

## Chapter 2

# THE 1807–1838 LIFE AND EDUCATION OF THOMAS GREEN CLEMSON

*Jerome V. Reel*



Portrait of Thomas G. Clemson as a young man, 1834, by William Kennedy Barclay (1816–1851). Oil on canvas. Clyde V. Madren Conference Center, Clemson University. On loan from the estate of T. Ashton Phillips.

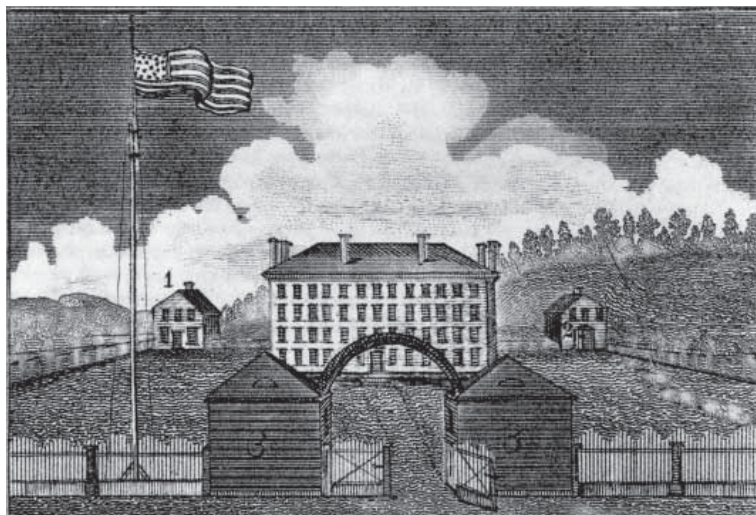
Following the death of Thomas Clemson III in 1813 and the subsequent appointment of his second cousin John Gest as guardian of Thomas and Elizabeth's six children, their education, of course, was an important issue. While the paucity of records raises a question about the degree of that importance, the paucity itself may reflect an aspect of the educational history of Philadelphia.

The Quaker founders of Philadelphia had led the Provincial Council to establish a school within the Meeting in 1683 to teach reading, writing, and arithmetic to boys and girls. Six years later, the Friends Monthly Meeting created a secondary school for males. It offered Bible, mathematics, and natural philosophy. At that stage, formal education ceased, because seventeenth-century Quakers, who had no clergy, had no need for colleges. When Benjamin Franklin proposed the Philadelphia Academy in 1740, it received support from many Quakers, but when, in 1755, it added collegiate instruction, most withdrew their support.<sup>1</sup> By 1800, both secular and religious education at the primary level was conducted by the churches, particularly the Quakers, Episcopalians, Presbyterians, Moravians, Baptists, Roman Catholics, and Lutherans. Most of these schools were open to girls and boys of both congregational and fee-paying families. After 1801, the children of the poor could attend one or another of these schools, and the city paid.<sup>2</sup> By 1813, the Charity School of Philadelphia was open and operating.<sup>3</sup>

Beginning in the winter of 1814, the older Clemson children were enrolled in day school at the Tabernacle Presbyterian Church,<sup>4</sup> then located in Ramstead Place on Fourth Street between Chestnut and Market Streets.<sup>5</sup> That congregation began in 1804 as a break-away congregation of English independents from Second Presbyterian Church.<sup>6</sup> How long the children stayed at Tabernacle Presbyterian School is not known, and there is no solid indication of where each of them went for secondary school. An uncorroborated, late nineteenth-century story suggests that one or more of them may have gone to a school called “Shellpot Hill,” and another mentions a “Manual Labor School.”<sup>7</sup> The only certainty is that, for Sunday services, Mrs. Clemson owned a pew at Saint Stephen’s Episcopal Church on Tenth Street.<sup>8</sup> It is probable that the children went to services with her, because one of her sons, John Baker Clemson, later chose to be ordained as a deacon there in 1825.<sup>9</sup>

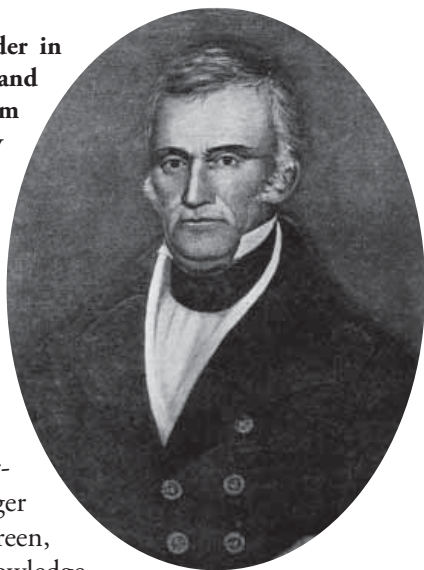
### *Norwich Academy, Vermont*

In 1819, Captain Alden Partridge, who had served as the first instructor in civil engineering at the United States Military Academy, opened the American Literary, Scientific, and Military Academy, which came to be known first as Norwich Academy and later, in 1838, having been chartered by the government of Vermont, as Norwich University. Besides the usual courses in the classics, history, and literature, Partridge included such courses as chemistry, astronomy, botany, and mineralogy, along with more “practical instruction” in surveying, mensuration of heights, civil engineering, and agriculture, which were revolutionary in North America. Knowing that the United States had been embroiled in “wars and rumours of wars” almost continuously from 1775 to 1815, Partridge also formed his students into a cadet corps and led them on regular military marches and field trips through the countryside. In 1822 the French language was added to the curriculum.<sup>10</sup>



An early view of the American Literary, Scientific, and Military Academy in its original location in Norwich, Vermont. Classes were held in South Barracks, the central building in the drawing. M. M. Peabody's engraving from drawing by E. F. Johnson. From *Thompson's Gazetteer* (1824): 202. Collection of the Sullivan Museum and History Center of Norwich University, Northfield, Vermont.

Captain Alden Partridge (1795-1854), founder in 1819 of the American Literary, Scientific, and Military Academy in Norwich, Vermont. From *History of Norwich University 1819–1911* by Grenville M. Dodge and William Arba Ellis, vol. 1 (Montpelier, Vermont: Capital City Press, 1911), iv.



Thomas Green Clemson was enrolled in the Norwich Academy for the spring term of 1823. He was fifteen years old. His older brother, John Baker, by then a graduate of Princeton College, sent a letter without a salutation but probably to Partridge with specific instructions for his younger brother's advanced education. Thomas Green, who already had a speaking and reading knowledge of French and a reading knowledge of Latin, and had progressed through Virgil and Horace, was to continue in Latin. He may have continued French either formally or informally. His instruction in Greek (which may have been a new subject) should include all of the *Graeca Minora*, some of

the *Graeca Majora*, and into Homer's *Iliad*. Mathematics should progress through seven books of Euclid's propositions through polynomial equations, while the young Clemson should take as much surveying as he could accomplish. In addition, English grammar, geography, history (probably post-Roman), Roman antiquities, Bible, and athletic exercises, particularly fencing, were to be included. John Baker hoped the course could be completed in 1824 or at least by the spring of 1825.<sup>11</sup> He did not mention chemistry, astronomy, agriculture, civil engineering, botany, or mineralogy, but Clemson did study most, if not all, of those subjects.

| age | NAMES.  | RESIDENCE.        | ROOMS.   | Entered  |
|-----|---|-------------------|----------|----------|
| 18  | Ira Carpenter,                                | Keene, N. H.      | x No. 44 | May 1823 |
| 14  | George E. Coolidge,                           | Dorchester, Mass. | 26       | " "      |
| 16  | Thomas G. Clemson,                            | Philadelphia, Pa. | 39       | " "      |
| 15  | Thomas T. Craven, Midship-<br>man U. S. Navy. | Portsmouth, N. H. | x 16     | June "   |

Listing of cadet "Thomas G. Clemson, Philadelphia, Pa." in a *Catalog of the Officers & Cadets of the American Literary, Scientific, and Military Academy* (Windsor, Vermont: Simeon Ide, 1823). Marginalia include Clemson's age and the date he entered the academy. Catalog Collection, Norwich University Archives, Northfield, Vermont.

Thomas Green is listed as a cadet in the catalogs for 1823 through 1824.<sup>12</sup> His name also appears on some class rolls, room inspection reports, and on a receipt for board and laundry. Whether he left at the end of the autumn and winter session in 1825 or in June 1825 is not known.

What is clear is that by 1825 he was home in Philadelphia and was in that region studying mineralogy. Sometime in early 1826 and at eighteen years of age, Thomas Green Clemson read his first professional paper on an analysis of mineral substances to the Geological Society of Pennsylvania. He suggested they would be useful if properly mixed to coat iron for preventing oxidation. Almost at the same time, he conducted an analysis of iron ore, the sample for which was acquired from Franklin County, New York. A third analysis was of hydraulic limestone from Jefferson County, Virginia (now West Virginia). In this work, he noted three different substances including the prevailing blue limestone and also varieties of black and gray. Eight years later, these analyses would be published together in the *Journal of the Franklin Institute*.<sup>13</sup>

### *Paris 1826–1831*

In the late summer of 1826, Thomas Green took leave of his family and his Philadelphia friends, Ralph Hannoveraly, A. M. Stevenson, and Sam Yorke, as he boarded his ship to sail to France. Stevenson, years later, remembered that Clemson embarked close by the Auction Store in Philadelphia where the young men

worked.<sup>14</sup> The date of the sailing, the name of the ship, and the place of landing in France have not been found, but Clemson seems to have proceeded directly to Paris and settled at No. 49 in Rue Mazarin. Whether he remained there until his return to Philadelphia is not known. The first clear picture of Clemson's initial year in Paris is seen in a letter from a fellow American, M. Robinson, who wrote Clemson on November 2, 1884, remembering their meeting fifty-eight years earlier in Paris:

I recall my first meeting with you there at a reception of General Lafayette soon after his return from the United States in the winter of 1825–1826 when I was struck with your gay nature and an enjoyment of the attractions and novelties of Paris equal to my own.<sup>15</sup>

Obviously, the young Thomas G. Clemson enjoyed public company, particularly the company of luminaries, then and later in his life.

The second and more personal glimpse is a letter from Clemson to his mother, Elizabeth, on August 29, 1828. He does not refer to his scientific study, although other references make it apparent that he was heavily involved in those endeavors. To her, he wrote that "If any person has a restless disposition, I think it is myself. I have a great ambition [and] wish to see and do everything." At this point, Thomas Green had been in Paris "upwards of two years." The mercurial personality (he called it "a restless disposition") had already begun to manifest itself. On the one hand, he found himself "unhappy because I am not at home." A part of his concern was that his financial affairs were not settled, a worry that would follow him through his life. Thus, in this 1828 letter, he instructed:

if any thing should happen to me whilst absent, I do desire that everything I have in money Bank stock Property etc, may be given to you and to be enjoyed by you whilst living—and after your death that it may be given to those of my sisters who are not married. This is a thing that I should have thought of before I left home for everyman in going to sea is running a risk never to return.

The mention of his estate, without commas, makes it difficult to gather an understanding of the investments or even an estimate of the amount. His disquiet also stemmed from the scarcity of letters his mother had written him. Letters arrived in Paris from Philadelphia via Le Havre every fifteen days, and Thomas Green had received no letters for over a month.

Yet he was happy in Paris, happier that he would have been in Philadelphia. In Paris he felt free:

There is not that liberty [in the United States] that exists in Paris. People meddling with things that do not regard them. One giving his advice. Another blaming you for this. He plays too much on the flute, on the violin. He does [...]

drink and sleep. If you are seen taking your glass of wine, or play in a game at cards, or at the theatre. O! he drinks! He gambles—He frolics. He is lost.

So he wrote, “I do not think of returning home.”<sup>16</sup> Perhaps he has given an insight into his Parisian pleasures and pastimes.

That is not to suggest that he was not busy on scientific matters. One of his letters, later published, was written in Paris, September 18, 1828, to Jacob Green, M.D., professor of chemistry at Jefferson Medical College in Philadelphia. Green and Clemson had met earlier in Paris, and Dr. Green had asked Clemson the name and type of oil burned in France. Clemson investigated and found that the oil was extracted from the grain of a species of cabbage (*Brassica arvensis* or *campestris*) and was called “Huile de Colza.” Clemson, however, was not satisfied with the simple answer. He noted that the plant grew throughout France, particularly in the north, with Lille as the center of production, all the way through the Netherlands. Planting, transplanting, cultivating, harvesting, extracting the oil, and preparing it for use were detailed, along with the note that the research was carried out by Louis Jacques Thénard, whose lectures Clemson later would testify in a Philadelphia court he had attended, along with those of Gay-Lussac and Dulong in the Sorbonne (a medieval foundation college of the University of Paris) in 1826.<sup>17</sup> This research might be noted as his first reference to scientific agriculture and, perhaps, demonstrated the broadening of his mind and spheres of interest.

Eight months later, on May 27, 1829, Clemson wrote a letter to Benjamin Silliman, M.D., Yale faculty member and editor of the *American Journal of Science and Arts*, describing Clemson’s observation and analysis of a sample of iron ore, which had been found in the Baltimore area and sent to him by a Mr. Warden. Silliman would publish the assay and analysis in a subsequent issue of his journal.<sup>18</sup>

Clemson also broadened his knowledge in practical laboratory chemistry by working in 1826 and the first half of 1827 with the chemist Gaultier de Clowbry. Later, Clemson continued this style of learning with other Parisian chemists, Laugier, Filier, and Robiquet. His acquisition of advanced knowledge grew, and, on November 4, 1828, at the request of the United States consul in Paris, Clemson was admitted to the Royal School of Mines in Paris by the minister of public works as an “irregular student” [*auditeur libre*]. His record indicated he attended, or had permission to be an irregular student, from 1828 to 1832.<sup>19</sup> Clemson spent the remainder of the winter of 1828–1829 and the spring of 1829 at his studies at the Royal School of Mines, but he planned to tour part of the Germanys, especially Saxony, during the summer of 1829. Probably during that visit, he wrote his observations and submitted them to Silliman, who subsequently published them.<sup>20</sup>

In June 1831 Clemson received his certification as an assayer from the Royal Mint of France.<sup>21</sup> After receipt of the certificate, Clemson made plans to return to Philadelphia, but his friends in Paris were not happy with that decision. A Ca-

nadian, Lefte Neal, was upset partially because Clemson would miss the July celebration. That remark is part of a longer letter he sent Clemson from his Parisian apartment on Rue de la Université. In it, Neal chided Clemson for not delaying his departure only fifteen days:

And not one of us can conceive why you do not wish to be present at the celebration of the July festival, you, one of the combatants of our three great days; you whom I can still see covered with sweat, coming from the firing, and taking, in order to return thither, a new strength at a wine shop on the corner of Mazarine and Guénégaud Streets at the foot of the barricade. Your leaving before the celebration of the anniversary is almost desertion.<sup>22</sup>

The anniversary was of the July Days (28, 29, and 30) of 1830. These days signaled the outbreaks of political and intellectual revolts fifteen years after the Vienna Conference had attempted to re-establish more traditional European governmental and social form at the end of the tumult and wars of 1789 to 1815—the era of the French Revolution, Reign of Terror, and the Napoleonic empire. In France, the Vienna Conference had meant the restoration of the royal throne to be held by Louis XVIII (1755–1824), the brother of the guillotined Louis XVI. Louis XVIII was as moderate as a Bourbon could be, even tolerating the Bourbon white banner sandwiched between the Parisian red and blue. His restoration, after Napoleon I's "One Hundred Days" failed return to power, was marked by a limited franchise and parliamentary government. Upon his death in 1824, he was succeeded by his younger brother Charles X (1756–1836). Charles was no moderate and adopted a much more repressive form of rule that alienated liberals and moderates. The growing reactions in 1829 and 1830 led to the uprising of 1830. Moderates looked to the younger cousin of the direct Bourbons, Louis Philippe (1773–1850), who would reign from 1830–1848. The son of Louis Philippe Joseph, Duc d'Orleans, who was known during the revolutionary era as Philippe Egalité, Louis Philippe had been taken by his father, once a supporter of the Third Estate, to Austria as the revolutionary leadership grew increasingly bloodthirsty.

When in 1830 Charles X abdicated and fled into exile, Louis Philippe was elected by the parliament as the lieutenant general of France. Liberals or radicals, who wanted a republic, supported the Marquis de Lafayette, an avowed liberal. Renowned for his support of and participation in the American Revolution, Lafayette had been a member of the opposition during the Restoration and, upon the accession of Charles X, moved firmly into the radical wing. During the Revolution of 1830, he served as commander of the National Guard. He was the liberals' favorite to serve as president of their hoped-for republic. However, the moderates, in combination with most gentry and ecclesiastical and commercial houses and authorities, prevailed, and the Orleanist heir became king.

Such a turn of events may shed light on Thomas Green Clemson's decision to leave for Philadelphia fifteen days before the first anniversary celebration in Paris of the July Days of 1830. Certainly it is tempting to imagine a disappointed, republican Clemson, from a family that supported the American Revolution, who harbored loyalty to General Lafayette whom Clemson had seen at least twice and for whose cause and leadership in the July 1830 revolution he had fought.

Whatever the case, one of the coincidences of Clemson's participation in the 1830 French revolution is that the fervor and excitement of those July days would spread into the Belgian provinces and light the separatist feelings there. The Belgians chose Léopold of Saxe-Cobourgh (1790–1864), as King Léopold I (1831–1864), in whose court Thomas Green Clemson later would serve as a diplomat (1844–1851).

### *Back to Philadelphia 1831–1832*

Thomas Green Clemson arrived back in Philadelphia in the first half of September 1831. No doubt his mother and perhaps some of his brothers and sisters greeted him at home. Then his old friend, A. M. Stevenson, came to see him. Later, Stevenson would recall, "After talking a while you jumped up from your chair and said, 'Come out, let us go to Holahans and get a mug of beer and pretzels,' which you said you had often longed for in Paris—and there we had a long confab."<sup>23</sup> The Philadelphia they walked through had grown to 80,462, although it had slipped in relative size from second behind New York City to third, just edged out by Baltimore.

In February of 1832, Clemson served as one of Pennsylvania's witnesses in the famous trial of Lucretia Chapman (also known as Lucretia Espos Y Mina), along with another woman, probably her sister, for the murder of William Chapman, Esq., of Bucks County, Pennsylvania. Clemson was the twenty-third prosecution witness. He testified that, on September 22, 1831, he had been summoned to aid in the examination of the contents of William Chapman's stomach by Dr. Hopkinson in the laboratory of Dr. Mitchell. Clemson's testimony, which was carefully delivered, indicated that the interior of the stomach was coated with a "brown semi-fluid substance." A tablespoon of the substance, which had a brownish hue, was taken from the stomach for testing. Clemson stated that parts of the stomach were inflamed and the blood vessels were visibly browner than the rest. The substance was subjected to a series of tests, the first two of which revealed nothing, but, when the substance was cleansed of its residue of animal matter, the remains gave off the characteristics of arsenic.

When asked for his *bona fides*, Clemson noted the Parisian chemists, in whose laboratories he had worked, and his diploma from the mint as an assayer. A defense lawyer asked him for his experience as expert; Clemson acknowledged that he had only observed Mr. Robiquet perform such a series of tests for poison but that this

was his first direct such examination. However, in it, he assisted Dr. Hopkinson under the continuous witness of Dr. Mitchell. In addition, two other doctors, Hare and Togno, occasionally were present.<sup>24</sup> Clemson's testimony was characterized by a thoroughness and honesty that would mark all of his scientific work.

### *Paris 1832*

Not yet twenty-five years old, Clemson returned to Paris by April 1832. He started a journal, which began in June 1832 and concluded in February 1837, and which is primarily a series of non-scientific notes, general observations, thoughts, and some expenses. Also included are several letter drafts from 1832 and 1837. On the flyleaf Clemson noted that he still considered the family home on Filbert and Ninth Streets, Philadelphia, as his principal residence.<sup>25</sup>

The journal reveals that Clemson's second stay in Europe would be from April 1832 to late summer of 1834. During that time, he continued his studies in a variety of sciences, worked diligently on his German, and, as an outcome, had an article on iron ore published in the U.S. and then reprinted in the *Journal für Chemie und Physik*.<sup>26</sup> He also analyzed some carbonate of iron and a sample of Harlan "bronzite" for correspondents in the United States. These two analyses were published by Benjamin Silliman in the *American Journal of Science and Arts*.<sup>27</sup>

By October 1834, Clemson had returned to Philadelphia where he stayed perhaps as late as mid-June 1835. With a group of friends, he conducted field work in nearby York County. Subsequently, he read a paper "Observations on the Geology of York County, Pennsylvania" to the Geological Society of Pennsylvania. This non-professional paper was then published as a pamphlet. One passage noted the existence of gold in quartz, and Clemson wrote that these "bear a strong resemblance to those of the gold belt of Georgia, North and South Carolina, and Virginia."<sup>28</sup> These passages may have been prescient of Clemson's later gold-related enterprises.

Again, Clemson returned to Europe. Using Paris as his base, he took a long trip to the United Kingdom, to which he had traveled once before. On his first trip, he had visited parts of England and Scotland. This time he took only day-trips out from London and lodged for a while on Regent Street in London before returning to Philadelphia. Why he went is not known. Perhaps it was a vacation or a search for employment. Whatever the case, by the late spring of 1836, he spent time with Richard C. Taylor in Cuba investigating bituminous coal. In August 1836, Taylor presented their findings to the American Philosophical Society in Philadelphia.<sup>29</sup>

In the late spring 1836, Clemson was back in Paris until early August when he and two of his aunts returned to the United Kingdom. Their travels took them by Lichfield, to Chester, and then to Holywell, Wales, where they stopped and visited St. Winifrid's Well. Clemson's little pocket diary also mentions their passing

Conwy Castle and crossing the Menai River on Telford's remarkable suspension bridge. From Anglesey, they crossed by boat to Dublin. There, Clemson's party was joined by his friend, Huizinga, from the Low Countries, and they traveled north along the Irish Sea. As they passed through small Irish villages, Clemson noted the "mud" and "miserable hovels" in which the Irish peasants lived. The conditions improved markedly when they stopped overnight in Newry and then spent three days in Belfast, the childhood home of one of his aunts. The group went on to Scotland for Clemson's second visit to Edinburgh, where, typical of his disinterest in religion, Clemson dodged morning service at St. Mary's Scottish Episcopal Church in favor of hiking up to Arthur's Seat with his friend Huizinga. Back in Dover, England, Clemson saw Léopold I, King of the Belgians, a glimpse that presaged unexpected connections between the two. After all, three years earlier, the king had received his throne as a result of the revolution in which Clemson participated in 1830, and it would be to Léopold's court that Clemson would be sent as chargé d'affaires in 1844.

### *Auspicious Meetings*

Back in Philadelphia by 1837, Clemson had come to the notice of a group of Missourians: E. F. Pratte, C. C. Cable, and L. C. Linn, who were interested in acquiring a lead mine (LaMotte) in Missouri, but who first wanted an expert opinion. They contacted Clemson and offered him a quarter share for his advice and subsequent supervision. To make the deal final, in the spring of 1838 Clemson went to visit Louis Linn, who was serving as a U.S. senator from Missouri, in Washington, D.C.<sup>30</sup> Linn roomed in the same boarding house as South Carolina Senator John C. Calhoun. In a discussion between the two, Calhoun's purchase of the O'Bar Mine in Georgia came up. As a result, Linn introduced Clemson to Senator Calhoun. It was through this connection that Anna Maria Calhoun, who in 1834 had accompanied her father to Washington as his confidential secretary, met Thomas Green Clemson.<sup>31</sup>

This was a pivotal meeting for the young, single Clemson, whose education ranged from geology, chemistry, docimacy, metallurgy, mining engineering and management, mineralogy, and agriculture to English, French, German, some Latin, a bit of classical Greek, and perhaps some Spanish. Here was a man who enjoyed the companionship of his peers and his elders, as well as dancing, the theatre, and music. Here also was a widely traveled man whose pocket diary remarked on engineering wonders, bridges, gas lighting, rocks, herds, soil, and royalty, as well as the hovels of the European poor; ignored architectural monuments; and paid keen attention to his money. And now, in 1838, just as he turned thirty-one, Thomas Green Clemson was in love.

## Notes

1. Frederick B. Tolles, *Meeting House and Counting House: The Quaker Merchants of Colonial Philadelphia* (Chapel Hill: University of North Carolina Press for the Institute of Early American History and Culture, Williamsburg, VA, 1948), 149–151.
2. Russell R. Weigley, Nicholas B. Wainwright, Edwin Wolf, Mary Maples Dunn, et alia, *Philadelphia: A 300-Year History* (New York: W. W. Norton, 1982), 224–226.
3. *Constitution of the Philadelphia Society for the Establishment and Support of Charity Schools: Incorporated the eighth day of September, 1810* (Philadelphia, PA: Privately published by the Society, 1840), 1–18.
4. Annie B. Roberts, a granddaughter of Thomas III and Elizabeth Clemson, to a Mrs. Hotchkiss, 26 January 1898, Clemson Papers in Smith Papers, American Philosophical Society (hereafter cited as APS), Philadelphia, PA.
5. Willis P. Hazard, *A Continuation of "Watson's Annals"* (1830): 3, 310–311.
6. Deborah Mathias, *Tabernacle Church (Presbyterian and United Church of Christ), A History* (Philadelphia: Privately published, 1974), 1.
7. M. S. (Mattie) Clemson, West Chester, PA, to Sam [last name not given], 26 January 1898, Clemson Papers in Smith Papers, APS.
8. Annie B. Roberts to Mrs. Hotchkiss, 26 January 1898, *Ibid.*
9. M. S. (Mattie) Clemson, West Chester, PA, to Sam [last name not given], 26 January 1898, *Ibid.*
10. Jacqueline S. Painter, assistant curator of Special Collections, Henry P. Chaplin Memorial Library, Norwich University, to Robert C. Edwards, president, Clemson University, 12 January 1978, Series 19, 159ff, Special Collections, Clemson University Libraries, Clemson, SC (hereafter cited as SCCUL); William A. Ellis, *Norwich University, 1819–1911; Her History, Her Graduates, Her Roll of Honor* (Montpelier, VT: Capital City Press, 1911), 1–18.
11. See Series 19, 159ff, SCCUL.
12. Ellis, *Norwich University*, 3, 617.
13. These early papers by Thomas Clemson were published in the *Journal of the Franklin Institute* 13 (1834): 78–79, 79–80, and 80, respectively: "Analysis and Observations on Diverse Mineral Substances"; "Assay of an Iron Ore from Franklin County, New York"; "Analysis of Two Varieties of Hydraulic Limestone from Virginia."
14. A. M. Stevenson to TGC, 4 January 1884, Clemson Papers, MSS 2, SCCUL.
15. A. M. Stevenson to TGC, 31 July 1884, *Ibid.*
16. TGC (Paris) to Elizabeth Baker Clemson (Philadelphia), 29 August 1828. In March 2006, Meredith Sonderskov gave Jerome and Edmee Reel this letter that she had only recently found. Jerome Reel transcribed the letter and gave it, on Ms. Sonderskov's behalf, to be included in the Clemson Papers in the Special Collections, Clemson University Libraries.
17. TGC letter to Jacob Green, 18 September 1828, reprinted in *Journal of the Franklin Institute* 8 (1829): 356; the testimony is extracted from John J. Smith, *Celebrated Trials of all Countries* (Philadelphia, PA: Jesper Harding, 1846).
18. Thomas Green Clemson, "Assay and Analysis of an Iron Ore, (fer titanne), from the environs of Baltimore, (land of Mr. Patterson), received through Mr. Warden," *American Journal of Science and Arts* 17 (January 1830): 42–43.
19. Alester G. Holmes and George R. Sherrill, *Thomas Green Clemson: His Life and Work* (Richmond, VA: Garrett & Massie, 1937), 5n14.
20. Thomas Green Clemson, "The Hartz-Physical Geography, State of Industry, Etc.," *American Journal of Science and Arts* 19 (January 1831): 105–130.
21. The diploma, along with other items, was placed in a metal box in the cornerstone of the main Clemson Agricultural College building (now called Tillman Hall) when it was laid 28 July 1891. See *News Courier* (Charleston, SC), 29 July 1891. The building burned 22 May 1894. When the cornerstone was extracted in 1989 by a team from the Clemson University Facilities and Maintenance Office under the direction of Gary Pringle and opened by the archivists of the Clemson University Libraries' Special Collections, led by Michael Kohl, director, all the contents were found to be irretrievably damaged by heat and water. That fire also destroyed Thomas Green Clemson's library and the law library of his father-in-law, John C. Calhoun.

22. Lefte Neal to TGC, 17 July 1831, Clemson Papers, MSS 2, SCCUL.
23. A. M. Stevenson to TGC, 31 July 1884, Clemson Papers, Ibid.
24. Smith, *Celebrated Trials*. The transcript of this passage from Smith's book was made by Richard Newman Brackett, Ph.D., professor of chemistry at Clemson Agricultural College. The transcript is in Clemson Papers, MSS 2, box 1, 2ff, SCCUL, and the original volume was owned by H. C. Miller, a lawyer from Anderson, SC; Miller's letter to Brackett, offering to let the book be examined, was written on 26 March 1927, and is now in the Holmes Papers, MSS 1, SCCUL. Miller called this trial "one of the most noted known to original jurisprudence."
25. "The Pocket Journal of Thomas G. Clemson," Clemson Papers, MSS 2, SCCUL (hereafter cited as TGC Journal). Some of the transcription work noted in the text is the work of Charles R. Clemson, of Lancaster, PA, which he did in the autumn of 1979. His notes are also in the Clemson Papers, MSS 2, SCCUL. The remainder of the transcription was done by this author. Also included are several letter drafts from 1832 and 1837. The journal covers about 26 months out of those 4  $\frac{3}{4}$  years. The flyleaf indicates that Clemson still considered the family home on Filbert and Ninth Streets, Philadelphia, as his principal residence. In addition, there are twenty-five pages of receipts and expenses that cover 20 December 1832 to 16 May 1833. Retrospective entries on 27 and 28 July 1833 refer to transactions up to 14 June 1833. The record begins again 20 August 1833 and continues through 31 August 1834. It breaks off again, resuming with one note for 2 February 1835, and resumes from 30 June to winter 1837. Some of the expenses are also noted in the body of the text.
26. Refer to *Journal für Chemie und Physik* [Nuremberg: Schrageschen Buckknadlung] 64 (1834): 63–65.
27. Thomas Green Clemson, "Analysis of American Spathic Iron and Bronzite," *American Journal of Science and Arts* 24 (July 1833): 170–171.
28. Thomas Green Clemson, *Observations on the Geology of York County, Pennsylvania* (Philadelphia: W. P. Gibbons, 1834).
29. Thomas Green Clemson and R. C. Taylor, "Notice of Vein of Bituminous Coal Recently Explored in the Vicinity of Cuba," *Philadelphia Magazine* (1837): 161–167.
30. See Clemson Papers, MSS 2, b1 F 3, July 1837, SCCUL.
31. Ernest McPherson Lander Jr., *The Calhoun Family and Thomas Green Clemson: The Decline of a Southern Patriarchy* (Columbia: University of South Carolina Press, 1983) 2, 3, 30n2, 39–43.