof. Eben H. Frost, the well known teacher of music, died at his residence in Fitchburg Friday morning. He has been in failing health for some months past, and a fever finally carried him away. Prof. Frost has long been a power in musical circles, and was especially successful in the teaching of vocal music. His name is associated with many successful musical gatherings."

The Boston Transcript's obituary described more of his character and personal attributes in an enthusiastic and inspiring manner:

"Mr. Frost possessed many qualities which made him a popular conductor of music associations and leader of church choirs. The most conspicuous of those was, his great energy which he threw into a large chorus. He seemed to have the power to make everyone sing. Full of life and animation himself, the singers caught the inspiration, and seemed to be conscious of a power which compelled them on. He was a great worker, and exerted himself to the utmost in his endeavors to accomplish the work laid out before him. He carried through the amount of labor which ordinarily would require, we might say, the work of a dozen men to perform, and in this way he laid the foundation for the disease which finally resulted in his death. As an instructor in the formation and cultivation of the voice, he had hardly an equal. . . . Some of our best singers have become so from studying with Mr. Frost. He possessed a frank and generous nature, and was ever ready to lend his assistance in all cases where he could benefit his fellow man. He will be greatly missed in musical circles, and it will be difficult to find one who will succeed in all respects as a conductor of musical societies so well as Prof. Frost."

Ether Day

A description of the events of October 16, 1846, is beyond the scope of this discussion.^{8,10,11,13,14,21} Surgeon Henry Jacob Bigelow observed Morton's use of ether anesthesia, approached John Collins Warren, chief of surgery and founder

of Massachusetts General Hospital, and convinced him that a public demonstration was in order. A written invitation was delivered to Morton by house surgeon Charles Frederick Heywood.

Augustus Addison Gould, a physician at whose home Morton was a house guest, had suggested the night before that valves might be necessary to avoid asphyxiation. Thus, Morton was extremely busy the next morning: obtaining all the materials necessary for the demonstration, visiting instrument maker Joseph Milner Wightman to modify the inhaler, and finally bringing along Frost from his home. Morton "had taken the precaution to request Mr. Frost to accompany him, to conduce in some way his relief in case of failure, and act as a voucher as regards to his statements of what he had already accomplished."¹⁰

Arriving a few minutes after his appointed time, Morton took the hand of Gilbert Abbott, "assuring him that he would partially relieve, if he did not entirely prevent all pain during the operation, and pointing to Mr. Frost, told him there was a man who had taken it and could testify to its success."¹⁰ In addition to portraying himself as a caring physician, this act gave him an opportunity to introduce the fellow he brought along as Frost, and announce his success with a former patient. His actions here remind us of behavior in his earlier years at the St. Louis boarding house where he would "make ostentatious displays of piety by loud reading and praying so as to be overheard."¹³ It was certainly Morton's triumph as everything went his way on Ether Day. He accomplished what he hoped for, as Gilbert Abbott was anesthetized successfully with ether and unaware that the tumor was removed from under his jaw. However, Morton never obtained what he coveted most from this – wealth from worldwide royalties.

Motivation

His obituaries describe Frost as a passionate soul, humble in his teaching efforts and dedicated to his fellow man, and seemingly living his life to the fullest. The serendipity of such a man ringing the doorbell at Tremont Street on September 30, 1846, eagerly submitting to ether, was a gift for Morton, who immediately realized its value. Morton immediately obtained a sworn statement from Frost and kept track of him until October 16, 1846. Frost, in his desire to help mankind, eagerly agreed to provide comfort and testimonial to another patient, Gilbert Abbott. Having learned from Wells' failed attempt, Morton was focused on only one thing: the success of the demonstration. He was inwardly frightened of repeating the earlier public failure of his onetime partner Wells. Morton would not subject himself to such humiliation, and he would provide proof of his brilliant discovery in the personage of Eben H. Frost.

Conclusions

October 16, 1846, the date remembered as Ether Day, commemorates one of the greatest discoveries in medicine. Its key

participants were Gilbert Abbott (the famous patient), John Collins Warren (the towering and authoritative surgeon), and William Thomas Green Morton (the embezzling business man turned dentist who administered ether in the first successful public demonstration of anesthesia). Failure was not an option Morton would consider, and he would leave no stone unturned to ensure success. Bringing Frost along was necessary in case things did not go according to plan.

The elegant façade of Morton's superb performance on that fateful day has been chipped away as more of his earlier exploits surface.^{13,14} As many of his contemporaries had warned, Morton was a villain. Alone, he did not have the scientific knowledge or training to develop and bring to fruition this medical breakthrough. However, the daring he did possess was proven even more important. Thus, we must not dismiss how he employed his talents to draw out information from his resources. He learned from Wells' mistake of using a less potent agent, he heeded Jackson's recommendation to use the more suitable ether, and finally he paid attention to Gould's warning about asphyxiation from rebreathing exhaled gas. He experimented on animals, himself, and Eben Frost before he was emboldened to attempt a public demonstration. We suggest that he brought Frost along as an insurance policy in the event of a failure. He was acutely aware that Wells too had had successes before he attempted the disastrous demonstration. We could ask ourselves: Would we have behaved differently? Morton's achievement was the medical equivalent of man taking flight, or first stepping into a boat. The perplexing life and career of this poorly understood man leaves us ambivalent, wondering whether we should respond with admiration or censure.

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