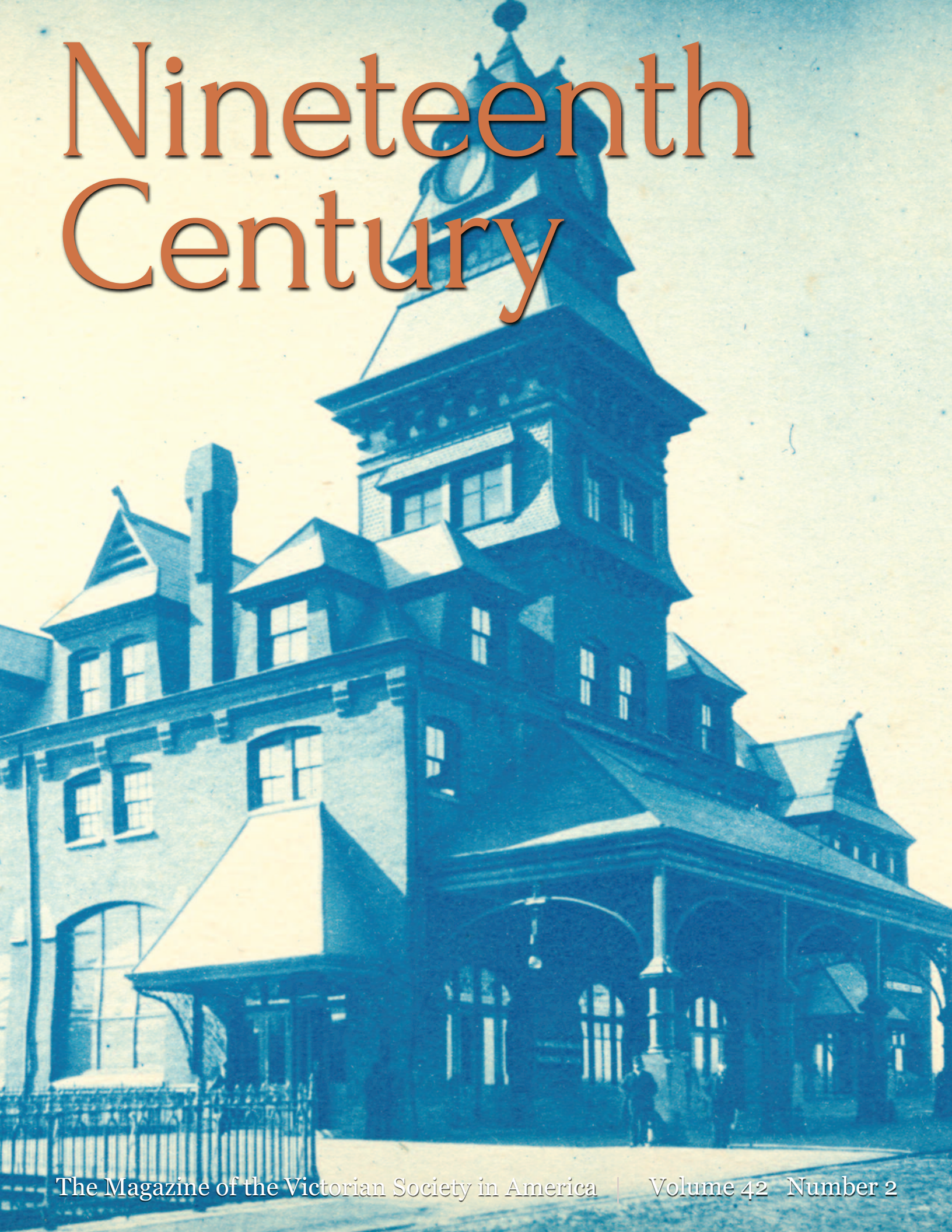


Nineteenth Century



Editorial

“History is an angel, being blown backwards.”

–Laurie Anderson with a nod to Walter Benjamin

Hoggees they were called. Sometimes as young as seven or eight years old, they led the canal-barge mules along towpaths throughout much of the nineteenth century.

Near my house in the Hudson Valley there is a town called High Falls where a museum dedicated to one such canal just re-opened. The D & H Canal Museum (for the Delaware and Hudson Canal) has relocated into the very 1797 stone tavern that had been the official home of the D & H Company offices starting in 1850.

There is a fine tribute in the museum to the hoggees (pronounced like the sandwich) and their work. Little skill was required, they had to know the call to bring the mules to a stop, “ho”, they had to know the call to get them to go, “gee”, and they had to be able to walk all day long in all kinds of weather.

Before the railroads came in, the canals being built across the northeast in the 1820s and 1830s were the new, fast way to move large quantities of goods across great inland distances. The D & H canal was completed in 1828. Its more famous cousin, the Erie Canal, opened in 1825. At the beginning, the canal boats operated by the Delaware and Hudson Canal

Company were hauling anthracite coal from deep in the mountains of Pennsylvania. Black diamond, as it was known, was bound for New York City and elsewhere along the Eastern seaboard. Anthracite is a glossy, hard coal that is vastly more efficient, hotter and cleaner burning than bituminous, or soft, coal. Pennsylvania was the only source for it in this new country and three-quarters of the world’s anthracite resides there. Later, their barges would also carry heavy goods such as Rosendale cement and quarried bluestone. Much of it, again, bound for a burgeoning New York City.

One remarkable aspect of life for a hoggee was – for the boys at least - the job could soon lead to bigger things. It was not uncommon for them to become captains of a canal barge by the time they were fourteen. Often the fathers of these children would be engaged in the D & H company’s mining operations; or loading and unloading the barges; or maintaining the canal. Women often operated the locks near the family home. In this way, entire families might gain their livelihood from the canal.

The D & H Canal Company ceased official operations in 1898, ceding way to the railroads which are the topic of some of the articles in this transportation issue of *Nineteenth Century*. I cannot help but feel a bit wistful for this earlier time of goods moving at a mule’s pace, even if they were led by poorly paid children.



E. L. Henry (1841-1919) *On The Towpath*, 1919. Oil on canvas. Christies/Bridgeman Images.

The Fall 2021 issue of *Nineteenth Century* features an article on E. L. Henry by author Valerie Ann Leeds, who also is a contributing author in this issue.

Warren Ashworth, editor

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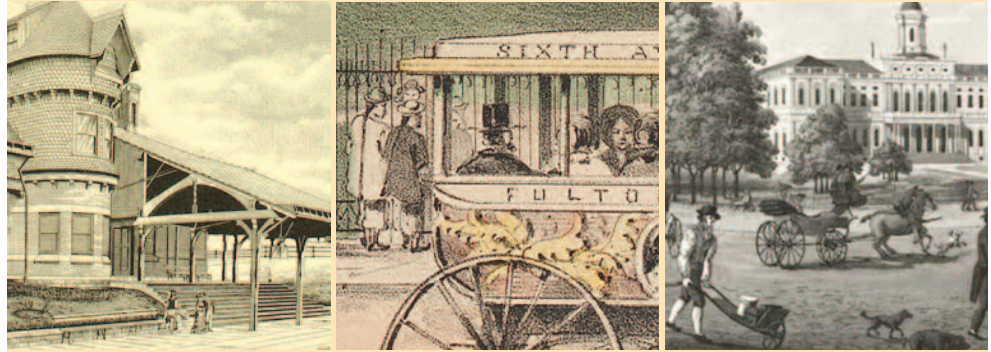
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Cover: Philadelphia Station, Baltimore & Ohio (B&O) Railroad, 1887. Frank Furness, architect. Courtesy Library Company of Philadelphia.



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THANK YOU TO OUR PEER REVIEWERS

Nineteenth Century would like to acknowledge our peer reviewers. We at the editorial board are, as always, deeply grateful to this group of anonymous scholars who review all our author submissions for accuracy of content and application of up-to-date methods of research and scholarship.



Mt. Airy Station, Reading Railroad, 1882. Frank Furness, architect. Fidler-Lindsay Photo Album, 1887. Courtesy Riverton Free Library.

Frank Furness's Architecture of Motion:

DEPOTS, FERRYBOATS, AND OCEAN LINERS

Michael J. Lewis

DEDICATED TO HYMAN MYERS
(1941-2022)

Whose restoration of the Pennsylvania Academy of the Fine Arts gave architects, scholars and the public a renewed appreciation for the work of Frank Furness.

How many of us have the sheer moxie to change careers the month we turn forty? Frank Furness did when, with virtually no previous experience, he became chief architect of the Reading Railroad. He may have been Philadelphia's most accomplished architect in November 1879, having designed its most imaginative banks, libraries, and hospitals, but he had never so much as built a whistlestop depot. He had designed two modest railroad projects, both unbuilt. It is a wonder the Reading Railroad even sought him out.

And yet Furness took to his new position swimmingly. Railroads became the backbone of his practice, and remained so for the rest of his life.¹ After his five years with the Reading he would work in turn for the Baltimore & Ohio Railroad and then the Pennsylvania Railroad (which gave him the curious distinction of having worked for three of the four railroads on the *Monopoly* game board). The most important building of his career was a railroad terminal, the ten-story, \$1.4 million leviathan known as Broad Street Station, the centerpiece of the mighty Pennsylvania Railroad in Philadelphia.

But Furness did more than just design train stations. He designed passenger cars, the interiors of ferryboats, even the paint colors of the depots and locomotives. Today we distinguish between architects, industrial designers, and graphic artists but Furness recognized no such boundaries. Like Eero Saarinen, he built furiously original terminal buildings; like Raymond Loewy, he designed streamlined railroad cars; and like Massimo Vignelli, who gave American Airlines its logo, Furness invented one for the Pennsylvania Railroad. In effect, he created all that the railroad passenger would see or touch, the complete physical and visual experience of travel. Frank Furness can be said to be our first architect of *motion*.

To us in our age of cynical materialism, motion is purely a physical phenomenon, having to do with the behavior of matter. For the nineteenth century, which brooded over the connection between matter and spirit, speed presented a new kind of psychological experience, both on land and sea. To hurtle through the countryside in a steam-driven railroad car, or to plunge triumphant on a steamship into white-capped waves at twenty knots, seemed the essence of modernity. This was by no

means a good thing in everyone's eyes. For John Ruskin, it was horrifying (railroads were "the loathsome form of devilry now extant...destructive of all wise social habit or possible natural beauty, carriages of damned souls on the ridges of their own graves"). But to J. M. W. Turner railroads were breathtaking; his *Rain, Steam and Speed* of 1844 was the first painting to capture the sensory reverie of a speeding train. Of all the artists and writers who brooded over the newly speeding world, it was the Italian Futurists who extracted the most radical lessons. They proclaimed that "the world has been enriched by a new beauty: the beauty of speed" and demanded that art learn from locomotives, airplanes, and steamships, and that it bewilder our senses, just as those moving objects do.

Furness was like the Futurists in recognizing that mechanical motion posed challenges unlike anything architects had ever faced. The physical fact of travel did not correspond to its psychological fact. A building was no longer a stationary object but a lively blur, swiftly approaching or receding in space. And the experience of travel itself was transformed. Train stations might be separated by hundreds of miles, dozens of hours, yet be part of the same living system. One entered a door in one city, took a seat, and walked out that same door into a totally different city. How did one express this?

Along with such metaphysical questions were simple practical matters. Transportation architecture was under constant stress—the friction of shuffling feet and luggage, the grinding of wheeled carts, and above all, the constant vibration and jolt of the trains themselves. Even worse stresses afflicted waterborne conveyances like ferryboats (before 1910 the railroad journey across the Hudson involved a ferry crossing).

In short, how was one to accommodate the physical task of railroad architecture while also expressing that the purposeful union of steam and iron was the new and poetic fact of modern life?

On Nov. 1, 1879, Furness joined the Philadelphia & Reading Railroad (to give it its full name) at a salary of \$3,000.² This was the country's great coal-carrying railroad, its lines stretching through eastern and central Pennsylvania, and converging on Philadelphia, from whose port it shipped its coal to the country and to the world. Furness's duties encompassed all of the company's buildings, from its largest terminal to its humblest tool shed. This was not armchair design but hands-on work, and he was constantly on the road. The surviving letters paint a picture of a desperately harried architect, flung by the railroad's managers across the state, from station to station, to attend to construction problems. And construction problems of the most niggling sort, e.g., "the doors of baggage room at new depot



Proposed Depot for Shamokin, Reading Railroad, 1876. Frank Furness, architect. Courtesy Architectural Archives of the University of Pennsylvania.

Wissahickon...are warping badly.” Or that the builder of the depot at Noble had put up a “rough board shanty for his laborers...will you please direct that it be taken away soon.” For a man who had given Philadelphia an American masterpiece with the Pennsylvania Academy of the Fine Arts, it must have been humbling to get a letter telling him that the new lamps at Wayne Junction “are too high...lower them.”³

And yet by all evidence Furness loved it. He had spent three years of the Civil War as a cavalry officer, in a tent or on horseback, and he had acquired a taste for the active life. For the rest of his life he rose at 6:00 to ride, and when possible he went buffalo-hunting in Wyoming or tarpon-fishing in Florida. His railroad service had all the lively tempo of his cavalry life but none of the danger. Even better, he had the use of the *Ariel*, the private train car of the Reading’s president, and once again he had the thrill of speeding through the countryside to the scene of action.

It was a thumping pace of work. Before leaving the railroad in early 1885, Furness had completed 125 depots—in essence, he had designed a new one every other week for five years. After his first tentative essays, he quickly gained in confidence and fluency. His oldest known depot, an unbuilt project of 1876 for Shamokin, Pennsylvania, draped his characteristically restless walls and agitated roofline over a thoroughly conventional plan. It was jaunty work, typical of Furness, but generic; it could just as easily have been a pavilion in a park; in fact, it bears a striking resemblance to his contemporary Elephant House in the Philadelphia zoo.

Yet within a few years, Furness was designing buildings so exquisitely tailored to their function that they could be nothing but train stations. His quirky station at Mt. Airy, Philadelphia, took as its theme the movement of passengers between train and station, and expressed it as one continuous swoop of the roof, plunging without interruption from the top of the roof ridge to trackside. It was little more than a cottage—a picturesque essay of shed-roof dormers and prominent wood framing—but everything

about it proclaimed *movement* – alert, urgent, but always purposeful movement.

Furness’s depots, though more numerous, are nowhere near as famous as his famous Boston contemporary, H. H. Richardson. The dozen or so stations designed by Richardson are regarded as among the most distinguished specimens of American architecture in the Gilded Age. They are fully in the spirit of the Aesthetic Movement, displaying all the subtle refinement and repose that was the aim of that movement. By contrast, Furness’s were generally regarded as baffling oddities, even by his champions. Even James O’Gorman, the scholar who singlehandedly rehabilitated Furness’s reputation with his 1973 exhibition catalogue found his depots “gawky, histrionic, bewildering,” an example of “composition by accumulation.”⁴ So he described Graver’s Lane Station (1883), the best surviving example of his railroad work.

Of course, Richardson sought repose and Furness vitality, but it is not so simple as that. Look at photographs of Furness’s depots and those of Richardson, and you notice a curious fact. Richardson’s stations are photographed from the street and those of Furness from the track. For Richardson, the chief feature of interest is the heroic arched portal that addresses the town; for Furness the interest is all trackside. Richardson configured his Old Colony Station at North Easton to receive the departing commuter, and he treated it as a ceremonial portal, serene and massive, as if bolted to the earth herself. Furness’s Graver’s Lane Station addresses the tracks; it is entirely defined by the restless play of bay, tower, and passenger shed that greets the arriving passenger, and when he published it, he labeled this the “front view.” In other words, Richardson designed his stations for someone moving slow, no faster than a horsedrawn carriage, and Furness designed for the man moving fast.

We know this from Furness’s own words, which are preserved for us by sheer chance. Furness never seriously tried to build a national practice and published little of his work. He wrote only a single essay on architecture, devoted to ornament, and made no



Gravers Lane Station, 1883. Frank Furness, architect. As published in the *Journal of Railway Appliances and Railway Price Current*, 1884. Courtesy Linda Hall Library of Science, Engineering & Technology.

effort to explain the meaning of his work. He had no need to: he found work enough in Philadelphia. But an article in the charmingly titled *Journal of Railway Appliances*, written by a reporter with a special connection to Furness, gives us as intimate an explanation of Furness's architectural thought as we are likely to get.

George Baugh Heckel (1858-1941) was a medical school dropout who, around 1875, strolled into Furness's office, looking for a job. Furness had no work but sent him to another architect who did, and in the process earned Heckel's lifelong gratitude.



Old Colony Station, 1881-1884. North Easton, Massachusetts. H. H. Richardson, architect. Courtesy Boston Athenaeum.

When Heckel later became a publisher of trade journals, he always made sure to give Furness good press. His 1884 review of Graver's Lane Station is the richest account we have of Furness's thought process in designing any building.⁵ There is no question that it is based on a personal interview; so much so that it reads as if dictated by Furness himself.

For Furness, four factors determined the form of Graver's Lane Station. First came *architectural effect*, he did not mean architectural style or character, but rather the specific visual effect on the viewer who saw it. For Graver's Lane, it consisted of "Prominence of the office and waiting-room, as approached from the cars in front." In other words, Furness wanted the station to be legible from the arriving train. This was a problem in the nature of human perception: how do you perceive an object when moving quickly towards it, or past it? To achieve this, Heckel reported, Furness exaggerated the size and conspicuousness of those elements that were essential to the typology of the railroad building, accentuating "the prominent tower or bow-window, in which are the ticket-offices, etc., and the portico and steps."⁶

The second factor was *beauty of design*, which Furness attained by means of the general outline of the building, which, to the North, presents the broad sloping roofs of the platform at that end and the porch sloping down to the track level, while all the lines in view lead up to and culminate in the ornamental cone of the tower.⁷

The third and fourth factors were *accessibility* and *convenience*. Accessibility meant that the path taken by the arriving passenger should be straightforward and effortless, and so it is: one arrives under the porte-cochere, through the waiting room, and then under shelter directly to the train—all in an easy straight line. Convenience was a sop to the well-heeled residents of Graver's Lane. Many would arrive in carriages, and the deep porte cochere would permit them to disembark out of the rain.

This roster of considerations yielded a station that was as nervously vital as the ambitious commuters who used it. Furness did not try to compress this sprawl of parts—the slanting roof, the

upthrust tower, the jutting porte-cochere – into a unity, as Richardson did, but let them declare themselves, even exaggerating them, for they were the elements that marked Graver’s Lane as a railroad building. For Heckel, this was the hallmark of Furness’s stations:

He builds a railway station so that it *looks* like a railway station, and while making it beautiful, makes its beauty suggest its use. One cannot mistake Mr. Furness’ stations for warehouses, chapels, manufactories or cathedrals, as might be done in the case of some other stations (otherwise beautiful) that we could name. Mr. Furness’s stations are simply railway stations, and one would not mistake them, even at a distance.

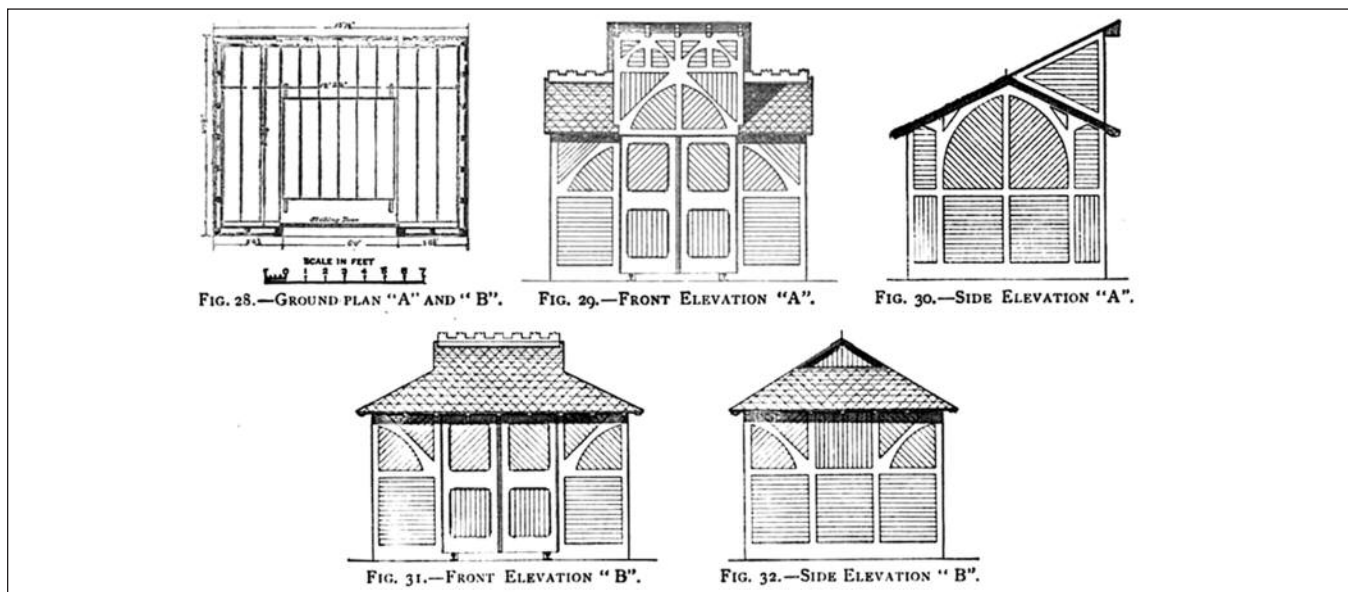
Graver’s Lane Station cost \$8,000 and was typical of his depots for the Reading.⁸ Most of them cost less than \$10,000, and some far less. He was kept under a tight rein by William H. Bines, the assistant chief engineer, who approved his plans and estimates. But they quickly developed an extraordinarily harmonious working relationship, so much so that Bines needed to give Furness only the briefest of instructions to design a provincial depot. For a \$1,000 depot, one paragraph sufficed:

It is desirable that a small depot and warehouse be erected at the West end of Sunbury bridge...to accommodate the requirements of a new station at that point and would like...you prepare plans asap...A building about 15’ x 30’ with waiting room 15’ x 12’ and wareroom about 15’ x 18’ less the space occupied by the partitions, will be amply sufficient, and as...there is no agent, no provision for teleg. office. It will be situated on level ground.⁹

facing bankruptcy, it went into a long period of receivership, from May 1880 until February 1883. If it wanted to cultivate a vigorous image, it would have to do so frugally. Furness’s answer was standardization. For one thing, the railroad needed a great many toolhouses, those humble but absolutely essential sheds for storing track maintenance equipment. Because any repairs had to be made immediately, the toolhouses were regularly spaced along the 595 miles of tracks; up to 200 were needed.¹⁰ Furness devised a 10’ x 13’ windowless shed, to be built out of tongue-and-groove lumber and enlivened with exposed framing and diagonal cross-braces. He designed them to be mass-produced in the railroad’s Pottstown shops, each costing about \$120, and shipped by rail where needed.¹¹

Furness wanted identity, not monotony, and “to avoid sameness of design along the road,” he made three variants of his toolhouse, each with the same plan but with a different roof.¹² At the same time, he designed a shelter for the watchmen that the railroad posted at important grade crossings. Known as a watchbox, it was similar in form to the toolhouse but even smaller, measuring only 6’ x 6’. This one came in four variants, and the chief engineer encouraged his assistant to vary them: “You need not confine yourself to one design, but can use all if you wish to do so.”¹³

By 1883, Furness was also responsible for the comprehensive paint scheme of the railroad, providing “Standard Colors...for our depots, offices, toolhouses, watchboxes, etc.”¹⁴ And not only for the buildings but the rolling stock as well. One intriguing letter of 1880 shows Furness giving explicit instructions for painting the wheels of a locomotive, directing “that the claret band should extend around the crank pin hub as well as the centre hub of the driving wheel.”¹⁵ Since warm colors appear to



Reading Railroad Tool Houses, 1882. Frank Furness, architect. As published in *Buildings and Structures of American Railroads*, 1893.

No musing about style, no fussing over character or expression: the Reading implicitly trusted Furness with the creation of its architectural identity.

Identity, but on a shoestring budget. The ambitious railroad had badly overextended itself in buying Pennsylvania coal lands;

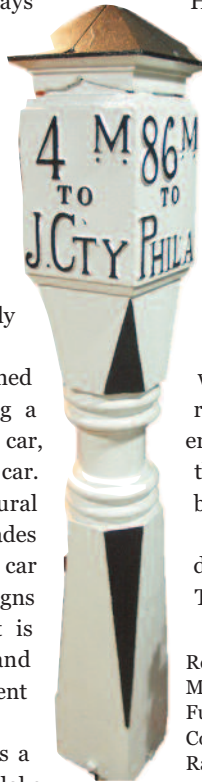
advance, and cooler ones to recede, he would have painted the rest in olive green, a contrasting cool color. This was the same chromatic logic of “the distinctive color of the Pennsylvania Railroad—red for the running gear with a dark olive body,” the

color scheme that became standard when Furness was the company's chief architect in the 1890s.¹⁶ It is perfectly in keeping with Furness's architecture of motion, which always suggested action, that he assigned to the most dynamic part of the locomotive the deepest and richest red, as if to say *this is the color of speed*.

By the time Furness left the Reading in 1885, he had given its 595 miles of track visual unity. He had even designed its standard milepost, a burly cast iron affair that looks like newel post torn from one of his Philadelphia houses and left to fend for itself. But passengers did not have to wait for a mile to go by for a glimpse of one of Furness's works; they were already sitting in one.

During his stint with the Reading, Furness designed "seven sets of passenger and parlor cars," including a passenger day car, first class passenger car, parlor car, standard coach, and combination baggage and smoking car. For each he designed everything, from the structural framing and seating plan to the moveable window shades and upholstery. They were built in bulk in the Reading car shops, twenty or thirty at a time, and because his designs were kept in production for years, an exact count is impossible. But it is certain that they changed and developed, as he realized that motion brought different demands, and different possibilities.

His first passenger car, designed in early 1880, was a woodworker's jubilee. This was the zenith of the Eastlake movement, which reveled in the mechanical jigsaw and lathe, and could not bear to let a board pass by without subjecting it to a hearty chamfering and notching. Accordingly, Furness saw to it that all the oak woodwork of his car was comprehensively



round ends, which allowed them "to run at an increased rate of speed on account of offering less resistance to the wind."¹⁸

Henceforth, he regularly gave his passenger cars rounded corners in order to reduce wind resistance, effectively "streamlining" them, although that term was still decades in the future. He seems not to have realized how consequential his innovation would be.

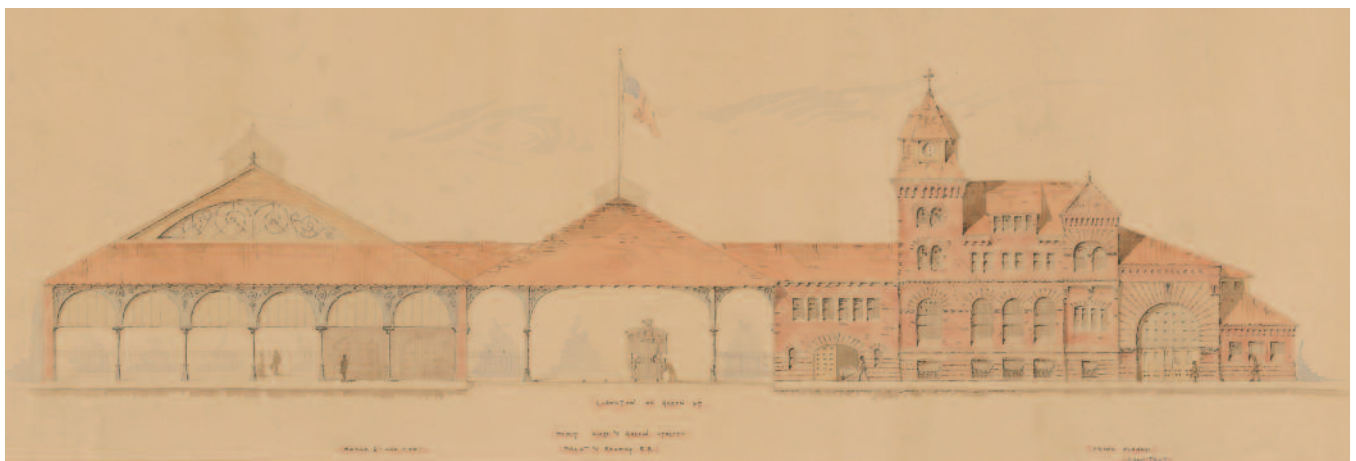
The Reading's determined attempt at modernization did not ease its financial straits and in June 1884 it again went into receivership. Seven months later it discharged sixty employees, including most of its construction department, as a cost-cutting measure; Furness, whose salary had by now risen to a hefty \$5,000, was among them.¹⁹ But he had a contract and the railroad was forced to strike an agreement: if he agreed to forgo the remaining nine months of his contract, "I should be employed by the Company, on any work they had to do in the future requiring the services of an architect, & I should be paid for such work at my regular rates."²⁰

This agreement was tested in 1887 when the railroad decided to improve its depot at Ninth and Green streets.²¹

This was Philadelphia's earliest railroad depot, built in 1832 by the Philadelphia, Germantown & Norristown Railroad in what were then the northern outskirts of the city. That original building had been repeatedly enlarged and now consisted of a two-story headhouse

Reading Railroad Milepost, 1883. Frank Furness, architect. Courtesy Whippany Railway Museum.

on Green Street and a long train shed extending north along Ninth Street. But it looked shabby, especially since the Pennsylvania Railroad built itself a handsome Gothic Revival



Depot, Ninth & Green Streets, Reading Railroad, 1887. Frank Furness, architect. Architectural Archives of the University of Pennsylvania.

"paneled, beaded, chamfered, and notched, and there is not a single piece of wood, if it is only a few inches long, that has no notches, grooves, right angles, or rosettes."¹⁷ His car was called a "Swiss Cottage on Wheels," an affectionate nickname that inadvertently reveals its dependence on traditional architecture. The following year he designed a new passenger coach with

terminal across from City Hall. Furness was engaged to see what could be done.

Very little, it seemed. The distressed Reading was under receivership, and would be until January 1888; every expense, even one hundred dollars for installing a new switch, had to be approved by a United States Circuit Court judge.²² An exorbitant

station was out of the question: Furness had to work with what he had. He decided to remodel the older depot, build a second one across Ninth Street, and annex the street in between to serve as the train shed. This was Furness at his cheekiest, making railroad property out of thin air and taking for granted that the city would approve it.²³

The planning was elegant. Trains would depart from the right while incoming trains would arrive on the left in the new depot, a light structure of iron and glass. It was an asymmetrical composition, but then the arriving passenger did not need a ticket office or restaurant. Those facilities, along with the railroad offices, were placed in the old depot, which was to be rebuilt in rugged romanesque fashion. With its haughty clock tower and massive clenched arches, it bore a family resemblance to his library for the University of Pennsylvania—naturally so, since both projects were on his drafting board during at the same time.

But Furness was to be disappointed. The railroad decided that renovating the unhappily located station would be throwing good money after bad, and early in 1888 it decided to abandoned the project, choosing instead to build its magnificent Reading Terminal on Market Street. The instant Furness learned his project was dead, he submitted his bill for \$600. The railroad was indignant but he reminded them that, according to their agreement, he “should be paid for such work at my regular rates.” He estimated his station to cost \$60,000, of which he charged 1%—“the regular and accepted charge” for preliminary studies.²⁴ His note was brusque, and reading between the lines one senses his anger. In the end, the Ninth & Green complex was downgraded to a secondary depot and on the site of Furness’s new depot for arriving trains was given over to an engine house—effectively a car barn. Such was the melancholy coda to his years of service with the Reading Railroad. But rather than coming to an end, Furness’s railroad work now opened up onto a wider stage.

On April 27, 1886, the perennially cash-strapped architect dropped in to see his banker, Cornelius Weygandt, who recorded the visit in his diary:

Frank Furness came in today, to renew his note; and, upon inquiry as to whether he is busy now, I learned from him that he is likely to have the work of the Balt. & Ohio R.R. Co., for the stations upon its line between Balt. and Phila.; including the large main station and offices, at Chestnut Street near the Schuylkill river, which Furness says is a difficult and perplexing job, architecturally.²⁵

Furness was referring to the new Baltimore & Philadelphia Railroad, a newly created division of the venerable B&O, which had just completed its tracks and now required a full set of new depots. Furness’s qualifications were obvious, and in May 1886 his appointment was approved.

The B&O was a different kind of railroad than the Reading, and Furness gave it a different kind of station. The Reading reached into the hinterlands, through Pennsylvania Dutch country and up to the coal mines in the mountainous northeast; its world was a mix of the industrial and the rural. The new B&O line, by contrast, was urban. It ran through major cities and its

stations were at once more lavish and less provincial than those of the Reading. Furness designed some two dozen of them, including superb buildings in Wilmington, Chester, and Philadelphia. The last was Pittsburgh Terminal, an uncharacteristically graceless building of 1888, by which time the overextended railroad was forced to build cheaper stations. But his work to that point was extraordinary.

The finest was that “difficult and perplexing job” in Philadelphia. The problem was the site, alongside the Chestnut Street Bridge where crossed the Schuylkill River. The station was effectively suspended in the air, 27 feet above the level of the train tracks, to which passengers had to be directed in as easy and comfortable a way as possible. Furness’s solution was to build his massive station upon a cage of iron, opening its lower level into a great airy tent of space, 119 feet long and 58 feet wide. The hall seemed to consist of nothing but space and stairs, encased in iron and light. It is normal in architecture that you encounter more light as you rise, but here the space brightened as you descended to your waiting train.

Above this the station was a reassuringly muscular essay in brick, stone, and terra cotta. A fidgety tower rose above a tumult of dormers, gables, and chimneys, flaring outward three times before calling it a day. It was the same design strategy as at Graver’s Lane, where “all the lines in view lead up to and



Perspective of the first design for the Philadelphia Station, Baltimore & Ohio (B&O) Railroad, 1886. Frank Furness, architect. Private collection.

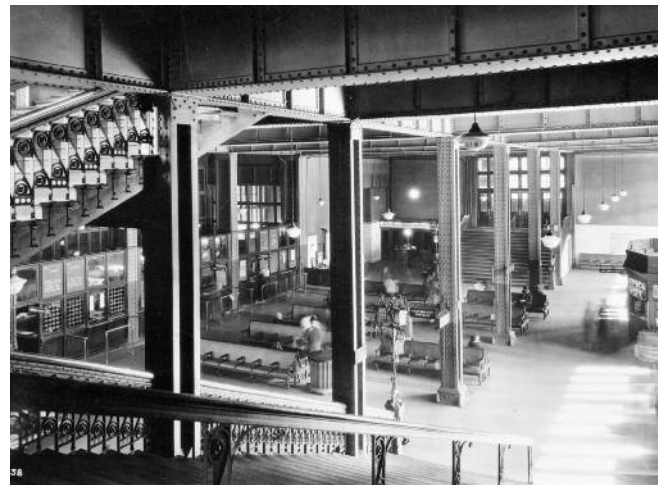
culminate in...the tower.” The tower gave the building something of the civic swagger of a north European Rathaus or town hall. In fact he told reporters that its style was “Flemish.”²⁶ And like the late medieval town halls of Brussels or Oudenaarde, it culminated in an intricate clock. Had he just seen them? He described his contemporary Wilmington station as “a type frequently seen in Holland,” implying a recent railroad tour.²⁷ (There is evidence that Furness visited Europe before 1890, perhaps during the summer of 1885, after he left the Reading Railroad).²⁸



Philadelphia Station, Baltimore & Ohio (B&O) Railroad, 1887. Frank Furness, architect. Courtesy Library Company of Philadelphia.

Had Furness built his original design, as published in *Harper's Weekly* in January 1887, it would have been even wilder. But once construction started a few months later, Furness was ordered to pare down his project. He subjected it to a comprehensive revision, substituting terra cotta details for brick, eliminating the hefty stair tower to the east, and—most significantly—cutting out a full story. Most distressing was the loss of the hulking low-slung arches of the western entrance. The result was still a feisty performance, but anyone who saw the original rendering was bound to be disappointed.

But most remarkable was the interior, which was entirely free of the normal conventions of polite architecture—no stone columns or arches, no carved wainscoting, no murals or sculpture; all it offered was unadorned raw construction. To be sure, Furness liked to test the limits of how frankly one could express construction, and had been doing so since the start of his career. When he and George W. Hewitt built their Pennsylvania Academy of the Fine Arts (1871-1876), they chose a fateful course of action. They might have followed the example of H. H. Richardson, who routinely entrusted his buildings to one general contractor, typically the Norcross Brothers. Instead they followed the traditional practice of building by separate contracts, hiring one firm for the masonry walls, another for the iron girders, and a third for the concrete floors. This had one great advantage: it let the architects *deliberate*, giving them time



Lower level of the Philadelphia Station, Baltimore & Ohio (B&O) Railroad. Frank Furness, architect. Courtesy Library of Congress, Historic American Buildings Survey Collection. Photograph by Cervin Robinson.

to study each problem in detail as it arose, such as ventilation, heating, lighting, and roofing.²⁹

Of course, such an approach had aesthetic consequences. Buildings made this way were liable to look additive, more like



Broad Street Station, Pennsylvania Railroad, Philadelphia, 1892-1894. Furness, Evans & Co., architects. Courtesy Library of Congress. Photograph by Detroit Publishing Company.



Broad Street Station, under construction, 1893. Photograph by William Rau. Private collection.

assemblies of distinct components, bolted and fastened together, and less like exquisitely refined unities. But this did not disturb Furness in the least; in fact, he embraced it, but nowhere with such glee as in the B&O's Philadelphia Passenger Station. One descended the great stairs between bare brick walls and naked iron girders—girders that flaunted their rivets the way a

contemporary barista might flaunt her metal tongue stud—and for the same reason—to proclaim that this was a new world, like it or not.

The B&O Station was a dress rehearsal for Broad Street Station, Furness's definitive statement in railroad architecture. Here again a metal frame rose freely through a spacious waiting room, but now it continued upwards to carry an eight-story skyscraper. In it were the corporate offices of the Pennsylvania Railroad, a mammoth enterprise with a national scope and a payroll of upwards of 60,000 employees. It was the greatest building of Furness's career, and when it opened in the summer of 1894, he had the pleasure of writing out an invoice for \$49,856—representing 3.5% of the cost of the roughly \$1.4 million building. (By comparison, his fee for the University of Pennsylvania Library was only \$5,688.66).

Furness more than earned his fee, for the project was far more intricate and constrained than the B&O Station. The corner site was spectacular, just to the west of City Hall on Market Street, but he did not have a free hand. He was adding to an existing building, the "modern Gothic" station built in 1881 by the Wilson Brothers, Philadelphia's brilliant firm of architects and engineers. He had to defer to its character, even as he more than doubled its height, and to keep it in continuous operation while building his addition. Hobbled though he was, he managed to make something that was unmistakably his own.

Furness reprised the original building's red brick, Gothic detail, and scenic corner tower, while intensifying their sense of restless movement. His tower rose a daring 240 feet, and instead of the four stately spires that stood sentinel around the original crown, he surrounded his with eight (suggesting an airborne bed of nails). Restless movement was also the theme of the station below: Furness opened up the entire ground floor to make a spacious entrance hall measuring 245½ by 64 feet, more than twice as long as that of the B&O Station. There he exploited the potential of metal construction, here he proclaimed it. He did this most flagrantly with the steel girder above Fifteenth Street, which ran straight through the station and provided cab access for arriving and departing passengers. This girder, which had to carry nine stories of skyscraper, measured fifty-eight feet long, and weighing over fifty tons, and was the largest ever made. (So large in fact that the manufacturer, the Philadelphia Bridge Company, had to assemble it outdoors in a field).³⁰ The train shed likewise broke a record. It spanned the entire block from Market to Filbert Street, its clear span of 306 feet giving it the widest clear span of any train shed in the world.³¹

If Furness liked to design railway stations that *look like a railway station*, he did not have to ponder long over this one. A massive downtown terminal is a different object than a rural

depot; its place is not alongside the tracks but at their end. Here sixteen tracks surge westward on a raised viaduct, known universally in Philadelphia as the Chinese Wall (that is, the Great Wall of China) and plunge into the deep hangar-sized shed where they come to a screeching halt, seeming to fling themselves upwards ten stories in one last spasm of momentum, to halt, breathless but proud, at the foot of City Hall. After all, a terminal must terminate.

But the design was not yet perfected. Even as the railroad was taking out its building permit in early October, Furness was speeding west to Chicago to visit the World's Columbian Exposition, as chairman of a committee of architects who would inspect the buildings on behalf of the fair's commissioners. His report spoke approvingly of the new classicism on display, particularly the Administration Building by Richard Morris Hunt, his mentor, which he found "imposing, magnificent and scholarly." But nothing seems to have impressed him so much as Louis Sullivan's Transportation Building with its extravagant program of allegorical sculpture, depicting the entire history of transportation, the *Genesis of Transportation, Ancient and Modern Transportation, Land and Sea Transportation*, etc., and with freewheeling abandon.³² Furness returned to Philadelphia convinced that his station, which had been designed



Waiting room of the Broad Street Station. Photograph by William Rau. Courtesy National Canal Museum/Delaware & Lehigh National Heritage Corridor.

without sculpture, deserved something equally as bold.

Gothic buildings, properly speaking, do not have classical pediments but Furness now realized he needed them for his allegories. He redesigned the cornice line of his building to create a pediment in the middle of the south and east sides, and added a third one at second-story level, just where Fifteenth Street disappears beneath the station. Each pediment was filled with a heroic figural group in red terra cotta, executed in the highest relief. For his sculptor he recruited Carl Bitter, a recent émigré from Vienna, who had provided all the sculpture for Hunt's building, including imaginative allegories of Earth, Water, Fire, and Air. Together with Furness he devised a sweeping set of allegories that celebrated the achievement and ideals of the Pennsylvania Railroad.

The east pediment, facing City Hall, symbolized "strength, wisdom and power subduing natural forces and by the aid of art turning them to the pleasure and comfort of man," which Bitter depicted in a vignette of Perseus lifting the head of Medusa before a seated Minerva.³³ The south pediment, high above Market Street, celebrated the inexhaustible strength of the Pennsylvania Railroad in peace and war (the railroad had played a crucial role in the Civil War, and its president was made Assistant Secretary of War), expressed by a goddess bearing aloft a torch, crouching lions by her side.

Bitter gave the most thought to the pediment above Fifteenth Street, a prodigy measuring 50' x 10½' and the largest terra cotta

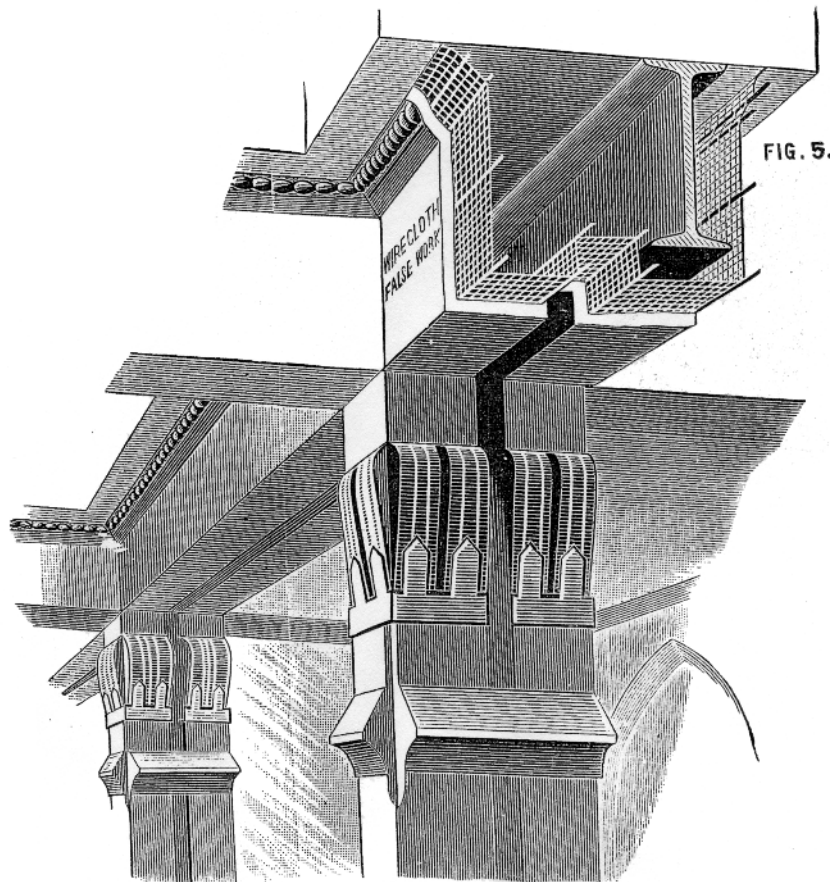
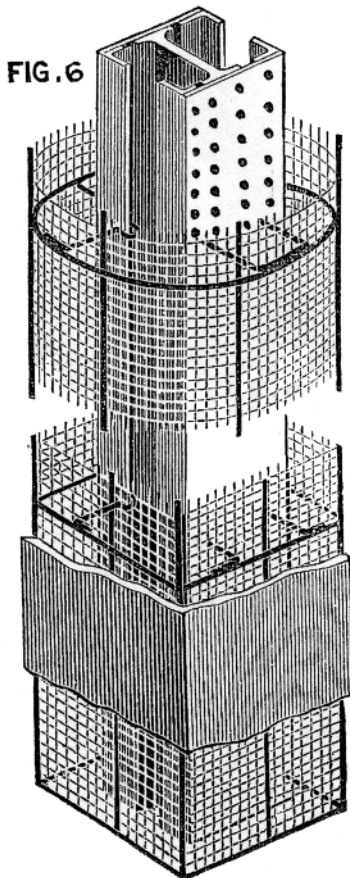
sculpture ever fired. Here Bitter sought out to distinguish the Pennsylvania Railroad from those of Europe, which were frequently built for strategic considerations or at imperial behest. (Having fled Austria to avoid conscription, this counted much for him.) By contrast, he claimed, "the Pennsylvania system stands emphatically for the interest of the people," for trade and commerce, for art and science, and for civilization itself:

Therefore, at the centre of the pediment is placed Mercury, the mythological messenger and guide of Wealth and Commerce, standing in the chariot, directing, with outstretched hand, the course of element-compelling Man; while seated in the chariot is Minerva, entitled by Homer "Founder of Cities," surrounded by implements of Art and Industry, showing how towns and cities have arisen in the wake of the great railroad.³⁴

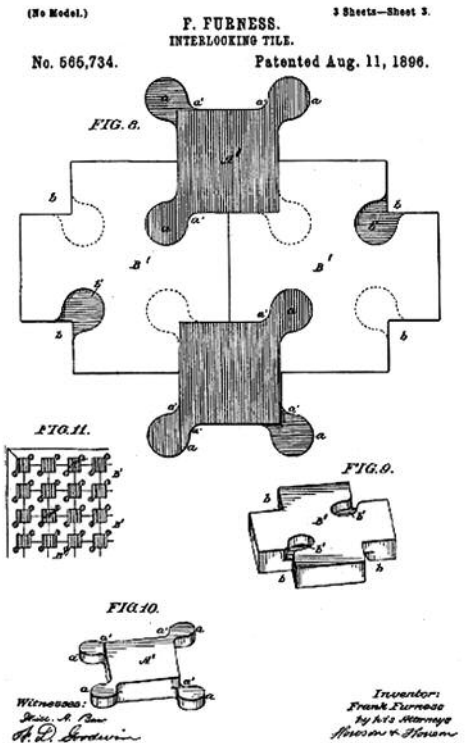
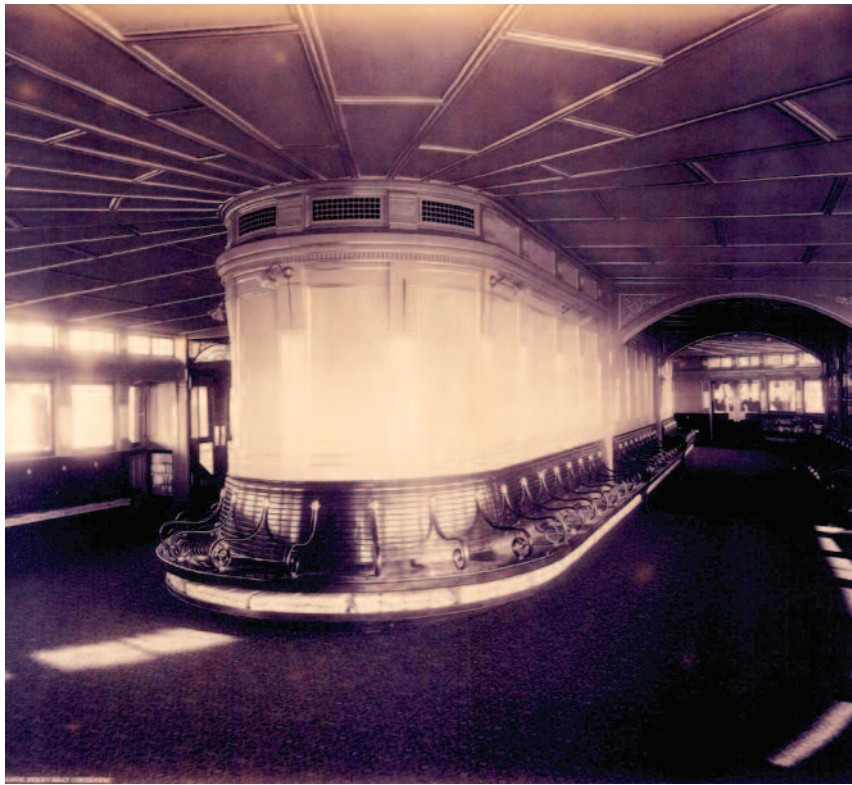
Behind those classical divinities Bitter depicted the essence of steam power, which he expressed as

Man engaged in yoking to a chariot the two demons, Fire and Water...the former represented by a male figure, furious in expression, clad in a lion skin, the latter by a female with loosened hair surrounded by reeds and marsh grass.

Finally, in the outer corners of the pediment, were symbols of Philadelphia and the Pennsylvania Railroad, which he depicted



Wire lathing and false work on steel beams for the Broad Street Station. As published in *The Roebling Fire-proof Flooring Considered from the Engineer's Point of View*.



L to r: Interior view of Pennsylvania Railroad's ferryboat *Cincinnati*, 1891. Frank Furness, architect. Photograph by William Rau. Courtesy American Premier Underwriters, Inc. *Patent for Interlocking Tile*, 1896. Patent no. 565,734. Frank Furness, inventor.

as a strapping well-muscled youth, pointing ahead to the vigorous future of the company.

There was yet even more sculpture. Along the lengthy south flank of the train shed were ten aedicules, ten feet high, and each typifying one of the major cities served by the railroad, from Philadelphia to Chicago to San Francisco, and not by allegory but rather a historical depiction of its founding. These were rather perfunctory and literal, and nowhere near as spirited as Bitter's last sculpture, and the only one to survive, *The Progress of Transportation*. Made of plaster of Paris and jute "staff," it depicted the Genius of Transportation as a female goddess, seated on a coach and leading a triumphal procession of the carts and wagon trains of the past before trailing off at the far right with a steamship, a locomotive, and—prophetically carried by an infant—a Jules Verne airship of the future. The sculpture was mounted where it would be seen by every passenger, just above the entrance from the main waiting room to the train shed. (It is now installed in Philadelphia's Thirtieth Street Station).

Although Furness's spacious waiting room paraphrased that of his B&O Philadelphia Station, there was no frank display of raw construction. The Terminal, after all, stood at the center of Philadelphia's public life, not along a riverside trainyard. Civic dignity was the order of the day. Moreover, an exhibitionistic display of riveted beams would have been incongruous in a building whose fourth floor contained the railroad's board room, furnished like an English gentlemen's club with wainscoting and pillars of red English oak "which contrasts well with the color of the domestic oak," so the reviewer sniffed, of the overhead beams.³⁵

Furness instead treated his beams as classical piers, inflected by his own idiosyncratic understanding of classicism. The shaft of the pier expanded at its top to form a kind of abstract entablature (one can make out the sequence of capital, architrave, frieze, and cornice), which was immediately followed by a *second* capital, this one formed out of a pair of elongated brackets, and a *second* entablature. All this was pure rhetoric, expressing the fact that buildings are massive and heavy things, and the lifting of their weight is the subject of high drama. Such was the symbolic truth of construction, the literal truth was an entirely different matter.

Furness encased his riveted beams within a jacket of wire lathing, a new fireproof material just invented by John A. Roebling's Sons Co., the company founded by the engineer who designed the Brooklyn Bridge, and marketed by their subsidiary, the New Jersey Wire Cloth Company. Its wire lathing gave Furness's I-beams the shape and proportions of a traditional masonry pier, but even better, it was a flexible material that could absorb "the strain and sudden shocks usual in a great railway."³⁶ The Roebling company was proud of its invention being in the new station, and made a point of illustrating it in its trade catalogue:

the actual frame of the building included the single I beam shown in Figure 5. It is supported by iron columns...The massive effect so well conveyed in the illustration is produced entirely by wire-lathing false-work, fastened to cross-section rods bent to proper profile. Rigidity is ensured by the iron rods woven into the fabric every 7/8 inches...Incidentally it may be stated

that the Roebing Standard Wire Lathing is used throughout the building named...

Broad Street Station was not the only project for the Pennsylvania Railroad that forced to Furness to think about the “strain and sudden shocks” of moving objects. Beginning in 1891, he designed the interiors of the ferryboats that carried New York-bound passengers from Jersey City to lower Manhattan. The journey across the Hudson was only 1,796 yards but it was essential to the railroad that it be gracious and involve a minimum of discomfort. By 1902, he had already designed or remodeled ten ferryboats, giving the railroad what amounted to a whole fleet of ferryboats.

His first great ferryboat for the railroad was the *Cincinnati*, one of the first to be driven by propellers rather than side wheels. This let him open up the upper cabin to form “one spacious saloon, 87 feet long and 38 feet wide,” something that came in handy when it was time to disembark.³⁷ There was nothing even vaguely nautical about it, only the suggestion of domestic ease and comfort. The seats were of warm mahogany, with bent wood arms, the floor covered with Brussels carpets, and the walls and ceilings painted a delicate pink, highlighted with aluminum leaf. Even the lighting was pleasant, with 200 “lily-shaped” electric globes mounted on silvered brackets and covered with opalescent shades.³⁸ One might as well be in a parlor.

But parlors do not move or get wet. As with his railway cars, Furness learned by experience, and watched how his ferryboats behaved under heavy use. Worse than the problem of corrosion and heavy wear on the floors and stairs was the constant bending and vibrating of the boat. The answer was to find materials that were flexible enough to move with it. In 1894 he patented the first of his inventions for maritime travel, an ingenious floor system of interlocking rubber tiles, designed to prevent

floors from cracking or opening at the joints because of tension or compression strains” and particularly useful in the tiling of floors and decks of vessels, and especially the floors of ocean steam-ships.³⁹

Having patented the idea, Furness set up a partnership with the New York Belting & Packing Company to manufacture it, and he now specified whenever appropriate, not only in ferryboats and ocean liners, but in Broad Street Station and other buildings subject to heavy foot traffic.⁴⁰ At a moment when public taste was moving away from his individualistic eclecticism, he seems to have enjoyed the challenge of exploring the new materials and construction techniques that transportation architecture was forcing on him. He followed up his initial rubber tile patent with five more, which he filed between 1896 and 1900, and which addressed such specific difficulties as the treatment of borders and the tiling of a stair tread.

So convinced was Furness of the inherent superiority of rubber tile as a flooring material that he organized a public test in 1897. He enlisted William Gray & Sons, contractors who had provided the fine masonry for many of his buildings, to mount a horizontal iron wheel, ten feet in diameter, that would rotate at 75 rpm. Next to it was mounted a frame that would hold a six-inch-square block of flooring material. After one hour of rubbing against the wheel, which was constantly supplied with sharp rubbing sand and water, each material was inspected for the

amount of wear. Vermont marble lost 3/4 of an inch of thickness; teak, oak, and Oregon pine fared poorly. English earthen tile came in second best, losing only 1/8 of an inch in thickness. But the undisputed victor was rubber tile, which lost only 1/14 of an inch.⁴¹ Furness’s experiment was covered widely in the press, and was even noted appreciably in the *Deutsche Bauzeitung*.

The principle of using supple materials on moving surfaces applied to walls as well as floors. For the *Cincinnati*, Furness had used canvas panels with decorative stippling, obviously not a happy solution for ocean-going vessels, such as the Red Star liner *St. Louis*, whose interior Furness designed in 1894. It was outfitted with some 2000 decorative panels, with relief sculpture by Carl Bitter and executed with the same mixture of paper pulp and plaster of Paris as in his *Genius of Transportation*. But the panels were backed with pasteboard, which “after exposure to dampness and changes in temperature,” began to swell and buckle.⁴²

By the time Furness outfitted its sister ship, the *St. Paul*, he had learned his lesson. Instead of mounting the panels on pasteboard, he mounted them on wire mesh, clearly inspired by Roebing’s wire lath invention. But as it had not yet been applied to decorative panels, Furness promptly patented it “for use on steamships, cars, &c., where the ordinary panel will become distorted and cracked, owing to the working of the parts and the dampness.”⁴³ So did the technical and material insights flow and intermingle, from depot to ship, from floor to wall, as could only happen in the work of an architect simultaneously engaged in every aspect of transportation.

In 1902 Furness remodeled the *Jersey City*, an elderly ferryboat that had been built during the Civil War. This was a sign that the Pennsylvania Railroad was no longer investing heavily in its ferryboat fleet. Nor did it need to: Electric trains were now coming into use, making possible a railroad tunnel under the Hudson, and the construction of Pennsylvania Station. The ferryboats would continue to run, for decades, but no longer needed to be at the forefront of fashion, as they were when Furness designed them.

But then Furness himself was no longer at the forefront of fashion. When the Pennsylvania Railroad selected an architect to design its new terminal in New York, he was not even considered. The project was given to Charles F. McKim, of McKim, Mead & White, America’s most gifted architect of classical revival architecture. It was the logical choice. Furness was still valued for his professional expertise, and his firm was given one more significant commission, a station and office building in Wilmington, Delaware. But the project was put in the hands of Allen Evans, the firm’s junior partner. Furness was withdrawing from the active business of design.

One final indignity was in store. In 1908 Furness was forced to defend in court his various patents for interlocking rubber tiles. The court ruled that the improvement in the use of tile, although useful, was not necessarily “an original conception,” but merely the application of an existing principle to a new material. Moreover, the judge ruled that “Furness first obtained his idea of an elastic floor covering from tiles...laid in the cabins of White Star steamships.”⁴⁴ There is no more appropriate end point for Furness’s four-decade run as America’s preeminent architect of motion.

When Furness's battered reputation was rehabilitated during the 1960s, his surviving buildings did much to support his claim to be one of America's most consequential architects. But while we have important banks, libraries, churches, and so forth, there is no lobe of his practice so poorly represented as his transportation architecture. None of his boats, ships, or train cars survive, as can be expected. But virtually all of his railroad buildings have been swept away. Apart from a few small depots and some very late works, not one of the great stations of his prime has made it into the new century. It is time revisit them, for Furness brought an unusually intense personal experience—stamped by abolition, Transcendentalism, the Civil War, the pitiless financial competition of the Gilded Age—to the architecture of motion, but also an uncommon receptivity to the new world that was coming into being.

Acknowledgements

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Notes

1. Preston Thayer, *The Railroad Designs of Frank Furness: Architecture and Corporate Imagery in the late Nineteenth Century* (Ph.D. diss., University of Pennsylvania, 1993).
2. Thayer, pp. 49-50. Furness's contract was not exclusive; in fact, some of his finest non-railroad work came during this period, including the National Bank of the Republic and the William Rhawn House.
3. Thayer, p. 240, 250, 282.
4. James F. O'Gorman, *The Architecture of Frank Furness* (Philadelphia: Philadelphia Museum of Art, 1973), p. 56.
5. *Journal of Railway Appliances and Railway Price Current*, vol. 3, no. 5 (Monday, Sept. 1, 1884), pp. 113-114 (also vol. 3, no. 1, August 1, 1884), pp. 61-62.
6. *Ibid.*
7. *Ibid.*
8. Thayer, p. 254.
9. William H. Bines to Frank Furness, Dec. 19, 1883; quoted in Thayer, p. 95, p. 272.
10. This is the estimate of Preston Thayer; see Thayer, pp. 86, 99, 245.
11. *Ibid.*, p. 251.
12. Walter G. Berg, *Buildings and Structures of American Railroads* (1893), pp. 10-11.
13. Thayer, p. 245.
14. Furness provided the color scheme by October 1883 when engineer Nichols distributed them to his Division Road-Masters. Thayer, p. 263.
15. J. E. Wootten to L. B. Paxson (April 14, 1880), quoted in Thayer, p. 234.
16. "A Short Cut to Upper New York," *Philadelphia Times* (May 14, 1897), p. 5.
17. "A Swiss Cottage on Wheels – Improvements in Rolling Stock – Items of General Interest" *Harrisburg Patriot* (May 7, 1880); *Railway World* 6, no. 20 (May 15, 1880), p. 461.
18. *Perkasie Central News* (December 15, 1881), p. 3; "Construction," *American Journal of Railway Appliances*, vol. 2, no. 5 (March 15, 1884), pp. 120-121.
19. "Reading Retrenchment," *Wilkes-Barre Daily News Dealer* (February 2, 1885), p. 1.
20. *Ibid.*, p. 290.
21. "Railroad Depot for Philadelphia and Reading Railroad, Ninth and Green Street, Philadelphia, Pa.; ca. 1884, demolished," Architectural Archives University of Pennsylvania.
22. "Reading's Financial Affairs," *Philadelphia Times* (May 27, 1887), p. 1.
23. "The Reading's New Depot at Philadelphia," *Reading Times* (June 20, 1887), p. 1.
24. Thayer, pp. 289-290. Furness also submitted a smaller bill for his proposal to remodel the Reading's other Philadelphia depot at Broad and Callowhill streets.
25. April 27, 1886, Diary 1886 (2), box 3, Cornelius Nolan Weygant Papers, UPT50 W537, University Archives and Records Center, University of Pennsylvania.
26. "New Passenger Station," *Philadelphia Times* (November 11, 1886), p. 1.
27. "The New Station," *Delaware Gazette & State Journal* (July 1, 1886), p. 3.
28. Michael J. Lewis, *Frank Furness: Architecture and the Violent Mind* (New York: W. W. Norton, 2001), p. 150.
29. *Exercises at the Laying of the Corner-Stone*, pp. 12-13.
30. "A Large Girder," *Stone*, vol. 7, no. 3 (1893), p. 237.
31. Although Furness made a preliminary design for the train shed, it was ultimately designed and built by the Wilson Brothers. It published dimensions vary, ranging from 306 by 598 feet (*Philadelphia Times*) to 307 by 707 feet (*Railway World*), but there is no dispute over its record-setting width.
32. Jonathan Hall, "The Allegorical Program of Louis Sullivan's Transportation Building at the World's Columbian Exposition of 1893," *Nineteenth Century* Vol. 38 No. 1 (Spring 2018): 14–19.
33. "Art Notes," *Buffalo Enquirer* (Jan. 12, 1894), p. 4.
34. "The Bitter Panel," *Philadelphia Times* (April 8, 1894), p. 21.
35. "P.R.R. Officials' Elegant Quarters," *Philadelphia Inquirer* (June 3, 1894), p. 5.
36. The images and text are found in two very rare trade catalogues, found bound together: *The Roebling Fire-proof Flooring Considered from the Engineer's Point of View*, and the circular *The Roebling Standard Wire Lathing*. (Trenton: New Jersey Wire Cloth Co., n.d.)
37. "The New Ferry-Boat 'Cincinnati,' of the Pennsylvania Railroad," *Engineering News and American Railway Journal*, vol. 26 (Nov. 7, 1891), pp. 428-430
38. "Queen of Ferryboats," *Philadelphia Times* (Nov. 7, 1891), p. 2.
39. Frank Furness, "Tile Floor, Wall, &c.," patent No. 527,961, application filed March 31, 1894.
40. *The Metal Worker*, formerly *Sanitary and Heating Age*, "Interlocking Rubber Tiling," July 6, 1895, p. 45.
41. *Scientific American*, vol. 77, no. 1 (July 3, 1897), p. 6.
42. Francis Churchill Williams, "Art in Ship-Building," *Harper's Weekly* no. 2027 (Oct. 26, 1895) pp. 1013-1016.
43. Frank Furness, "Ornamental panel," patent No. 613,625, November 1, 1898.
44. "New York Belting & Packing Co., Limited, et al. v. Sierer et al." *United States Circuit Courts of Appeals Reports*, vol. 86 (1908), pp. 79-84.



Entered, according to Act of Congress, in the year 1847 by W. Williams in the Clerks Office of the District Court, of the Southern District of New York. Drawn & Engr'd by W. Williams.

W. Williams, *Cities of New-York and Brooklyn, &c, &c.*, 1847. This map of lower Manhattan shows the tracks of the New York and Harlem Railroad to its then southern terminus at City Hall.

The Sixth Avenue Railroad:

THE BEGINNING OF THE LINE FOR THE STREETCAR

Keith E. Letsche

The streetcar is one of America's great contributions to railroading. Even in its earliest iteration as a horsecar, that is, a car (in its nineteenth century sense of a rail vehicle, "train" being a shortening of "train of cars") pulled by horses or mules, the streetcar was able to accommodate a greater number of riders and afford them a more comfortable ride than the omnibuses and city stages which it displaced. Its subsequent forms—the cable car, propelled by a continuously moving underground cable, and then the trolley, powered electrically—radically increased these abilities. As such, the systems of streetcars that developed in towns and cities in the second half of the nineteenth and the early twentieth century transformed urban America. They allowed people to live away from where they worked, giving rise to the distinct residential, commercial, and industrial districts that characterize our towns and cities today. With their ability to effectively move masses of people, they enabled the creation of the "downtown" with its concentration of retail, business, and entertainment activities as well as the distinctive architectural forms like the department store block, skyscraper, and palatial theater associated with it. Able also to travel beyond the ends of city streets, the streetcar contributed significantly to the development of suburbs. Even exurban development, so much a product of the automobile and freeways in the second half of the twentieth century, originated with the streetcar, especially the trolley, or electric streetcar, which could whisk picnickers and vacationers to amusement parks, beaches, and resorts well beyond urban areas.

The New York and Harlem Railroad

Pinpointing the streetcar's debut is somewhat difficult given that the earliest American railroads tended to resemble later horsecar lines in their frequent use of horse-drawn vehicles and city streets for rights-of-way (in many cases the sole means of accessing built-up parts of cities). The original portion of New York City's first railroad, the New York and Harlem Railroad, from lower Manhattan to Harlem, especially those parts of it where horse-drawn vehicles continued to be used after the introduction of steam, is often cited as the first streetcar line.¹ Starting at Prince Street and the Bowery, through the Bowery to 14th Street, and then over to and up Fourth Avenue (now Park Avenue South and Park Avenue) this portion of the railroad was completed and opened in sections from November 1832 to October 1837, when it reached Harlem (then a separate village).² Additionally, in 1837, the railroad was allowed to extend its tracks south over Broome Street to Centre Street and down Centre to Walker Street and then, in 1839, to Chatham Street (now Park Row) for a new southern terminus opposite City Hall.³

Like many American railroads in the early 1830s, the New

York and Harlem first used cars pulled by horses. Although its original charter authorized the use of steam, animals, or other forms of propulsion, an amendment to the charter, apparently at the behest of the city before operations began, banned the use of steam below 14th Street and limited cars to speeds of five miles per hour. Subsequently, the prohibition on steam was extended to all trackage below 23rd Street when locomotives were introduced in 1837, then 32nd Street, and finally, by an 1851 ordinance, 42nd Street, where the Metro-North Commuter



View of the steam portion of the New York and Harlem Railroad at 84th Street and Fourth Avenue c. 1840.

Railroad, as the New York and Harlem's ultimate successor, terminates today.⁴ The enforced use of horse-drawn cars gave these lower portions of the New York and Harlem's operations the appearance of a horsecar line.

Yet railroad historians generally agree that the New York and Harlem was conceived and built as a conventional railroad, and not a local streetcar line.⁵ With omnibuses having first appeared in New York only a couple of years before the railroad's chartering in 1831,⁶ it is doubtful that the new and drastically more costly alternative of constructing a railroad for a purpose already being adequately served by these vehicles (and that would be for almost two more decades) could have attracted the necessary investor interest. Although the city's omnibus and stage owners might have regarded the New York and Harlem as a competitor, its promoters did not see them so much as the owners of the steam packets that plied the Hudson as the ones whose interests would have to be accommodated. To preempt as much as possible opposition from the steamboats, the railroad's promoters, in seeking the charter for it, emphasized to legislators their desire to locate it "inland"; and even though allowed by the charter to place it anywhere between Third and Eighth Avenues,



New York and Harlem Railroad depot at 26th Street, c. 1857. Railcars were exchanged between locomotives and teams of horses here until 1845. Visible at left is a “city” car used for service in lower Manhattan; at right a “long” car, used for through runs to Harlem.

they chose Fourth Avenue on the east side because of its distance from the river and the boats.⁷

Additionally, pronouncements of the New York and Harlem’s early directors and officers reveal ambitions for the railroad that are well beyond the scope of a local transit operation. At the groundbreaking ceremony on February 23, 1832, the railroad’s vice president, John L. Mason, spoke of its possibly connecting at Harlem with another railroad that would be built to Albany.⁸ In a pamphlet published the following year to boost goodwill after fallout over the railroad’s attempt to lay tracks on Broadway (see below), the company directors elaborated more fulsomely on its future:

We take pride in predicting that [the New York and Harlem] is to form the main trunk of a mighty system of internal communication whose branches are to extend throughout our own state, throughout New England, and the whole interior of the West.⁹

Further, from a technical standpoint, although the New York and Harlem made virtually complete use of city streets for its right-of-way, its original tracks were not laid flush with the roadway surface like modern streetcar tracks. Strap-rail, consisting of lengths of granite stringers with bands of iron bolted on the tops, was set on granite piers (as was the earliest practice of before the use of wooden crossties) sunk beneath the surface of the street; the rails projected anywhere from an inch to several inches above the surface of the street. Run on the crown (center) of the roadway, the tracks tended to force other traffic to either side of the street, much to the irritation of drivers of other vehicles and pedestrians alike.¹⁰ The railroad’s secretly securing a right from the city in 1832 to extended its tracks southward down busy Broadway, when publicly disclosed the following year, produced mass meetings of angry citizens (some of whom even

tore up tracks) and outlandish rumors of steam carriages running roughshod through the streets that ended only when permission was withdrawn.¹¹ Although occasionally measures could be taken to alleviate the problems created by the tracks, such as the widening of Fourth Avenue above 32nd Street to the Harlem River to accommodate both trains and other vehicles more safely, wheels of carriages and wagons getting caught on the projecting railhead, and frequently broken in efforts to free them, lingered long in the memory of New Yorkers.¹²

Also, the New York and Harlem’s passenger coaches, unlike the light-weight construction cars that would be later built specifically for use on horsecar lines, were standard railroad cars intended to be pulled by locomotives. Some, dubbed “regular horse killers,” weighed four tons.¹³ On through trains between Harlem and lower Manhattan, the cars were simply exchanged between locomotives and teams of horses.¹⁴ Even though horse-drawn and limited to speeds of five miles per hour, the large cars on the crowded streets apparently provoked such concerns about safety that the railroad announced in 1838 it had instructed drivers “to walk” their horses in the most densely built-up portion of the line between Walker and Grand Streets and then “to drive at a very slow pace” until past 13th Street.¹⁵

Yet despite the New York and Harlem’s being planned and constructed as conventional railroad, aspects of its operations as they evolved over the next two decades, especially in the area where steam was banned, would provide the vital suggestion for the idea of the street railroad. Indeed, it may be no exaggeration to say, in this regard, that the New York and Harlem was the “midwife” to the birth of the streetcar.

Initially all of the New York and Harlem’s cars were run at fifteen-minute intervals to the end of the line, with passengers able to request stops for boarding or alighting wherever they wished. The adult fare was 12½ cents regardless of the

destination.¹⁶ However, after steam was introduced and the road opened to Harlem and subsequently to the counties beyond it, its operations in the area that continued to be served by horse-drawn cars began to evolve features that were distinctive from the rest of the road. In 1838 twenty-three stops were established between Walker and 132nd Streets with passengers now restricted to boarding or alighting at these stops. While the stops above 23rd Street averaged eight blocks apart, those in the congested area of the city below that point averaged four.¹⁷ Also, graduated fares were introduced at this time. While the fare between City Hall and Harlem was 25 cents (later reduced to 12½ cents), it was only 6¼ cents between City Hall and 15th Street (and later 27th Street), a rate that encouraged the use of the cars for transit between points within this area.¹⁸

Most significantly, perhaps, after the introduction of steam, not all cars from City Hall were run through to Harlem as previously. This meant that more equipment was available for service in lower Manhattan. Probably as a result of this, the railroad was able to run cars at a much-reduced headway—five minutes—between City Hall and 15th Street and later 27th Street, while trains to and from Harlem ran at headways of half an hour to an hour and even more depending on the time of day and season.¹⁹ By 1845, the railroad was also using the “small,” or “city,” cars exclusively between City Hall and 27th Street. These shorter, four-wheeled cars, probably of an earlier vintage than the eight-wheeled cars then being used for through trains to Harlem and beyond, would have been less fatiguing on the horses and more manageable on the crowded streets of this area.²⁰ By the end of the 1840s, merchants on the Bowery were noticing that the

trains, in their progress through the streets, stop to take up and let down passengers at every successive corner, and thus the inhabitants of Westchester, Putnam, and Dutchess become distributed throughout the street, to make their purchases.²¹

In short, the New York and Harlem’s lower Manhattan operations had begun to take on features of the later streetcar lines and even public transit today.²²

Although the New York and Harlem’s lower Manhattan operations clearly pointed to the potential use of railroads for urban public transit lines, this would be meaningful only if it were also shown that it could be profitable. The New York and Harlem had gotten off to an auspicious start financially, with capacity ridership almost daily and receipts of nearly \$8,000.00 in its first year and half of operation, even though during this period it ran only six cars to 32nd Street at the farthest.²³ But like other railroads in the depression that followed the Panic of 1837, its finances suffered. During the early part of this period it was widely regarded as being mismanaged.²⁴ In 1841, at the depression’s nadir, it gave away 150 free tickets apparently in an apparent attempt to drum up ridership.²⁵ Confidence in the railroad’s prospects returned, however, when financier Jacob Little, the first “American Railroad King,” became its president and brought in a new board of directors.²⁶ In the recovering economy, the railroad’s operational receipts increased significantly, more than doubling between 1844 and 1848, with the greatest jumps occurring in the last two years of this period.²⁷

In January 1849, the railroad began paying regular semi-annual dividends of eight percent on its preferred stock.²⁸ The New York and Harlem’s lower Manhattan operations were a significant part of its growing financial success: a report of the board of directors to shareholders for the first six months of 1849 showed the “city cars” as accounting for almost half the road’s passenger mileage and over a third of its passenger revenues.²⁹

In July 1850, in an attempt to dissuade New York city officials from further consideration of the ideas for street railroads that were beginning to circulate, several city stage and omnibus line owners submitted a petition to the Board of Aldermen that gave this glimpse of public transit below 42nd Street:

More than seventy thousand persons are transported daily with in the city below 42nd Street, making for the yearly travel of upwards of twenty million—a number equal to the population of the United States. To accommodate this enormous population of travelers, the Board [of Alderman] assigned the use of forty-five miles of public street. The number of omnibuses in the city, running on various lines is five hundred, carrying each from twelve to twenty-four passengers. In addition to these there are more than five thousand horses, with drivers, grooms and attendants of every kind, making a total of about three thousand persons depending on the stages alone for their subsistence.³⁰

Although intended to demonstrate to officials that the stages and omnibuses were fulfilling the city’s transit needs, the facts offered, when set against New York’s burgeoning population (from 242,278 in 1830 to 696,115 in 1850), pointed to just the opposite: an ever-growing need for public transit that would ultimately require something other than stages and omnibuses to meet it—and great opportunities for those who could provide that something other. The time for the streetcar had arrived.

The Sixth Avenue Railroad

On November 6, 1850, *The Evening Post* carried an announcement of a model of a street railroad track being exhibited at the Merchant’s Exchange on Wall Street.³¹ The model was described as consisting of a

miniature rail-track, very handsomely executed, showing the form of rail, and the mode of laying it, designed for the proposed Sixth Avenue Railroad, and recommended by the Special Committee on Railroads of the Board of Aldermen.

The model, unfortunately, appears to have been lost to time, but a remarkable broadside, titled *The Model Rail Track for the Sixth Avenue Railroad* that explains the model and gives other details about the proposed line, has survived.³² From the immediate references made to the model in it (“This miniature track...”), the broadside was probably intended to guide viewers’ understanding of the model at the exhibit.

The Sixth Avenue Railroad Company, which had submitted the proposal, was composed of nine investors, the most notable of whom was the company’s president, James S. Libby (1805-1871). Libby was probably best known at the time as the proprietor of Lovejoy’s Hotel, the first European plan hotel in the United States, at the corner of Beekman Street and Park Rowe.

He was also involved in the New York real estate market as an investor in two savings and loans associations, one of which he was the president; this may explain his interest in a street railroad for Sixth Avenue.³³ More important for the company's success in securing city permission for the road was his prominence in the city's Democratic politics. He had served two terms on the Board of Alderman and would challenge, and lose to, Fernando Woods, the city's first Tammany Hall-connected mayor, in the 1856 mayoral race.³⁴

Most of the particulars set out in the broadside about the proposed line appear to have been worked out between the company and Special Committee from December 1849, when the proposal was preliminarily reported upon to the Board of Aldermen and referred back to the committee because it lacked information about fares, hours of operation, running interval, and other basics, to the exhibiting of the model in November 1850.³⁵ Reading the proposal, one gets a strong sense that the Special Committee, in overseeing the development of the proposal, had done its work very thoroughly, taking into consideration the general transportation needs of the city, affordability and convenience to riders, and compatibility with other users of the streets.

It is not surprising that the tracks should be the focus of the model, or that the manner of their construction should be explained in such detail in the broadside. The projecting rails of the New York and Harlem, as previously indicated, had long been the *bête noire* of New Yorkers, and it was said that merchants on

the Bowery, as late as the mid-1840s, witnessing a customer's vehicle getting stuck or breaking a wheel on the tracks, still felt an urge to rush out into street and tear them up.³⁶ Eliminating any obstacle posed by the tracks therefore was an imperative for public acceptance of the Sixth Avenue Railroad Company's proposal. Moreover, as the company shrewdly surmised, the most persuasive way to demonstrate this to wary New Yorkers was visually through a model of the tracks.

In the broadside, the rails are described as being flanked by granite blocks, which besides securing them, "present the best possible surface for the wheels of carts and carriages to travel on." The area in between was to be filled in with "round paving stones [to] afford the best possible foothold for horses," and "[t]he entire work...embedded in concrete like the Russ pavement."³⁷ Compared with tracks then in use, tracks constructed in this manner would "present no obstruction to the passage of the usual vehicles over the streets and rails, either lengthwise or transversely, at any angle to the rail" and it was "impossible for a cart or carriage wheel to be jammed or wedged into it, or for a horses' [sic] hoof or shoe to be caught or in or injured by it." *The Evening Post's* announcement about the model affirmed that "[t]his new form of rail presents many advantages over the track at present in use. As the very highest part of the rail is not above the level of the street, it offers no obstruction to the passage of any kind of vehicle."

Equal attention is given in the broadside to the route. As proposed by the Special Committee on Railroads, the line would start at College Place and Barclay Street, proceed up College Place (now part of West Broadway) and West Broadway to Canal Street, west on Canal Street to Varick Street, then north on Varick Street to Carmine Street, west on Carmine Street to Sixth Avenue (now the Avenue of the Americas), and north on Sixth Avenue to 42nd Street. Thereafter, the line was to be completed to the Harlem River, as required by the city, whenever Sixth Avenue had been graded for tracks.³⁸ The line was also to be extended from Barclay Street and College Place southward on Greenwich Street to the Battery. "[S]mall, light and comfortably furnished horse cars" would be run on the line "night and day." The fare below 42nd Street would be five cents; eight cents to Bloomingdale (96th Street to 110th Street) and ten cents to Manhattanville (122nd Street to 135th Street). The fare below 42nd Street was $\frac{1}{4}$ cent cheaper than the New York and Harlem's, and to Manhattanville, $2\frac{1}{2}$ cents cheaper than New York and Harlem's fare to Harlem.

The reasons for the proposed route are set forth verbatim from the Special Committee's report. Among them is that Sixth Avenue was selected because of its being about midway between the New York and Harlem and the Hudson River Railroad lines, thereby affording rail transportation to residents of the center of the island. Also, the route as a whole would pass through the less traveled thoroughfares and "least interfere with the travel or business of any omnibus routes" as "[t]he only part of it on which omnibuses now run are, is through a part of the Sixth avenue, and the Sixth avenue stages have ten-twelfths of their route and eleven-twelfths of their business outside the Sixth avenue." The latter reason is most certainly in response to a petition filed the previous summer with the Board of Aldermen by city stage and omnibus owners opposing city railroads, which stated their belief



The proposed route for the Sixth Avenue Railroad, c. 1850. Graphic courtesy of author.

that new forms of transportation would become necessary only when the center of business had established itself north of 45th Street and that the franchising of private railroads now would result in the owners' "utter ruin."³⁹ Additionally, the line would provide the equivalent of one or more additional stage lines, relieving the overcrowding of stages and omnibuses on Broadway, especially in inclement weather and during the morning and afternoon rush hours.

By the week following the announcement of the exhibit, the model track (along with the broadside) was apparently having its intended effect. In an article November 12, 1850, the *New York Tribune* declared that the model "seemed to meet and overcome the objection of wheel-catching." Styling the Sixth Avenue line "our railroad" and noting that its "incubation had been insufferably long," the *Tribune* begged the Board of Aldermen to make a decision on the proposal before the end of the November session.⁴⁰ This, however, was not to happen, as action on it was deferred while the Board took up the general question of whether the city government should undertake the building of street railroads rather than private concerns.⁴¹

In February 1851 a further delay ensued when another group of promoters petitioned the Board of Assistants for permission to build a street railroad up Eighth Avenue over part of the Sixth Avenue Railroad's proposed route.⁴² The group was headed by John Pettigrew, a politically well-connected sewer and paving contractor.⁴³ While a report of the Special Committee on Railroads at the end of May indicated that an accommodation had been reached between the two groups, action continued to be deferred apparently in order to work out revise route for the railroad to Sixth Avenue since the proposed route through West Broadway had been allocated to the Eighth Avenue Railroad. Finally, an ordinance granting trackage rights to both railroads was enacted by the Common Council at the end of July. The Sixth Avenue Railroad's new route was to start at West Broadway and Chambers Street and proceed through Chambers, Church, Canal, Wooster, and 4th Streets, to Sixth Avenue. Construction of the line was to begin within three months and be completed to 42nd Street within a year.⁴⁴

With arrangements for construction having been made by the end of October, work on the Sixth Avenue line was ready to begin. "IT IS COMMENCED," proclaimed the headline to an article in the November 6, 1851 *New York Times*:

We are to have the 6th Avenue Railroad; and at an early date...This will be pleasant news to the thousands who are anxiously anticipating the accommodation to be afforded by this new route of omnibus travel...

The article continued enthusiastically, though erroneously referring to it as an omnibus rather than a city car line. The article noted that the laying of track was begun on what was one of the most heavily traveled parts of the route, Church and Canal Streets, to test a redesigned rail:

The rail proposed to be used differs entirely from any heretofore laid down. The length of the shoulder—or that part of the rail which receives the shoulder of the car-wheel is but half an inch, instead of an inch as on the Harlem road...From the shoulder or rim of the rail a bevel runs inwardly, or toward the centre of the track,

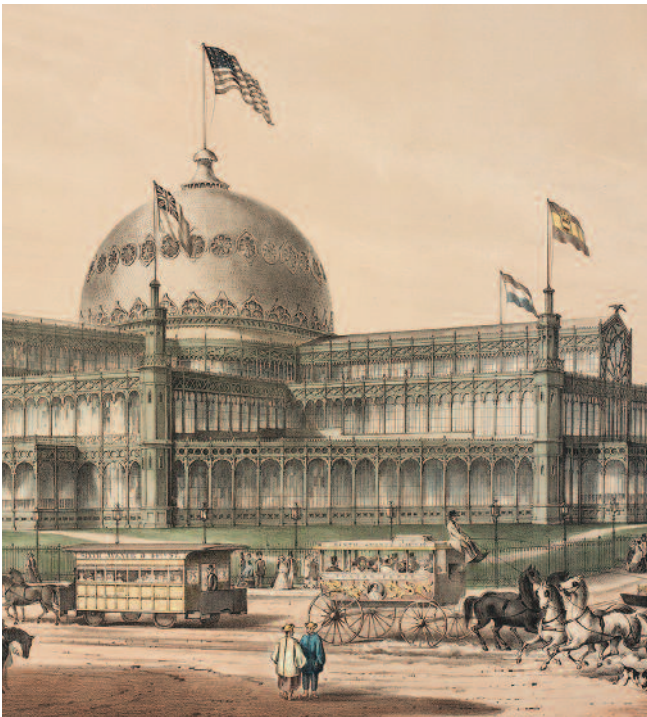
nearly four inches in width. The whole rail will be sunk in the pavement, so that its upper edge will be upon a dead level with the Russ pavement which is to border it outwardly, while the cobble pavement inside the track will rise from the thin edge of the bevel of the rail toward the centre, forming a wide and shallow gutter which may be crossed with out the least danger by the frailest of vehicles.

As an additional accommodation to other roadway users, the gauge of the track was being reduced from the New York and Harlem's four feet, nine inches to just four feet; this, the article claimed, would be would effectively prevent accidents "because only one wheel of the cart or carriage can get on the track at the same time, and there can, therefore, be no wedging."

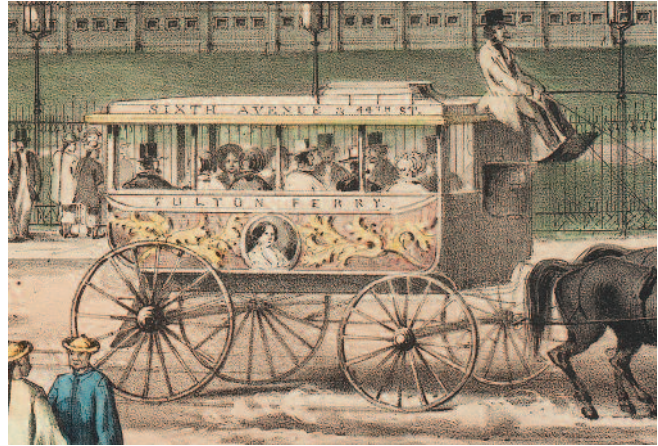
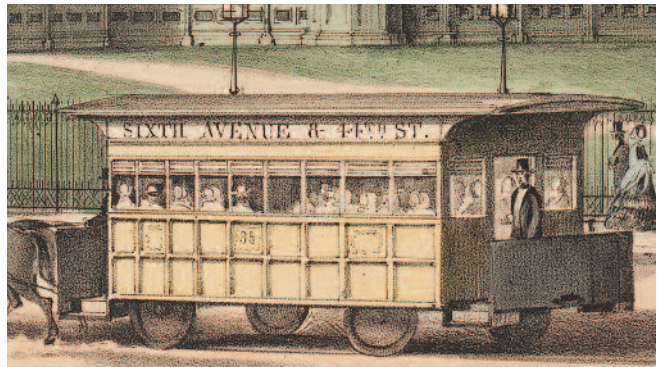
In February 1852, it was announced that the Sixth Avenue Railroad Company had ordered twenty cars for use on the road and had let contracts for work. As to the cars, the public was assured that they would have "all of the modern improvements" and be "as commodious as the size of the track would permit" and that "no persons will be admitted to the cars than can be comfortably seated," noting in this regard that a patent had been taken out for the method used to determine their capacity.⁴⁵ Two months later the company purchased fourteen lots along Sixth Avenue between 43rd and 45th Street for stables and a car depot.⁴⁶

In an unexpected turn, the Board of Aldermen in May authorized a last-minute change in the line's route to and from Sixth Avenue. Starting at Chambers Street and West Broadway, the line would now proceed up West Broadway and Laurens Street (now West Broadway and LaGuardia Place) to Amity Street (now vacated) and west on Amity Street to Sixth Avenue. Coming from Sixth Avenue, the line would go through Carmine Street to Bleecker Street, east on Bleecker Street to Thompson Street, down Thompson Street to Canal Street, east on Canal Street to West Broadway, and down West Broadway to Chambers Street.⁴⁷ Speculations about the reasons for the change ranged from the inability of a certain few of the originally designated streets to accommodate portions of the line that would be double tracked, to the influence of an alderman and assistant alderman who didn't want the cars running in front of their residences. The change had been made with virtually no public notice, somewhat blemishing the good public relations the railroad had enjoyed up to that point, and brought howls of protest from residents of Bleecker Street, who regarded the cars as a danger because of the narrowness of their street, already overcrowded with city stages, and unnecessary because the residents had their own carriages.⁴⁸ When the railway opened, a routing up Varick and Carmine Streets had been substituted for the one up Laurens and Amity Streets, but there was no change for Bleecker Street.⁴⁹

On August 11, 1852, the Sixth Avenue Railroad opened for regular service, with cars running every ten minutes and making the trip between Chambers Street and West Broadway and Sixth Avenue and 44th Street (almost three miles) in from thirty to thirty-five minutes. The cars, an article in the *New York Herald* noted approvingly, could seat from twenty to twenty-four passengers comfortably and were "much the same as the best cars on the Harlem short line, but rather wider," an advantage for passengers having to stand. They were easy to board and



Above: *New York Crystal Palace*, 1853. Lithograph. N. Currier, New York. An omnibus and horsecar from the Sixth Avenue Railroad are visible in the foreground. At right: Detail showing the omnibus and horsecar. Courtesy Museum of the City of New York.



alight from, it being “a much less awkward operation to step upon the platform of one of these vehicles than to climb into an omnibus...”⁵⁰

While the short headways, frequent stops, and other aspects of the Sixth Avenue Railroad’s operations were familiar features of the New York and Harlem, its innovative tracks, which tailored the rails to city streets, set it apart as the first true streetcar line. With roomier and smoother riding cars that were also less of a strain on the horses pulling them than stagecoaches or omnibuses, the Sixth Avenue Railroad’s impact, and that of the Eighth Avenue Railroad (which opened at the end of the month), on the city’s transit were almost immediate. Before the end of the year, horsecar lines had been proposed for Second Avenue, Ninth Avenue, and even Broadway—almost unthinkable for the laying of track since the New York and Harlem’s attempt twenty years earlier—which prompted the *New York Daily Herald* to observe:

The mania of building railroads through the city of New York has, at present, attained to such a such a height that we may expect, in a year or two, to see rails laid down in every principal street and avenue of the metropolis; and it requires no great stretch of foresight to calculate that ere long the omnibuses will entirely disappear.⁵¹

By the end of the decade, the streetcar had appeared in Boston (1856), Philadelphia (1858), and even the new but rapidly growing city of Chicago (1859); in 1853 it had crossed the Atlantic to Paris where it was known as *le chemin de fer américain*.⁵² By 1880 the *New York Daily Herald*’s prediction of its dominance of public transportation had become true in virtually every sizable American town and city.



Keith E. Letsche, a retired municipal attorney, is a volunteer in the Operations and Electric Car Departments of the Illinois Railway Museum, where he is currently assisting with the creation of a docent program. He also consults on historical lighting and electrical technology and was the co-author of “The Shrewsbury-Windle House: A Case Study for Mid-Nineteenth Century Gaslight Installation,” which appeared in the Spring 2018 issue of *Nineteenth Century*.

Notes

1. John H. White, Jr., “Horsecars: City Transportation Before the Age of Electricity,” 2, <http://spec.lib.miamioh.edu/wp-content/uploads/2013/02/Horse-Car-brochure-for-website.pdf>, accessed May 24, 2022. As an example, see E. Clarence Hyatt, *History of the New York & Harlem Railroad* (1898), 8. As one might expect at this time, the name of the railroad, even in documents by the company, is spelled variously, e.g., “New-York and Harlem Railroad,” “New York and Harlem Rail Road,” with the simple reference “Harlem Railroad” often being used. The forms “New York and Harlem Railroad” and “New York and Harlem” are used throughout this article, except in directly quoted material.
2. Most of the facts regarding the early construction and operation of the New York and Harlem here, unless otherwise referenced, have been taken as outlined in early pamphlet, E. Clarence Hyatt, *History of the New York & Harlem Railroad* (printed by the author, 1898) <https://archive.org/details/historyofnewyork00hyat/page/n1/mode/2up>, and as elaborated upon in greater detail in Louis V. Grogan, *The Coming of the New York and Harlem Railroad* (printed by the author, 1989), 1-22 passim. An excellent summary of its construction and operation based on these sources and others is in “Park Avenue main line,” Wikipedia, https://en.wikipedia.org/wiki/Park_Avenue_main_lin (last edited

- February 28, 2022).
3. *The Evening Post* (New York), October 27, 1837; Grogan, 10. A final southerly extension, from City Hall along Chatham Street (Park Rowe) to the Astor House at Broadway was opened in 1851. Grogan, 13.
 4. Grogan, 2, 4, 10, 21-22.
 5. White, 2.
 6. *Id.*
 7. Grogan, 2, 6.
 8. Hyatt, 11.
 9. "A Statement of Facts in Relation to the Origin, Progress, and Prospects of the New-York and Harlem Railroad." The text of the pamphlet was printed in *The Evening Post* (New York), February 21, 1833. In 1852 the New York and Harlem would finally connect with the Albany and West Stockbridge Railroad, and its trains enter Albany over the latter's tracks. After the New York and Harlem Railroad's lease to the New York Central and Hudson Railroad in 1873, trains originating at its Grand Central Depot at 42nd Street would connect with others to Chicago and St. Louis in fulfillment of the vision of its early directors.
 10. Grogan, 4.
 11. *Id.*, 6. Grogan summarizes the public perception problems faced by the railroad both before and after the disclosure of the grant of trackage rights on Broadway as follows: "Opinion throughout the city regarding the merit of the railroad was sharply divided[,] ranging from disenchantment that over the fact that the real-estate value was not enhanced over the first few weeks of operation, as promised by the railroad's promoters; to the concern over the prudence of conducting such an operation in the densely populated area south of 23rd Street—some wanted the railroad contained in the remote region north of 42nd Street and beyond. Still others were concerned with the width of the street to be taken up by the tracks and the fact that rails would occupy the crown of the streets, creating a hazard to the foot-traveler and carriage alike. A fraudulent map that had been circulated depicting the railroad taking twenty-three feet from the street instead of the expected five feet increased the anxiety and tension. It was also argued that the extension of the line southward would necessitate street widening resulting in the destruction of property and a corresponding drop in land value."
 12. John Ewen, letter to the editor, *The Evening Post*, April 3, 1850; "It is Commenced," *The New York Times*, November 6, 1850.
 13. John H. White, Jr., *Horsecars, Cable Cars and Omnibuses: All 107 Photographs from the John Stephenson Company Album, 1888* (New York: Dover Publications, 1974), V.
 14. Grogan, 22.
 15. *The Evening Post*, June 21, 1838.
 16. *The Williamsburgh* (New York) *Gazette and Long-Island Advertiser*, November 5, 1835; Grogan, 7.
 17. *The Evening Post*, July 19, 1838.
 18. *The Evening Post*, May 5, 1840, and September 2, 1840.
 19. As an example of the railroad's running times, see the summer timetable in *The Evening Post*, May 5, 1840. Like other railroads at this period, the New York and Harlem adjusted its schedules seasonally, and, as running times for a particular season were not necessarily repeated from year to year, it is difficult to generalize about them. The headway time for cars between City Hall and 15th Street (and later 27th Street) was slightly increased in the following years. *The Evening Post*, February 18, 1841 and June 19, 1841, show a hybrid arrangement, with cars running every five minutes from 8 to 10 a.m., every ten minutes from 10 a.m. to 2 p.m., and then every five minutes again from 2 p.m. to 7 p.m. *The Evening Post*, May 2, 1842, and January 1, 1843, show a running interval of ten minutes and the latter also an interval of twenty minutes on Sundays. A six-minute headway is shown in *The Evening Post*, February 18, 1846.
 20. *The Evening Post*, May 15, 1845; "Report of the New York and Harlem Railroad," *The Evening Post*, November 1, 1849. In a speech October 26, 1844, at a dinner on the occasion of the opening of the railroad to White Plains, the railroad's president mentioned the acquisition of five new cars with a capacity of sixty to seventy-two passengers each and the refurbishing of the "old ones." "Harlem Railroad Celebration," *New-York Tribune*, October 28, 1844.
 21. *New York Daily Herald*, May 21, 1849.
 22. The New York and Harlem's horsecar line below 42nd Street would be formally separated from the rest of its operations when Cornelius Vanderbilt leased the railroad's trackage above 42nd Street to the New York Central and Hudson River Railroad, which Vanderbilt also owned, on April 1, 1873. The New York and Harlem's operation of the horsecar line below 42nd Street ended when it was leased to the Metropolitan Street Railway in 1896. Grogan, 22, 25.
 23. Grogan, 6.
 24. "Money Market," *New York Daily Herald*, November 19, 1845.
 25. *The Evening Post*, November 10, 1841.
 26. "Money Market," *New York Daily Herald*, November 19, 1845, and February 8, 1848.
 27. "Money Market," *New York Daily Herald*, January 16, 1849.
 28. *The Evening Post*, December 29, 1848; June 18, 1849; and December 22, 1849; *New-York Tribune*, June 25, 1850.
 29. "Report of the Harlem Railroad," *The Evening Post*, November 1, 1849. The operational breakdown gives 135,510 miles for the city cars versus 114,710 miles for locomotive-hauled train (eight-wheeled) cars and 40,126 miles for horse-drawn train cars; \$45,874.24 is listed for city passenger fares and \$75,648.05 for "long lines" fares. The totals exclude mileage and revenue from the New York and New Haven Railroad's cars, whose trains were carried into New York over the New York and Harlem beginning in 1848. Grogan, 19-20.
 30. *The Evening Post*, July 9, 1850.
 31. The article is titled "The Proposed City Railroad."
 32. The broadside is in the author's collection of railroad ephemera. No other copy of it appears to be extant.
 33. *The New York Times*, September 25 and October 28, 1851; *New-York Tribune*, March 11, 1852; Charles Thornton Libby, *The Libby Family in America 1682-1881* (Portland ME: B. Thurston, 1882), 52, [www.https://www.ebooksread.com/authors-eng/charles-thornton-libby/the-libby-family-in-america1602-1881-bbi/page-52-the-libby-family-in-america1602-1881-bbi.shtml](https://www.ebooksread.com/authors-eng/charles-thornton-libby/the-libby-family-in-america1602-1881-bbi/page-52-the-libby-family-in-america1602-1881-bbi.shtml).
 34. Libby, James S., "Our Campaigns," <https://www.ourcampaigns.com/CandidateDetail.html?CandidateID=71577>, last modified February 9, 2007, 4:12 p.m.; Charles Libby, 52.
 35. *The Evening Post*, December 19, 1849.
 36. *New York Daily Herald*, May 21, 1849.
 37. "Russ pavement" consisted of closely set dressed stone block and was extensively used in New York at this time. "Round paving stones" are cobble stones.
 38. The Central Park Act of 1853, which authorized the purchase of the site that is now Central Park, forced the abandonment of this extension of the line above 59th Street.
 39. "City Intelligence," *The Evening Post*, July 9, 1850.
 40. "Sixth Avenue Railroad," November 12, 1850.
 41. "Dear Ald. Herring," *New-York Tribune*, November 21, 1850.
 42. "Board of Assistant Aldermen—Stated Session, Monday, Feb. 3, 1851," *The Evening Post*, February 5, 1851.
 43. *The Evening Post*, February 17, 1849, and April 5, 1849.
 44. "City Items," *New-York Tribune*, May 30, 1851; "City Railroads," *The Evening Post*, August 1, 1851.
 45. "New-York City," *The New York Times*, February 12 and 23, 1852.
 46. "New-York City," *The New York Times*, April 3, 1852.
 47. "The News," *New York Daily Herald*, May 18, 1852.
 48. "Railroads," *New York Daily Herald*, May 24, 1852; "The Sixth Avenue Railroad," *New-York Tribune*, May 24, 1852.
 49. "Opening of the Sixth Avenue Railroad," *New York Daily Herald*, August 11, 1852.
 50. *Id.*
 51. "City Railroads," *New York Daily Herald*, November 25, 1852.
 52. White, Jr., "Horsecars: Transportation Before Electricity," 3.



New York City Hall, John McComb, Jr. (1763-1853) and Joseph-François Mangin, (active 1794-1818) architects.

New York City Hall and John McComb, Jr.:

A RECONSIDERATION OF HIS ROLE AS ARCHITECT

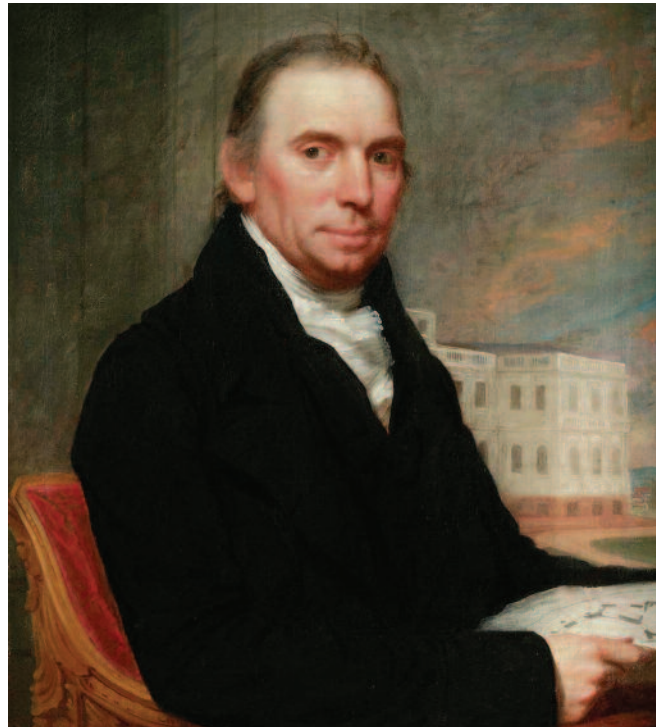
Valerie Ann Leeds

From the moment the cornerstone was laid for the new New York city hall on March 26, 1803, controversy surrounded the authorship of the building design of what became this celebrated architectural jewel of the Federal period. It is known that the commission for the new city hall was jointly awarded to two architects, John McComb, Jr., (American, 1763-1853) and Joseph-François Mangin (French/American, active c.1794-1818) on October 4, 1802. Claims for which of the two architects held the primary responsibility for the building plan nonetheless quickly ensued and continue to this day with architectural historians and interested parties joining opposing sides of the argument, further clouding the issue; many deem Mangin as the foremost contributor, although there are compelling points that favor each. This analysis will principally focus on the exterior design of City Hall and the architectural contribution of McComb, within the context of some of his other efforts. The work of Mangin is also considered, weighing his skill and career to assess his influence in the City Hall building project. This reexamination of City Hall focuses on the commission of this important American monument, possible continental sources for the exterior design, and the prominent positioning of the building within urban early nineteenth-century New York City. With few primary documents and accounts, mystery surrounds the singular collaboration of McComb and Mangin on this exceptional historical structure, the result of a collaborative pairing of two proficient architects. The pendulum of principle authorship has swung in both directions since soon after the awarding of the commission, and while Mangin's contribution has been reinstated with modern commemorative additions, there is also evidence indicating that McComb's involvement in the design was far more extensive than generally credited as he is often dismissed as primarily a builder.

From the announcement of the award of the City Hall commission, the plan was greeted with great interest and acclaim. An 1803 notice appreciatively observed that "the elevation is elegant, and does no less credit to the taste and talents of the architects, than it reflects honor on the judgment of the Corporation."¹ One indisputable fact of New York City Hall was the quality and distinction of the building design that likely contributed to the authorship debate since the stakes were notably so high. The success of the building has endured since New York City Hall is in fact the oldest continuously functioning city hall in the United States.

The New New York City Hall and Ensuing Controversy

The discussion of a new city hall to replace the old one (Federal Hall) began in 1800. An 1802 notice placed in several New York

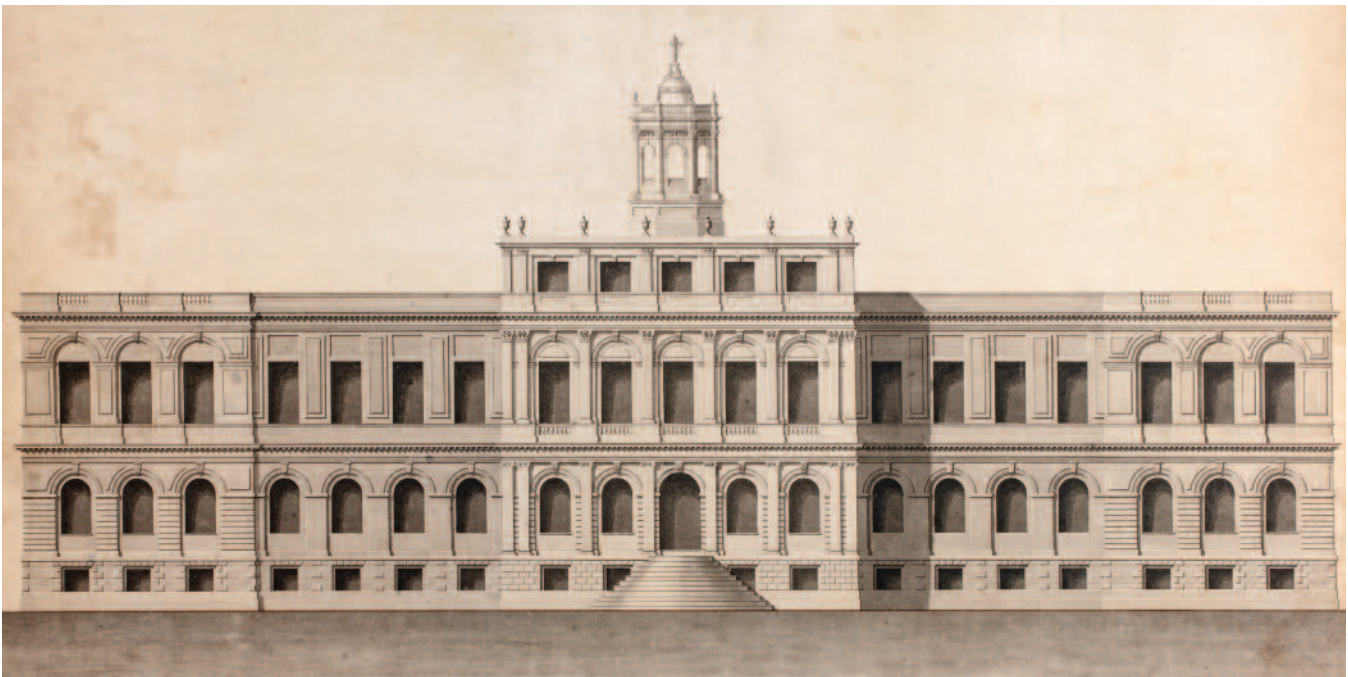


Samuel Lovett Waldo (1783-1861), *John McComb, Jr.*, n.d. Oil on canvas. Courtesy City Hall Portrait Collection.

publications advertised a competition entertaining design proposals for a new city hall. Twenty-six competitors submitted designs, and the joint entry of Mangin and McComb was awarded the commission.² There are three presentation drawings that consist of views of the north façade, the south façade, and a cross section that now reveal only the signature of McComb, but there is visible erasure and recoloring with a wash over the area in which McComb's signature appears on at least two of the three presentation drawings. It is now accepted that prior to when the McComb drawings and papers were donated to the New-York Historical Society in 1898, Edward Wilde, a grandson-in-law to McComb, who had financial motives, was responsible for removing Mangin's name from the presentation drawings in the visibly touched-up area above McComb's signature.³ Whatever role Mangin played in the initial design of City Hall, he did not remain involved with the further development and building of city hall once the design selection was settled, nor has any solid explanation for this been uncovered. There is no mention of Mangin in any of McComb's extant papers, nor in the Common Council minutes that was the record of note of the meetings



New York City Hall, front elevation, 1802. Architectural drawing by John McComb; John McComb Architectural Drawing Collection, PR 040, CH001. New-York Historical Society, 18986.



New York City Hall, rear elevation, 1802. Architectural drawing by John McComb; John McComb Architectural Drawing Collection, PR 040, CH002. New-York Historical Society, 100060d.

before and during construction. Since there is no record of any exchange between McComb and Mangin, there is also no knowledge of their working relationship, nor of how the collaboration transpired or functioned. Therefore, how one of the masterworks of early American civic architecture came to be created is largely an enigma.

McComb was officially designated the architect of City Hall by

the Common Council on March 22, 1803, so he became the sole architect, assuming all responsibility for the building oversight, implementation of the plans, and later design changes, which is how it may be that his name alone appeared on the original cornerstone.⁴ A procession and dedication ceremony for the new city hall occurred on May 26, 1803, as the *New-York Evening Post* noted the following day. The controversy of Mangin's

omission as architect was here first publicly raised regarding his absence from the procession and his name left off the original cornerstone.⁵ A newspaper editorial appeared on May 28, 1803, and on June 2, another notice confirming charges were described in an anonymous letter to the editor, signed “Justice,” that stated Mangin was the real author of the building plan and expressed outrage over his lack of recognition. The same day, McComb noted in his diary: “Another communication published in the *Evening Post* about the manner Mr. Mangin was treated in not having his name published as the principal architect.”⁶ McComb unfortunately did not outline a reason or express any reaction to the situation. The newspaper notice, McComb's diary entry, and evidence of erasure on the presentation drawings have generated intrigue, even ascribing malevolent intent to McComb to relegate Mangin to a minor role, but it is not known how or why Mangin withdrew from involvement in the project following the award of the commission.⁷ The lack of reference to Mangin in the council minutes documenting the construction of City Hall, nor of him registering any objections to the arrangement or to his exclusion is of notable significance.

Division over the authorship of the City Hall design ensued in the following years. In 1908, over one hundred years after the City Hall dedication ceremony, when the building was being evaluated for restoration, authorship was reintroduced in two vituperative exposés that resurrected the supposed scandal, although this second attack was actually based on the initial allegations.⁸ Again in 1915, as the restoration was nearly complete, the matter of adding Mangin's name to the building resurfaced, but McComb's grandson-in-law expressed the most vocal opposition to the addition, and appears to have prevailed.⁹

Divisiveness about the design continued into the twentieth century and beyond. In the 1950s, the controversy arose again. Over the years, with the renovations and refurbishments of City Hall, the original cornerstone went missing. During the mid-1950s, an extensive campaign to locate the cornerstone was conducted, and it was likely the exterior restoration when the realization of its disappearance came to light.¹⁰

McComb and his Role

In recent decades, the significance of McComb's contribution to the design has been continually minimized, based on disparagement of his creativity, denigration of his drafting skills, judgment of a decided Frenchness of the original design, and that McComb was viewed as an architect-builder before about 1810, rather than as an architect.¹¹

As both an architect and the builder of City Hall, McComb dealt with all aspects of the construction, which occupied his attention over the course of a decade. His diary records his early engagement with every facet of the building, suggesting his deep involvement in the project. Numerous travails occurred over the course of construction, and the first dilemma was a proposed reduction in the scale of the building by taking away two windows from the front projection, shortening the length of the front by taking out two windows, and reducing the depth of the building by one window.¹² McComb was the sole architect involved in dealing with the proposed alternations to the original City Hall design.

The council minutes do not detail any further consultation

with Mangin or solicit his input on any alterations, nor his formal withdrawal from the project. Many reasons have been cited for why Mangin was not active in the realization of City Hall, including his opposition to the requested design changes, disadvantageous political alliances, difficult temperament, problems that arose over his work on the city map, and lack of facility with the English language. Of his language skills, while perhaps not fluent in English, he was able to communicate, and furthermore, whatever language challenges he may have had, it did not hinder his securing other architectural commissions and survey work.¹³

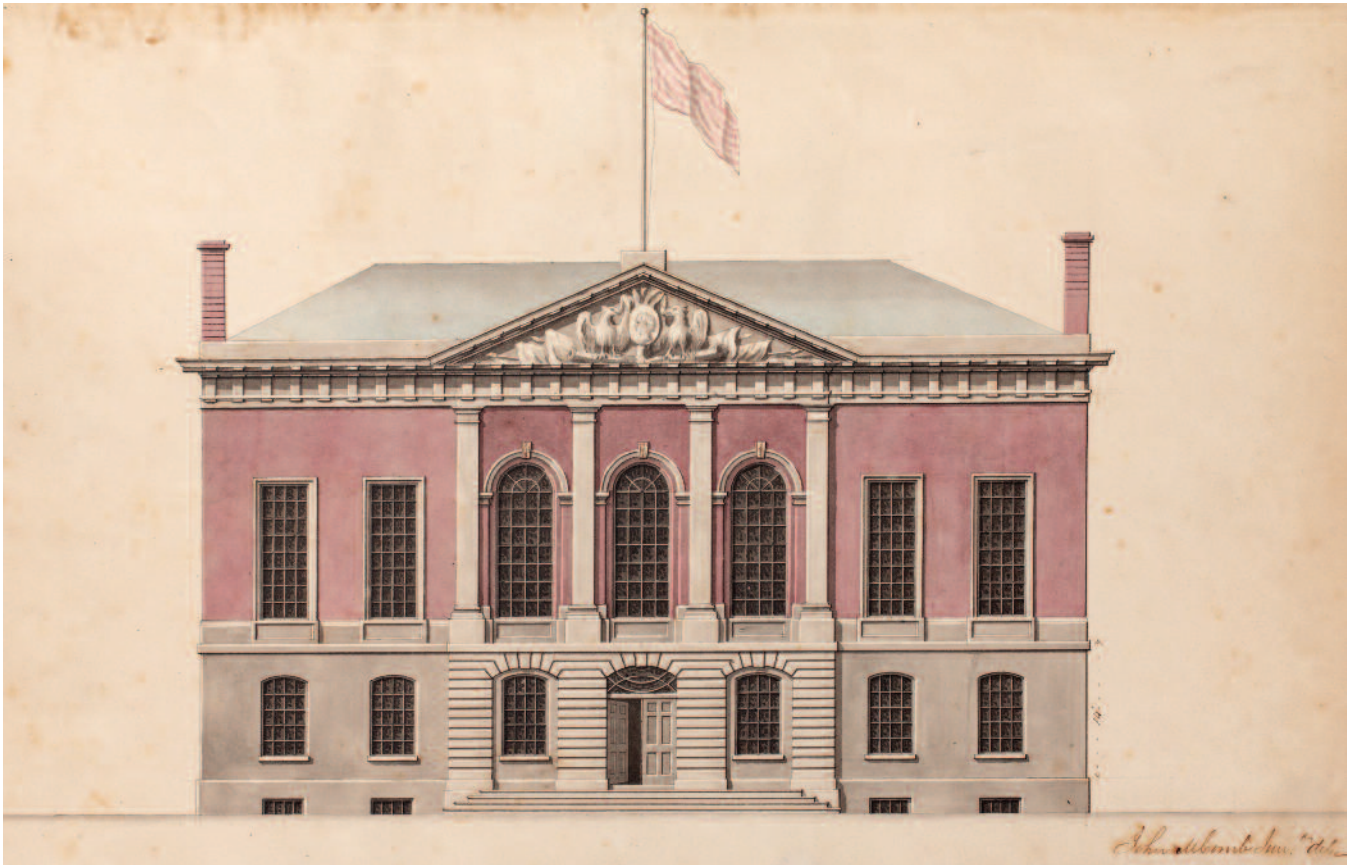
As McComb assumed responsibility for the project, he forcefully objected to the reduction of the plan on the grounds of compromising the design proportions, but he lost the argument about reducing the building depth for the sake of lowering the cost. His diary notation infers a strong emotional attachment to the original plan—an expected reaction from one of its designers.¹⁴

In addition to acting as the representative in the Common Council meetings, McComb also dealt with numerous practical details that included serving as the liaison with the quarries, artisans, carvers, and workmen, and making arrangements for their respective roles in carrying out the plan. The stone used for the exterior of the structure came under review by the Common Council when they became concerned about building expenses. McComb advocated that the entire building be faced in white marble as in the original design, but this was met with opposition from the council based on the cost. Various proposals were discussed, but the final decision approved the use of white marble on the south, east, and west façades, while brownstone would face the north side. The rationale for this was that the building was built so far “uptown” that no one would be concerned with the rear of the building.¹⁵ After many delays, the building was finally dedicated in 1811, and officially opened in 1812.

McComb's singular devotion and commitment to the building and its construction were unquestionable. He frequented the site and the quarries, activities outlined in numerous diary entries. His dedication appeared to extend considerably beyond what would be the expected involvement of simply the builder. Part of the difficulty in reconciling McComb's contribution to City Hall is that he represents a transitional figure in American architectural history as a builder-architect of the earlier colonial tradition,¹⁶ and his dual role as builder and architect has resulted in his artistic contribution often being diminished and underestimated.

McComb's and Mangin's Careers as Relates to the City Hall Commission

In evaluating McComb's and Mangin's involvement as designers of City Hall, their other architectural accomplishments warrant consideration. Prior to 1803, there are few architectural efforts on the part of McComb that relate to the design of City Hall. From 1773, he assisted his father, a noted architect and designer of such efforts as the Brick Church (1767) and the North Dutch Church (1769), and he may have taken an extensive tour of Europe before 1790.¹⁷ His name is frequently associated with the design of Government House in New York (c. 1790), and there



Washington Hall, drawing from a bound sketchbook, July 4, 1809. John McComb Architectural Drawing Collection, PR 040, item 1180. New-York Historical Society, 100061d.

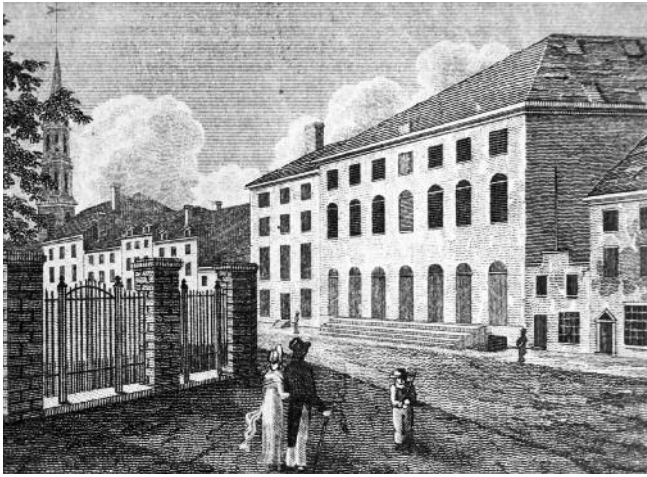
are two extant drawings in the McComb Collection, held in the New-York Historical Society collections, that are suggestive of the executed building, although James Robinson is considered the architect of record.¹⁸ The predominant Federal-Georgian style of this building however bears little relationship to the design of City Hall. McComb also designed a number of lighthouses, including the lighthouse at Montauk Point (1795), as well as various residential homes including opulent country houses. He also designed St. Mark's Church-in-the-Bowery (1799), and his most well-known building prior to City Hall was The Grange, Alexander Hamilton's still extant Harlem Estate (1801-2), as well as possibly serving as the architect for Gracie Mansion (1799).¹⁹ Contemporaneous to City Hall, McComb also designed the building for the Society of Mechanics and Tradesmen on Park Place (1802-3), and St. John's Chapel on Varick Street (1803) (in collaboration with his brother Isaac)—an example of the Wren-Baroque architectural style.

Following City Hall, McComb had a thriving and prolific career; his subsequent design efforts include the West Battery (1807-11); Cedar Street Presbyterian Church (1807); Washington Hall, home of the Washington Benevolent Association (1809-12); Old Queens building, Rutgers University (1809), the oldest building on the campus; Murray Street Presbyterian Church (1811-12); Alexander Hall at Princeton Theological Seminary (1815-17); American Bible Society Building on Nassau Street, Princeton (1822-23); and Bleecker Street Presbyterian Church,

(1822-25), in addition to other structures, and in 1817, he was even considered as a possible candidate to design the United States Capitol.²⁰ The buildings he designed exhibit a range of



Plan of the City of New York/drawn from actual survey by C[a]simir Th. [G]oerck, and Joseph Fr. Mangin, City Surveyors, 1803. Courtesy New York Public Library.



Joseph-François Mangin (with Charles Mangin), *Park Theatre*, c. 1830. Balch, Rawdon & Co. Courtesy New York Public Library.



Louis Oram, (active 19th century) *New York State Prison*, 1814. Courtesy New York Public Library.

styles that includes tributes and specific quotations of Wren-Baroque, Federal, Georgian, and strong influences of the Adams, Inigo Jones, James Gibbs, and William Chambers, although he especially excelled in the Federal idiom. It is therefore evident that the dominant influence on McComb's work is English architecture, an architectural vocabulary in which he appeared most conversant.

Of the later structures, most significant to the discussion of City Hall is Washington Hall. This endeavor is the likely result of McComb's exposure to an architectural vernacular that he incorporated into his own later work. Stylistic connections between the two buildings are more clearly evident in McComb's detailed studies from his sketchbook, than in the illustration of the finished building where the shutters somewhat obscure the design. Although City Hall and Washington Hall exhibit distinctly different overall styles, McComb recycled and adapted some of the essential design features of City Hall for this later effort. The entry stairs, arched windows in both stories of the central bay and their decorative moldings, low-level basement windows, engaged pilasters, use of horizontal rustication, and the decorative recessed panels under the second-story windows are elements similar to both structures.

As for Mangin, no clear stylistic antecedents to City Hall are evident in his work either. The details of Joseph Mangin's biography are sketchy and little is known of his work outside of New York where he is believed to have arrived in 1794 via Haiti.²¹ Born in Dompierre, in the Voges region of France in 1758, he became a naturalized American citizen in 1796. He collaborated with Casimir T. Goerck as surveyor of an official New York City map beginning in 1797, which was eventually published in 1803.²² The undertaking was controversial when it became known that Mangin had improved on reality, taken great liberties, and made topographical alterations. The map was initially suppressed due to its tremendous inaccuracy, but was later released with the caveat that two-thirds of it was invalid, although it became recognized for its fine draftsmanship.²³ It is principally on the production of this map that Mangin's reputation as an exceptional draftsman rests. Mangin's architectural efforts prior to City Hall include collaboration on

the Park Theatre (1796–97), which was with his brother Charles, and the New York State Prison, located on what is now Christopher Street, near West Street (1797).²⁴ Curiously, Mangin's career largely stalled following City Hall. He designed the First Presbyterian Church on Wall Street (1810), and his principal architectural endeavor was the design of the first St. Patrick's Cathedral on Mott Street (1809-15)—one of the earliest examples of the Gothic Revival style in America—so is therefore stylistically unrelated to City Hall. He returned to survey work and is intermittently noted in New York directories until disappearing in 1818.²⁵

The plan for the prison is visibly plain in conception as its intended purpose would dictate. The simplicity of the façade of the Park Theatre reveals none of the design motifs commonly associated with the “Frenchness” of the City Hall plan, nor any of its grand monumentality. Ultimately, none of the three designs bear any stylistic affinity to City Hall, nor do they illuminate the origins or sources of the City Hall design more than McComb's prior conceptions do.

The McComb Papers contain over one hundred drawings by McComb relating to the design of City Hall that include a site plan, various studies for the cupola, cross sections, and interior and exterior views.²⁶ While it has not been ascertained whose hand is responsible for the three presentation drawings, there is no dissension that McComb was the originator of the remainder of the collection since many of the drawings are signed and contain numerous notes in the margins consistent with his handwriting. These works, a sketchbook, and numerous other architectural drawings of various building projects all attest to McComb's ability as a competent draftsman, though many of the drawings contained within the McComb collection vary widely in quality, since quite a number represent working efforts showing the architect in the process of resolving various design issues. Some are of a more refined quality while others are rough in their execution. In focusing on McComb's more finished drawings, it is clear that he did have an aptitude for architectural drafting.

A principal point of contention regarding McComb's authorship of the presentation drawings has been their technical execution. Some scholars have made much of the pigment in the

drawings, variety of paper, and the “graded wash” shading technique (as in the shadows and darkened windows) that correlate to the tradition of French architectural drafting, thereby connecting Mangin to the city hall drawings.²⁷ In a few cases, however, McComb can be seen to employ the same graded wash method in his architectural sketches, so this point is therefore inconclusive as evidence.

Stillman and some other contemporary scholars also cite the difference in style and the method in which McComb delineates shadow and depth in his other work from that seen in the presentation drawings.²⁸ Yet a close examination of the drawings in the McComb collection holds certain revealing clues. While the overall presentation of the winning drawings is different from the others, it must also be considered that their submission for the competition was of monumental importance, and in fact actually represented the single most important architectural endeavor of either McComb or Mangin throughout their professional lives. Surely both architects were aware of the high stakes in winning the design competition, the immense prestige to be gained, and the significance to their respective careers. The other drawings in the McComb Collection can be differentiated by the fact that the majority of them represent plans for projects that McComb had already essentially been awarded or were working studies. It is for these principal reasons that the particular attention lavished on the City Hall presentation drawings sets them distinctly apart by exhibiting an infinitely more polished technique and use of refined detail. They are in fact more elaborate than any other known architectural drawings by either Mangin or McComb, and the building design far surpasses in sophistication and elegance any known plan by either architect whose designs generally tend toward stately simplicity.²⁹

Another important feature that must be evaluated is McComb's sketchbook that outlines his various designs for Washington Hall.³⁰ There is no dispute about the authorship of the sketchbook as the drawings have notes and titles in the margins, and several are signed in his own hand. The Washington Hall sketchbook was subsequent to City Hall, nonetheless, it is illuminating and of importance. The design of Washington Hall is typical of the simplicity of McComb's designs, yet there are numerous architectural motifs that are common to City Hall. Of principal importance are the actual drawings themselves. A close examination of the sketchbook reveals that although the drawings are not of the same refinement and finish as the City Hall presentation drawings, both suggest execution from the same hand. Beyond the same assured touch and approach to rendering architectural form, certain similarities in executing details in both the sketchbook and drawings lead to the conclusion of a single draftsman's hand. The finely detailed shadows and moldings around the windows (notably the arched windows) and doors, and the rendering of the rusticated exterior present the possibility of McComb's authorship of the drawings. An examination of the single Mangin drawing contained within the McComb Collection, of the Park Theatre (c. 1798), shows no similarity in execution or style to the City Hall presentation drawings.

New York City Hall

New York's City Hall at the time of its construction had few architectural peers in the country. In 1814, Thomas Stanford noted the following in his “Concise Description of the City of New York”:

Broadway passes along the North side of the Park, which forms a noble area, to the most magnificent structure in the United States, the New City Hall...This magnificent structure unites a splendid combination of taste, grandeur and elegance.³¹

Into the next century, the building still elicited comment. For example, the architectural significance of the building was highlighted by the noted critic Montgomery Schuyler nearly one hundred years after its completion:

New York City Hall was at the time of its erection the most successful piece of civic architecture in New York, or, for that matter, in the United States. It had only one predecessor that was or is entitled to much architectural consideration, and that is the Boston State House, which preceded it only by a decade...³²

City Hall exhibited exceptional sophistication and stately refinement in comparison to other period structures, and even well into the twentieth century, it was still garnering praise, as noted in the *Architectural Record*:

Seldom has a building been awarded praise so wholesouled, so universal as that which has heaped itself upon this, New York's most precious structural inheritance. Indeed, when men have had the temerity to compile lists of the world's noblest examples of architecture, the New York City Hall has not infrequently been called upon to stand forth among America's representatives.³³

This effusive admiration conveys the prevailing sentiments about the design of New York City Hall even more than a century after its construction.

In addition to the remarkable aesthetic quality of City Hall, the siting of the building represents a significant part of its success. Bordered by Park Row, City Hall was situated on an 8.8 acre triangular expanse of land that was relatively pastoral, and had undergone various functions, even serving as a cow pasture; at different times, it was known as the Commons, and the Fields.³⁴ At the time that the plan was conceived, the parcel of land contained some other public buildings and was located at the northernmost end of the city in what is now lower Manhattan. In his diary, McComb noted that the new City Hall would:

be erected on the vacant ground between the gaol and bridewell, that the wings in front range with Murray street on a parallel line with the fence in front of the Alms House, and that the cupola range in a line with the cupola of the Alms House.³⁵

The building was prominently sited toward the southern tip of the triangular plot with the façade facing south, which at the time meant that the City Hall entrance opened out toward the urban hub. The structure was intended to stand out prominently within

the landscape and was conceived with proportions and decoration of enduring monumentality, executed in white marble and topped with a cupola. In 1827, James Hardie noted that

this chaste and beautiful edifice stands near the upper end of the Park, on the highest ground in that part of the city: and is consequently seen to considerable advantage from almost every quarter.³⁶

New York's new city hall was noticeably more prominent than the locale of the old city hall, now the Sub-Treasury Building, at the corner of Wall and Nassau Streets.

Architectural Style

City Hall is an anomaly with regard to the careers of both collaborators and the architectural style of the building itself. Neither architect ever approached the high level of artistry and sophistication of City Hall in any of their other productions, nor

anywhere in Europe, without attracting notice of any kind.³⁸

Nonetheless, the structure has been repeatedly labeled as primarily French in character, although few specifics have been cited. The most thorough stylistic analyses of the building's French origins have been offered by architectural historians, Talbot Hamlin and Damie Stillman. For example, Hamlin noted of the winning design:

...with this the entire English tradition received its deathblow. None of the English detail...could obscure the fact that here for the first time in New York a building was being produced that was not Georgian and not Adam and not Regency. Its use of the orders and their relation to the openings, its sense of scale, and its general placing of detail are if anything more French than English. Yet it is a French style more dainty than that of Louis XIV and more robust than most Louis XVI work. New York's



Axel Leonhard Klinckowström (1775-1837), *Broadway - gatan och Radhuset i New York*, 1819.

are major components of structural or decorative design specifically reproduced in their other projects. The building of City Hall also heralded a widespread international neoclassic style particularly evident in civic architecture.³⁷ And, it reflects an internationalism that makes it difficult to categorize; it has been described as Georgian, Federal, and French neoclassical, among others, but it could be considered an amalgam of French and English neoclassical styles that allude to McComb's British tradition tendencies while exhibiting some aspects of Mangin's French architectural influence. One of the few reproving statements of the structure's design came from the critic James Jackson Jarves who duly noted its internationalism:

The New York City Hall is a meagre [*sic*], Renaissance [*sic*] building, with nothing new in expression or adaptation, and would find itself at home almost

cosmopolitanism was finding its first expression.³⁹

As noted in his sweeping statement, Hamlin observes the inherent tension visible in the confluence of stylistic influences of the building. The single most distinctly French aspect of City Hall exterior is the decorative swag relief that appears in two variations above the windows of the second floor, yet McComb had a strong predilection for sculptural decoration, and numerous drawings of these design motifs are extant in his own hand for this and other of his buildings. The swag is also a prominent element of the cupola design, which is universally attributed to McComb and is the subject of numerous drawings in his hand.⁴⁰ Stillman also weighed in on the overall Gallic spirit of city hall, and saw similarities in it to Brongniart's Hotel de Monaco in Paris, although overall visual correspondences

between the two buildings are relatively few.⁴¹

Nonetheless, however valid the claim of stylistic kinship to French architecture may be, other facts cannot be overlooked. City Hall certainly departs from McComb's other known work and has an overall international aesthetic that may be attributed to Mangin's input. Yet, the manner of rendering the structure in the presentation drawings provides more evidence of a French feeling than is evident in the actual edifice. The volumetric depth of the openings and surface decoration appears far shallower in the stone façade than it appears in the drawings, and so the City Hall edifice lacks the surface dimensionality—an element commonly ascribed to French architecture. The more ornate design of the building, the recessed spaces in the openings particularly evident in the portico and central bay of the south façade, and the relief decoration and depth of the moldings decoration, can be as easily attributed to English stylistic influences as to French ones. The 1966 Landmarks Preservation Commission designation report for the exterior called City Hall

program commenced and necessary alterations were made during the construction that was supervised by McComb.

The most obvious design motifs of City Hall can be traced to Sir William Chambers (English, 1726-1796). Included in McComb's extensive architecture library was a copy of the third edition of Chambers's book, *A Treatise on the Decorative Part of Civil Architecture*, published in 1791. It was known to have been in McComb's library for some time prior to the execution of the design of City Hall. According to McComb's grandson-in-law:

within the front cover of this book is pasted a slip in the handwriting of Mr. McComb containing page references to those parts to which he referred his draughtsmen in designing the City Hall.⁴³

Many decorative and structural attributes of City Hall and later designs appear directly adapted from this source. On the second floor, the arched windows in the center section of the building have been virtually lifted from Chamber's design book, including



New York City Hall, Park and Environs, c. 1840. Published by Williams & Stevens, New York. Courtesy Library of Congress.

“designed in competition in the Federal Style of architecture with considerable French influence.”⁴² While there are some French design elements, English and Palladian sources are also highly evident, and the “Frenchness” of the design is not enough of a foundation on which to attribute the design to Mangin. Furthermore, little compelling evidence to assign the authorship of City Hall's design to Mangin has been offered in terms of his other architectural endeavors or drawings. Only Mangin's French origins, his supposed skill as a draftsman, and the difficulty in reconciling the exceptional sophistication of City Hall with McComb's other efforts have been cited. Mangin surely had a significant hand in the overall initial design, but as his influence waned when he was no longer involved, some of the French details may have been watered down as the building

the decorative elements of the balustrades, engaged Corinthian columns, and arched moldings. Again a fairly direct quotation of Chambers can be seen in the orders used on the double porch with the bottom Ionic colonnade, and the Corinthian columns on the second floor. A literal adaptation can also be seen on the outer forward extensions of the building that use engaged pilasters even including similar sculptural figures topping the balustrade as seen in the City Hall presentation drawing though left off from the actual building. Although Stillman largely attributes the exterior design of City Hall to Mangin, he argues that McComb contributed details of the orders, moldings, and decorative sculptural elements after Mangin was no longer involved in the project. However, as discussed, it is the essential designs that McComb appears to have taken from Chambers's

book as they appear in the presentation drawings that Stillman has ascribed to Mangin.⁴⁴

Numerous examples of British neoclassic architecture could have set the stylistic precedent for the City Hall design since this was the dominant influence on and vernacular of McComb's architecture.⁴⁵ Many of the features both Hamlin and Stillman cite as French appear in well-known English structures with which McComb was likely familiar. Inigo Jones's Queens House, Greenwich (1616-35), considered the first neoclassical building in the United Kingdom, which, for example, is notable for a flat colonnaded portico, rustication, and balustrades, to which McComb may have looked. Jones's design of The Banqueting House in Whitehall, London, also contains intriguing elements such as the extensive use of the applied decorative swag motifs that, albeit more sparingly, appear on City Hall, the balustrades, and engaged columns and pilasters that are also echoed in City Hall's façade. In addition to Chambers's design book, another important inspirational source for McComb appears to have been Chambers's Somerset House, London (1776-86), which also exhibits the five squared attic windows in the center bay, engaged Corinthian pilasters and windows, and the balustrades along the top floor of the outer bays as seen in City Hall, and more rounded windows and decoration. It clearly boasts aspects of both French and English neoclassical style, and is an amalgam of both.

Clear and convincing influences on the design of New York's city hall can be identified in the architecture of Chambers and Jones; the same elegance and stateliness that characterize the examples of their work also define City Hall—challenging the notion of an exclusive or dominant French aesthetic. Other highly probable derivations for the neoclassicism found in City Hall, which one writer even called, “one of the purest specimens of Italian architecture,”⁴⁶ could be Andrea Palladio's work and his treatise, *The Four Books of Architecture*.⁴⁷ Many of the distinctive design elements of the City Hall exterior that define it as a neoclassical structure are traceable to Palladio. The use of rounded arches, rustication, window arrangements, protruding wings, decorative sculpture, columns, pilasters (engaged and freestanding), and the same use of orders appear in Palladio's treatise though may have been filtered through British influences, but perhaps may have had a more direct influence. McComb's extensive architecture library also undoubtedly contained references to Palladio's treatise or books on his architecture and he was surely quite familiar with his work and ideas as well as architectural sources. An important point to bear in mind was that McComb as a working architect and builder appears to have been a student of architectural antecedents and was able to adapt and assimilate various architectural styles into his vocabulary as illustrated by the stylistic range of his oeuvre.

One of the most significant buildings in America's early architectural history, City Hall is the result of a creative alliance; and the design debate reflects its prominence and its ultimate success as a structure. The lack of primary information about Mangin and the working relationship of Mangin and McComb remains problematic in resolving authorship. In examining the known production of both architects, neither ever again approached the artistry or majesty of the City Hall design in any of their other efforts. Ultimately, City Hall represents a unique

collaboration between two architects uniting complementary talents and qualities of internationalism that resulted in a remarkable synergistic effect. It is my contention that McComb played a more significant role and was a more active participant in the design of City Hall, of the exterior in particular, than is generally afforded him. In a coda many decades after the controversial omission of Mangin's name, there have been measures taken to acknowledge his role as co-architect with the mounting of an outdoor plaque from the Landmarks Preservation Commission in 1988, as well as another prominent interior plaque in the rotunda, and text was also incised in an existing modern bluestone paver in the eastern end of the plaza in front of City Hall in 2003 to commemorate the two hundredth anniversary of the construction of the building that all credit both architects with the design.⁴⁸

Acknowledgements

I wish to extend a particular note of gratitude to Professor Robert Twombly who encouraged me to pursue the publication of my research on this topic. Also my deep appreciation is extended to Warren Ashworth for his interest in the subject and for publishing it in this journal. Also great thanks is due to Mary Beth Betts, formerly of the New-York Historical Society and currently with the New York Design Commission. She was immensely helpful in answering queries and providing guidance on researching McComb and City Hall. Additionally, I offer thanks to Roberta Mayer and Marianne Egger for their editorial advice that shaped the end result of this article.



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Notes

1. As quoted in I. N. Phelps Stokes, *The Iconography of Manhattan Island: 1498–1909* 1 (New York: Robert H. Dodd, 1915), 463.
2. The winning presentation drawings can be found among the John McComb collection of papers and drawings at the New-York Historical Society.
3. Information on the commission of the City Hall design has been gathered from a myriad of sources as cited throughout. A good sequential summary of the events surrounding the commission can be found in Stokes, *The Iconography of Manhattan Island*, 463–67. My gratitude is extended to Mary Beth Betts, formerly of the New-York Historical Society and currently with the New York Design Commission, for sharing insights from her vast knowledge of the early development of City Hall. Also see Agnes Addison Gilchrist, “John McComb, Sr. and Jr., in New York, 1784–1799,” *Journal of the Society of Architectural Historians* 31, no. 1 (March 1972): 12, for more on the

- competition drawings and the erasures, see Samuel D. Stillman, "Artistry and Skill in the Architecture of John McComb, Jr.," (MA thesis, University of Delaware, Newark, 1956), 82, 145. Stillman reported on the erasures on the competition drawings, from laboratory tests done in 1955. Also see Gerard Koepfel, *City on a Grid: How New York Became New York* (New York: Da Capo Press, 2015), 62. Koepfel suggests that the discoveries of the erasures were new information. This information, however, had been known at least since 1928 and has been repeatedly referenced in print: see "City Hall Cornerstone was Laid 125 Years Ago: Winning Design Cost \$350—Criticized as Calling for Too Large and Expensive Building for The Town—Mangin's Name Left Off Stone," *New York Times*, May 20, 1928, 130. Also see later citations: Stillman, "Artistry and Skill in the Architecture of John McComb, Jr.," 82; Damie Stillman, "New York City Hall: Competition and Execution," *Journal of the Society of Architectural Historians* 23, no. 3 (October 1964): 129–42; Clay Lancaster, "New York City Hall Stair Rotunda Reconsidered," *Journal of the Society of Architectural Historians* 29, no. 1 (March 1970): 33–39; and Gilchrist, "John McComb, Sr. and Jr. in New York, 1784–1799," 10–21.
4. As quoted in the John McComb Diary, March 22, 1803, collection of the New-York Historical Society. McComb transcribed the "Minutes of the Building Committee," into his own diary notes. For the most in-depth view of McComb's career to date, see Stillman, "Artistry and Skill in the Architecture of John McComb, Jr."
 5. McComb Diary, May 27, 1803, and "New City Hall," *New-York Evening Post*, May 27, 1803. The original cornerstone went missing sometime during many different restorations and changes to the building, but was found at some indeterminate point and is now on display in the basement. Mary Beth Betts to the author, March 9, 10, 14, and 15, 2022.
 6. McComb Diary, June 2, 1803. Also see the editorial in *Daily Advertiser*, May 28, 1803, and the *New-York Evening Post*, June 2, 1803.
 7. Accusations of maliciousness on the part of McComb are merely rumination, lacking any substantiating proof. To counter the theory of McComb's scheming, there is the possibility that McComb and Mangin later shared an address of "Bowery Hill." It is however not known whether this designation refers to an area or to a specific address. If they indeed shared an address, it is unlikely that there were hard feelings between them. In addition, there is an architectural drawing by Mangin of the Park Theatre, contained within the McComb archive. While no specific conclusion can be drawn from this, it would be unusual for one architect to be in possession of an arch rival's design. Conversations with Mary Beth Betts, March 22, 1996 and May 22, 1996.
 8. "In Paint and Sandblast," *Evening Sun* (New York), May 9, 1908, and Montgomery Schuyler, "The New York City Hall: A Piece of Architectural History," *Architectural Record* 23 (May 1908): 388–89.
 9. "Dispute Over Share in City Hall's Fame: Effort to Include Name of Joseph F. Mangin, as Co-Architect, Meet Opposition," *New York Times*, September 26, 1915, 15.
 10. The original cornerstone was believed to have been made of marble and was located on the southeastern exterior corner of the building. The date of its finding and relocation to the basement, where it currently resides, is not known despite numerous inquiries and much research. Records at City Hall and the Landmarks Preservation Commission have not to date yielded this information. For more on the missing cornerstone and efforts toward its recovery, see William R. Conklin, "City Hall Observes 150th Anniversary Parade and Pageant Features Re-enactment of Laying of Cornerstone in 1803; Parade and Pageant Features of Re-enactment of Laying of Cornerstone in 1803; Ceremony is on Schedule; First One Began 3 Hours Late—Public Works Department to Seek Restoration Funds," *New York Times*, May 27, 1953, 33; "Our Crumbling City Hall," August 20, 1953, *New York Times*; Charles G. Bennet, "Experts to Seek City Hall Relic; Museum and Army Scientists Wild Sound Foundation for 'Lost' Cornerstone of 1803," *New York Times*, September 27, 1953, 46; Sanka Knox, "The Great City Hall Mystery, or, Whatever Happened to the Cornerstone?"; Expedition Tomorrow to Delve For Lost City Hall Cornerstone," *New York Times*, February 16, 1955, 31; Sanka Knox, "1803 Relic Eludes Hunt at City Hall; Army Mine Detector Fails to Locate Plaque and Stone Sought by Antiquarians," *New York Times*, February 18, 1955, 23; and Thomas W. Ennis, "City Hall—Outstanding Treasure of New York's Architectural Heritage; Hub of City's Life Marks 146 Years," *New York Times*, November 3, 1957, 1, 10.
 11. See Stillman, "Artistry and Skill in the Architecture of John McComb," chapters one and four of the thesis deal with various aspects of McComb's biography including the view of him as a builder-architect. It is now often asserted that Mangin was the primary designer of City Hall, although there is no direct evidence to substantiate this. Also see Stillman, "New York City Hall: Competition and Execution," 136–37. Some exterior elements can be considered French, but there are also English neoclassical influences and inspiration.
 12. McComb Diary, March 10, 1803.
 13. The matter of Mangin having a possible language barrier was brought up by Lancaster, but he also indicates possible malevolent intentions on the part of McComb, See Lancaster, "New York City Hall Stair Rotunda Reconsidered," 34; Gilchrist also mentions a possible issue with Mangin's command of English, see Gilchrist, "John McComb, Sr. and Jr., in New York, 1894–1799," 34. Koepfel, however, points out that Mangin submitted his reports in French, and preferred communicating in French, however, he did compose some French-infused letters in English. See Koepfel, *City on a Grid*, 30, 37, and also 60–63.
 14. McComb Diary, April 5, 1803, and September 17, 1803.
 15. McComb Diary, September 3, 1803, and October 5, 1803. The basement was built in brownstone as well. As New York City expanded uptown and restoration work was later needed on the City Hall, the north side of the building was painted to match the marble, in 1891. The entire four exterior sides of the building were thoroughly resurfaced in a two-year project, \$2 million project in the mid-1950s cladding the building in Alabama gray-veined limestone and Missouri red granite, mimicking the original design. At that time, the brownstone basement was redone in Missouri red granite. See Charles G. Bennett, "City Hall of 1812 is Rededicated: New Yorkers Honor their Refurbished City Hall: Broadway Parade and Nine Speakers Reflect History of Restored Edifice," *New York Times*, July 13, 1956, 21; also see Lancaster, "New York City Hall Stair Rotunda Reconsidered," 33. For more on various restorations, see "How New York's City Hall Was Built," *The Scrap Book—First Section* 6 (July 1908): 168–69; also found in McComb Papers, New-York Historical Society; Donald Martin Reynolds, *The Architecture of New York City* (New York: Macmillan Publishing, 1984), 58–59; and "In Paint and Sandblast."
 16. Talbot Hamlin, *Greek Revival Architecture in America* (1944; reprint, New York: Oxford University Press, 1964), 120–21.
 17. Agnes Addison Gilchrist disputes that he was in Europe based on his duties as secretary and a vague offhand comment he made in a letter. See Gilchrist, "John McComb, Sr. and Jr., in New York, 1784–1799," 11.
 18. Stokes, *The Iconography of Manhattan Island*, 417–18.
 19. For more on McComb's career prior to City Hall, see Gilchrist, "John McComb, Sr. and Jr., in New York, 1784–1799," and Agnes Addison Gilchrist, "Letter to the Editor of The Times," *New York Times*, June 14, 1969, 31. The latter discusses two Manhattan residential buildings that McComb built, one for himself in 1798, and another income property built in 1818. McComb is often rumored to have been the architect of Gracie Mansion, although his involvement has not been ascertained. See for example, Mary Beth Betts, "The Mayor's Mansion," *New York Times*, October 10, 2004, <https://www.nytimes.com/2004/10/10/opinion/nyregion/the-mayors-mansion-240931.html> and "John McComb, Jr.," Hamilton Grange National Memorial, <https://www.nps.gov/articles/000/john-mccomb-jr.htm>.
 20. See "John McComb," *Dictionary of American Biography*, Vol. 6, ed. Dumas Malone (New York: Charles Scribner's Sons, 1933), 599, which notes that upon Latrobe's resignation as architect of the United States Capitol, McComb was mentioned and approached about the post. Also see E. S. Bulfinch, *The Life and Letters of Charles Bulfinch* (Boston: Houghton Mifflin, 1896), 207; and Glenn Brown, *History of the United States Capitol*, Vol. 1 (Washington DC: Government

- Printing Office, 1900), 55.
21. For biographical information on Mangin, see *Dictionary of American Biography* 6 (New York: Charles Scribner's Sons, 1933), 231–32; also see chapter three in Koepfel, *City on a Grid*, 29–48, esp. 31, and for the most extensive outline of Mangin's early life, also see https://en.wikipedia.org/wiki/Joseph-Fran%C3%A7ois_Mangin.
 22. Stokes, *The Iconography of Manhattan Island*, 454–55.
 23. Robert Augustyn and David Cohen. "Maps in the Making of Manhattan," *Antiques* 148 (September 1995): 340. Also see chapters three and four in Koepfel, *City on a Grid*, 29–63. Koepfel is an apologist for Mangin and his map of New York, which was largely discredited for its inaccuracy, although much of what he envisioned on the map did indeed come to pass eventually. Mangin and Casimir Goerck were tasked with producing the first official map of the city since the Revolution, which Koepfel acknowledges on page 29; however, Goerck took ill and died before the effort was completed and Mangin finished it according to his own vision, not as an accurate record as he was commissioned to do. As he declared: "My plan...is not the plan of the City such as it is, but such as it is to be."
 24. The original New York State Prison was in existence for less than twenty-five years before it was demolished and was replaced by the one in Ossining, New York, which was completed in 1828. See <http://daytoninmanhattan.blogspot.com/2020/09/the-lost-1797-n-y-state-prison.html>.
 25. Stillman, "Artistry and Skill in the Architecture of John McComb," 80–81; also see chapter three in Koepfel, *City on a Grid*, 63. Koepfel suggests that Mangin's career was still active, however, Mangin's productivity pales in comparison to that of McComb.
 26. McComb Archive, collection of the New-York Historical Society. The archive also contains many additional drawings for other architectural projects.
 27. Stokes, *The Iconography of Manhattan Island*, 467.
 28. Stillman, "Artistry and Skill in the Architecture of John McComb," 82–83, 86–97.
 29. There is contained one architectural drawing by Joseph Mangin, of the Park Theatre, held in the McComb Archive at the New-York Historical Society. It is of a distinctly different style than the City Hall drawings.
 30. McComb Sketchbook, collection of the New-York Historical Society. The Sketchbook is devoted to a varied series of designs for McComb's Washington Hall (1809–12), home of the Washington Benevolent Society.
 31. As quoted in Charles C. May, "New York City Hall, Part I," *Architectural Record* 39 (April 1916): 300.
 32. Schuyler, "The New York City Hall," 387.
 33. May, "New York City Hall, Part I," 300.
 34. See "A History of City Hall Park," *City Hall Rehabilitation Archeological Project*, chapter five, 5.1, http://s-media.nyc.gov/agencies/lpc/arch_reports/1555.pdf. Also see "Introduction," *The Buried History of City Hall Park: City Hall Park Project, Final Report*, 8, http://s-media.nyc.gov/agencies/lpc/arch_reports/349.pdf. Alyssa Loorya, Introduction to "Chapter Three: History and Land Use of City Hall Park: Background History, Introduction," 103–4, http://s-media.nyc.gov/agencies/lpc/arch_reports/1046_B.pdf. and Oliver E. Allen, "When City Hall Park Was 'The Fields,' a Tumultuous Place in American History," *Tribeca Trib*, November 8, 2016, <http://tribecatrib.com/content/when-city-hall-park-was-fields-tumultuous-place-american-history>.
 35. McComb Diary, March 18, 1803.
 36. May, "New York City Hall, Part I," 300–301.
 37. William H. Pierson, Jr., *American Buildings and Their Architects: The Colonial and Neoclassical Styles* (1970; reprint, New York: Oxford University Press, 1986), 373.
 38. James Jackson Jarves, "The Art Idea," 1864, as quoted in Lewis Mumford, *Roots of Contemporary American Architecture* (1952; reprint, New York: Dover Publications, 1972), 71–72.
 39. Hamlin, *Greek Revival Architecture in America*, 124.
 40. McComb Archive, collection of the New-York Historical Society.
 41. Stillman asserts that "The exterior of the City Hall and the stairway and rotunda within, the parts predetermined by the competition drawings, are, I believe, very definitely French inspiration. They feature a spirit and details that are Gallic and are found nowhere in earlier work of McComb's and seldom in his subsequent products. The building is jewel-like, more refined and of greater finesse [*sic*] than McComb's English models, the works of Adam and Chambers and their followers. It is magnificent, yet petite. The detail decoration is sparse [*sic*] and restrained, not over-attenuated and over-refined, as is much of Adam's work. The portico—low, decorated, and unpedimented—is especially French in feeling, while the entire building has a spirit that is quite un-English." Stillman further outlines the relationship of City Hall to French architecture by citing parallels to Brongniart's Hotel de Monaco in Paris, pointing out the one-story projecting portico as French and the raised attic story adding that: "The order of the columns is different—Doric in the Parisian mansion, Ionic at City Hall—but the ensemble and details are very similar. And the one-story projecting portico, seen in both buildings, seems to be a specifically French device. Another structural feature, the raised attic story elevated above the central section, could have had its prototype in France...A more distinctly decorative detail of the City Hall façade which can be traced to French styles is the recessed panel, with swags, above the rectangular windows. Scores of French buildings display them... English examples are very few." See Stillman, "Artistry and Skill in the Architecture of John McComb, Jr.," 83, 84.
 42. As stated in the preservation report on the exterior of City Hall, Landmarks Preservation Commission archives, February 11, 1966, Number 2 LP-0080, <http://s-media.nyc.gov/agencies/lpc/lp/0080.pdf>. My gratitude is extended to Meghan DeVito of the Landmarks Preservation Committee for sharing this report with me.
 43. Edward S. Wilde, "John McComb, Jr., Architect," *American Architect and Building News*, 94 (August 12, 1908): 50–52. Also see Edward S. Wilde, "The New York City Hall," *Century Magazine* 27 (April 1884): 871–72.
 44. See Sir William Chambers, *A Treatise on the Decorative Part of Civil Architecture*, vols. 1 and 2 (1791; reprint, London: Priestley and Weale, 1825). Also see Stillman, "Artistry and Skill in the Architecture of John McComb," 82–83, 86–87.
 45. McComb's architecture library also contained the important British neoclassical architectural reference, Robert and James Adam, *The Works in Architecture of Robert and James Adam*. Volumes one and two were first published in the 1770s. See Stillman, "New York City Hall: Competition and Execution," 138.
 46. "How New York's City Hall Was Built," 168–69; and McComb Papers, collection of the New-York Historical Society.
 47. See Andrea Palladio, *The Four Books of Architecture* (1738; reprint, New York: Dover Publications, 1965).
 48. Identifying when the interior stone plaque in the rotunda was added with Mangin's name has also proved a challenging unsolved mystery, despite pursuing the matter with City Hall as well as the Landmarks Preservation Commission. The building received landmark status in 1966, which states that no changes can be made without an extensive review and approval process, however, no paper trail about this has been unearthed. It could have been added during the 1950s extensive renovation which included much stonework on both the interior and exterior and it was known that the original cornerstone was missing during those years (see n. 10), but this is conjecture in the absence of any documentation. City Hall was rededicated on July 12, 1956. See Bennett, "City Hall of 1812 is Rededicated"; and "City Hall is Named Official Landmark and a Top Beauty," *New York Times*, February 8, 1966, 41. Also see Mary Beth Betts to the author, March 10, 21, and April 13, 2022, and City Hall application docket, # LPC-04-2875 from November 10, 2003, Records, New York City Landmarks Preservation Commission.

Preservation Diary

The Venetian Room, New York City

Pascale Patris

The Venetian Room, as named by Helen Hay Whitney, was created as the reception room in her town house at 972 Fifth Avenue, New York. It is one of architect Stanford White's masterpieces of imaginative achievement, and one of his very last creations. He was actively engaged in overseeing its completion when Harry Thaw murdered him in June 1906. The brilliantly decorated room is a rare surviving gem of the Gilded Age in New York. The townhouse was a wedding gift from Oliver Payne, a financier and industrialist, for his nephew Payne Whitney and Helen Hay. Between 1902 and 1906 Stanford White designed and oversaw construction of the mansion.¹

At the turn of the twentieth century in New York, wealthy American patrons turned toward historic European architectural styles to create luxurious homes that reflected their elite status. This so-called Gilded Age was characterized by particularly rich interiors. These residences relied on historical expertise of American architects such as Richard M. Hunt (1827-1895) or George B. Post (1837-1913), prominent architects trained in the Beaux Arts tradition, or the influential architectural firm McKim, Mead and White. The architectural and artistic creations flourished as both an intellectual and aesthetic pursuit. Architecture drawn directly from historical precedents, along with an influx of decorative arts, helped to distinguish and dignify elite private mansions. The work of international decorators, such as Jules Allard (1832-1907), Joseph Duveen (1869-1939), and dealers such as Stephano Bardini in Florence or Eugene Glaenger,² all exerted a powerful influence over the new millionaire class, in a new world of interior decoration and period room installations. Stanford White, also active as a dealer, enjoyed an international network of trade and decorative arts that extended from London to Cairo, Rome to Istanbul, and Paris to Madrid.³

Deeply inspired by the architecture of the European continent where he had travelled extensively, White chose to design the townhouse in the style of the Italian Renaissance. The most precious construction materials were imported from Europe, including stone from France and marble from Italy. Selected works from galleries and auction houses in France, Italy, and England were acquired, including several exceptional pieces.⁴

Design sources of the Venetian Room range from High Renaissance molding for the marble mantle and doors leading to the room originally from Villa Torlonia in Rome, to a Louis XV ormolu and Meissen porcelain mantel clock⁵ with chinoiserie, and a Bavarian rococo candelabra with enameled flowers in the ceiling cove. The enameled flowers and porcelain details of the candelabra interweave with the porcelain flower-heads decorating the wide ceiling cornice and elaborated latticework framing the room. This was the most sumptuously decorated room on the first floor of the mansion.

The voluminous archival material in the folders of the McKim, Mead and White papers at the New-York Historical Society reveals the process of creating a grand mansion in the Gilded Age. Folders include plans, correspondence with letters concerning suggested transformations or alterations, detailed bills, and information regarding the completion of the reception room after White's death in June 1906. Although the floor plan remained fixed⁶ Stanford White developed four decorative schemes for the reception room, per the latest and most definitive drawings dated May 2, 1906.

For the execution of the mansion's interior design, Allard and Son was selected. However, the actual work for the reception room was executed by the firm of Waters, Nichols, and Crowninshield. White turned for the lighting to Edward F. Caldwell⁷, a leading New York maker of gas and electric fixtures, which provided the rococo chandelier with enameled flowers which hung over the mantel cove. The G. E. Walter Co. supplied and installed the 'perforated cove cornice', the ornamental work on the side walls, the six ornamental frames, and the electric light brackets. The firm of Waters, Nichols, and Crowninshield, makers and importers of furniture, woodwork, fabrics, and decorations, submitted a final invoice in December 1906 for the completion of the reception room. The most expensive items⁸ were the composition and plasterwork, at \$1,542, and the gilding, at \$1,910. The mirror framing totaled \$975, the mirrors \$616, the metal cove \$300, and the oval frames \$244.

The design of the Venetian Room represents Stanford White's lifelong interest in the intersection of architecture and ornamental design, dissolving the boundary with decorative arts. The striking mirrored wall paneling of the room framed in neo-classical gilt moldings and the Torlonia doors opened to a large allegorical-painted ceiling, now lost, by James Wall Finn (1867-1913). Finn, an American muralist, was one of White's favorite decorative painters. The latticework motif on the ceiling of the hall continues in the handsome ceiling cove of the cornice in the reception room. The cornice, richly decorated with elaborate latticework, includes hundreds of porcelain flower-heads, and cast bronze foliage, endlessly reflected in the mirrored walls. Eighteenth century portrait paintings in gilt frames further embellish the room that was furnished with a set of painted white sitting furniture with decorated floral trails and Sphinxes⁹ as well as various decorative ornaments, such as the brass door handles adorned with Payne Whitney initials.

Helen Hay Whitney died in 1944, and in the spring of 1949 the building was sold to investors. The Venetian Room, however, was not part of the auction in accordance with his mother's wishes, and in 1948 John Hay Whitney had the room carefully inventoried, documented, dismantled, and put in storage.¹⁰ It included all the mirror work with carved and gilt wooden stiles, the woven metal

cove with porcelain flowers, the mirrors behind the cove, fixtures, built-in paintings, marble mantel, and so forth. For nearly half a century the Venetian Room was stored at a property in Manhasset, with the decorative architectural elements kept in 75 wooden crates, and all the furniture draped over as a way of protection. In 1952, the French government acquired the building, and it became the Cultural Services headquarters of the French Embassy.

In May 1997, Betsey Cushing Whitney donated the Venetian Room to the French American Foundation and provided the financial support so that the room could be returned to its original location at 972 Fifth Avenue, restored to its original condition. The architectural restoration work¹¹ was completed in February 1998, and the armature of the room and its mirror paneling were re-established. Most elements had survived in their crates because of their well-crafted construction, but others had been damaged while

space very appealing, triggering a *regard imaginaire*. When one sees the room with its sophistication and fine work, one has the impression it all came from Europe, as a period room reconstruction. However, the entire architectural décor and finishes were made in New York, from the ceiling cove all the way to the marble baseboard, and from the architrave to the herringbone floor.

Preliminary examination of the construction in conjunction with a review of the archives at the New-York Historical Society and documentation from the previous restoration revealed that most of the mirrored paneling and their frames had been glued to the walls during the 1998 re-installation. This was contrary to the original installation, which has been mechanically fastened. At regular intervals former screws holes along the wooden stiles show evidence of the original installation. Still, tiny nails irregularly



L to r: Enameled flowers interweave with porcelain flower heads on the ceiling cove; cornice with latticework, gilt decorative elements and frames with putti. Photographs by author.

being removed in 1948. Since then, the French Embassy has agreed to maintain the room and open it to the public on a reasonable basis.

On a visit to the Cultural Services of the French Embassy in 2012, I saw the Venetian Room for the first time, and recognized it as an extraordinary vestige of the Gilded Age in New York. The period has been a particular focus in my work as a decorative arts conservator at the Metropolitan Museum of Art, where I work primarily with the collection of European Sculpture and Decorative Arts and the American Wing. Years of research investigating the materials and techniques has provided me with a deep understanding of processes involved in the creation of decorative finishes. The room immediately caught my attention and demanded a closer look. Upon inspection it became clear that the room was in need of conservation work to ensure its preservation. With the Cultural Embassy's agreement¹² scaffolding was installed for one week for studying the room's construction and its materials.

Entirely created from Stanford White's imagination, the room is a theatrical illusion. The interior of mirrored walls renders an impression of infinite space, an ambiguity within a highly decorated intimate room. The décor creates an immersive installation of endless reflection. The high finish of the room, so richly decorated and whimsical, yet delicate and elegant, makes the

lodge in previous holes are noticeable. Years of dust accumulation was at once visible overall due to environmental effects, and all materials of the décor would need a corresponding method for dust removal. Additionally, fluctuation of temperature to the opened space had produced degradation of decorative finishes such as the painted and gilded surfaces of ornamental details that were delaminating from their wood support. Splitting cast elements creating unstable structure were unsafe and vulnerable. Scattered in areas of the mirrored paneling, structural wobbling previous repairs due to bad quality of filling materials were masked with bronze paint that had darkened over time, creating patches immediately visible when at eye level. These repairs were disrupting the coherence of the ensemble.

Architectural molding elements of the mirrored walls, as well as elaborate built-in picture frames, revealed the diversity of techniques used in their manufacture. The picture frames are perfect examples of the various types of replicated carved wood or cast elements for the decoration design: raised in low relief and fixed to the surface of the wood or applied to metal wire used as a structure to the ornament. Other cast decorative details are made in composition materials called *compo* and *duretta*.

Compo makes a malleable paste easy to use in wooden molds for all kind of replication; it is bound in a mixed binder of protein,

drying oil, and natural resin, making a homogeneous putty with great strength. Compo was conceived as a substitute for a more laboriously produced plaster or carved wood or stone ornaments. It was commonly used from the late eighteenth century for architectural ornaments, and by nineteenth century its use increased, and composition picture and mirror frames became common.¹³

In comparison *staff*, another material used extensively in various ornamental details in the room, is heterogeneous and porous, becoming friable with age as its binder disappears. In this case the putty or dough mixture is made of gypsum and cement composed of diversified elements, analyzed as aluminum-silicates and quartz, with additional fibers added to the mold.¹⁴ The binder which had almost entirely vanished could only be detected in Fourier transform infrared spectroscopy (FTIR) analysis.¹⁵

Staff, invented in France about 1876, was used in the construction and ornamentation in the buildings of the Paris exhibitions of 1878 and 1889. It was also used in the construction of buildings of the World's Columbian Exposition at Chicago in 1893. This material is described as chiefly made of powdered gypsum or plaster of Paris, with a little cement, glycerin or dextrin mixed with water. To strengthen it, coarse cloth fibers of hemp or jute were put in the mold before casting.

Lavishly gilded, the decoration produced a dazzling appearance, a unique vision of a boundless universe. In completing cleaning tests, thus revealing original surfaces, astonishing details were revealed. Achieved using traditional techniques,¹⁷ the workmanship is remarkable, with water gilding mostly used. Noticeable are freely hand-painted brushstrokes creating shadows over gilded surfaces for low relief ornaments. The greenish brushstrokes enhance the shallow relief of the gilt putty, ribbons, and flowers at the center of the built-in frames on the west and east walls, as well as on the latticework and foliage. The brushstrokes are also found in the small-scale flower swags hanging from the ceiling cove. These painted details suggest the work of one workshop.

Placed at regular intervals, near the ceiling cove, the small-scale and delicate flower swags give further evidence of original technical practices. Damage to their surface reveals canvas fragments used on the reverse to re-enforce the cast staff, which is gessoed and water gilt over a red clay or *Armenian bole* for making the foliage and flowers. The sensitive water gilt details became vulnerable with time, suffering further damage during the dismantling and restoration of the room.

Creating the cove at the ceiling, two flat mirrors are butted together at a 90-degree angle to provide an illusion of rounded concave mirrors. At the front, rough cast bronze foliage is applied



L to r: Evidence of frame construction with exposed damaged areas. Details of putti with evidence of freehand brush strokes applied over gilt surface to enhance contrast in relief. Details of flower swag with evidence of deterioration and construction with visible canvas. Photographs by author.

In New York, *duretta*, a patented casting material used for reproduction of decorative ornaments, was extensively advertised by G. E. Walter “for the reproduction of lightings, fixtures, standards of Antiques and Objets D’art,” as “an exact, fireproof imitation of plain and carved woodwork, or of metal.” The market for antique reproductions that thrived in the nineteenth century flourished alongside the market of real antiques. Quality reproductions would satisfy clients if originals could not be obtained.¹⁶ At the Whitney mansion exact duplicates of objects purchased in Europe were executed, as well as original designs based on eighteenth century models. Examples of replicas or duplicates of cast ornaments are repeatedly used around the reception room on moldings, decorative details, or objects such as sconces, wall fixtures lightings, latticework, and so forth.

to the latticework. The foliage of golden bronze metal, a copper-zinc alloy, displays a green surface tonality. Likely the color has been used to create lifelikeness in the cast bronze foliage of the porcelain flower-heads, a key to the décor’s visual coherence. At the turn of the century, many recipes for bronze patination were available for decorative purposes. Most of the basic patination processes involved the use of chemicals, which combined with the characteristics of the cast texture will result in particular effect.¹⁹ When the coloring was complete, the colored surface needed to be sealed. In this case, analysis revealed the presence of microcrystalline or paraffin wax on the surface and two types of copper oxidation products, antlerite and brochantite,²⁰ which appear to be consistent with natural oxidation. However, recipes for patination of bronzes using ammonium sulfite or other

materials could also have produced these compounds.

The preliminary study provided the opportunity to record materials used in the creation of the reception room and discover evidence of their degradation. Documentation was accompanied by detailed photography. A survey and a map of the damaged areas helped to assess and prioritize conservation needs accordingly. Maps of the damaged areas emphasized evidence of damage due to frequent environmental changes from the outside world. The pre-treatment examination report prompted a much-needed plan for the conservation and future preservation of the room. With this report in hand, a committee for the preservation project of the Venetian Room was organized and funds were raised. Isabelle Denis, head curator of the French Patrimoine des Affaires Etrangères in Paris, in agreement with the committee, selected a French restoration studio, Atelier de Ricou, for the completion of the project. Both the French Embassy and the French American Foundation were informed in all aspects related to the conservation project. Given the importance of this room, the committee were involved in all decision-making and oversaw each step of the preservation process.

As is widely known, some restoration treatments can be irreversibly damaging. The conservator's action can determine the appearance of an object and consequently its interpretation. In this

case minimal intervention was advised, using materials and techniques that conformed to the highest conservation standards. Ultimately, the aim was to remove years of dust accumulation, which itself can promote deterioration, and to stabilize the fragile decoration overall. During this process the electrical lighting system in the ceiling cove was re-wired, enhancing the illusionist perspective in the mirrored salon as originally intended. Finally, a plan for environmental preservation included modification to the main entrance. With the completion of the Venetian Room conservation program in 2018, the public can once again appreciate its stunning decorative design as conceived by Stanford White a century ago.

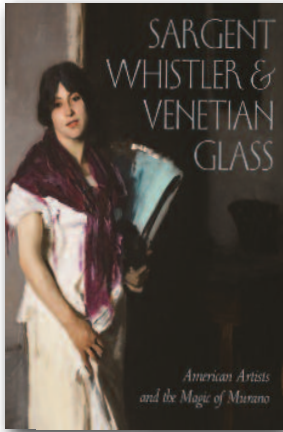


Pascale Patris studied fine arts and received her training in conservation in Paris, where she focused primarily on European sculpture. Pascale joined Objects Conservation at the Met in 1994 where she expanded her expertise in the study and analytical interpretation of surface finishes for European and American decorative arts and sculpture with a personal interest in the surface finishes of Asian sculpture. Her current responsibilities include the research and treatment of painted and gilded wood surfaces of decorative arts from medieval Europe, through the Italian Renaissance and Baroque, to the nineteenth century Gilded Age in America.

Notes

1. Wayne Craven, *Stanford White*, Columbia University Press, NY, 2005.
2. One of the art dealers responsible for importing from Italy was Eugene Glaenger, a Frenchman who operated primarily out of New York. Beginning in the 1890's Glaenger also served as chief importer of art and antiques for Stanford White.
3. Wayne Craven, *Stanford White*, Columbia University Press, NY, 2005, p.5.
4. Such as the outstanding and now famous statue *Young Archer* purchased in a London gallery. S. Bardini is said to have obtained this statue from Prince Paolo Borghese. In 1997 the statue was authenticated as an original work of Michelangelo Buonarroti (1475-1564). The marble sculpture is currently on loan from the French government to the Metropolitan Museum of Art.
5. Signed Gallois a Paris. *Tardy Dictionnaire des Horloges* (Paris) vol. 1, p.243. Etienne Gallois recorded in *Rue Croix des Petits Champs 1740-1760*. Francois Gallois recorded 46 Rue Sainte Croix 1754-1775.
6. Wayne Craven, *Stanford White*, Columbia University Press, NY, 2005.
7. The Caldwell firm built the elaborate electrical system with a ten-circuit panel in the basement, the the ceiling cove was encircled by electric lights creating another level of illuminating perspective to the décor.
8. Diana S. White, *Stanford White's Venetian Room* p.8. Published in association with the Cultural Services of the French Embassy.
9. Eighteenth century painted furniture with caned seat, possibly Italian. Archive files at the New-York Historical Society noted reception room furniture to be bought in Europe.
10. Diana S. White, *Stanford White's Venetian Room*. Richard Kimball, then with the firm of Gugler Kimball and Husted, was engaged to supervise the project.
11. John G. Waite, and Clay S. Palazzo, project manager, John G. Waite Associates, Architects, Albany.
12. The Metropolitan Museum of Art and Objects Conservation Department authorizations were required, and the study was done on my own time.
13. Jonathan Thornton and William Adair, *Applied Decoration for Historic Interiors - Preserving Composition Ornaments*. National Park Service U.S. Department of the Interior. Press-mold decoration has been used with various soft plastic materials for centuries. It is known that medieval sculptors press-molded organic mixtures to decorate polychromed sculptures. Press-molded mixtures called Pastiglias were used to decorate boxes and picture frames as early as the fourteenth century.
14. Material sample was mounted in cross-section to be analyzed using microscopy reflected light under visible light and ultra-violet illumination. Pascale Patris, Conservator. The sample in cross-section was further analyzed by the Sciences Department. Scanning Electron microscopy/Energy Dispersive spectroscopy (SEM/EDS) analysis. The Metropolitan Museum of Art, Federico Caro, Research Scientist.
15. Sciences Department. The Metropolitan Museum of Art. Fourier-transform infrared spectroscopy (FTIR) analysis. Adriana Rizzo, Research Scientist.
16. In the last quarter of the nineteenth century machines that mechanically trace pattern and carving with rotary burrs were introduced, for ornamental details on furniture and cabinetwork. A fair amount of hand finishing was required, but this meant that more complicated carvings could be mass produced. The ornamental work could be performed in the most satisfactory results, at small expense. (1897 Chas. A Stringer & Company catalog) photo ex catalog. A new mode of embossing designs on wood by Mr. John Straker, of Red-Cross-Square, Cripplegate, London. Raised figures/ornaments on wood such as employed in picture frame and other articles of ornamental cabinet wood, are produced by means of carving, or by casting the pattern in plaster of Paris or other composition and cementing or otherwise fixing it on the surface of the wood. Natural wood can be press-molded to a limited extent after being made plastic by either steam of ammonia. J. Thornton and W. Adair.
17. Surface samples were collected from diverse elements, mounted in cross-sections to be analyzed using microscopy reflected light under visible light and ultra-violet illumination. Pascale Patris, Conservator.
18. Armenian bole is an earthy clay, usually red due to presence of iron oxide. It is used as a base for water gilding. The bole layer where the leaf is laid over allows burnishing of the gold leaf providing a sparkling surface finish like metal.
19. Richard Hughes and Michael Rowe, *The Coloring, Bronzing and Patination of Metals*. Van Nostrand Reinhold Company, Inc., 1983.
20. Scientific Department, The Metropolitan Museum of Art. Julie Arslanoglu, Research Scientist. Antlerite $\text{Cu}_2(\text{SO}_4)(\text{OH})_2$; Brochantite $\text{Cu}_2\text{SO}_4(\text{OH})_2$.

The Bibliophile



Sargent, Whistler & Venetian Glass: American Artists and the Magic of Murano

Crawford Alexander Mann III, ed.

Contributions by Sheldon Barr, Melody Barnett Deusner, Diana Jocelyn Greenwold, Stephanie Mayer Heydt, Brittany Emens Strupp, and Mann.

Princeton University Press in association with the Smithsonian American Art Museum, 2021.

Through the glimmer of glass, Venice captured the imagination of late nineteenth-century American audiences. The exhibition catalog *Sargent, Whistler, & Venetian Glass:*

American Artists and the Magic of Murano explores this long-held artistic and cultural relationship between the United States and Venice—an Italian city tied to Gilded Age-international travel. The volume, connected to the Smithsonian American Art Museum exhibition and organized by Crawford Alexander Mann III, focuses upon the period 1860–1915, as the revival in Venetian glass accompanied a rising fascination with Venice for American artists, collectors, and tourists. The story builds out of the Venetian island Murano’s furnaces, as Italian glassmakers produced delicate handblown vases, goblets, glass vessels, and ornate objects. This revival of glass would send out resonances across the transatlantic artistic community, inspiring John Singer Sargent, James McNeill Whistler, and fellow Gilded Age contemporaries who portrayed Venetians and the glassmaking scene. In this post-Civil War environment, glassmaking in Venice and the city itself provided an avenue for American artists, aesthetes, and collectors to explore ideas of identity, beauty, and cultural significance.

Rather than separate the decorative objects, the authors consider cross-media dialogues and the ways Venetian glass, and the Italian city, were in conversation with American artists and collectors. Together, the five essays, and the introduction by Mann, cohesively present Venice as this alluring destination and how Americans became passionate about glassware. Melody Barnett Deusner’s essay explores how Venetian glass appeared in private-public collections and how the vogue for these decorative objects connected with the Anglo-American Aesthetic Movement. Deusner focuses upon specific American collectors and their glass, including Isabella Stewart Gardner, Leland and Jane Lathrop Stanford, and John Gellatly (who gave his collection to the nation in 1929). Sheldon Barr’s essay provides an overview of the revival of Venetian glass that began in the 1850s, specifically exploring the global demand for the objects and the marketing of glass to American clients. Murano glassmakers and firms, including Antonio Salviati’s operations and the expansion of *vetri artistici* (artistic blown glass), received international funding as glassmakers experimented with the medium. Stephanie Mayer Heydt examines how Venice inspired the artistic innovations of Whistler, Sargent, and Robert Frederick Blum. These American artists portrayed a city of Venetians, away from the tourists, and offered glimpses down alleys or of women set in dramatically-lit interiors, often suggesting the experience of the city or visions of Venice. As a companion to glassware, Diana Jocelyn Greenwold discusses the

interest in collecting and reproducing antique Italian lace that reached across the Atlantic with American patrons and workshops. The cumulative essay by Mann looks at the overarching impact of the Venetian-glass revival on the United States, including the historical references and associations tied to this glassware. Mann creates an interwoven analysis of art, culture, and literature to consider how Americans were drawn to Venetian history and modern design, and the fascination with images and souvenirs of the city. Each author expertly integrates larger themes of culture, politics, and American tourism to explain the city’s attraction for American artists.

The thoroughly researched catalog offers a new perspective on cross-cultural exchanges in the late nineteenth century, and opens up additional avenues to consider American art and internationalism. Essays contribute to larger questions about how we can define the “transatlantic” through materials, or visualize travel through objects. Rather than isolate artists, essays expertly craft an all-encompassing vision of the late nineteenth century through this interplay of media. Juxtaposing reproductions of Venetian glass alongside works by American artists successfully removes these Gilded Age artists from a vacuum and suggests how late nineteenth-century viewers perhaps experienced diverse media forms.

While the authors present a rich and comprehensive study on exchanges, I encourage thinking critically about the terms “exotic” or “unfamiliar” tied to Venice. What were the implications of this exoticism connected to Venice and the glass material? How is an Italian city, and now an over-burdened tourist site, redefined by Americans? Throughout the essays, I often wondered how the Venetians (besides the leaders of the glass firms) considered the onslaught of Americans buying objects. This especially comes across when considering the range of paintings depicting working-class Venetians, and American artists gazing at, or studying, Italians. I couldn’t help but think of the rise of Italian immigration and increasing xenophobia in the late nineteenth-century United States, or the anxiety around race for White Anglo-Saxon Protestants during the Gilded Age.

As the field of American art history continues to question what is “American” art, the volume contributes to studies on transatlantic tastes, objects, or aesthetics. How can we define American art outside the boundaries of present-day United States? The essays offer a rich exploration of material dialogues and of the late nineteenth-century circle that gravitated toward Venice, and will generate future studies on international cities, travel, and American art.

Reviewed by Lea Stephenson

Lea Stephenson is a doctoral candidate in art history at the University of Delaware, and focuses on late nineteenth-century American and British art.

—WINNER OF THE VICTORIAN SOCIETY IN AMERICA BOOK AWARD—
in recognition of its important contribution to the study of art and architecture in the Victorian era



Architects of an American Landscape: Henry Hobson Richardson, Frederick Law Olmsted, and the Reimagining of America's Public and Private Spaces

Hugh Howard.

Atlantic Monthly Press, 2022.

Olmsted and Richardson strode across the American stage in the latter half of the nineteenth century and, as Howard's title suggests, helped to remake the country's architecture and landscape. Frederick Law Olmsted (1822–1903) emerged in the 1850s with his design for Central Park in New York and went on for the next fifty years (with his firm and sons) to design many more public parks such as in Buffalo, Boston, and Chicago. He recognized the importance of, and helped save, the great natural landscapes of Niagara Falls and Yosemite. Olmsted invented the profession of landscape architect for the United States. H. H. Richardson (1838–1886) occupied a lesser time span, emerging with his Boston churches in the 1870s, and followed by numerous libraries, train stations, and houses as well as other work. His final masterpiece, the Marshall Field Wholesale Store in Chicago, was completed after his death. Highly revered, Richardson has the honor of being the first American architect to have a book written on him: Mariana Griswold Van Rensselaer's folio volume of 1888 (limited to 500 copies). Olmsted pushed Van Rensselaer to write the book.

Olmsted and Richardson's interaction began in 1866 when they both lived on Staten Island and encountered each other at various New York clubs. Opposites in many ways, Olmsted was part of the Abolitionist movement and a member of the Sanitary Commission during the Civil War while Richardson came from a wealthy slaveholding family in Louisiana and spent the war years abroad in Paris at the *École des Beaux-Arts*. But they hit it off in the 1860s and began a friendship, and then a collaboration, that would last until Richardson's death. After the early New York days, they both moved to Boston and had adjacent houses in Brookline, a fancy Gardenesque suburb. Richardson operated his architectural practice from a house that had several additions, and Olmsted eventually had a home office as well. Olmsted's house is a National Historic Landmark run by the National Park Service and open to the public while Richardson's house has been the subject of a long preservation battle with attempts at demolition. The status of Richardson's remains unresolved, but it may be close to being saved.

A good observation on the two comes from John J. Glessner, for whom (with his wife Frances) Richardson designed a well known house on Prairie Avenue's "millionaires' row" in Chicago. Glessner wrote, "They were very dissimilar men, one big of bulk, the other small." Olmsted weighed about 140 pounds and had a limp, while

Richardson tipped the scales at over 300 pounds. Richardson's size is one of the sub-themes of the book. His eating and drinking habits were out of control and, as time passed, he could hardly move. For some site visits such as the Glessner house in Chicago, he could not get out of the carriage. Frequently sick from his consumption and suffering from "Bright's disease" (a form of kidney failure), Richardson did not take care of himself and for portions of his later years he worked from his bed in the Brookline house with draftsmen bringing him drawings to critique.

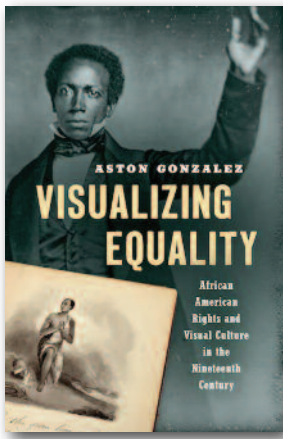
The conjunction of the two lay with Olmsted designing the grounds for many of Richardson's projects outside the city and taming down the picturesqueness of some of his buildings. Their first major collaboration came with the State Asylum for the Insane in Buffalo where Olmsted's entry and plantings help settle the complex into the landscape and aided in the recovery of those confined. Visual extravagance remained in some of Richardson's later buildings, as seen in Pennsylvania's Allegheny County Courthouse, while many of his designs, such as those for the railroad station and library in North Easton, Massachusetts, became calmer. Olmsted was certainly there with suggestions. Richardson's impact upon Olmsted centered on materials and stonework.

After Richardson's death, Olmsted worked with Richard Morris Hunt at Biltmore, but they had a tempestuous relationship. While the collaboration was successful, American architecture was by then headed in another direction as evident in Olmsted's work for the World's Columbian Exposition in Chicago.

Hugh Howard has created a masterful study, beautifully written and very readable. It is well researched with many footnotes and sources documenting the interaction between these two very different individuals. Only one complaint: there is a lack of illustrations, perhaps to keep the size and cost of the book down. One needs a picture book at one's side when reading it. However, it is an outstanding contribution to the literature on American Victorian.

Reviewed by Richard Guy Wilson

Richard Guy Wilson is Commonwealth Professor Emeritus of Architectural History at the School of Architecture at the University of Virginia. His research interests have long included the firm of McKim, Mead and White, and he has been the director of the Newport venue of the Summer Schools of the Victorian Society in America.



Visualizing Equality: African American Rights and Visual Culture in the Nineteenth Century

Aston Gonzalez.

University of North Carolina, 2020.

Although the phrase “a picture is worth a thousand words” asserts that an image can convey an idea more effectively than words, historian Aston Gonzalez takes up the challenge of using words to describe printed images. In his book, *Visualizing Equality:*

African American Rights and Visual Culture in the Nineteenth Century, Gonzalez explores the visual media created by several obscure yet noteworthy artists and illustrators. In the decades surrounding the Civil War, these African American artists actively supported abolition and equal rights while creating a visual record that spoke to viewers about their beliefs. In *Visualizing Equality*, Gonzalez investigates how these “nearly forgotten artists produced images that challenged stereotypes of African Americans. Envisioned as advocacy and designed to sway the hearts, minds, and actions of viewers, these images underscored the brutalities of slavery, promoted black respectability, and celebrated black leadership.” (Gonzalez, p. 2)

The artists examined by Gonzalez were keenly aware of their role in shaping public perception. In his first chapters, Gonzalez explores the life and works of Robert Douglass Jr. and Patrick Henry Reason. Both men were actively engaged in the anti-slavery movement in the 1830s and ‘40s and used their skills as photographers and lithographers to educate and persuade viewers of their art to support the abolitionist cause. With Douglass and Reason, Gonzalez effectively illustrates the methods employed by artists to popularize the work of anti-slavery societies while countering common stereotypes of both abolitionists and the growing black population in northern cities. Robert Douglass Jr.’s 1833 portrait of abolitionist William Lloyd Garrison countered the public perception of a dangerous radical, depicting Garrison as a sensitive and respectable middle-class intellectual. Patrick Henry Reason’s highly individualized portraits of formerly enslaved men who self-liberated similarly disputed the conventional stereotypes of black men as ignorant brutes by depicting them as self-made, self-educated, and fully capable of contributing to American society.

In perhaps his most entertaining chapter, Gonzalez introduces the reader to the “moving panorama,” a presentation form that gained popularity with anti-slavery societies in America and England. Moving panoramas were originally used as travelogues to highlight faraway destinations and natural wonders for an audience unable to see these places for themselves. On stage was a hand-painted and backlit backdrop connected to two spools on either side of the stage. As the speaker presented, the backdrop would scroll across the stage, illustrating the presenter’s points. Anti-slavery societies in America and England capitalized on this concept, hiring a free black artist, James Presley Ball, and two formerly enslaved men, William Wells Brown and Henry “Box” Brown, to present their personal stories of escape and detail the

many abuses and horrors of enslavement. (Noted abolitionist Henry Brown received his nickname when, as an enslaved man, he self-liberated by shipping himself in a box from Virginia to an abolitionist friend in Philadelphia). Gonzalez effectively conveys the power of art as a marketing tool designed to persuade audiences to contribute money to the abolitionist cause.

In the final chapters, Gonzalez demonstrates how technological advancements in the production and distribution of photographs during the 1850s, ‘60s, and ‘70s increased the opportunity for images to speak to viewers. Black photographers such as Augustus Washington, Edward Bannister, and Robert Douglass Jr. were able to market their images, and in turn their beliefs, to a larger and more diverse audience. James Presley Ball continued to operate his Cincinnati photography studio, photographing Frederick Douglass in 1867 while mentoring his son and other photographers who would later capture Cincinnati’s rising black middle class. Gonzalez is especially adept at reminding readers that nineteenth-century America was already familiar with the use of imagery to promote a cause. For example, he notes that in July of 1863 the popular periodical, *Harper’s Weekly*, ran an article about an enslaved man named Gordon. A photograph of Gordon’s whip-scarred back led one journalist to note that “it tells the story in a way that even Mrs. Stowe [author of *Uncle Tom’s Cabin*] cannot approach, because it tells the story to the eye.” (Gonzalez, p. 172)

In *Visualizing Equality*, Aston Gonzalez has crafted a book chock full of insightful commentary on the lives of several nineteenth-century black lithographers and photographers. This book is an excellent resource for anyone interested in understanding the power and influence of commercial art just as mass media was taking hold in America. While a picture is indeed worth a thousand words, in *Visualizing Equality*, it is equally helpful to have a thousand words for each picture.

Reviewed by Michael A. Lord

Michael A. Lord is the Site Director at the Philipse Manor Hall State Historic Site in Yonkers, NY. He is a public historian who has written and presented extensively on enslavement in the colonial north and its effects on the cultural and economic development of the United States.

Milestones

The Grand Duke Comes to Call

Anne-Taylor Cahill

In November, 1871, the Grand Duke Alexis Romanov, fourth son of Tsar Alexander II of Russia, came to call on the United States. Traveling 5,610 miles by rail and 891 miles by boat in the U.S., Alexis crossed the country from Philadelphia to Denver in three months' time.

Ostensibly, the visit was a diplomatic one, but the reality was something different. Alexis was deeply in love with the daughter of a poet. It was a most unsuitable relationship in the eyes of the Tsar; so he sent Alexis on a round-the-world trip to last one year. When Alexis left Russia, Alexandra Zhukovskaya was 6 months pregnant. They wanted to marry but the Tsar was having none of it.

The run up to the visit was fraught with drama. The Russian ambassador managed to offend nearly everyone, and the United States asked Russia to recall him. In New York there was talk of an assassination attempt. The U.S. government hired Pinkerton agents to investigate and provide protection for Alexis. City officials across the country did not want to spend the money to welcome Alexis. German and Polish-Americans voiced political objections to the visit.

Despite all the drama, the trip went forward and in the end was considered a grand success. Alexis was a handsome and charming young man who easily overcame the objections to his presence on American soil. Throughout the country, he was an honored guest at dinners, dances, operas and plays. Adding more excitement to the visit were rumors he was looking for a wife. This, of course, added to his appeal to the female population.

At the time of his visit, America was in the throes of the Industrial Revolution and the rise of the "big city." He visited Chicago just after the Great Fire, and in New York he visited the first tower of the Brooklyn Bridge. He met notables Samuel Morse, inventor of the telegraph; Cyrus Field, main proponent of the transatlantic cable; and Joseph Pulitzer, the newspaper publisher, to name just a few.

During his visit Alexis gave a tremendous number of lavish gifts, such as \$5,000 (\$120,000 today) to the city of Chicago to help victims of the Great Fire. In St. Louis he presented a gold, amethyst and diamond bracelet to Lydia Thompson, who had sung for him at the Olympic Theatre. Naturally, the press had a field day with that tidbit. In New Orleans, he gifted jewels to actress Lotta Crabtree, who had starred in the play *The Little Detective*. Alexis did not ignore the gentlemen, either, giving them jewel-encrusted stickpins and gold rings set with precious stones.

Alexis tossed cash around like confetti. In Boston he gave \$5,000 for the poor and in New York he gave \$15,000. The Clarendon Hotel in New York received \$60,000 for the "fittings and furniture" of his accommodations. Everywhere he went he left huge tips for the staff. In Annapolis, he donated a Russian-made compass to the Naval Academy that was so large and heavy that it took two men to handle

it. It is said his gifts while in the U.S. totaled well over one million dollars.

Once he returned to Russia the gifts continued. The University of Michigan received over 50 books on Russian history and law. The Mechanics Association of Lowell, Massachusetts received another collection of books. General John Adams Dix was honored with the Military Order of St. Stanislaus for organizing the events of the trip. Albert Bierstadt, who organized a buffalo hunt, received the same. Alexis was so taken with the Wild West that he had one of Bierstadt's paintings hung in the Hermitage Museum.

Letters he wrote home commented on American men and women. He deemed the men "smart and energetic but entirely lacking in manners." Despite this opinion Alexis had a royal good time on the buffalo hunt organized by Bierstadt. His guides were none other than "Buffalo Bill" Cody and General George Armstrong Custer. The hunt received tremendous press. A journalist from the *New York Herald*

accompanied the party, sending daily reports. The idea was to give Alexis a taste of Western hospitality. The program included entertainment by 300 Lakota Sioux, Chief Spotted Tail, his wife and daughter. The *Herald* reported that both Custer and "Buffalo Bill" flirted heavily with the beautiful young "Miss Spotted Tail." Alexis' comments on American women were more complimentary; noting that he could easily have fallen in love with them all! His effect on women prompted some amusing antics. In St. Louis a young lady of 16 sat outside Alexis' hotel for 13 hours until she was escorted off the premises. In New York one enterprising debutante sent her card via carrier pigeon. The *Atlanta Constitution* reported that Alexis, who was over 6 feet tall, liked small women. It further noted that "stately young ladies are knocking the heels off their shoes and eschewing lofty coiffeurs and otherwise seeking to reduce their stature." Another young

woman "fell madly in love with Alexis and followed him from St. Louis to Omaha, with the firm intention of becoming his wife."

Eventually Alexis made his way to New Orleans where he was royally feted at Mardi Gras, his visit serving as the impetus for quick-minded merchants. The purveyor of Charter Oak Stoves proudly announced that Alexis' meals had been prepared using this stove. Merchants sold "Alexis Kid Gloves" and "Alexis Hats." Another advertised the Ringen Clothes Washer, which they claimed was fit for a Grand Duke. Alexis then departed for Pensacola, where the Russian fleet would take him on the next leg of his journey. The American trip was pronounced a success.

And what of Alexandra? She married a German officer and became a Baroness. Alexis provided generously for her and his son. He never married.



The Grand Duke Alexis Romanov (1850-1908). Courtesy Library of Congress.

For further reading:

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Sally Mackin, *A Society Woman on Two Continents*. Continental Publishers, 1898.

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AN INVITATION TO JOIN THE VICTORIAN SOCIETY IN AMERICA

Since 1966, The Victorian Society in America has been a leader in the appreciation and preservation of this country's nineteenth century heritage. Founded as a companion organization to The Victorian Society in Great Britain, The Victorian Society in America brings together lovers of Victoriana—old house owners, professional historians, architects, collectors, students, museum curators, preservation organizations, college libraries, art galleries, antique shops, and restoration specialists. Interests are as varied as the era itself.

Benefits of Membership

- **Symposia and Study Weekends**
Frequently, members gather for a weekend of special study or a symposium on a selected topic such as Victorian houses, hotels and resorts, as well as collectibles.
- **Annual Meeting and Tour**
The annual meeting is held in a locale distinguished for its Victorian heritage and includes tours, receptions, and visits to private collections.
- **Summer Schools**
These schools, based in Newport, R.I., Chicago, I.L., and London, England, study facets of nineteenth/early twentieth century architecture and culture.
- **Publications**
Nineteenth Century magazine is devoted to the cultural and social history during the Victorian era. *The Victorian Quarterly* newsletter covers activities and news from our local chapters.
- **Preservation**
The Victorian Society engages in efforts to ensure the preservation and/or restoration of nineteenth century buildings throughout the U.S.
- **Chapter Affiliations**
Members enjoy an even greater variety of activities by joining both the national and a local chapter.

VICTORIAN
SOCIETY
IN AMERICA

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2023 SUMMER PROGRAMS

NEWPORT • CHICAGO • LONDON

Apply for our summer programs in Newport, Chicago or London to study 19th- and 20th-century architecture, design, preservation, and the arts. Enjoy expert guides, lectures by leading scholars, private tours, and behind-the-scenes visits of historic sites and museums. All application materials due by March 1, 2023. Online applications available at victoriansociety.org/summerschools.

**FULL AND PARTIAL
SCHOLARSHIPS AVAILABLE**

NEWPORT
June 2-11

CHICAGO
June 15-21

LONDON
July 1-16



Spring Study Tour 2023

BOSTON AND BEYOND

MAY 24 - 27, 2023

Join us as we explore the history, art, architecture and landscapes of Boston, Gloucester, Salem, Lincoln and Concord. From historic houses to museum collections and walking tours, it will be a full four days! Highlights include a visit to the MFA, Boston to see the special exhibition *Hokusai: Inspiration and Influence*, as well as H. H. Richardson's Trinity Church, Gropius House, the House of Seven Gables and McKim Mead & White's Boston Public Library.

**More details coming soon –
check our website for updates and registration!**

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For more information visit victoriansociety.org