

Reproduction Challenges in Federal Style

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Sideboard, attr. to Elbert Anderson, New York, c. 1800, mahogany and mahogany veneer; collection of Colonial Williamsburg, VA (1930-12). To save time, small details were photographed with rulers next to them. The photographs were scaled to size in Photoshop afterwards.



Time Challenge

The reproductions were built as exact replicas of existing pieces in major collections in the United States of America: the Smithsonian Institution, the Metropolitan Museum of Art, the Museum of the City of New York, and Colonial Williamsburg.

1. The first challenge was the limited time available to examine the furniture: we had only four to twelve hours on-site with each piece to measure and photograph them, after which they were reproduced at Fallon & Wilkinson, LLC's studio in Baltic, CT. The Louis XVI suite of chairs was the only exception: fortunately, we had the chairs side by side in our facility while the originals were treated for conservation and the reproductions were being manufactured.
2. The second challenge was the very short deadline: all 28 pieces had to be completed within 1.5 years.

Original armchair (left) and reproduction arm chair (right), during treatment. Original chairs are attr. to Adam Hains, original upholstery attr. to George Bertault, Philadelphia, PA, 1790-95, mahogany, ash; collection of the National Park Service/ Hamilton Grange



Cabinetmaking Challenge

The Louis XVI side and armchairs were very complex pieces to build because of compound angles, round shapes, and limited accessibility with the upholstery on them. The rear stiles featured an angled orientation within the seat plan, and a big off-center turning (15" diameter) to allow a rake for the lower as well as the upper part of the stiles. Because of these features, the mortise and tenon joints of the rear seat rail, stay rail, and crest rail were all at a different (compound) angle with the rear stiles. It was very important to get both the lower and the upper rakes of the rear stiles and the angle within the seat plan exactly right. If any of the angles were off, the width of the crest rail and stay rail, length of the arms, and splay of the legs would not be correct. Most of the carving on the chairs was fairly straightforward, although time consuming. The arms, however, did pose an interesting carving challenge. They were very three-dimensional with a double curve going up and out and fluting that continued up into the rear stiles.

Left: Reproduction shield back chairs. Right: Detail of reproduction shield back chair. Original chairs, attr. to Elbert Anderson, of New York City, c. 1790-1800; collection of the Metropolitan Museum of Art, New York City (MMA 1977.257.1)



Inlay challenge

The main challenge of the shield back chairs was the sheer quantity of the bellflowers, which totaled 1472 individual pieces for the sixteen chairs. The vine pattern on the center splat, with leaves, lines, and dots, was complex and very time consuming to execute. In addition, part of the inlay of the back could only be done after assembly of the chair, further complicating the project. All pieces were hand-cut, laid out on the surface, after which the cavities were incised, routed out, chiseled to a perfect fit before inlaying the pieces. Finally, the inlaid flowers and leaves were engraved and inked to give the effect of shading. Hundreds of bellflowers were inlaid in similar fashion on the sideboard.

The contour and negative space of the center splat were cut out with a high pressure water jet to save time, after which they were finished by hand.

Timing

Cabinet Making

Inlay

28 Reproductions for Hamilton Grange in New York City

In 2010, Fallon & Wilkinson, LLC was awarded two contracts: one to build 28 pieces of Federal furniture, and the second to conserve five of the original Louis XVI chairs that would also be reproduced. Both contracts were for Hamilton Grange National Memorial, the one-time residence of Founding Father Alexander Hamilton, located in New York City. The contracts were part of the much larger project of moving the mansion to a new location and reinterpreting the period rooms. Several of the reproduction pieces posed interesting challenges.

The following pieces, with a documented history to Alexander Hamilton, were reproduced:

- For the parlor
- 3 Louis XVI armchairs
 - 2 Louis XVI side chairs
 - 1 Louis XVI sofa
- For the hall
- 2 Federal side tables
- For the study
- 2 writing desks
 - 1 Federal cylinder desk
- For the dining room
- 14 shield back side chairs
 - 2 matching shield back armchairs
 - 1 Federal New York sideboard



Clockwise: side table, shield back chair, Louis XVI sofa, Louis XVI armchairs, sideboard, writing desk, cylinder desk; collections of Smithsonian Institution (Washington DC), Metropolitan Museum of Art (NYC), Museum of the City of New York (NYC), Colonial Williamsburg (VA), Historic New England (MA), and the National Park Service

Mechanics

Upholstery

Design

Mechanical Challenge

Like many cylinder desks, the Hamilton desk had a mechanism that rolled back the cylinder when the writing surface was pulled out. Having little access for accurate measurements of the mechanism, it turned out to be quite a puzzle to find the correct location of four pivoting points, one of which stationary, and the correct lengths of the three arms, one of which L-shaped. There proved to be only one configuration that allowed for all elements to work: i.e. the writing surface to be pulled out to the maximum length, the cylinder to be rolled back completely, and the movement to be able to go backwards and forwards in its semi-circular track without binding.

The desk further featured a lock in the drawer directly below the cylinder that not only locked this drawer, but also locked the cylinder and the pull-out writing surface.



Reproduction cylinder desk. Original desk, c. 1800; collection of the Museum of the City of New York (MCNY 71.31.13)

Upholstery Challenge

Much of the under upholstery on the original chairs of the Louis XVI Hains suite was retained, providing abundant evidence of the correct shape and loft. Further research revealed information on the historically accurate type of show cover. Subtle differences in the side and armchairs led to an expanded comparison between eleven attributed chairs and sofas in seven different collections, comparing upholstery shapes, techniques, and materials, as well differences between the frames. Through our research of frames and upholstery, we were able to help the curator argue successfully for additional funding to upholster the five original chairs and the five reproductions in a much more accurate way. A historically correct custom woven show cover of 100% silk damask with a large repeat and a French style upholstery shape with brass nailing and trim was applied. The original chairs were upholstered with minimally intrusive techniques on Nomex® sewing strips.



Original side and armchair (left) and a reproduction side chair (right), after treatment. Original chairs are attr. to Adam Hains, original upholstery attr. to George Bertault, Philadelphia, PA, 1790-95, mahogany, ash; collection of the National Park Service/ Hamilton Grange

Design Challenge

The reproduction of the Louis XVI sofa was a challenge of different proportions. The presumed original sofa at the Museum of the City of New York (MCNY) was severely altered in the 19th C., when all the legs were taken off and an Empire style base with crotch mahogany was put on it. Fortunately, we were able to briefly inspect one of two other Hains sofas in Historic New England's (HNE) collection. The dimensions and main features of the sofas were very close, although there were quite a few minor differences. We were able to use the layout of the MCNY sofa from the seat rail up, and apply the design of the HNE sofa legs, which matched the legs of the side chairs, for the base of the reproduction sofa.



Top: Sofa at Historic New England. Gift of the children of Arthur and Susan Cabot Lyman. (1966.116.1). Photograph by Randy S. Wilkinson. Courtesy of Historic New England; Bottom: Sofa at the Museum of the City of New York. (71.31.16). Photograph by Randy S. Wilkinson. Courtesy of Museum of the City of New York. Right: Reproduction sofa. Original sofa is attr. to Adam Hains, original upholstery attr. to George Bertault, Philadelphia, PA, 1790-95, mahogany, ash; collections of Historic New England and the Museum of the City of New York

N.B.

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