INTRODUCTION

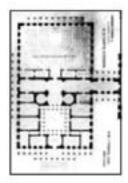


The Capitol in 1846. The building before addition of the new wings and dome. Library of Congress

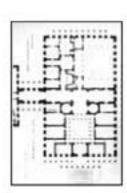


Architectural drawing of Capitol as it would look completed with dome and new wings. Architect of the Capitol

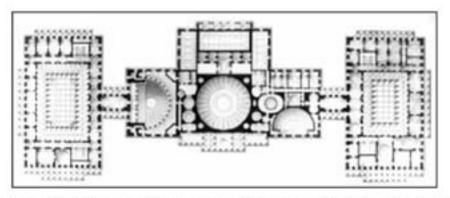
Walter's original floor plan for the House and Senate chambers against outside walls with windows. Architect of the Capitol







Section of the new dome. Architect of the Capital



Revised floor plan of Capitol approved by the president in 1853 (with House and Senate chambers in interior of wings). Architect of the Capitol

INTRODUCTION

Montgomery Meigs

Montgomery C. Meigs was born on May 3, 1816, in Augusta, Georgia, and grew up in Philadelphia, the eldest of ten children. Graduating from the U.S. Military Academy in 1836, Meigs worked as an army engineer in a number of posts, including supervising construction of fortifications at Detroit and at Rouses Point on Lake Champlain.

In the fall of 1852, shortly before the commencement of this journal, General Joseph G. Totten, the army's chief engineer, assigned Meigs to conduct a survey that would determine the best source and route for an aqueduct to bring water to Washington, D.C. Completing the survey in February 1853, Meigs recommended transporting Potomac River water to Washington from Great Falls, Maryland. Secretary of War Jefferson Davis then selected Meigs, who was promoted to captain in March 1853, to oversee construction of the aqueduct.

Meanwhile, work was under way on construction of an extension to the U.S. Capitol to provide spacious new quarters for the House and Senate, because the building had become increasingly crowded as new states entered the Union. Secretary Davis, whose jurisdiction also included the Capitol construction, chose Meigs to oversee this second major project as well. To these substantial responsibilities, the secretary in 1855 added supervising additions to the General Post Office and building the new larger dome for the expanded Capitol.

As Meigs juggled these and other public works duties during the 1850s, he kept a detailed journal of his activities, written in Pitman shorthand and only recently transcribed.

The Journal

Purpose

Initially, Montgomery Meigs used the journal to record decisions and activities related to his official duties. Early entries, for example, noted the arrival of supplies, such as brick and stone, and the number of workmen employed on each aspect of the construction. At the end of each month, Meigs recorded payroll and contract costs. Later, however, he expanded the en-

tries to discuss his social and family life and political events in Washington, as well as commenting on such world events as the Crimean War. The entries for the mid-1850s thus provide a rich glimpse of life in nineteenth-century Washington.

Since Meigs also frequently used his journal to refresh his memory of previous actions or discussions, he inserted a brief heading in longhand at the top of each shorthand page for easy reference, in addition to marking the dates in the margins. As time went on, Meigs also began using the journal as a scrapbook, in which he pasted newspaper clippings related to his activities. Still later, after he both hired a photographer for the Capitol and acquired a camera himself, he also inserted photographs of colleagues and family members and of the various works in progress.

Meigs had an inquiring scientific and engineering mind that enjoyed analyzing how machines and other equipment worked and inventing ways to make them function better. The journal is therefore also full of scribbled rough sketches of designs for various devices, including scaffolds or derricks to help in building the Capitol dome, a machine for copying marble sculptures, a cast iron die for use with a steam hammer to punch out eyes for the roof, and a temporary roof to cover the Rotunda during construction of the new dome.

Method

Meigs started his journal in longhand, but in May 1853 he began recording his daily entry in Isaac Pitman's recently devised system of "phonography," a phonetic shorthand that used symbols to permit writing at a rate six times faster than conventional longhand. Meigs embraced the system enthusiastically as a new labor-saving invention that could help him record more information in a shorter time. Although the process seemed slow and laborious to him at first, he gained proficiency as the months passed. Then, just as Meigs was achieving confidence in his shorthand, a personal loss intervened, with the deaths of two young sons in September and October 1853. Overwhelmed by concern and grief, Meigs completely stopped the journal during the period of the children's illness and for some weeks after their deaths. When he resumed, he returned to writing in longhand and continued to do so for several months. Finally, in January 1854, having acquired a compendium and book about the Pitman technique, Meigs again took up the shorthand and soon found that he could write far faster and with greater ease

than in longhand. He did, however, continue for some time to keep the journal in longhand when he was traveling.

Life in Washington

When the thirty-six-year-old Meigs moved his family back to Washington, D.C. from remote Rouses Point in northern New York state, they quickly entered into the active life of the nation's capital.

At the time the journal opened, Meigs and his wife, Louisa Rodgers Meigs, whom he had married in 1841, had five children: John (11), Mary (10), Charles (8), Montgomery (6), and Vincent (2). When Charles and Vincent died of an "inflammation of the brain," in the fall of 1853, Meigs and Louisa were grief stricken. The following year, a daughter, Louisa, known as Loulie, was born. In 1856, another baby girl was stillborn.

The Meigs family lived with Louisa's mother, Minerva Denison Rodgers, the widow of Commodore John Rodgers, and her unmarried daughter, Jerusha. Mrs. Rodgers owned the house and also contributed to the household costs. As Meigs frequently complained in the journal, his officer's salary was barely sufficient to support his family, even living with his mother-in-law and receiving an annual allowance from his father, a successful physician. Pointing out the vast sums of money he administered, Meigs noted that private engineers superintending large projects generally received a percentage of the money spent, while he had only his salary as a captain. Mrs. Rodgers' house was on the north side of H Street between 9th and 10th Streets, northwest, a location that was convenient for Meigs' visits to the White House and the War Department (then at 17th Street and Pennsylvania Avenue, northwest), but a somewhat longer trek to the Capitol.

Montgomery Meigs' parents, Dr. Charles D. Meigs and his wife Mary Montgomery Meigs, lived in Philadelphia, as did three of his brothers, John, Emlen, and Franklin, and two sisters—Emily, married to Jonathan Williams Biddle, and Mary, at home with her parents. Two married brothers lived in Indiana, and another, Henry, lived in Columbus, Georgia. In 1856 Meigs' father, a noted obstetrician, built a country house outside Philadelphia, which he named "Hammonasset." He retired there in 1858.

A religious man, Meigs attended church regularly on Sundays, often in both morning and afternoon, and for a time he served on the vestry of St. John's Church on Lafayette Square.

On some Sundays, however, he was so exhausted from the week's work that he slept all afternoon. Or, in fine weather, he often walked with his sons or brother-in-law John Rodgers for miles through the neighboring countryside. In supervising the work on the aqueduct, Meigs often took long horseback rides along the Potomac to Great Falls, Maryland.

Socially, Meigs and his wife occasionally attended functions at the homes of high government officials, dining at the White House during both the Pierce and Buchanan administrations. They also visited back and forth with relatives and connections of his wife and saw families they had known while living at Meigs' previous posts. Meigs often wished that he could afford to entertain in a manner that he felt would be appropriate to his position.

Starting in 1855, Louisa and the children regularly fled the summer heat and danger of disease in Washington, spending part of August and September in the country, either in nearby Maryland or in the mountains of Virginia. There, they boarded at local farmhouses or inns, often at a cost that Meigs considered excessive, although he saw the need to keep his family healthy.

In his free time, Meigs participated in an informal scientific club that met each Saturday evening at the home of a participant. His fellow members included Joseph Henry, the first secretary of the Smithsonian Institution; Alexander Dallas Bache, superintendent of the U.S. Coastal Survey; George C. Schaeffer, an examiner at the Patent Office; and Titian Peale, the son of noted American artist Charles Willson Peale, an artist and naturalist who was also an examiner at the Patent Office. These men and some others would gather to discuss scientific principles, examine various inventions, or hear a lecture by a visiting authority.

In his daily work, Meigs came into contact not only with his workmen, their supervisors, and the contractors, but also with members of Congress and officials of the army engineer corps and the War Department, as well as with artists and others seeking commissions for work on the Capitol extension. In addition, Meigs' office in the Capitol frequently attracted visitors eager to be shown over the site. For a time, his office was in the future House Agriculture Committee room where artist Constantino Brumidi was painting a sample fresco on the wall, making Meigs' own working space a tourist attraction.

Background of Capitol Extension

Construction of the Capitol extension had begun in the administration of President Millard Fillmore, under the general oversight of the Interior Department. In 1851, President Fillmore approved the plan of Philadelphia architect Thomas U. Walter. His design involved adding new House and Senate wings attached to either end of the existing building by connecting corridors. Walter was placed in charge, as the architect of the Capitol extension, while the commissioner of public buildings retained oversight of the old portions of the Capitol Building under the secretary of the interior. Walter in turn hired a civilian, Samuel Strong, to serve as general superintendent. In 1852, however, a Senate committee, chaired by Samuel Houston of Texas, began investigating expenditures for the Capitol extension project. The committee's report, issued in March 1853, concluded that finances and contracts had been improperly handled, although Walter was charged with no wrongdoing. The report therefore urged the president to place disbursements for the project in other hands.

On March 4, a new president, Franklin Pierce, had taken office. With encouragement from Secretary of War Jefferson Davis, Pierce issued an executive order transferring responsibility for the Capitol extension from the Interior Department to the War Department. The order also specified that an officer of the Corps of Engineers or Topographical Engineers would be general superintendent of the project, since an army officer could be expected to administer contracts fairly and be scrupulously honest in handling funds. In choosing Meigs, Davis selected the right man, for the captain had a strong sense of duty and took pride in making the enlarged Capitol a solidly built and attractive building, while seeking the best price for the government from each contractor.

Under the new arrangement, Walter remained as architect but was no longer responsible for negotiating contracts or hiring workers. During 1853, he was also busy with designing and rebuilding the quarters of the Library of Congress in the Capitol, which had been destroyed by a fire in December 1851.

At the time Meigs arrived, the plans for the two wings of the Capitol placed the House and Senate chambers against the outer walls, with windows to admit light and air. Because this arrangement would require members to approach the chambers through public corridors, with no way to elude those seeking to lobby them, Meigs' solution was to move the chambers to

the center of each wing. Although this plan eliminated windows, it provided space for private corridors and cloakrooms from which the public could be excluded. To light these interior chambers, Meigs designed skylights combined with gas lighting, and for ventilation he used steam-powered fans. He also studied acoustics and visited halls and churches in Philadelphia and New York with Joseph Henry and Alexander Bache to determine the shape and size of auditorium in which debates could be most clearly heard. President Franklin Pierce and Secretary Davis approved the revised plans for the two chambers in June and July 1853.

In 1854 Thomas Walter began designing a new larger cast iron dome to take the place of the existing low dome designed by Charles Bulfinch, which would be completely dwarfed by the new wings. When members of Congress visiting Walter's office saw his drawing of the enlarged building surmounted by his proposed dome, they grew enthusiastic about funding it. In March 1855 Congress provided an initial appropriation for the dome, and Meigs began to prepare weight estimates and plans.

Art and Sculpture

President Pierce and Secretary Davis believed that both the exterior and interior of the new wings should be aesthetically pleasing, with the interior richly decorated with art.

With the concurrence of Secretary Davis, Meigs had directed Walter to add pediments to the porticoes of the House and Senate wings, which he intended to fill with sculpture, in keeping with the central pediment in the original building. He also saw a need for two massive ornamental doors for the new porticoes. Since both Meigs and Davis considered these features part of the building's construction—unlike future statues that might be placed in the Capitol's interior—they would be paid for out of construction funds and selected with the approval of the secretary of war. Meigs therefore began inquiring about highly qualified American sculptors who might be willing to submit designs for approval by the secretary of war. Ultimately, Meigs contracted with Thomas Crawford to fill the Senate pediment, design two sets of doors, and create a statue to crown the new dome, while Randolph Rogers won a commission to design the bronze Columbus doors, which are now at the east front entrance to the Rotunda.

Secretary Davis reported to Congress that, while the original plan had been for the interior finish of the new wings to include simple whitewashed walls and brick floors like the existing building, he believed that "this style would not be a fair example of the present state of architectural skill." Samples of more elaborate decoration were prepared for the examination of members of Congress and in 1856 the necessary funds were appropriated. ¹

In selecting construction materials for the interior of the building, Meigs therefore considered decorative effects as well as structural properties. For the floors, he chose encaustic Minton tiles that were both long wearing and brightly colored in attractive designs. He also contracted for colored and imitation marble walls and columns, intricate plaster ceilings, and sculpted bronze stair rails.

Since Davis agreed that the interior walls of the new wings should not simply be whitewashed like those in the old building, Meigs studied art books and visited galleries on his trips to New York and Philadelphia, in order to learn about the best of classical European wall decoration. When Meigs was introduced to Constantino Brumidi, an Italian artist who had immigrated to the United States a few years earlier, he offered the painter a chance to produce a sample fresco on the wall of the room Meigs used as his office. Once Meigs and Davis approved the sample fresco, they hired Brumidi to paint the rest of the walls and ceiling of the future committee room. During and after the work, the "painted chamber" attracted throngs of admiring congressional and other visitors. Members encouraged Davis to have the remainder of the new wings similarly decorated, and once Congress appropriated the necessary funds, Brumidi and other artists were set to work.

As all of these efforts at decoration began to bear fruit, they became increasingly visible to members of Congress and others visiting the Capitol. From Rome, Crawford sent the plaster models of figures for the pediment, asking that they be copied in American marble in Washington. As a result, sheds soon sprang up on the Capitol grounds filled with Italian stone carvers chipping away at sculptured figures, while a host of mostly foreignborn decorative artists, working under the direction of Brumidi and Emmerich Carstens, busily painted walls and ceilings in the new wings.

In the wake of political upheavals in Europe in 1848, a wave of immigrants had sparked an answering surge in nativism in the United States. In 1854 the American (Know-Nothing) party

 $^{^1\}mathrm{See}$ excerpt from the Report of the Secretary of War, December 1, 1856, in Appendix, page 785.

elected fifty-one members to the House of Representatives and one senator, and in 1856 fourteen representatives and two senators. The sight of so many foreigners decorating the Capitol raised the hackles of these and other members of Congress, as well as of newspaper writers, and all demanded to know why American artists had not been hired. In vain did Meigs explain that he could not find Americans with the needed skills and that many of these were artisans, not artists, who were copying in stone the plaster sculptures created by others or painting plaster walls to resemble marble. The controversy built up until finally, in 1858, Congress included a provision in an appropriation bill that forbade any more contracts for works of art or sculpture at the Capitol unless specifically approved by a presidentially appointed art commission. By that time, however, the principal decorations had already been approved or contracted for and were well on their way to being completed.²

Construction Problems

The construction work itself, with the supervision of hundreds of workers, also caused Meigs some headaches. Strikes or threats of strikes were a recurring problem. Stone cutters struck in 1854 over the use of carvers who did not belong to their society, and strikes by other workers threatened to disrupt the work at several points. Once, in 1858, the plasterers became outraged that two of their number were earning a higher wage than the rest and threatened to walk off the job if all did not receive the higher amount.

On such an enormous project, accidents naturally happened. When in the course of construction an occasional injury or death occurred among the workers, Meigs often expressed annoyance rather than sympathy. A strong believer in taking careful precautions to ensure that scaffolding and other equipment was solidly grounded and firmly supported, he grew angry at the cheap and sloppy arrangements by contractors that allowed workers to fall or be crushed. On other occasions he blamed the injured worker himself for carelessness that permitted an accident to happen. Never did Meigs blame himself for accidents, believing that those running the particular operations, the foremen or the contractors, had the direct responsibility. On the other hand, whenever Meigs noticed a scaffold or derrick that appeared unsafe, he did not hesitate to point out the flaw to those in charge and urge that it be corrected. Sometimes Meigs himself even di-

²For more on the decoration of the Capitol extension, see Barbara A. Wolanin, *Constantino Brumidi: Artist of the Capitol* (Washington: Government Printing Office, 1998).

rected the raising of a derrick to ensure that it was done correctly.³

Other Construction Projects

As noted earlier, Meigs was responsible for other projects than the Capitol extension. He was also superintending the building of the Washington aqueduct from Great Falls in Maryland, as well as expansion of the General Post Office in Washington and construction of Fort Madison at Annapolis, Maryland. Although Meigs believed he would gain more fame from his work on the Capitol and the dome, his favorite of all these undertakings was the aqueduct.

In the 1850s, Washington residents depended on wells and cisterns for their water supply, which was often insufficient for fighting fires, as well as liable to become polluted. Other cities, like Boston, New York, and Baltimore, were building aqueducts to provide pure water, but Washington's situation was unique because its budget was controlled by the federal government. Thus, the Washington aqueduct was to be funded by congressional appropriations and overseen by the secretary of wara proposition that city officials greeted warmly. Committed to the goal of providing a reliable water supply for the city, Meigs lobbied Congress for funding on the frequent occasions when adequate appropriations were not forthcoming. In 1853 city officials ordered a silver tea kettle to present to Meigs in gratitude for his report recommending construction of the aqueduct. Meigs himself, reflecting on the multiple undertakings that occupied his time, stated that, of them all, the aqueduct would bring the greatest and most lasting benefits.

When the water first reached Washington from the reservoirs in January 1859, the day before the Senate was scheduled to move into its new chamber, Meigs arranged for a jet of water some twenty feet high to shoot up at the foot of Capitol Hill, where it could be seen from the windows of the Capitol. Meigs wrote: "God be thanked for having made me the instrument of this much good to this city. . . . No more shall the houses of the poor burn in flames for want of the means to extinguish them. And the poor and the servant will now be relieved of the unhealthy labor of carrying water from the pumps through the snowed-up streets of winter." ⁴

³For more on the construction of the Capitol extension, see William C. Allen, *The United States Capitol: A Chronicle of Construction, Design, and Politics* (Washington: Government Printing Office, 2001).

⁴See entry for January 4, 1859.

Since this volume focuses principally on construction of the Capitol extension, only occasional mentions of the aqueduct are included.

Political Difficulties

From soon after his arrival in Washington, Meigs found that he would be occupied not only with overseeing his construction projects but also with political maneuvering to keep the works funded and protected from political opposition. Each new Congress had some members fiercely opposed to one aspect or another of Meigs' work, such as having an army officer superintend civilian projects, or his contracting for painting and sculpture. He also, however, had a number of staunch and reliable congressional supporters. Many of those he could count on came from the South, such as Senators Robert M.T. Hunter of Virginia, James Pearce of Maryland, and William Dawson of Georgia, Representatives Lawrence Keitt of South Carolina and Burton Craige of North Carolina, and Meigs' mentor, Secretary of War (and later Mississippi Senator) Jefferson Davis.

Although he suffered from some congressional sniping in his early years in Washington, Meigs' worst troubles began in 1857 after James Buchanan succeeded Franklin Pierce as president. The new secretary of war, John B. Floyd, had a very different attitude to the work than had Jefferson Davis. A former governor of Virginia, Floyd saw the construction on the Capitol and the aqueduct as a rich field for using patronage to reward cronies and political supporters. Meigs, who scrupulously solicited bids and awarded contracts to the lowest bidder capable of performing the work, found to his dismay that potential contractors applied directly to the secretary of war. Floyd, unlike Davis, sought to steer the lucrative transactions to loyal Democrats. He also frustrated Meigs by occasionally requiring him to fire a competent worker or foreman and replace him with someone of the secretary's choosing. Some senators and representatives who owned businesses also urged the engineer to help them gain contracts. Meigs resisted all these pressures unless he received a direct order from the secretary of war. In such cases he protested but obeyed, since it placed the responsibility for the decision on Floyd. The very honesty and integrity that had made Meigs the perfect choice of superintendent for Davis thus made him a constant trial to John Floyd.

Also during this period, starting in 1857, the architect, Thomas Walter, who had previously seemed to work congenially with Meigs, saw a chance to regain the authority he had lost in 1853

and began to build a relationship with the new secretary of war. Although the journal naturally presents the conflict from Meigs' viewpoint, Walter had apparently chafed for years at Meigs taking credit for designs the architect considered his own. Thus, whenever possible, he attempted to undercut Meigs with Floyd, gradually intensifying his campaign until he began directly defying Meigs' orders. The conflict offended Meigs' strict military sense of propriety and hierarchical authority. When it became clear that Floyd would never support him against Walter, Meigs turned to President Buchanan, a weak man who simply wanted peace in his administration. Caught between a cabinet officer and Meigs, Buchanan stalled in an effort to avoid choosing either, but when ultimately forced to a choice, as Meigs predicted in his diary, the president chose Floyd.

In October 1859, after two years of increasingly tense relations with Meigs, Floyd had the captain removed from the Capitol extension, the dome, and the Post Office extension, while leaving him in charge of the aqueduct. Still, the change failed to improve relations between the two, and in September 1860, after the captain refused to obey a direct order from the secretary, Floyd reassigned Meigs to Fort Jefferson in the Dry Tortugas islands along the Florida coast.

Meigs' exile was brief, however, and in February 1861 he was back in Washington, having been recalled by the new secretary of war, Joseph Holt, after Floyd had resigned in December 1860. Although Meigs was vindicated by restoration of his authority over the Capitol, the dome, and the aqueduct, the outbreak of the Civil War soon called him to more important duties as quartermaster general of the Union army.

Editorial Method

Although Meigs in his journal discussed a wide variety of topics, including his work on all the projects he was overseeing, his family and social life, and current events of the time, this publication focuses principally on his work on the Capitol. Even when an entry for a single day contains discussions of several of Meigs' activities, only those relating to the Capitol have been selected for publication, although some passages about his family and life in Washington have been included for human interest. The excerpting has been necessary because the complete diary is extremely voluminous, running to 2,800 typed double-spaced pages for the years 1853 to 1859 and for several months of 1861. (The diary for 1860 has not been transcribed because

Meigs was removed from supervision of the Capitol extension in the fall of 1859 and not restored until February 1861.)

To assist the reader of this volume, every point where a paragraph has been dropped is indicated by a row of three asterisks. Where only a portion of a paragraph is omitted, the omission is indicated by ellipses. Background information needed for comprehension because of omitted portions is included in italics in square brackets.

Because Meigs first kept his journal in longhand then later switched to Pitman shorthand, in which he wrote the bulk of the diary, the portions in each form are indicated by boldface notations in square brackets: [longhand transcription follows].

The two forms created separate editorial problems.

In longhand, Meigs' handwriting is not very legible, becoming even worse on occasions when his remarks are squeezed into a very small space, as in marginal notations. There are thus a number of undecipherable words, which are indicated here simply by [illegible word] or [three illegible words]. Questionable words are followed by [?]. In writing longhand, Meigs frequently used abbreviations to speed up his writing. These have generally been changed to full words to match the style of the shorthand transcriptions. He also made frequent use of ampersands, which have been changed to "and." Because punctuation is often very irregular or missing entirely from the longhand portions, minimal punctuation, such as commas and periods, has been silently added where the intention is clear. At the ends of sentences, periods have been substituted for dashes, and capitalization has been added at the beginning of sentences. Paragraph indentation has been standardized, and superscripts have been brought down to the line (most have been eliminated by spelling out the full word).

The shorthand entries were transcribed by a retired Senate reporter of debates who was familiar with Pitman shorthand. Because no one else involved in the project knows the shorthand, it has not been possible for the editors to proof against the original or to make additional efforts to decipher words the transcriber could not identify (indicated simply by ______). Words followed by [?] are those the transcriber was unsure of. This portion of the text therefore appears as transcribed, with the exception of silently correcting spellings of proper names (which were also written phonetically in shorthand rather than in longhand), placing book and newspaper titles, works of art, and names of ships in italics, adding appropriate accents to some foreign

names, and incorporating correct words in brackets where the context makes it absolutely clear.

Other editorial changes to both longhand and shorthand portions involved spelling out "inches," "feet," and "degrees" where Meigs had used symbols, making capitalization consistent, and adding commas in long numbers. Meigs wrote numbers in longhand even within the shorthand entries. While in most cases they are clear, there are places where the numerals are difficult to make out. These are marked with [?].

Meigs was inconsistent in the way he wrote out dates. He placed the day of the month in the margin next to each entry (both those in longhand and those in shorthand), but usually he only included the month at the top of each page or at the beginning of a new month. On some occasions, he wrote the dates simply as "2., 12.," etc., and on others in the style "2nd, 12th." These dates written by Meigs have been retained in their original form. As a guide for the reader, the month of each entry has been added in brackets, and the date has also been indicated after each omission to show whether the same day's entry continued or a later one began. The supplied dates in brackets are all in the form "May 1, Dec. 5," etc.

Explanatory footnotes have been provided at the first mention of individuals or companies for whom more information has been found than the identification Meigs provides. For those identified in a footnote, the page on which the note appears is indicated by bold type in the index. For easy frequent reference, some identifications also appear, grouped by category, in the "Cast of Characters" at the beginning of the book. Where the last names are similar, the first names of some individuals who have been previously identified are included in brackets, if the context fails to make it clear. Footnotes also summarize the content of relevant clippings from newspapers or congressional proceedings that Meigs pasted in his diary. The full texts of some of the more important clippings appear in the appendix.

Meigs made frequent use of specialized engineering, architectural, and construction terms. Explanatory footnotes are included for some that can be easily defined without resorting to further specialized terms.