

“Memorializing the Civil War Dead: Modernity and Corruption under the Grant Administration”

By Bruce S. Elliott

Markers XXVI, Association for Gravestone Studies,
2011, pp. 15-55

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January 2012

Keywords: Civil War headstone project; War Department headstone program; Arlington National Cemetery; America's national cemeteries; Union soldiers; Montgomery C. Meigs; Edwin M. Stanton; William Worth Belknap; zinc, white bronze; Corinthian Monuments; gravestones; Spring Grove Cemetery; Eagleson & De Veau, New York City; Rutland Marble Co., West Rutland, Vermont; Pioneer Monumental Marble Works, Fort Scott, Kansas; President Grant; Edward P. Doherty, Washington; granite slab blocks; Dewitt Clinton Sage; Charles S. Jones, Washington; Thomas P. Morton, Washington; Samuel Green Bridges, Keokuk, Iowa; Richmond Quarry, Vermont; Sheldons & Slason marble mills, West Rutland, Vermont; white marble; stonecutters mallet chisel; Baird's Spring Garden Marble Works, Philadelphia, Pennsylvania; steam-powered equipment; inscriptions; iconography; sand blast machine; gangs of saws; pneumatic tools; Benjamin C. Tilghman, Philadelphia; Daniel W. Whitney, Troy, New York; Manhattan Quarry, Rutland, Vermont; W. H. Fullerton's marble works, Manchester Depot; D. L. Kent & Co., East Dorset, Vermont; Knoxville Marble Co.; stone trade unions; stonecutters' union; Gross Bros., Lee, Massachusetts; West Stockbridge Marble Co.; monument industry; Redfield Proctor, Vermont Marble Co.; Producers Marble Co., Vermont; mechanization; monument industry; twentieth century; Britain's Imperial War Graves Commission; Portland stone; Hopton Wood limestone; England; pantograph machine



Frontispiece A: Headboards at Arlington National Cemetery, c.1870, from a stereoview. Deterioration of the wooden headboards posed the question of how 300,000 permanent markers could be produced economically. Private collection.



Frontispiece B: Same view May 2009. The headboards have been replaced by headstones, and the pathways of 140 years ago have given way to additional modern graves. Photo by B. Elliott.

Memorializing the Civil War Dead: Modernity and Corruption under the Grant Administration

Bruce S. Elliott

The American Civil War in many respects was a prototypically modern conflict. It was fought by volunteer armies that incurred large-scale losses, and the proliferation of print media and photographic technology brought gruesome accounts and images into the nation's homes. The Civil War saw the beginning of the widespread use of embalming, employed by private contractors who returned home the corpses of members of wealthy families. The war also occasioned the government's acknowledgement of the necessity to recognize the democracy of sacrifice by marking the graves of all who fought for the Union, regardless of wealth or status.¹ It was no longer acceptable to leave the dead strewn on the field of battle, or bury them anonymously in trenches or common graves, and erect public monuments merely to the generals. Whether the pervasiveness of death in antebellum culture inured the citizens of the new Republic to the sacrifice of the nation's youth, as Mark Schantz has argued, or whether the populace was deeply shocked by the scale of the slaughter, as Drew Gilpin Faust has contended, there emerged a general consensus that citizen soldiers had to be commemorated as individuals and be accorded appropriate funerary rites.² For a state in the process of formation, official recognition of voluntary sacrifice was necessary to legitimate the state's employment of such colossal violence in its own defense.³

Despite this emphasis on memorializing the common soldier, the burgeoning literature on Civil War commemoration⁴ pays scant attention to the actual production of the headstones contracted by the War Department to replace the deteriorating wooden headboards in the new national cemeteries (Frontis. A and B).⁵ Faust in *This Republic of Suffering* explores the logistical as well as the emotional response to the slaughter. Her seventh chapter deals with the postwar re-interment program, the national cemeteries, the repatriation of Confederate dead, and the centrality of Ladies' Memorial Associations in the South, a story enlarged upon by Caroline Janney.⁶ Faust terminates her account in 1871, thus omitting consideration of the War Department's headstone program which began the following year.

Commemorating the dead of a modern war demanded modern solutions. Producing 300,000 individual permanent markers to standard

specifications tested the capacity of what was largely a craft industry to move closer to modernity, and this in two respects. First, the headstone project can be acknowledged as a significant milestone in the shift toward mechanized, deskilled mass production techniques. It marked the first time, indeed, that every stage in headstone production was accomplished by machinery. But the detailed narrative reveals that this transformation advanced by fits and starts and was not a simple linear progression. Secondly, it constituted a movement in the direction of modern business models, where innovation was advanced not by traditional craftsmen skilled in their trade but by entrepreneurs and businessmen putting technology, capital, and labor together.

Both innovations were broadly contested; indeed, every aspect of the project became a bone of contention, even a focal point for fury. Modernity was not a set of universally adopted, self-evidently advantageous new practices and principles. If one could praise the efficiency and cost-effectiveness of machine production, standardization, and larger markets, one might query the aesthetics and durability of the product, and lament the loss of the handcrafted, the diverse, and the local.⁷ In the view of Anthony Giddens, indeed, modernity implied the “disembedding” of social and business relations from face-to-face local contexts and webs of personal relationships. It necessitated learning to trust in “expert systems.... of technical accomplishment or professional expertise” of people one did not know and whose knowledge it was beyond one’s capacity to evaluate.⁸ It was especially difficult for those in the trade to accept that solutions to thorny problems might come from interlopers who lacked “the expertise of generations.”⁹ This could be profoundly unsettling. The Civil War headstone project was in many respects a hothouse environment for forcing these developments and the ensuing debates. As there was a substantial government contract involved, state subvention became a motivation for innovative solutions. The incentive of profits lured the entrepreneur, but also the charlatan and parasite. I will argue, however, that the charges of scandal attaching to the award of the contracts were intensified by the tendency to see the involvement of entrepreneurs and contractors with no previous experience in the stone trades as *prima facie* evidence of jobbery rather than as an appropriate and legitimate business form. The Secretary of War and the Quartermaster General were themselves floundering at divining a way to produce 300,000 stones affordably, and some of the irregularities of the contract process arose from adjusting the specifications to the emerging realities of new production techniques.

Distrust of Novelty: Meigs’ Iron Markers

Quartermaster General Montgomery C. Meigs (Fig. 1) himself proposed, in 1866, a technological solution to replacement of the wooden headboards: markers of galvanized iron, or cast iron coated with zinc. He

designed the headblocks himself (Fig. 2),¹⁰ but they proved unappealing aesthetically and were greeted with derision. They were denounced in the Senate as looking “more like a tin kettle than anything else, and are liable to be kicked off and kicked about,” a “burlesque rather than a monument.” The bill to establish the National Cemeteries was postponed for a month, and was passed in February 1867, mentioning only “a small headstone, or block” without specifying the material.

Concerns were raised about the wisdom of adopting a new and unproven technology, as well as about the appropriateness of their appearance. The Secretary of War, Edwin M. Stanton, submitted the question of the headblocks’ durability to the National Academy of Sciences. The experts reported back that if any of the iron were exposed to rain by chipping away of the zinc coating, a galvanic current would erode the zinc entirely leaving the iron fully exposed to the elements.¹¹ Bids, however, had already been called for in October 1866, with sample markers distributed to depot quartermasters’ offices throughout the country.¹² Ninety-two bids were received, the lowest from the Washington partnership of Strong & Donohue.¹³ Both partners were known to the Department, though neither had experience in foundry work. Samuel Strong, a New York builder, had been Meigs’ predecessor as general superintendent of works for the extension of the Capitol Building in the 1850s, but he had resigned following accusations by a Senate committee of extorting money from workmen and having an interest in the brick contracts.¹⁴ His partner in the proposal, William J. Donohue, was a conveyancer and general agent but he had been acting superintendent for the burial of Union soldiers under Lt. Col. James M. Moore following the war. Presaging the type of business arrangement that would produce the government headstones in 1873, these men with no experience in the metal trades retained a former Albany ironmaster at an annual salary of \$5,000 to lease a furnace and supervise the work.¹⁵ But for months nothing happened.

Rumors circulated about the outcome of the competition. The *Boston Post* complained in 1868 of “the celebrated tombstone job under Stanton and his gross mismanagement of the contract.” The *Post* reported that the contract had been let to the low bidders, but that two-thirds of the job had

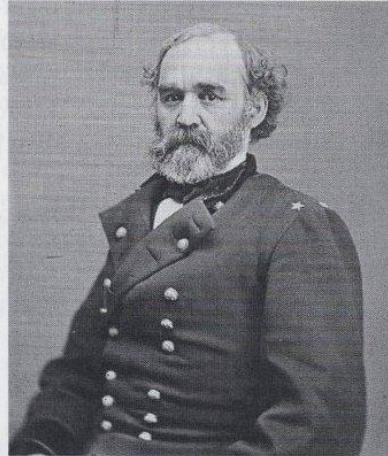


Fig. 1. General Montgomery C. Meigs (1816-1892), Quartermaster General U.S. Army 1861-1882, the officer in charge of national cemeteries. Library of Congress, LC-B813-6417 B [P&P]

subsequently been taken from them and doled out to some of Secretary Stanton's political cronies.¹⁶ In fact Stanton had referred the specifications to a high-level internal committee in 1867, which reported in favor of Meigs' design.¹⁷ Still unconvinced, Stanton in January 1868 had ordered that nothing be done about the markers, and so the contract was not in fact awarded. In 1870 the money appropriated for the project reverted to the Treasury.¹⁸ The Boston report cannot have been more than an elaborate unsubstantiated rumor. Strong & Donohue nonetheless sued for failure to award the contract, but the case was dismissed in May 1871.¹⁹ There is often said to be one of Meigs' cast-iron headblocks in Section 13 at Arlington National Cemetery, a reminder of the abandoned plan, but the marker there is in fact a later white bronze monument.²⁰

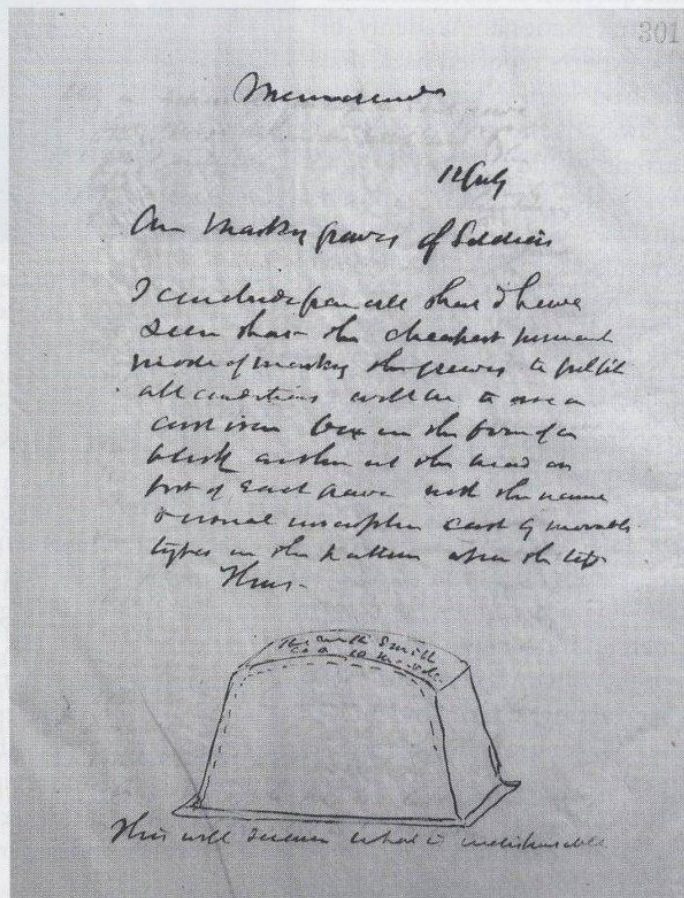


Fig. 2. Design for iron headblock by Quartermaster General Montgomery C. Meigs, July 1866. Meigs' design was widely disparaged and compared with a kettle. NARA, RG92 E294, Box 1, M.C. Meigs, press copies of private letters, 1865-67, f. 301, memo July 12 [1866].

Contested Memorial Landscapes

While the replacement of the headboards was on hold (1870), one of the inspectors of national cemeteries, Major Oscar Mack, drafted a report to the new Secretary of War, General William Worth Belknap (Fig. 3), appointed 25 October 1869, recommending that the Department follow the example of Spring Grove Cemetery in Cincinnati and employ unobtrusive 6"x6" granite markers flush with the ground. "Long rows, or large numbers, of uniform head-boards, or marble or other slabs, are not pleasing to the eye," Mack averred, "whilst scarcely any thing in a landscape is more agreeable to the sight than a fresh, neatly trimmed lawn."²¹ Spring Grove was the prototype of the late-Victorian lawn cemetery that would flower in the twentieth century as the memorial garden aesthetic. Adolph Strauch, the superintendent and godfather of Spring Grove, had won a convert in Mack, who readily acknowledged his advice.²² But Mack's boss, Montgomery Meigs, was already irked that his pet iron markers were being savaged in the press and the legislature, and miffed that Secretary Belknap was slighting his advice. He no doubt was less than thrilled that Mack had gone over his head and written directly to the Secretary of War.

Meigs responded, rejecting what was to become, in time, the modern aesthetic, but he did so to argue the primacy of another modern principle: universal commemoration, the naming of common soldiers and not merely of generals. It was imperative, he said, that each soldier have a stone with his name and details, for he was convinced that their great-grandsons would want to find their specific burial places and see their contributions honored individually, and not collectively or anonymously.²³ He had earlier rejected suggestions that his iron markers bear only the grave number: "I do not believe that those who visit the graves of their relatives would have any satisfaction in finding them ticketed and numbered like London Policemen or convicts. Every civilized man desires to have his friend's name marked on his monument."²⁴ He responded to Mack's report in similar vein:

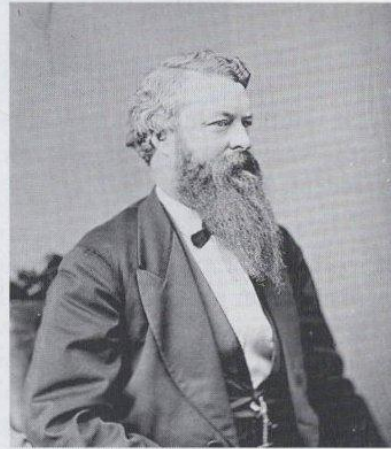


Fig. 3. General William Worth Belknap (1829-1890), Secretary of War 1869-1876. Belknap was accused of corruption over the 1873 headstone contracts.

Library of Congress,
LC-BH83-2519 [P&P].

[T]he usual practice of man is to raise, not to sink, a monument, and it had better be followed. The whole object is to gratify a sentiment;

and I think there can be no doubt that the mere numbering the dead would shock 99 out of 100 visitors, while all would be gratified to find the graves of their dead friends distinguished by inscriptions giving name and rank, date and Regiment, which last also gives the state from which he entered the service.²⁵

Meigs had his way in this, though dates of death were not at first included. The markers for the unknowns, however, ended up a variant of what Mack proposed, based on the Spring Grove model²⁶ (Fig. 4).



Fig. 4. National Military Cemetery, Chattanooga, Tennessee, showing markers for the known (slabs) and unknown (blocks), the latter based on a Cincinnati precedent. From a stereoview. Private collection.

In practice, the democratization and implicit egalitarianism of commemoration were compromised by the persistence and indeed intensification of traditional social categories, of class and racial boundaries. Others have recounted the controversies and consequences of the decision to exclude the Confederate dead (reversed at Arlington in 1901 and generally in 1906).²⁷ Commercial monuments already mingled with the headboards, erected by families that could afford them, and they would continue to be erected amongst the standard-issue headstones that followed (Frontis. A and B). (They are now allowed only in sections where precedents existed before 1947.²⁸) At Arlington signs still forbid visitors intruding on the lawn in sections reserved for high-ranking officers. The races, too, were segregated by "local custom" in national cemeteries. At Arlington colored troops and civilian contrabands were marginalized in the peripheral Sec. 27 (Fig. 5). Integration was mandated in 1948, but the regulation was applied only to newly surveyed sections until well into the 1950s.²⁹

Modern or Shoddy? The 1872 Competition

It was likely the Strong & Donohue lawsuit that delayed further action into 1872. Following passage of an amending Act of June 9, 1872, the

Quartermaster General issued a new circular on August 1 calling for proposals for headstones. Unfortunately no restrictions were noted as to size or type of stone, even in the "Information for Bidders."³⁰ An undated supplementary circular attempted to clarify that "no size, kind of stone, or style of letter is prescribed. The law [of February 22, 1867] requires the War Department to invite proposals for head-stones." The Department would adopt the style that seemed best suited from amongst the samples submitted, and use the same type in all the National Cemeteries.³¹ The wording was unfortunate, for "no size, kind of stone, or style of letter" was widely construed to mean that any material was acceptable, "iron, stone, marble, wood or composite coming under the bids," as one newspaper stated it, despite the specification of headstones.³²

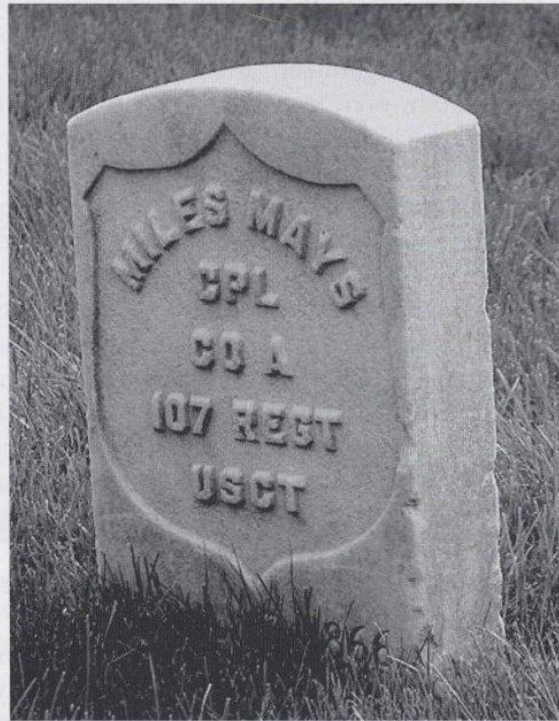


Fig. 5. Headstone for a member of the U.S. Colored Troops, Sec. 27, Arlington.
Photo by B. Elliott.

This generated a flood of some 350 submissions in an arresting variety of designs and materials ranging from the "exceedingly chaste and beautiful" to the utterly unacceptable. The samples were put on view to potential contractors and the public in a former art gallery on F Street in Washington. Marble works in Newark (Ohio), Cincinnati, and Louisville had submitted "the most fitting and beautiful designs in Italian marble, and the

prices, owing to importation direct by the river, are quite as low as those of Eastern yards." Dealers in Missouri, Ohio, and Indiana submitted sandstones, and a Missouri dealer polished red syenite that resembled Scottish granite. All of these were judged too expensive. Some bidders submitted models at the other end of the scale. Markers were made of "wood, iron, pottery, fire clay, plaster Paris, wire netting, and several varieties of patent stone." One pottery marker was said to resemble "a section of glazed Scotch sewer pipe," and one contractor sent "twenty galvanized iron tablets, exactly like music stands, with the standards cut down to a foot in height." One even submitted wire netting strung between two posts with lead lettering attached with fine wire.³³

The Congressional appropriation for 300,000 stones was, however, only \$200,000, or 66 cents each, hence the proposals for cheap artificial materials. This seeming parsimony generated some journalistic venom. "It appears," noted one correspondent, "that the poor soldier is liable to be made the victim of shoddy, even in his grave." It was not enough that he had suffered from shoddy hats, coats, boots, and rations in service; now "his grave must be haunted by the same sham and swindle in the shape of a last head-stone that is not stone at all, but some vile, 'artificial compound,' that will crumble away with winter's cold or summer's heat, or dissolve in the rains of autumn or spring."³⁴

It was expected that the War Department would select a model and then award contracts to manufacturers in various parts of the country. But how was General Belknap to do this when each applicant had bid on his own design and process? Belknap was nonplussed by the variety on offer and sought a legal opinion as to whether he was obligated to accept the lowest bid. The low bid was for a marker of burnt clay, but it still was projected to cost over twice the amount of the Congressional appropriation. The Judge Advocate General opined that the contract must go to the lowest bidder whose sample could be termed a headstone but warned that the Secretary could not enter into a contract for a sum exceeding what Congress had approved. Belknap therefore referred the whole matter back to Congress.³⁵

Despite the journalistic fulmination against "shoddy," the variety of materials and processes that were brought to public attention provide a revealing insight into American industrial inventiveness during Reconstruction and at the dawn of the Gilded Age. Even as the bureaucrats were drafting the terms for a third competition, Meigs' office continued to receive plausible if unorthodox submissions. Iron founder Walter Withers wrote from Atlanta, claiming to be an English immigrant and a "union man" (though his wartime record suggests otherwise). He enclosed a tintype photograph of a cast iron "head piece" he was putting up in Confederate cemeteries for \$1.50 each (Fig. 6), but promised "a much prettier one to adorn the graves of the defenders of our Country!"³⁶ In April 1873 Milo A.

Richardson and O.J. Willard, the originators of the pure zinc monuments that would soon begin to proliferate nationwide under the trade name “white bronze,” submitted details of their new product. This was just a month before the partners contracted to have their first commercial models cast in Patterson, New Jersey. They were initially marketed as “Corinthian Monuments,” in allusion to the durability of the relics of classical antiquity, but the partners soon sold out to a firm in Bridgeport, Connecticut. The marker proposed to the government was not what the Bridgeport company later produced. At this point Armstrong and Willard were still burning the inscriptions onto heavy plate glass rather than casting them into the zinc, nor had they submitted their patent application.³⁷

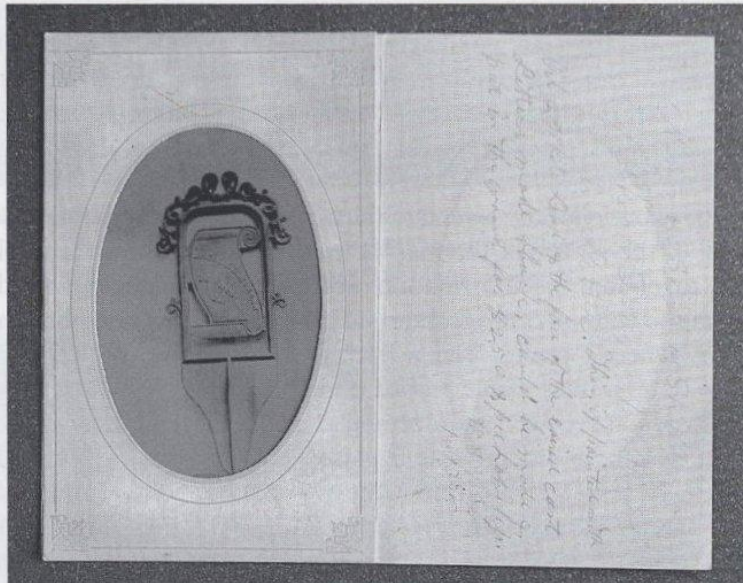


Fig. 6. Tintype photograph of a cast iron marker proposed by foundryman W.S. Withers of Atlanta, 1873. The 1872 competition showcased a wide variety of materials and technologies. NARA, RG92 E225, Box 786.

Thinner Stone or Foreign Labor: the 1873 Competition

The legislators raised the appropriation to \$1,000,000 on March 3, 1873, and a new request for proposals was issued in June, calling more conservatively for markers “of durable stone.” The contract was to be awarded to “some responsible person or persons whose samples and bids shall in the greatest measure combine the elements of durability, decency, and cheapness.” This wording left it to the Secretary’s judgment whether to award the contract to the lowest bidder, a point that was not universally comprehended, and that would cause Belknap much trouble later.³⁸ The terms of reference appeared

to give Belknap considerable latitude but raised the suspicions of bidders who were reluctant to incur considerable expense researching and preparing bids only to see another inconclusive outcome, or one influenced by graft or political considerations. Bids would be opened on September 6, 1873, in the presence of the bidders.³⁹

Two kinds of markers were specified. Numbered blocks six inches square by three feet long, but extending only four inches above ground level, were to mark the graves of the unknown. Identified remains were to be marked with headstones four inches thick, ten inches wide, twelve inches above ground and two feet below (south from Washington) and two feet six inches below (north of the capital).⁴⁰ The source of the headstone design is uncertain. George A. Meyer, once clerk in charge of national cemeteries, thought later that the design had been prepared "upon a large sheet of brown paper" by a firm called Bridges and Richardson, but the chosen design—text cut in relief within a recessed shield on a slab of white marble—was very similar to a design submitted the year before by a Kansas marble dealer (Fig. 7).⁴¹

The experiences of several of the bidders in this competition suggest something of the nature of the marble industry and of how the applicants proposed to obtain the information needed to calculate their bids and accomplish the volume of work required. They also show how they thought they might generate profits from what the Secretary of War still privately believed to be an unreasonable proposition,⁴² and how they sought to ensure that their products received an informed and advantageous hearing.

One of these bidders was Eagleson & De Veau, marble dealers in New York City (Fig. 8) who were extensive suppliers of Vermont stone to dealers in the American South. They contracted exclusively with one of their major suppliers, Rutland Marble Co. of West Rutland, Vermont, to provide "stone in the rough" should they succeed in their bid.⁴³ In their submissions they highlighted the fragmented nature of the trade, and expressed their understanding that they were the "only parties possessing independent command of the requisite Quarry and Mill facilities," the consequence of their partnership with the West Rutland quarrymen. But they argued frankly that no one could meet the specifications and come in within the million-dollar Congressional appropriation, and in fact only thirteen of the more than eighty bidders did so.⁴⁴ Their solution was to suggest that West Rutland marble was durable enough to stand upright even if the length below ground were halved to a foot and the thickness reduced from four inches to two.⁴⁵

Eagleson & De Veau had submitted a bid in 1872.⁴⁶ They were prepared to enter the ring a second time, but free-floating rumors created concern about the fairness of the competition. They spent a great deal of money gathering the information on which they based their bids. They had written to transportation companies throughout the country and paid friends to

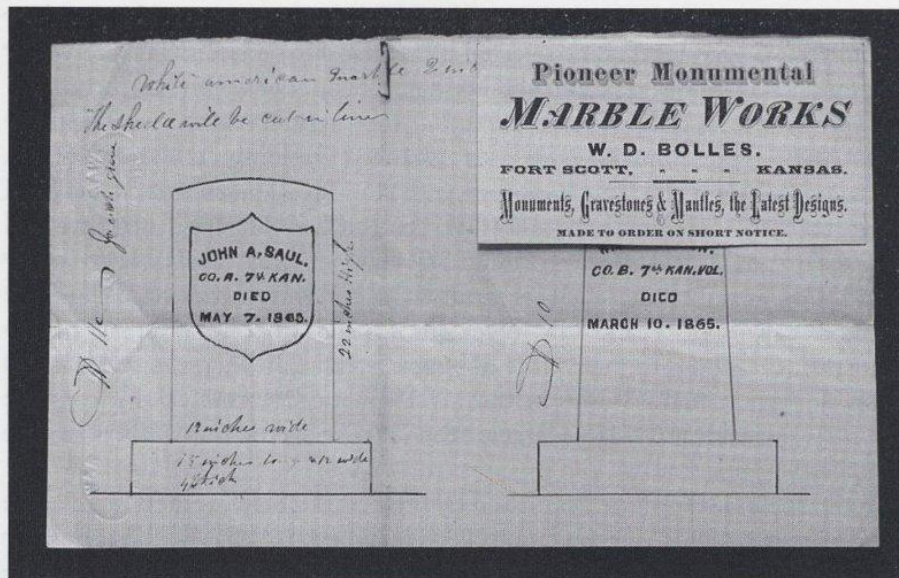


Fig. 7. The headstone design adopted in 1873 was similar to one proposed the year before by W.D. Bolles, a marble mason of Fort Scott, Kansas.
NARA, RG92 E225, Box 290: Cemeteries, National.



Fig. 8. Eagleson & De Veau, marble dealers of New York City, worked with one of their main suppliers, the Rutland (VT) Marble Company, to bid on the military headstone contract, but exceeded the allowable unit cost.
Vermont Historical Society, Doc. 423:13.

investigate the locations of the cemeteries. Not knowing anyone in the War Department, they tried to safeguard their interests by approaching a clerk in the department, Charles F. Benjamin, for advice. At his suggestion, they drew up and submitted a pamphlet advocating the advantages of marble (especially the West Rutland variety).⁴⁷ Benjamin also recommended that

they contact an insider unconnected with the contract to lobby on their behalf, but General E.C. Rice rejected out of hand the \$5,000 they offered for his services as totally unreasonable for a million-dollar contract.

Eagleson & De Veau argued that the margin was so small that the most they could hope to gain was enhanced standing in the trade.⁴⁸ In agreeing to supply the New York firm with stone at 32.5 cents per superficial foot (for two-inch slabs), by contrast, the Rutland Marble Company had entered in the details of their minutes that it was "very desirable" to enter into the arrangement because the contract "will return a very large excessive profit over present prices."⁴⁹ However, since Eagleson & De Veau still had to transport the stones to their place of business, have the inscriptions cut, and then ship and set the stones in the myriad national cemeteries across the country, their margin may well have been narrow, even if that of their marble supplier was not.

Meigs clearly was impressed by the document submitted in advance of the Eagleson bid. Meigs wrote to Secretary Belknap that he thought their fine-grained white marble preferable. He accepted that West Rutland had the best quarry, but cautioned that if its marble were specified:

the whole business is thrown into the hands of the proprietors of the West Rutland quarry, as they in fact have a monopoly of that particular quarry of marble, and for grave stones it is generally considered to be the best native marble. If the sample is made of one not quite so fine there will be competition, and the West Rutland will probably be the lowest, or within the limit fixed by law, as that Company has, I understand, the largest capital and best machinery.⁵⁰

No technology was specified in the advertisements, as the goal of the War Department was to encourage bidders to devise the means of producing the most durable, appropriate, and reasonably-priced markers.

Maurice P. Walsh of Walsh Bros., also of New York City, was convinced that only Italian marble could meet the quality requirements and come in under the appropriation. He arranged to have the work done in Carrara, where stonecutters were paid forty to fifty cents a day rather than the four dollars prevalent in the United States. What he would have to pay in customs duties he would save in transportation costs, for during the cotton season he could ship headstones from Italy to New Orleans for five dollars a ton, the same amount it cost to send stones by rail from Vermont to New York.⁵¹ As most of the national cemeteries were in the South, three-quarters of the stones would have to be shipped to New Orleans in any case. But the costs of preparing the bid were substantial. Walsh visited or sent agents to

all seventy-two national cemeteries, calculated the transportation costs, and sent a man to Carrara for two months before concluding that he could make a decent profit by taking advantage of cheap foreign labor. All of this cost Walsh between \$7,000 and \$8,000, but his company refused to honor the expenditure, with the result that Walsh left the firm and set up on his own.⁵² Following opening of the bids, Meigs was impressed with Walsh's figures and recommended his proposal to Belknap, rather than the West Rutland marble he had advocated on the eve of the competition.⁵³ In the end Belknap rejected Walsh's bid, claiming that President Grant would not have foreign stone over the graves of American soldiers, though a "Buy American" policy had not been specified in the call for proposals.

Entrepreneurs Over Craftsmen: Awarding the Contracts

Five contracts were signed late in 1873 because Belknap was concerned that none of the bidders had the means to accomplish the work independently.⁵⁴ None of the successful bidders had any experience in the quarry or monument industries, but all were entrepreneurs and contractors of various kinds who saw an opportunity to do what they claimed to do best: bring together the technology, capital, and labor to accomplish a job. Many people at the time (including quarrymen such as William Patrick of Knoxville, Tennessee, and one of the clerks in the War Department) were highly suspicious of this lack of expertise, and concluded that if contracts were to be given to men unconnected with the stone trades, corruption and jobbery must be behind it.⁵⁵ Indeed this was the conclusion drawn by the superintendent of the Rutland Marble Company that had partnered the bid of Eagleson & De Veau:

The head stone contracts, as I supposed from the first, have been a matter of jobbery & ring favoritism: there are too many wheels within wheels in this Washington business. The parties to whom the bids are awarded I do not think, are marble men, not one of them. The Keokuk man, Bridge, is a tinker or watchmaker, and I don't think one of them can fill their Contract at the price awarded.⁵⁶

Belknap had concluded that granite was the most durable material and was therefore preferable, but the only low bid for granite markers came from Edward P. Doherty of Washington. He had bid on the work for only one cemetery, in Fredericksburg, Virginia, and he was given the contract for the granite slabs and blocks there.⁵⁷ Doherty was a Canadian who had moved to New York in 1860, served in the cavalry during the war, and commanded the

party that subdued Lincoln's assassin. Following the war he was a contractor for roadworks in the capital.⁵⁸ Despite problems fulfilling the contract, the stones at Fredericksburg are indeed of granite and met the original specifications (subsequently altered) for capital letters twice the height of the rest (Fig. 9).



Fig. 9. Granite headstone at Fredericksburg National Cemetery, VA, displaying the original sizes of lettering proposed.
Photo courtesy Tom Ledoux, vermontcivilwar.org

The second contractor, Dewitt Clinton Sage (1836-1900), had been a manufacturer since inheriting a factory at sixteen; he had operated a cartridge plant in Middletown, Connecticut, during the Civil War, employing 150 women at five dollars a week. After the war he manufactured silver-plated butts and hinges there, and later he operated a brick factory in Cromwell, Connecticut.⁵⁹ Sage bid high on the slabs (\$5) but so low on the blocks (\$2.42) that it was claimed the government saved \$125,000 by giving the rest of the block contract to him.⁶⁰

The remainder of the contract, for headstones, was divided amongst three bidders, none of them the lowest. Charles S. Jones of Washington had been appointed doorkeeper of the Senate in 1858, was an army paymaster for six years, and in 1870 was made Indian agent for various tribes in Montana. He conceded that he had no experience in the stone trades: "No, sir; but I had character and credit."⁶¹ Thomas P. Morgan, also of Washington, was a more

formidable figure. An apothecary by training and latterly a general contractor, he was active in D.C. politics and a few years later was simultaneously Superintendent of Police and a member of the Board of Fire Commissioners. He became afterward a District Commissioner, and a Washington school was named for him.⁶²

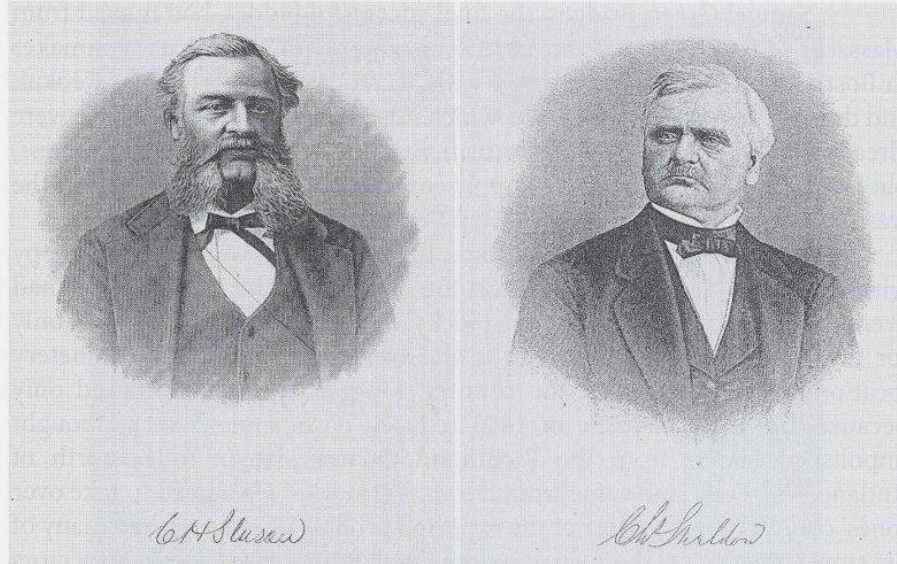
Samuel Green Bridges, the final successful bidder, had moved from Massachusetts to Keokuk, Iowa, in 1857 after apprenticing with a watchmaker in Boston. He had been acquainted with Secretary Belknap both in Keokuk and during their Civil War service, which raised a red flag to critics who were already expecting to see rank favoritism. Bridges was in the jewelry business, but from 1868 to 1873 he had a supply contract for government posts in the west, which he secured before Belknap became Secretary of War.⁶³

Though successful in their bids, the contractors were far from happy with the terms. Sage had bid low on the blocks, but the other bidders had averaged their bids for slabs and blocks and were offered contracts only for the more expensive slabs, but at the averaged price, and for cemetery locations scattered all over the country. Morgan agreed to proceed only because the financial panic of 1873 reduced costs somewhat. He bought unpolished blanks from the Richmond Quarry sixteen miles north of Rutland, Vermont, and some from Dover, Vermont.⁶⁴ He agreed to take over Jones' contract for a quarter of the expected profits (\$2,125) but had many of his stones rejected at the quarry by the Quartermaster General's inspectors as not white enough. He concluded that he could do as well by selling out as by continuing, thereby avoiding further delays and bother. After completing one cemetery and starting on four others, Morgan assigned both contracts to the final bidder, Bridges, for \$14,000.⁶⁵ Bridges also secured Sage's contract for the more lucrative blocks in October 1874 and agreed with Sheldons & Slason to supply marble at 81 cents a block. Sage appears, however, to have remained at least a front man for the operation as he and his agents were recorded actively setting stones into 1876.⁶⁶

New Technology: the Sand Blast

The question arises as to how Bridges, a jeweler with no experience in the monument trade, proposed to fulfill the various contracts. He did this by subcontracting the work to Sheldons & Slason (Figs. 10 and 11), a quarry firm in West Rutland, Vermont, that provided the marble and advanced the money to ship and set the stones.⁶⁷ But he also realized that the job could not be done in a reasonable time by hand. The sawing and polishing of marble with water-powered machinery had been pioneered in the 1790s, and the larger city monument firms were employing steam-powered equipment by the 1840s. Inscriptions and iconography were, however, still accomplished by batteries of men wielding mallet and chisel (Figs. 12a-c).⁶⁸ Bridges estimated

the work would take five years, which is what the Rutland Marble Co. also had calculated when planning their bid with Eagleson & De Veau. Bridges found that by consolidating the contracts he could make better deals for freight, but most importantly he contracted for patent rights to a new invention, the sand blast, for a royalty of four cents a stone.⁶⁹



Figs. 10 and 11. C.H. Slason and Charles Sheldon, of the West Rutland, Vermont, quarry firm Sheldons & Slason, contracted with S.G. Bridges to provide the marble and advance the money to ship and set the government headstones.

This was the first time Sheldons had produced finished monuments.

History of Rutland County, Vermont (1886).

The sand blast was patented in 1870 by General Benjamin C. Tilghman of Philadelphia.⁷⁰ As “a new invention for engraving glass,” it was demonstrated at the American Institute Fair in New York in 1871 and at the Maryland Institute Fair in October 1872.⁷¹ Meigs had been aware of the sand blast, writing to Belknap on the eve of the competition that “[t]he use of the sand blast will permit the whole inscription to be engraved at reasonable cost.”⁷² There had been proposals to employ the sand blast in 1872, but Eagleson and De Veau did not propose to employ it, and, as we have seen, Meigs ended up favoring Italian handcarving.⁷³

Bridges did more than secure the patent license and supply three of the machines to Sheldons. A contemporary account of the process by a West Rutland doctor credits Bridges with first demonstrating the practical utility of using the sand blast for engraving marble, “determining proper distance between the end of the blast tube and the face of the stone,” and the force of the steam, by trial and error, and conducting experiments in Keokuk using sands from the shoals of the Mississippi. In the end sand from the beaches at Northport, Long Island, was employed at West Rutland.⁷⁴

Fig. 12a.

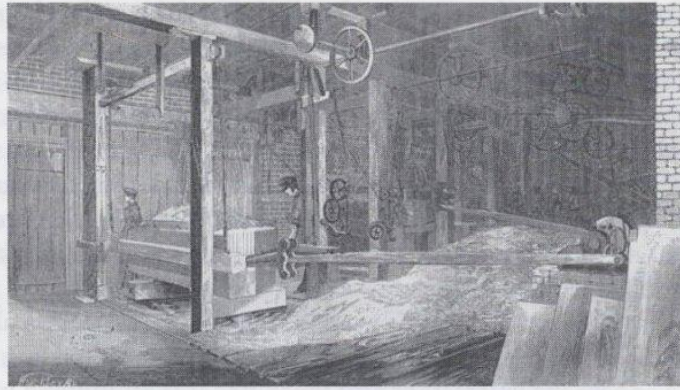


Fig 12b.

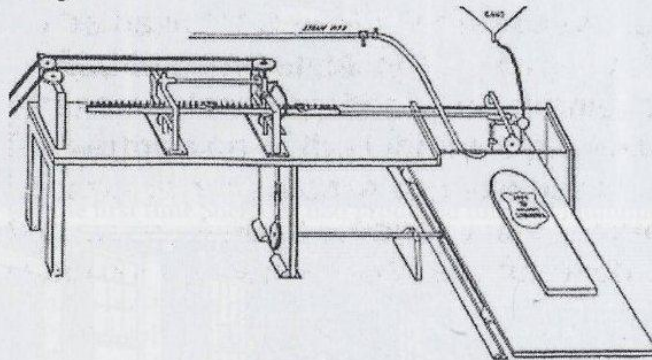


Fig 12c.



Though sawing (Fig. 12a) and polishing (Fig. 12b) had long been mechanized in the larger city marble works, inscriptions and iconography were still hand cut by batteries of stonecutters wielding mallet and chisel (Fig. 12c). Baird's Spring Garden Marble Works, Philadelphia, Pennsylvania. *Godey's Lady's Book*, January 1853.

Slabs were cut from seven-ton blocks by forty-eight gangs of saws at Sheldons' West Rutland Mills, running night and day. The slabs were set on a moveable table (Fig. 13), and "lettering boys" selected one-inch iron letters from a type box and spelled out the inscription on a hot griddle, sticking them onto the stone with heated shellac. Sand from the blast gun cut each inscription in four minutes, "every grain of sand ... a miniature chisel, cutting out a particle of marble."⁷⁵ Charles Sheldon estimated he would have needed 200 men, all unionized stonecutters at four to five dollars a day, to do the work by hand. Bridges claimed that one man could engrave manually about ten inscriptions a day, but that raised letters in relief in a shield, the style adopted, reduced production to three.⁷⁶ By contrast, with "a small force of boys" to adhere the letters, the three machines at West Rutland turned out 800 stones a day. At four minutes per inscription, this suggests that all three machines were running at least eighteen hours daily. Allowing for the time needed to remove one stone from the machine and replace it with another, and for frequent replacement of the blast guns (which wore out and had to be replaced every four or five hours, despite being cast in steel in Troy, New York) it is likely that, like the gang-saws, the sand blast machines operated through the night.⁷⁷



Sand-Blast Stone-Machine.

Fig. 13. Sand-Blast machine at West Rutland, 1875.

The sand blast allowed Samuel Bridges to reduce the unit cost under the terms of his contract. *Manufacturer and Builder* 8, no. 10 (October 1876): 229. Courtesy of Cornell University Library, Making of America Digital Collections.

The "Headstone Job" and the Fall of General Belknap

Though the quality of the sand-blasted inscriptions was questioned, scandal erupted in 1876, not over the quality of the headstones but over the contract process. Secretary Belknap was already embroiled in controversy over payments allegedly made to his wife by the recipient of a western trading post contract. The accusations were part of a campaign by a Democratic Congress to unseat Republican President Grant at the next election, and the Belknap

accusations broke not long after Grant's private secretary, vice president, and brother had been implicated in a conspiracy to help distillers evade the liquor tax (Fig. 14).⁷⁸ Belknap resigned to save his wife from further investigation, but his insistence that he knew nothing of the payments was not widely credited. His prompt resignation, hours before the House filed articles of impeachment, saved him from conviction in his subsequent Senate trial, but only because a number of Congressmen believed they had no jurisdiction to try an official who had already left office.⁷⁹

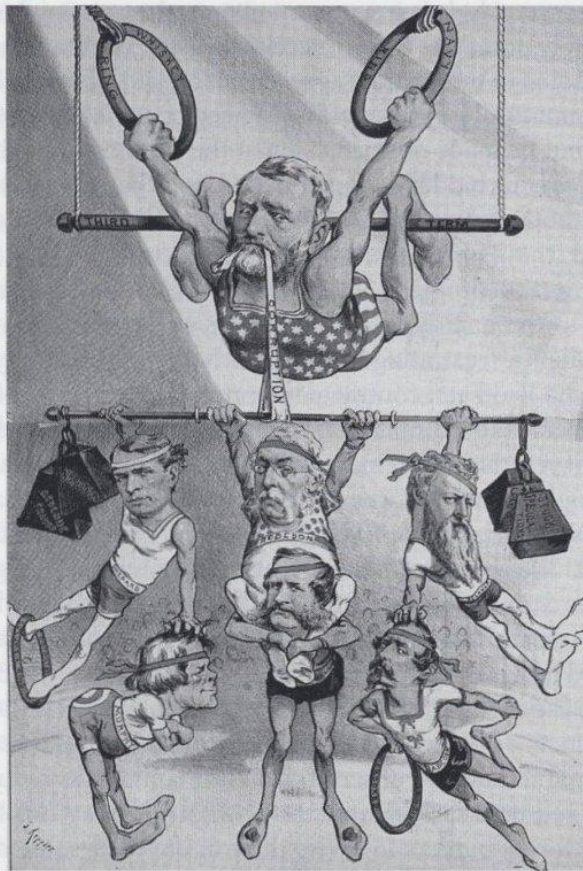


Fig. 14. Accusations against Secretary of War Belknap (middle row right) were among several *causes célèbres* besetting the Grant administration.

"Grant and the Scandals", *Puck*, 4 February 1880, 282-283.

Library of Congress repro no. LC-USZC4-5606

Though there had been much grumbling about the headstone contracts at the time they were awarded, bidders now rehearsed old grievances to the press and to the House Committee on Military Affairs, making the "headstone job" a late addition to the Secretary's woes. Press allegations that

Belknap pocketed \$90,000 on the tombstone contracts⁸⁰ seem unlikely given the narrow margins, and at the House hearings in 1876 no one would support the accusation. Serious consideration was given to claims that Bridges' bid had been slipped in after a number of the others had been read. Bridges denied it, and testimony before the Committee was inconclusive.⁸¹ Walsh was convinced he had seen a bid added, but could not be positive it belonged to Bridges.⁸² A clerk was reported to have said that one bid fell out of the basket in the vault and upon discovery was brought into the room.⁸³ The clerks recalled several bids being presented once the opening had begun, but said Meigs simply noted the time of receipt without reading them; they were subsequently noted in the abstract as received too late.⁸⁴ Walsh claimed in the press, more dramatically, that the bids had been opened and resealed prior to their reading, but he made no such claim at the Congressional hearings.⁸⁵

Unsuccessful bidders complained about changes to the headstone specifications, both before the closing of bids and following award of the contracts, and the House Committee concluded that they constituted irregularities in the process. Most, however, arose from adjusting the specifications to the emerging realities of production. In July 1873 Meigs had been through a frustrating exercise with William Struthers & Sons of Philadelphia who had been contracted to produce prototypes of the selected designs. Struthers had complained that the specifications (drawn up by Belknap but not yet advertised) increased costs because of Belknap's ignorance of the technologies employed in sawing and polishing the slabs.⁸⁶ At the end of July, Bridges, then an intending bidder, had written for clarification as to whether the rank, name, and state might be abbreviated. Meigs forwarded his letter to the Secretary, observing that the decision should be published so that bidders would remain on an equal footing. Belknap decided in the affirmative, and Meigs issued a press release on August 16.⁸⁷ As Bridges in the end decided to use the sand blast, the change did not materially affect his own bid, but by reducing the number of letters it would have allowed competing bidders planning to have the inscriptions cut manually to reduce theirs. As bids were opened on September 6, the notification may not have allowed sufficient time for all bidders to revise their figures, but some doubtless did so.⁸⁸

In May 1874, before much work had been done, Belknap agreed further to reduce lettering to a uniform one inch in height and one-eighth inch in depth. Initial letters were to have been double height but this made it more difficult to fit in the inscriptions, and deeply-cut relief letters were at greater risk of chipping. He also allowed the edges of the slabs to be slightly rounded when it was explained that sharp edges fresh from the saws were likely to be damaged in transit. Finally he clarified that the term "white marble" signified marble of monumental rather than statuary quality. These

alterations were seen by disgruntled bidders as *post-facto* cost savings, but seemed sensible pragmatic adjustments to the officials involved.⁸⁹

Robert Prickett, who studied the Belknap scandals many years ago, concluded that “while the circumstances of the contracts were unusual, to say the least, no criminal offense could be definitely proved.” This was possibly “just a case of patronage with no bribery involved ... it is more likely that he was just doing an old friend a favor.”⁹⁰ In the context of the trading post scandal and other accusations encircling Grant’s Cabinet, the accusations were believable, and certainly the Democrats seized upon the tombstone business as another clod of mud to hurl at the Grant administration in the coming election. The Democratic Party’s *Campaign Text Book* included a section entitled “Jobbery in Gravestones: Even Dead Soldiers are Victimized by Republican Sharks.”⁹¹

The Committee on Military Affairs concluded that Belknap’s division of the contracts, his failure to award to the lowest bidder, and his changes in the “form and dimensions of the head-stones, without a corresponding change in price” were abuses of authority. Even before their report was tabled, Belknap’s successor had assigned the management of national cemeteries and headstone contracts entirely to the office of the Quartermaster General.⁹² While Belknap’s decisions seemed questionable in hindsight, most of the alleged irregularities arose from the unfamiliarity of new technologies and business models. The changes in the terms of reference were, however, taken as evidence of favoritism toward particular bidders and contractors, lending credence to the suspicions that had arisen when the contracts were awarded to men with no prior experience in the marble industry. In his lengthy internal report on the affair, however, Oscar Mack concluded that the evidence showed “on the part of the Secretary of War a desire to aid the contractors in every way consistent with the true interests of the Government – and not to tie them down to the strict letter of the contract when the Government would not be benefited thereby.”⁹³

Beyond the National Cemeteries: the 1879 Contracts

Congress on February 3, 1879, approved a suggestion by the War Department that the government headstone program be extended to include the graves of Union soldiers buried outside the national cemeteries. Quartermaster General Meigs called for tenders on March 31. It was estimated that 17,000 headstones would be required, and the specimen monuments were displayed in the Quartermaster General’s office in Washington. American white marble was demanded, with grades carefully spelled out in the specifications. Outside the national cemeteries, the thickness of the stones was reduced to two inches and the company and regiment of the deceased were added to the inscriptions. Meigs had favored a two-inch

thickness from the outset, and had also wanted a more complete inscription. Now fully in control of the contract process, Meigs seems to have shaped the 1879 legislation to his liking.⁹⁴

The project met with some opposition, one newspaper suggesting that "the secretary of war may expect to be severely criticized for placing headstones at the Union soldiers' graves. These headstones, like the floral decorations, tend to keep the embers [presumably of North/South animosity] alive." The *Indianapolis Sentinel* rejected this suggestion, arguing that there would be no "severe criticisms" if soldiers' graves were marked "with a comely and honest headstone." But they cautioned the Secretary of War to "keep his eyes open on the old rings which encircled every species of contract during Grant's administration" and to guard against the "swindling and rascality connected with it. . . . The old soldiers' headstone swindle will not be forgotten soon."⁹⁵

Despite the continuing sensitivity of the question, especially in Democratic circles, the contract was awarded to Daniel W. Whitney of Troy, New York—and Samuel G. Bridges of Keokuk, Iowa. Clearly official blame for the 1876 scandal had not attached to Bridges.⁹⁶ Whitney had had some prior experience with the War Department. In 1863, when a resident of New York, he had contracted for 2,500 black walnut headboards at eighty-one cents each.⁹⁷ Bridges put to good use the experience he had gained from his earlier contract. Early in 1880 he leased the Manhattan Quarry at Rutland from Vermont's ex-Governor Page and repaired and enlarged W.H. Fullerton's marble works at Manchester Depot, equipping Fullerton with sand blast machinery to do the lettering.⁹⁸ The contracts had issued, however, just as the long recession of the 1870s began to ease, and almost immediately "prices for labor and materials went up." Whitney found he was losing money and tried to recover his position by appealing to the GAR or the soldiers' relations to pay the cartage and freight and absorb the costs of setting the stones. Though this arrangement was soon to become a standard feature of the contracts, at this point it was contrary to the terms and he was compelled to forfeit his bonds.⁹⁹ By 1883 the contracts required that the stones be delivered to the nearest railway station, and the parties applying for the markers (often GAR branches) were required to provide satisfactory evidence that they would be collected and set.¹⁰⁰ Whitney's contract was re-awarded to D.L. Kent & Co. of East Dorset, Vermont. Complaints about misdirected and undelivered stones continued to flood into Washington for some time after Whitney was relieved of his contract.

The Sand Blast vs. Pneumatic Tools: Quality, Deskillling, and Labor Unrest

To what extent did the application of sand-blast technology move the monument business from craft to industry? Charles Sheldon testified

before the House Committee on Military Affairs with regard to the original headstone contract that “nothing made it possible to do that work without a large loss except the sand-blast.”¹⁰¹ Their participation in Bridges’ contract involved Sheldons in the marble finishing business for the first time (prior to this they had sold dimension stone and blank slabs), and Bridges used sand blasting to fulfill his 1879 contract as well, though with a different partner. But when Sheldon & Sons secured the contract for supplying 11,000 more soldiers’ headstones in 1883, they reverted to lettering by hand, “the old sand blast method not having been found so durable.”¹⁰² William Patrick of Tennessee’s Knoxville Marble Company had testified in 1876 that the sand blast cut stone irregularly, sometimes to a depth of an eighth inch, sometimes a quarter. When Bridges was experimenting with the machinery in Keokuk, the iron letters sometimes blew off. The workmen then cut out replacement letters and stuck them on with shellac. The application of heat to do this, however, turned the marble surface to lime, and Patrick alleged the letter could easily be wiped off with a handkerchief.¹⁰³ As he was a disgruntled bidder, we may have to allow for a hint of sour grapes. Successful bidder Thomas P. Morgan by contrast was a fan of the new technology: “It is novel and it looks prettier.” But he acknowledged that it cut relief lettering better than incised letters: the lines and angles of the recessed letters were not sharp enough.¹⁰⁴

We think of the sand blast as the technology that facilitated the rise to dominance of the harder and therefore more expensive granite over marble toward the end of nineteenth century, but sand blasting only became important in the granite industry around 1915, presumably after its technological proficiency was improved.¹⁰⁵ Pneumatic tools (Fig. 15), a technology adopted in the industry in the early 1890s, did much to facilitate granite’s proliferation. Like the sand blast, compressed air had reasonably contemporaneous applications in a variety of industries, from mining coal and caulking steam boilers to repoussée work in metal and “every form of stone-cutting, from the dressing of the rough block to the execution of the most delicate carvings in the studio of the sculptor.” These applications of a patent of 1885 were all in practical if not wide-spread use by 1889.¹⁰⁶

A crucial difference between the two technologies was that the twentieth-century application of the sand blast brought about a deskilling of the craft, whereas the pneumatic tool enhanced the work of the skilled craftsman. The sand blast was resisted by the trade unions in Georgia, and likely elsewhere, for this reason.¹⁰⁷ A manufacturer observed that a pneumatic tool “combines the intelligent judgment of the workman with the economy and rapidity of power-driven machinery,” reducing costs and increasing quality.¹⁰⁸ Its use in carving required “no forcible pressure by the carver” as it cut through granite “literally ‘as though it were cheese’”¹⁰⁹:

[It was] essentially a skilled workman's tool, demanding ... the highest manipulative ability, on the part of the operator. In the hands of the ignorant tyro it can accomplish nothing. In the hands of the expert workman, it not only diminishes the drudgery of his work, but quickens his perceptions, emboldens him to venture upon achievements which he may vainly have tried to realize with his unaided skill, but failed; it enables him to multiply his productive capacity many fold.¹¹⁰

Its introduction, however, proved a mixed blessing for granite workers, skilled or not. Its greater efficiency was credited in 1898 with having put many men out of work at the Quincy, Massachusetts, granite works, and the agitation of the stonecutters' union for the eight-hour day was in part an attempt to require more men to be employed to produce the same amount of product.¹¹¹ In 1874 Sheldons' sand blast had been operated round the clock by small boys: this was a precedent the unions did not want repeated.

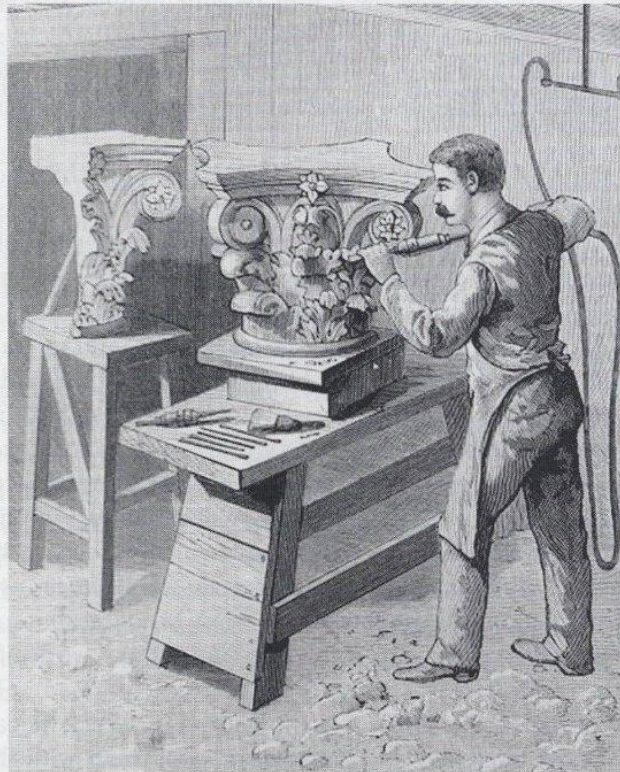


Fig. 15. The sand blast allowed gravestones to be made entirely by machinery, but was abandoned for the 1883 headstone contract because of quality issues. Pneumatic tools (shown here) instead facilitated the widespread shift to granite. *Stone 2*, no. 5 (September 1889).

The application of the sand blast at West Rutland was the first successful commercial experiment in carving inscriptions by mechanical means. All other steps in the production process had been mechanized, by the larger firms, decades earlier. It now was clear that inscriptions, too, could be done by machine, but not everyone was satisfied with the result. Sheldons had retreated to handcarving to meet their military headstones contract of 1883, and Gross Bros. of Lee, Massachusetts, with a labor force of thirty men, likely employed hand work to complete their 1885 contract for 4,509 headstones at a unit cost of four dollars. They turned out nearly 1,000 stones a month, and each man could easily have inscribed 150 stones by hand over the five months of the contract. It was said that in retail business the cost would have been fifteen dollars each, which was reasonable for small handcut headstones at the time.¹¹² By the mid-1890s a military contract for 10,000 stones was being tendered every two years, and the unit cost had dipped below two dollars, the cost of erection, however, now being borne by those requesting the headstone. In 1900 the West Stockbridge Marble Co. won the contract with a new low bid of \$1.28.¹¹³ Whether they employed the sand blast or pneumatic lettering tools seems not to have been recorded.

The lesson of the sand blast for historians of the monument industry is that there was no necessary linear relationship between the invention of new technologies and shifts in the materials used. New technologies had drawbacks that had to be overcome, and their adoption took place in fits and starts, often following and facilitating rather than inaugurating a shift to new materials. They also faced resistance from organized labor.

Bridges' headstone contract for the national cemeteries was also the first step toward moving quarry owners Sheldons & Slason in the direction of adding finished gravestones and monuments to their inventory (Fig. 16). Even so, they did not make the move until after the recession following the panic of 1873 bottomed out six years later and the market began to improve. A press account of 1883 notes that the town of West Rutland was growing remarkably due to "the marble finishing business introduced some two years ago," which had "added largely to the population and consequent prosperity of the place."¹¹⁴ Sheldons & Slason issued their "Design Sheet No. 1," with 32 illustrations (Fig. 17), sometime prior to the retirement of Francis Slason and the reorganization of the firm as Sheldon & Sons on October 1, 1881.¹¹⁵

Perhaps more important than the technologies employed were the business structures that were coming to dominate the industry. Business people and entrepreneurs were consolidating quarrying and marble finishing into ever-larger companies, often controlled outside the communities, indeed the states, in which they had their operations. In 1883 two new quarries were about to be opened in West Rutland by Boston and New York interests that had purchased mills in their vicinity and were putting them in a state of repair, and the local manager of the West Rutland Marble Company had

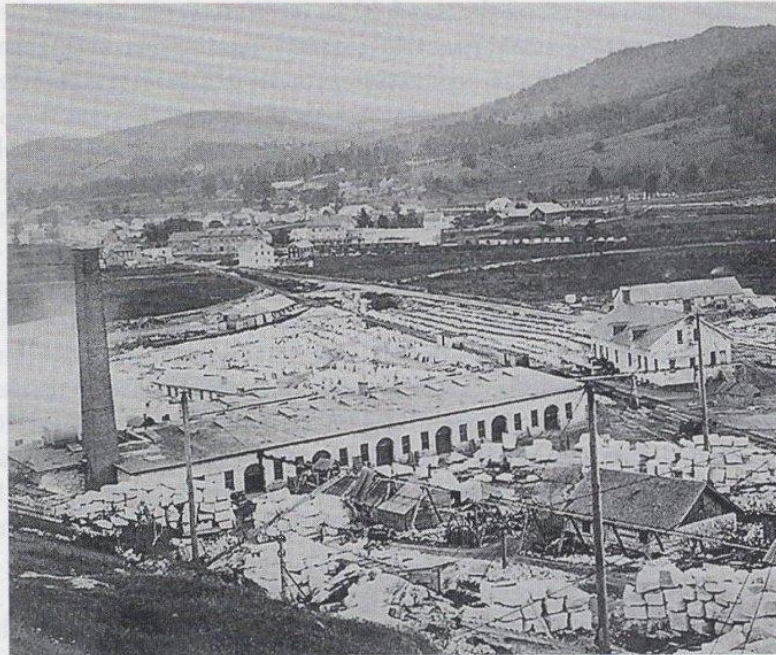


Fig. 16. Sheldon's & Slason's marble mills, West Rutland, Vermont, c.1870s.
From a stereoview. Private collection.



Fig. 17. Following completion of the first government headstone contract,
Sheldon's & Slason expanded into the monument finishing business.
Their Design Sheet no. 1 (c.1881). Private collection.

been succeeded by a Boston man. Redfield Proctor, the president of the Vermont Marble Company and instigator of the 1883 Producers Marble Company combination, was by training not a marble man but a lawyer. In 1889 it was widely rumored that both Sheldons and Vermont Marble were to be bought up by a syndicate of English capitalists.¹¹⁶

Conclusion

The Civil War headstone program marked an important stage in the movement toward the mechanization, consolidation, and standardization that were to characterize the monument industry for much of the twentieth century,¹¹⁷ but evolving business structures were perhaps more immediately important than the technologies. They did not have their origins in the postwar headstone contracts—periodic attempts to integrate supply, production, and distribution on a national scale dated back to the 1790s—but the headstone contracts became a flashpoint for controversy in which the involvement of entrepreneurs from outside the stone trades was seen as evidence of corruption and helped in a small way to contribute to the political downfall of the Secretary of War.

Despite the accusations of jobbery, bribery, and favoritism in 1876, the headstone program in fact was a success. More than 300,000 stones had been produced and set in just three years, and the work had been done for \$200,000 less than the Congressional appropriation of \$1,000,000.¹¹⁸ By the 1890s a contract for 10,000 stones was being tendered every two years, and whether using the sand blast or pneumatic tools, the unit cost had dipped to \$1.28 by 1900. Secretary Belknap's reputation remained solid with many of his fellow veterans, if not with future generations of historians. Admirers erected an impressive monument—of granite—to his memory at Arlington National Cemetery (Fig. 18), not far from that of his often unhappy subordinate, Montgomery C. Meigs. Oscar Mack lies buried at Congressional Cemetery, without a surviving headstone, which is fitting given his early espousal of the lawn cemetery aesthetic.

The concept and aesthetic of military commemoration pioneered in America's National Cemeteries, including the principle of equality in memorialization, were replicated in Europe following World War I by Britain's Imperial War Graves Commission and similar institutions of the other combatant nations.¹¹⁹ Remarkably, however, the British commission seems to have been entirely ignorant of the earlier American experience, and they puzzled through the logistical problems anew.¹²⁰ Commissioner Rudyard Kipling (the British poet) articulated the challenge in 1918: "There is no possibility of expediting the delivery of the headstones. More than half a million of these will be required, and at present there is not labour enough in all the world to cut, carve and letter them." Granite and marble were rejected



Fig. 18. Grave of disgraced Secretary of War W.W. Belknap, Arlington National Cemetery, Virginia. Belknap was impeached for financial irregularities, but remained popular with many of his fellow soldiers. Photo: B. Elliott.

because of their cost, and Portland stone and Hopton Wood limestone, widely used in England, were employed instead. Hand-carving of a regimental badge, however, took up to a week. After experimenting with acid etching and other methods, a Lancashire company invented a pantograph machine that could both trace and cut the inscriptions. But each machine produced only three stones a day, a far cry from the relief lettering accomplished decades earlier by the sand blast at West Rutland—in four minutes, and at one-eighth the cost.¹²¹

On a still larger canvas the controversies that beset the Civil War headstone program remind us that modernity involved more than an exhilarating ride along a linear path toward novelty and progress: modernity

itself was "flux and discontinuity."¹²² The novel and the modern presented a bewildering, disorienting, and fluctuating juxtaposition of gain and loss, an uncertainty as to which changes were truly progressive and which were retrograde and even dangerous. The headstone program demonstrated the profound ambivalence of the modern condition.

The 1866 competition revealed some of the limitations of belief in unfettered scientific advancement. Innovative headblocks of galvanized iron posed a technological solution to the costs of naming the dead but generated both uncertainty as to the reliability of the industrial process and public ridicule over the appropriateness of the material and design. Congressmen as well as the regional staff of the national cemeteries mocked this departure from tradition, judging both material and design more appropriate for domestic appliances than for a rural cemetery. The 1872 competition provided an opportunity for American inventiveness to showcase a wider range of materials, styles, and technological applications. But the lower-end prototypes aroused accusations of "shoddy," making it more difficult to reconcile cost with dignity and an assurance of permanence. The 1873 competition summoned tenders for marble, the socially acceptable material dominant in the current marketplace. Solutions to the cost question ranged from Walsh's foreign sweatshops to Bridges' sand blast technology, but efficiency, speed, and volume did not win the sand blast solution immediate and permanent adoption. Designs and inscriptions were simplified to maximize its technical advantages, but by 1883 quality issues and perhaps opposition by organized labor saw the sand blast abandoned in favor of a return to handwork. Decades would pass before the sand blast became a fixture in the nation's stone yards.

Nor did the reduction in unit cost guarantee its acceptance in the wider world beyond the national cemeteries. Economy was desirable in a government contract, but in a commemorative landscape dominated by the middle-class Victorian family, family plots and family monuments proclaimed sensibility, affection, continuity, and status; and the trend was toward more rather than less costly materials and markers. White marble, dominant throughout North America by 1850, was more aesthetically pleasing but also more expensive than the slate and other regionally-specific materials that preceded it. In the twentieth century, marble would be succeeded by granite, more durable but once again more costly, and large family monuments continued to displace simple headstones. Thus was consumerism tied to respectability, sentiment, and emotion and not merely to rational calculation.¹²³

Evolving business models also failed to win universal acceptance. A society that celebrated the entrepreneurial, the inventive, and the novel had not entirely come to trust unproven technologies nor to accept that a competitive bid from an unlikely source could represent genuine ingenuity rather than something more sinister. Many observers fell back upon the

traditional reassurances of a more personalized space of face-to-face familiarity and craft apprenticeship, seeing only the specter of jobbery and corruption in the awarding of contracts to men without experience in the stone trades. In a world of constant and disorienting change there indeed were enhanced opportunities for charlatans and parasites to prosper in a rapidly expanding and depersonalized marketplace. But the 1866 competition had been advertised in *Scientific American* as well as in the popular press, and new means of disseminating information opened the door to entrepreneurs who could assemble an effective combination of technology, materials, and labor, and not just to scroungers seeking to enrich themselves from the public purse.

Acknowledgements

For advice and assistance the author is grateful to Dennis Montagna, National Parks Service; Trevor Plante, NARA; Jennifer Perunko, Historian, National Cemetery Administration, Department of Veterans Affairs; David Gerleman, The Lincoln Project; Michael Trinkley, Chicora Foundation; Paul Carnahan, Vermont Historical Society; Tom Ledoux, Vermont in the Civil War; Janet Stewart, Newsbank/Readex; Chris Lofty, Commonwealth War Graves Commission; Anne Tait; Laurel Gabel; Karen A. Michalec; June Hadden Hobbs; Bob Drinkwater; Harry and Eleanor Pietersma; Diana Brake; Andrew Johnson; Mary Donovan; Leighann Neilson; and James McCallum. Earlier versions of this paper were presented at the American Culture Association, New Orleans; Association for Gravestone Studies, Schenectady; and the Shannon Lectures in History, Carleton University, Ottawa.

Notes

1. Susan-Mary Grant, "Patriot Graves: American National Identity and the Civil War Dead," *American Nineteenth-Century History* 5, no. 3 (Fall 2004): 84-86. The exclusion of the Confederate dead from the federal program was a topic of angry and divisive debate.

2. Mark S. Schantz, *Awaiting the Heavenly Country: The Civil War and America's Culture of Death* (Ithaca: Cornell University Press, 2008), 2-3, 89; Drew Gilpin Faust, *This Republic of Suffering: Death and the American Civil War* (New York: Alfred A. Knopf, 2008), xi-xiv.

3. Grant, "Patriot Graves," 86.

4. Other examples include David W. Blight, *Race and Reunion: the Civil War in American Memory* (Cambridge, MA: Belknap Press, 2001); Kirk Savage, *Standing Soldiers, Kneeling Slaves: Race, War, and Monument in Nineteenth-Century America* (Princeton, NJ: Princeton University Press, 1997); John R. Neff, *Honoring the Civil War Dead: Commemoration and the Problem of Reconciliation* (Lawrence: University Press of Kansas, 2005); *Monuments to the Lost Cause: Women, Art, and the Landscapes of Southern Memory*, ed. Cynthia Mills and Pamela H. Simpson (Knoxville: University of Tennessee Press, 2003).

5. The literature specifically on the national cemetery system and military headstones is mostly descriptive and does not contextualize the headstone program or deal at any length with its contested nature. See Mark C. Mollan, "Honoring Our War Dead: The Evolution of the Government Policy on Headstones for Fallen Soldiers and Sailors," *Prologue* 35, no. 2 (Spring 2003); Department of Veterans Affairs, "History of Government-Furnished Headstones and Markers," www.cem.va.gov; "The History of U.S. Military Grave Markers," www.militaryhistoryinstone.org/history.php; Therese T. Sammartino, "A Promise Made – A Commitment Kept: The Story of America's Civil War Era National Cemeteries" (2000) and Edward Steere, "Shrines of the Honored Dead: A Study of the National Cemetery System," *Quartermaster Review* (1953-54) both on www.cem.va.gov/hist-histhome.asp; Mark Hughes, *Bivouac of the Dead* (Westminster, MD: Heritage Books, 2008). Sarah Amy Leach notes the controversy over Meigs' cast-iron blocks: "Remembering Veterans: The Past and Present of Their Historic Headstones," *American Cemetery* (May 2003): 20-21, 54 (I am grateful to Jennifer Perunko for sending me this article).

6. Caroline E. Janney, *Burying the Dead but Not the Past: Ladies' Memorial Associations and the Lost Cause* (Chapel Hill: University of North Carolina Press, 2008).

7. Thomas A. Zaniello, "Chips from Hawthorne's Workshop: The Icon and Cultural Studies," in *Puritan Gravestone Art II*, ed. Peter Benes (Dublin, N.H.: Boston University, 1977), 73. There is a large and diverse literature on modernity. Useful reviews include Alan O'Shea, "English Subjects of Modernity," in *Modern Times: Reflections on a Century of English Modernity*, ed. Mica Nava and Alan O'Shea (London & New York: Routledge, 1996), 7-37; Simon Gunn,

"Modernity," in his *History and Cultural Theory* (Harlow: Pearson Education Limited, 2006), 107-130; and Stuart Hall, "Introduction," *Modernity: An Introduction to Modern Societies*, ed. Stuart Hall, et al. (Oxford: Blackwell, 1996), 3-19.

8. Anthony Giddens, *The Consequences of Modernity* (Stanford: Stanford University Press, 1990), 21, 26-28.

9. Giddens, *Consequences of Modernity*, 37.

10. National Archives and Records Administration (NARA), RG92 E294, Box 1, M.C. Meigs, press copies of private letters, 1865-67, f. 301, memo July 12 [1866]. A printed image showing a flatter top is in RG92 E225, Quartermaster General, Consolidated Correspondence, Box 787, Headstones.

11. Frederick W. True, *A History of the First Half-Century of the National Academy of Sciences 1863-1913* (Washington: National Academy of Sciences, 1913), 232-239. It is unclear how they were to be fixed to the ground, but they were hollow and were to be filled with earth or cement. "Washington Matters," *Jamestown Journal*, 27 November 1868, 1.

12. *Scientific American*, NS 15, no. 22 (24 November 1866): 1; *San Francisco Bulletin*, 21 January 1867; *Daily Iowa State Register* (Des Moines), 14 May 1867, 2. The printed specifications, dated October 1, 1866, are in NARA, RG92 E225, Box 786, Headstones.

13. "Washington News," *New York Times*, 3 December 1866, 1. Another 13 arrived after the closing date: *Evidence for Claimants*, U.S. Court of Claims, no. 5125, Dec. Term 1870, 16 in NARA, RG92 E225, Box 1087, Quartermaster General, Consolidated Correspondence: Strong & Donohue.

14. Barbara Wolanin, *Constantino Brumidi: Artist of the Capitol* (Washington: United States Capitol Historical Society, 1998), 37-38, www.access.gpo.gov/congress/senate/brumidi/Brumidi_4.pdf.

15. *Evidence for Claimants*, 28-29.

16. "Hark from the Tombs! A Doleful Sound," *New Hampshire Patriot* (Concord), 15 January 1868, 1; same in *Pittsfield Sun*, 16 January 1868, 2.

17. Their reports are in NARA, RG92 E225, Box 787, Headstones.

18. NARA, RG92 E225, Box 787, Headstones: R.W. Allen, Acting QMG, to John M. Crebs, January 23, 1872.

19. For dismissal of the suit, see 42nd Cong., 2d Sess., Senate Misc. Doc. no. 5, Report of the Clerk of the Court of Claims, December 4, 1871. There are two files of documents concerning the lawsuit in NARA, RG123, U.S. Court of Claims: general jurisdiction

case files 1855-1939, Box 280, Claim no. 5125, Strong & Donohue vs. the United States. The evidence for the claimants is more accessible in printed form in *Evidence for Claimants*, U.S. Court of Claims, no. 5125, Dec. Term 1870 in RG92 E225, Box 1087, Quartermaster General, Consolidated Correspondence: Strong & Donohue.

20. Philip Bigler, *In Honored Glory: Arlington National Cemetery The Final Post* (St Petersburg, FL: Vandamere Press, 2005), 22; James Edward Peters, *Arlington National Cemetery: Shrine to America's Heroes* (Bethesda: Woodbine House, 2008), 316-317; "The Meigs Family," *Arlington National Cemetery Website*, www.arlingtoncemetery.net/meigs.htm; Jennifer M. Perunko, Historian, National Cemetery Administration, Department of Veterans Affairs, confirmed in an e-mail that none of Meigs' iron markers are at Arlington.

21. NARA, RG92 E225, Box 787, Headstones, Recommendations of Major Oscar Mack, July 5, 1870.

22. On Spring Grove see Noël Dorsey Vernon, "Adolph Strauch: Cincinnati and the Legacy of Spring Grove Cemetery," in *Midwestern Landscape Architecture*, ed. William H. Tissler (Urbana: University of Illinois Press, 2000), 5-24; David Charles Sloane, *The Last Great Necessity: Cemeteries in American History* (Baltimore: Johns Hopkins University Press, 1991), 99-109, 115.

23. NARA, RG92, E225, Box 787, memorandum by M.C. Meigs, February 8, 1873.

24. *Evidence for Claimants*, 27.

25. NARA, RG92 E225, Box 787, Headstones, Meigs to Belknap, July 8, 1870.

26. When some 700 government headstones arrived at Spring Grove Cemetery in 1879, Adolph Strauch protested that the graves were "about to be disfigured by unsightly headstones, two feet in the air"; he won permission to "sink the stones to within an inch or two of the surface" and inscribe the names on the top. This was not in fact done. In the end the standard-issue marble headstones were cut down to the area of the shield bearing the personal details, and these were set flat in the ground. In 1884 the cut-down "marble slabs" were described as lying in circles, "thick as snow flakes amid the green turf of the triple mounds." Strauch's preference would have been to "build one handsome monument for all, and thus convert these burial places to places of beauty, where the people would resort as to a park." The six-inch granite squares Mack had praised in 1870 likely were not in the military section. "Headstones for Soldiers' Graves," *Cincinnati Commercial Tribune*, 29 October 1879, 5; 1 June 1880, 6. "Stone Spikes for Soldiers' Graves," *Cincinnati Daily Gazette*, 4 March 1873, 4; Blanche M.G. Linden, "Spring Grove: Celebrating 150 Years," *Queen City Heritage* 53, nos. 1/2 (Spring/Summer 1995): 74-77; *Cincinnati Commercial Tribune*, 31 May 1884, 1. My thanks to Diana Brake for guiding me around Spring Grove Cemetery and its Civil War plot.

27. Catherine W. Zipf, "Marking Union Victory in the South: The Construction of the National Cemetery System," in *Monuments to the Lost Cause: Women, Art, and the*

Landscapes of Southern Memory, ed. Cynthia Mills and Pamela H. Simpson (Knoxville: University of Tennessee Press, 2003), 27-45; Neff, *Honoring the Civil War Dead*, 111-136; Karen L. Cox, "The Confederate Monument at Arlington: A Token of Reconciliation" in *Monuments to the Lost Cause*, 150.

28. Peters, *Arlington National Cemetery*, 316-317.

29. Neff emphasized the exclusion of the Confederate dead, arguing that the color line was "between blue and gray, not black and white." He conceded that "the legacy of black interments is a mixed one" with Colored Troops "occasionally relegated to separate portions of the burial field," and detailed their virtual exclusion from Gettysburg and Antietam: *Honoring the Civil War Dead*, 133-134. MacGregor, however, indicates that "local custom . . . dictated racial segregation in most of the cemeteries" and documents how their integration became "an emotion-laden issue in 1947" and later. Morris J. MacGregor, Jr., *Integration of the Armed Forces 1940-1965* (Washington: Center of Military History, 1985), 223-226; Jesse J. Holland, *Black Men Built the Capitol: Discovering African-American History in and around Washington, D.C.* (Guilford, CT: Globe Pequot Press, 2007), 153. African-American veterans of World War I are buried in Sec. 19 at Arlington, at the opposite extremity to Sec. 27: P.F.V., Find-a-Grave Forum, September 25, 2009, <http://www.findagrave.com/forums/ubbthreads.php?ubb=showflat&Number=1199391>.

30. Information for Bidders, August 1, 1872, RG92 E225, Box 786, Headstones, file 3.

31. Documents attached to *Letter from the Secretary of War, in relation to the execution of an amendment to an act entitled "An Act To Establish and Protect National Cemeteries,"* Senate Exec. Doc. no. 8, 42nd Congress, 3rd Session, December 9, 1872.

32. *Buffalo Evening Courier & Reporter*, 19 August 1872, <http://fultonhistory.com>.

33. H.V.B., "Marking the Graves of the Boys in Blue," *Cincinnati Daily Gazette*, 23 October 1872, 3. Another reporter suspected some entries were made "more for the purpose of advertising" than in expectation of winning the contract: "A Unique Exhibition," *Daily Patriot*, 19 October 1872, in NARA, RG92 E576, General correspondence and reports relating to National and Post Cemeteries, Box 75, Headstones.

34. "Military Gravestones in Congress," *Cincinnati Commercial Tribune*, 12 January 1873, 4.

35. *Letter from the Secretary of War, in relation to the execution of an amendment to an act entitled "An Act To Establish and Protect National Cemeteries,"* December 9, 1872, U.S. Congressional Serial Set, Vol. 1545, Session Vol. No. 1, 42nd Congress, 3rd Session, Senate Exec. Doc. no. 8; *Times-Picayune* (New Orleans), 8 November 1872, 1.

36. RG92 E225, Box 786, Consolidated correspondence: Headstones, W.S. Withers to M.C. Meigs, Atlanta, April 19, 1873; on Withers see Walter Spencer Withers, *The Story of Walter Samuel Withers 1833-1907* (Wilmington, n.p., 1967).

37. NARA, RG92 E225, Box 786, O.J. Willard to M.C. Meigs, Paterson, N.J., April 5, 1873. The sketch they forwarded to Meigs unfortunately was returned and is not in the file. The standard reference on white bronze is Barbara Rotundo, "Monumental Bronze: A Representative American Company," in *Cemeteries & Gravemarkers: Voices of American Culture*, ed. Richard E. Meyer (Ann Arbor: U.M.I. Research Press, 1989; or Logan: Utah State University Press, 1992): 264-291. On the inventor Milo A. Richardson, see Rosell Lewellyn Richardson, *Amos Richardson of Boston and Stonington, with a contribution to the history of his descendants* (New York, n.p., 1906), 110-112 and the Rev. Samuel Orcott, *A History of the Old Town of Stratford and the City of Bridgeport, Connecticut* (Bridgeport: Fairfield County Historical Society, 1886), Part. II: 813-814. Richardson's patents are numbers 148,245 (1874), 158,866 (1875), and 169,192 (1875). On marketing as Corinthian Monuments: *St Alban's Daily Register*, 18 December 1876, 3.

38. *Wheeling Register*, 11 March 1876, 3.

39. "Proposals for Head-Stones for National Military Cemeteries," *New York Times*, 30 August 1873, 3.

40. NARA, RG92 E576, Box 75, Belknap to Meigs, "Mem: Head Stones," June 25, 1873. I presume the difference in depth was due to differential frost penetration.

41. *Contract to Furnish Soldiers' Head-stones*, House of Representatives Report no. 802, 44th Congress, 1st Session, August 4, 1876, testimony of George E. Meyer, 84, 74; Kansas design attached to business card of W.D. Bolles' Pioneer Monumental Marble Works, Fort Scott, Kansas: RG92 E225, Box 290: QMG Consolidated Correspondence: Cemeteries, National.

42. NARA, RG92 E225, Box 787, Headstones, MS report by Col. O.A. Mack on the history of the headstone program, March 1876, p. [11]; *Contract to Furnish Soldiers' Head-stones*, testimony of William Patrick, 77.

43. Vermont Historical Society, Barre, Doc. 427, Vermont Marble Company Treasurer's Records, file 21, Rutland Marble Co. legal papers, 1873-74, contract between Rutland Marble Company and Eagleson & De Veau, September 4, 1873.

44. *Contract to Furnish Soldiers' Head-stones*, testimony of Oscar Mack, 8.

45. Vermont Historical Society, Doc. 423:13, Rutland Marble Co. correspondence 1873 E-H, Eagleson & De Veau to Meigs, covering letter to bid, September 4, 1873; NARA, RG92 E225, Box 786, Headstones, Eagleson & De Veau, September 13, 1873.

46. RG92 E225, Box 786, Headstones, printed bid of Eagleson & De Veau, October 11, 1872.

47. The document as submitted is in NARA, RG92 E225, Box 787, with covering letter from Eagleson & De Veau dated March 24, 1873; a draft is in Vermont Historical Society, Doc. 427:11, Rutland Marble Co. legal papers.

48. *Contract to Furnish Soldiers' Head-stones*, testimony of Charles F. Benjamin, 68-71.
49. Vermont Historical Society, Doc. 427:6, Rutland Marble Co. minutes, September 2, 1873.
50. NARA, RG92 E225, Box 787, Headstones, Meigs to Belknap, June 23, 1873.
51. S.G. Bridges later estimated the latter cost to be three dollars per ton. *Contract to Furnish Soldiers' Head-stones*, testimony of Samuel G. Bridges, 46.
52. *Contract to Furnish Soldiers' Head-stones*, testimony of Maurice P. Walsh, 48.
53. NARA, RG92 E225, Box 787, Meigs to Belknap, September 8, 1873.
54. *Contract to Furnish Soldiers' Head-stones*, testimony of Samuel G. Bridges, 28.
55. "More Charges. What a Disappointed Contractor Says of the Awards for Headstones," *Chicago Inter-Ocean*, 7 March 1876, 5; *Contract to Furnish Soldiers' Head-stones*, testimony of Charles F. Benjamin, 69-70, and of William Patrick, 76-80.
56. Vermont Historical Society, Doc. 424, Vermont Marble Company Treasurer's Records, J.N. Baxter, Supt., Rutland Marble Co., W. Rutland, to A. Smedberg, NYC, November 25, 1873.
57. The contracts are summarized in *New York Times*, 3 April 1876, 1.
58. Doherty moved to New Orleans in 1875 and became a contractor there, fixing batture holes in the levies for the City. He also secured an Indian agency trading contract in Dakota in 1886 and then moved to New York, where in 1888 he was appointed inspector of street paving, a position he held till his death in 1897. *Daily Picayune*, 18 August 1879, 1; 18 July 1889, 4; *Grand Forks Herald*, 20 April 1886, 1; obituary, *Springfield Republican*, 5 April 1897, 5.
59. Around 1881 Sage moved to Fisher's Island, NY and in 1887 established the Long Island Brick Company near Greenport. Terry A. White, "Broux to Sage Ammunition Works," www.thomaspublications.ca/civilwarprojectiles/articles/broux_to_sage.htm; *Springfield Republican*, 17 May 1862, 8; *Trenton State Gazette*, 10 January 1863, 2; *Middletown Constitution*, 25 November 1868, 2; 21 July 1872, 3; 1 October 1873, 2; 1880 census: brickmaker, Cromwell, CT; *New Haven Register*, 22 June 1881, 1; *Brooklyn Daily Eagle*, 3 June 1887.
60. *Contract to Furnish Soldiers' Head-stones*, testimony of Samuel G. Bridges, 28.
61. *Contract to Furnish Soldiers' Head-stones*, testimony of Charles S. Jones, 40; *Weekly Wisconsin Patriot*, 18 December 1858, 4; *Cincinnati Daily Gazette*, 10 September 1871, 3.
62. *Daily Critic*, 6 February 1878, 1; "Thomas P. Morgan," D.C. Metropolitan Police Department, <http://mpdc.dc.gov/mpdc/cwp/view,A,1230,Q,565393.asp>.

63. *The History of Lee County, Iowa* (Chicago: Western Historical Company, 1879), 686. A photograph of a coin silver cup with the maker's mark of S.G. Bridges is on SM Publications, Silver Salon forums, <http://www.smpub.com/ubb/Forum19/HTML/000692.html>. In later years Bridges lived with his daughter Cora in Kansas City, Missouri, where he was still living in 1910. George Creel and John Slavens, *Men Who Are Making Kansas City: A Biographical Dictionary* (Kansas City: Hudson-Kimberly Publishing Co., 1902), 28; 1910 census, Ward 4, p. 6A.

64. *Contract to Furnish Soldiers' Head-stones*, testimony of George A. Meyers, 75-76.

65. *Contract to Furnish Soldiers' Head-stones*, testimony of Thomas P. Morgan, 87.

66. *Bridges v. Sheldon and others*, Circuit Court, D. Vermont, January 6, 1880 in *Federal Reporter*, Peyton Boyle, ed., vol. 7, (Saint Paul, 1881), 17; *Contract to Furnish Soldiers' Head-stones*, testimony of Dewitt C. Sage, 98; *Cincinnati Daily Gazette*, 23 March 1876, 2.

67. *New York Times*, 3 April 1876, 1; *Contract to Furnish Soldiers' Head-stones*, testimony of Samuel G. Bridges, 25, 33.

68. On the regional proliferation of water-driven marble mills in western New England, see Ezra Brainerd et al., *The Marble Border of Western New England* (Middlebury: Middlebury Historical Society, 1885). On steam power, see C.T. Hinckley, "The Spring Garden Marble Works of J. & M. Baird," *Godey's Lady's Book* (January 1853): 2-11.

69. *Contract to Furnish Soldiers' Head-stones*, testimony of Samuel G. Bridges, 28-30, 32.

70. "Etching Glass and Stone with Sand," *Manufacturer and Builder* 8, no. 10 (October 1876): 229, <http://digital.library.cornell.edu>; United States patent 108,408, Insulator Patent Reference Library, <http://reference.insulators.info/patents/detail/?patent=U108408>.

71. *Galveston News*, 10 November 1871, 2; *Baltimore Sun*, 4 October 1872, 1.

72. RG92 E225, Box 787, Headstones: Meigs to Belknap, June 23, 1873.

73. Eagleson's suggestion that they could deduct a further \$14,000 from their bid if the soldiers' ranks could be omitted suggests their intention to letter the stones by hand: Vermont Historical Society, Doc. 423:13, Rutland Marble Co. correspondence 1873 E-H, Eagleson & De Veau to Meigs, covering letter to bid, September 4, 1873.

74. J.B. Smith, "The Sand Blast and Its Application at West Rutland, Vermont," in Henry R. Seely, *Third Biennial Report of the Vermont State Board of Agriculture, Manufactures and Mining* (Rutland: Tuttle & Co., 1876), 639-640, www.archive.org/details/biennialreportof03verm.

75. Smith, "The Sand Blast ... at West Rutland," 633-642; *Manufacturer and Builder* (1876): 203; *Bridges v. Sheldon and others*, Circuit Court, D. Vermont, January 6, 1880 in *Federal Reporter*, Peyton Boyle, ed., vol. 7, (Saint Paul, 1881), 17.

76. *Contract to Furnish Soldiers' Head-stones*, testimony of Charles Sheldon, 101, and of Samuel G. Bridges, 29.

77. "Etching Glass and Stone with Sand," *Manufacturer and Builder* 8, no. 10 (October 1876): 203; Smith, "The Sand Blast ... at West Rutland," 640.

78. L. Edward Purcell, "The Fall of an Iowa Hero," *Palimpsest* 57, no. 5 (1976): 134; D. Alexander Brown, "The Belknap Scandal," *American History Illustrated* 4, no. 2 (1969): 33.

79. Brown, "The Belknap Scandal," 35; Purcell, "The Fall of an Iowa Hero," 137-142.

80. *The Nation*, 9 March 1876, 151; *Montpelier Argus & Patriot*, 9 March 1876, 2.

81. *Contract to Furnish Soldiers' Head-stones*, testimony of John M. Wright, 20, Samuel G. Bridges, 58, and William Patrick, 77.

82. *Contract to Furnish Soldiers' Head-stones*, testimony of Maurice J. Walsh, 47-51.

83. *Contract to Furnish Soldiers' Head-stones*, testimony of John M. Wright, 21.

84. NARA, RG92 E225, Box 786, John Jay Washburn to Meigs, April 7, 1876; Walter Woolcott to Meigs, April 6, 1876.

85. "Post-Traderships and Headstones," *Keokuk Gate City*, 5 March 1876, 1, quoting *Chicago Times*.

86. NARA, RG92 E225, Vol. 787, Struthers to Meigs and reply, July 1873; on the Struthers firm see *Philadelphia Inquirer*, 22 November 1876, 2; 16 April 1877, 2.

87. NARA, RG 92, E225, Box 787, Bridges to Meigs, 31 July 1873; printed notice by Meigs re abbreviations, August 15, 1873; Meigs to Associated Press, August 16, 1873.

88. *Contract to Furnish Soldiers' Head-stones*, testimony of Samuel G. Bridges, 23, and Thomas P. Morgan, 89.

89. NARA, RG92 E576, General Correspondence and Reports relating to National and Post Cemeteries, Box 75, Headstones, Belknap to Meigs, May 14, 1874; Meigs to Morgan, Washington, May 16, 1874, and *Contract to Furnish Soldiers' Head-stones*, testimony of Samuel G. Bridges, 24-25, Thomas P. Morgan, 88-89, and William Patrick, 79.

90. Robert C. Prickett, "The Malfeasance of William Worth Belknap," *North Dakota History* 17, no. 1 (January 1950): 48. He was less forgiving on the trading post contract: 17, no. 2 (April 1950): 126-130. Edward S. Cooper, in a monograph on the Belknap accusations, concluded that "the most plausible story" was Walsh's allegation that the bids had been

opened beforehand, and Bridges tipped off. There seems no particular reason to believe this. *William Worth Belknap: An American Disgrace* (Madison & Teaneck: Fairleigh Dickinson University Press, 2003), 188.

91. Prickett, "Malfeasance," 127. Joachim argues that Clymer, the chair of the Committee on Expenditures that investigated the trading post scandal, committed blunders in his eagerness to secure a conviction: Walter Joachim, "Hiester Clymer and the Belknap Case," *Historical Review of Berks County* 36, no. 1 (1970): 28-30. If the Democrats were content to make political points for the election, however, they may not have felt the need to push for a conviction. *The Democratic Campaign Text Book* (New York: Democratic Party National Committee, 1876), 684-689.

92. *Contract to Furnish Soldiers' Head-stones*, v.

93. NARA, RG92 E225, Box 787, Col. O.A. Mack, report of March 1876, 22.

94. *Cincinnati Daily Gazette*, 11 April 1879, 8; *New York Times*, 4 April 1879, 6; *Annual Report of the Secretary of War for the Year 1879*, 365-6. Michael Trinkley of the Chicora Foundation, a preservation contractor in Columbia S.C., pointed out to me that the headstones at the St Elizabeth's Hospital cemeteries in Washington measure from 1.5 to 2.25 inches in thickness.

95. *Indianapolis Sentinel*, 29 May 1879, 4.

96. Report from Washington, August 14, in *New Haven Register*, 18 August 1879, 1. The Secretary of War was then George W. McCrary, like Belknap a Republican from Iowa.

97. Memo in NARA, RG92 E225, Box 787, Headstones, 1866-72, contract with D.W. Whitney, August 18, 1863.

98. *Montpelier Argus & Patriot*, 24 March 1880, 2; *Rutland Herald & Globe*, 20 March 1880, 1; 20 April 1880, 4; on Fullerton see Edwin L. Bigelow and Nancy H. Otis, *Manchester Vermont: A Pleasant Land Among the Mountains* (Manchester: Town of Manchester, 1961), 138-9, 150, and *Montpelier Argus & Patriot*, 23 July 1890, 4.

99. *St Alban's Daily Messenger*, 11 November 1881, 3.

100. *Wisconsin State Journal* (Madison), 17 July 1883, 8.

101. *Contract to Furnish Soldiers' Head-stones*, testimony of Charles Sheldon, 101.

102. "Letter from West Rutland," *Montpelier Argus & Patriot*, 25 April 1883, 3. The firm was reorganized as Sheldon & Sons upon the retirement of Francis Slason in 1881.

103. *Contract to Furnish Soldiers' Head-stones*, testimony of William Patrick, 79-80.
104. *Ibid.*, 89.
105. Paul Wood, "Tools and Machinery of the Granite Industry," *Chronicle of the Early American Industries Association* 59, no. 4 (December 2006), Part III, <http://findarticles.com>.
106. "MacCoy's Pneumatic Tool," *Manufacturer and Builder* 21, no. 11 (November 1889): 244; Wood, "Tools and Machinery," Part III. The patent of James S. McCoy of Brooklyn for a "pneumatic tool" is no. 323,053 of July 28, 1885; he also patented later improvements.
107. S.W. McCallie, *A Preliminary Report on the Marbles of Georgia* (Atlanta: Geological Survey of Georgia, 1907), second edition, 93.
108. "Surface Cutting Granite by Machinery," *Manufacturer and Builder* (1894), 207.
109. *Manufacturer and Builder* 21, no. 11 (November 1889): 244.
110. "The Pneumatic Tool," *Manufacturer and Builder*, 21, no. 4 (April 1889), 73.
111. "Quincy Granite Cutters Give Notice That They Will Ask for Shorter Hours and 30 Cents an Hour," *Boston Journal*, 16 December 1898, 1.
112. *Springfield Republican*, 12 January 1885, 6; 20 May 1885, 6.
113. *Chicago Inter Ocean*, 14 May 1896, 6; *Boston Journal*, 17 May 1900, 5.
114. "Letter from West Rutland," *Montpelier Argus & Patriot*, 25 April 1883, 3.
115. Yet the notification sent out to their clients two weeks later still described the firm as "wholesale dealers in block and sawed marble" and made no reference to their wholesaling of completed monuments. *St Albans Daily Messenger*, 14 October 1881, 3; the design sheet and circular are in a private collection.
116. *Boston Journal*, 12 December 1889, 2.
117. The challenge to entrepreneurial and industrial hegemony by late 20th-century postmodern phenomena such as personalized monuments and roadside memorials is explored in Albert N. Hamscher, "Pictorial Headstones: Business, Culture, and the Expression of Individuality in the Contemporary Cemetery," *Markers* 23 (2006): 6-35 and C.D. Abby Collier, "Tradition, Modernity, and Postmodernity in Symbolism of Death," *The Sociological Quarterly* 44, no. 4 (2003): 727-749.
118. RG92 E225, Box 786, Headstones, Meigs to Banning, July 31, 1876; Grant, "Patriot Graves," 93.

119. Richard E. Meyer, "Stylistic Variation in the Western Front Battlefield Cemeteries of World War I Combatant Nations," *Markers* 19 (2001): 188-253.

120. In *Sites of Memory, Sites of Mourning: The Great War in European Cultural History* (Cambridge: Cambridge University Press, 1995), Jay Winter rejects the idea that World War I resulted in a cultural break, or that modernist anger, irony, or artistic forms were the dominant cultural response. He emphasizes "the power of traditional languages, rituals, and forms to mediate bereavement. Irony's cutting edge... could express anger and despair... but it could not heal. Traditional modes of seeing the war... enabled the bereaved to live with their losses, and perhaps to leave them behind." (115) He briefly discusses war memorial production as a business, and war memorials in war cemeteries, but he says nothing about headstone design or production. Nor, despite his comparative framework, does he consider American memorials at any great length, and he makes no acknowledgement of the Civil War precedent.

121. IWGC contractors produced 10,000 stones a year at a unit cost of £4, with half the stones being rejected by quality inspectors. Even today the custom-designed Italian machines employed by the CWGC produce only ten stones daily, and some are finished off by hand. The American relief carving was more attractive than the British incised inscriptions, but the American stones were produced with minimal detail and no iconography. Julie Summers, *Remembered: The History of the Commonwealth War Graves Commission* (London & NY: Merrell Publishers Ltd., 2007), 26-28.

122. Keith Walden, *Becoming Modern in Toronto: The Industrial Exhibition and the Shaping of a Late Victorian Culture* (Toronto: University of Toronto Press, 1997), 338.

123. Karen A. Michalec, "The Slate to Marble Transition in Early Nineteenth-Century Gravestones" (M.A. thesis, Historical Archaeology, University of Massachusetts, Boston, 1995), 90; I am grateful to Laurel Gabel for this reference. Barbara Rotundo argued that one of the reasons white bronze ultimately failed in the consumer marketplace was that its cheapness was associated with poor quality: Rotundo, "Monumental Bronze," 288.