MADE TO SCALE
STAIRCASE MASTERPIECES

The Eugene & Clare Thaw Gift
For over thirty years, Eugene and Clare Thaw collected superb examples of historic staircase models, particularly from the nineteenth and twentieth centuries, that demonstrate a stunning mastery of design, conceptual thinking, and construction skills. Staircases have been part of building design since about 6000 BC, initially as stone additions to exterior walls. Using as a guide the average length of the human foot, staircase design was both practical and military.

Changes in domestic architecture contributed to the development of central interior staircases. In the late fourteenth to sixteenth centuries, fortified castles gave way to a more welcoming and sociable residential architecture, and with it, more impressive interior staircases. Evolving social customs furthered their popularity: wide, graceful staircases allowed residents to make grand “entrances” to social events, and accorded their owners prestige by establishing their place in class hierarchies. As is evident in the Thaws’ collection, the sense of grandeur and elation associated with stairs has inspired beautiful results, including the invention of complex configurations such as single or double helixes, elliptical spirals, and cantilevered designs.

Models have served for centuries to test design theory and the practical elements of construction, as well as to display virtuosity. To achieve the three-dimensional realization of a design, the makers learned to perform wood- and metalwork on a miniature scale as well as develop fine conceptual skills. The resulting staircases were therefore archetypes of both architectural design and furniture craftsmanship.
These staircase models show careful craftsmanship, a mastery of geometric principles, and fine woodworking skills. However, I am less interested in the technical side of staircase models than in their aesthetics. I still look at these models as works of art: Are they pleasing to the eye? Do they possess a sweep, a kind of flair? They can be displayed as art, without need of any special skill or historical knowledge.

Clare and I came to the decision to donate our collection to Cooper Hewitt through Joan Davidson. It was she who suggested that Cooper Hewitt be their final resting place, and she introduced me to Paul Warwick Thompson, the museum’s [former] director. After talking with museum staff, I feel that Cooper Hewitt is clearly the right place for these models, and that they’ll be very much at home here. I hope, eventually, that Cooper Hewitt will be able to create a room of models like the great room at Sir John Soane’s Museum in London, where the idea that models of architecture are beautiful objects in themselves is reinforced. There is no such place either in New York or, as far as I know, in America. I think it would be extremely useful for designers, popular with the public, and serve the essential mandate of Cooper Hewitt as a museum of historic and contemporary design (fig. 1).

HISTORY OF STAIRCASE MODELS
Sarah D. Coffin

The staircase model reached its zenith as an art form in eighteenth- and nineteenth-century France thanks to a formalized guild system known as compagnonnage (society, or guild, of companions) that existed in France, parts of Germany, and western Switzerland. With origins in the medieval era, the compagnonnage movement grew into a significant force in the seventeenth century. Its main purpose was to allow any man (women were barred from guilds) the independence of joining a guild and the privilege of learning specific crafts. This differentiated it from the traditional learning process, in which craft skills were only accorded to those receiving wealthy patronage or passed on from father to son within a single family. Prior to the compagnonnage movement...
being established, particularly in the seventeenth century, apprentices often ran away from particularly difficult masters and had to hide to avoid police raids. Compagnonnage training was based on a meritocratic system open to young men who displayed talent and were able to pass the subsequent stages of exams in both design and execution.

Through this arrangement, apprentices in carpentry, cabinetmaking, and joinery honed their skills in the workshops of acknowledged masters during the day and took courses in the art of geometrical design drawing (l’art du trait) in the evenings. A number of books, along with masters’ instructions on the art of design drawing, taught principles which had to be learned before any model could be attempted. In 1738, the Dutch author Tieleman van der Horst published a book entitled The New Art of Building . . . the Art of Staircases, Their Elevations and Wreaths, which was translated into German in 1763. Another influential eighteenth-century book was André-Jacob Roubo’s L’art du menuisier (The Art of the Woodworker-joiner) published in Paris in 1769–75. This book included designs for staircases, one of which was for a pulpit that was reached via a spiral staircase similar to the compagnonnage model in the Thaw collection. Jean-Baptiste-Marie Bury’s 1825 book Modèles de Menuiserie (Models of Woodworking-joinery) also influenced staircase model design on both sides of the Atlantic (figs. 2–6).2
In France, compagnonnage apprentices lived and ate meals in monastic-style boarding houses called cayennes. Once they learned the basic concepts of staircase design, they were taught the skills necessary to execute these designs in three-dimensional form as models, thereby displaying their proficiency. In order to prove himself worthy of being taken on as an apprentice in one of the guilds, a young man first produced an “acceptance work.” If admitted, he then made a “tour de France,” working and studying under different master designer-craftsmen in major French cities such as Tours, Marseille, and Lyon. In each studio, the apprentice had to prove his competence in both drawing and workmanship before he was able to go on to the next location. Two Adolph Bordeaux drawings from a suite of ten dating from 1883 to 1887, executed in various “tour de France” cities, illustrate the work of a compagnonnage member who was perfecting various design concepts with different masters. They demonstrate the training apprentices learned in drawing perspectives, elevations, cross sections, and the details of joinery.

At the end of a successful tour—which normally took four to seven years—the apprentice produced a “reception masterpiece” to demonstrate his...
comprehension of, and dexterity in, the complicated designs and specialties he learned from multiple teachers. The last step in the compagnonnage process involved attaining the title of compagnon fini, or complete (finished) companion. To reach this level, the apprentice had to produce a maîtrise, or masterwork, exhibiting a level of design and craftsmanship beyond what was required for the reception masterpiece. These chefs d’oeuvre would often take years to complete. After formal acknowledgment as a master, several further honors could be earned by a companion. To attain the level of master in a specific city, for example, a member would create a particularly elaborate model as a form of competition with other area master workers. Sometimes these models, or special pieces made by a group of masters from the same city’s guild, were carried in area parades on men’s shoulders or on special supports (fig. 6).

New guild members often took on a symbolic name representing both an emblematic virtue or attribute and a place of origin, such as Languedoc, la Clef des Coeurs (Languedoc, the Key to Hearts) or Blois, Ami du Trait (Blois, Friend of Design Drawing). In the nineteenth century, the mystery associated with these symbolic names—sometimes used to avoid identification in moments of social unrest—and the secret rites often associated with compagnonnage guilds, including ceremonies involving the transfer of special walking sticks with symbols and the wearing of sashes, caused many people to regard them with suspicion.

In 1839, attempting to reinforce moral and professional standards for compagnonnage members, Agricol Perdiguier (1805–1875) wrote Le livre du compagnonnage (The Book of Compagnonnage) detailing the movement’s customs and duties. In the fervor of social romanticism characteristic of the time, Perdiguier’s book was enthusiastically received by the great French authors Alphonse de Lamartine and Victor Hugo. In 1841, the French writer George Sand further made Perdiguier and compagnonnage popular cultural icons through her book Le compagnon du tour de France (The Companion of the Tour of France). Perdiguier’s talents as a true master, along with the fame brought on by Sand, drew attention to some of the great works being produced by compagnonnage members and resulted in a revival of interest in their work (fig. 7).

Following France’s Revolution of 1848, the compagnonnage movement gradually weakened due to the general rise of organized labor, greater mechanization, and a decline in the demand for handcrafted work. However, the tradition of fine staircase model design has endured.

6 F. MEAULLE
The “Viannay” being transported from the Exposition Universelle to the chapterhouse on rue Mabillon, illustration from Le Petit Parisien Paris, France, 1900
The Thaws’ exceptional collection of sculptural models demonstrates the variety and ingenuity realized by many eighteenth-, nineteenth-, and early-twentieth-century craftsmen. Through their intricate, complex three-dimensional forms and joinery, these models represent true masterworks of design and technical virtuosity. This brochure celebrates Eugene and Clare Thaw’s generous donation of their staircase model collection to Cooper Hewitt’s permanent collection. As such, the staircases will remain testaments to high craftsmanship and design to be enjoyed by many future generations (figs. 8-30).

NOTES:
1 This book was highly influential through the 1970s, when images from the book were used in a publication by Willibald Mannes to reintroduce eighteenth-century wood staircase-building techniques. These techniques are also visible in a marquetry wood example from the Thaw collection made by O. E. Hadwiger in the United States in 1964.
2 The example of this book owned by Cooper Hewitt, Smithsonian Design Library is inscribed by American architect, treatise writer, and author on buildings Asher Benjamin. As it was then apparently owned by architects Ithiel Town and Alexander Jackson Davis before being acquired by Abram Hewitt, this volume likely served a key role in the history of American architectural use of staircases.

8 SPIRAL STAIRCASE MODEL
Paris, France, late 19th century
Planed, joined, and veneered cherry, walnut
H × W × D: 31 × 13 × 17.2 cm (12¼ × 5¼ × 6¾ in.)
Gift of Eugene V. and Clare E. Thaw, 2007-45-8

7 SPIRAL STAIRCASE MODEL WITH CURVED STRINGBOARD
France, ca. 1820-40
Planed, joined, and veneered pearwood, walnut
H × W × D: 27 × 20 × 15.6 cm (10¼ × 7¾ × 6¼ in.)
Gift of Eugene V. and Clare E. Thaw, 2007-45-23
This style was popularized by the important master of compagnonnage Agricol Perdiguier.
CURVED STAIRCASE MODEL
Signed by Ugen
France, late 19th century
Planed, carved, veneered, and
turned cherry
H × W × D: 54 × 53.3 × 27.9 cm
(21 ¼ × 21 × 11 in.)
Gift of Eugene V. and Clare E.
Thaw, 2007-45-14

This staircase model and number 26 (p. 24) are similar to ones in
a folio by E. Delbrel, published in
Paris in the 1880s.

ARCHITECTURAL STAIRCASE MODEL
Probably France, mid-19th century
Carved, planed, joined, inlaid, and
turned walnut and beechwood
H × W × D: 61 × 67.3 × 47 cm (24 ×
26 ½ × 18 ½ in.)
Gift of Eugene V. and Clare E. Thaw,
2014-11-3

This maîtrise, or masterpiece, in the
seventeenth-century Italian style
is one of the finest examples of the
combination of architectural design
and structure in staircase modeling.
11 BELL-TOWER MODEL WITH SPIRAL STAIRCASE
France, ca. 1880
Carved and turned pearwood
121 × 41.9 × 41.9 cm (47 ⅝ × 16 ½ × 16 ½ in.)
2014-11-1

12 HEXAGONAL PULPIT MODEL
England, ca. 1850
Strained oak
30 × 30.5 × 29.5 cm (11  × 12 × 11 ⅝ in.)
2007-45-3

13 STAIRCASE MODEL
France, mid- to late 19th century
Planed, joined, veneered walnut
22 × 20.2 × 17.5 cm (8  × 7  × 6 ⅞ in.)
2007-45-6

14 STAIRCASE MODEL
France, 19th century
Mahogany
93.2 × 61 × 49.6 cm (20% × 20% × 19% in.)
2007-45-2

15 STAIRCASE MODEL
France, mid- to late 19th century
Fruitwood, probably pear, ash base
35 × 38 × 23 cm (13% × 14% × 9 in.)
2007-45-6

16 CIRCULAR DOUBLE-REVOLUTION SPIRAL STAIRCASE MODEL
France, late 20th century
Cherry
H × diam.: 63 × 19.1 cm (20% × 7 ½ in.)
2007-45-20

17 STAIRCASE MODEL
France, mid- to late 19th century
Mahogany, oak
91.8 × 69.8 × 47 cm (36 ⅝ × 23 ¼ × 18 ½ in.)
2007-45-7

18 STAIRCASE MODEL
France, mid- to late 19th century
Walnut, mahogany
53 × 20.3 × 34.3 cm (20% × 8 × 13% in.)
2007-45-1

19 CIRCULAR SPIRAL STAIRCASE MODEL
Made by O. E. Hadwiger
Pueblo, Colorado, 1964
Fix, walnut
41 × 33.3 × 24.6 cm (16 ¼ × 13 × 9 ½ in.)
2007-45-17

20 SPIRAL AND CIRCULAR-SECTION STAIRCASE MODEL
Possibly France, mid-19th century
Bent and painted wrought sheet and cast iron
103 × 40.5 × 26.6 cm (40% × 16% × 10% in.)
2007-45-19

21 SPIRAL AND CIRCULAR-SECTION STAIRCASE MODEL
Possibly France, late 19th to early 20th century
Iron
H × diam.: 63 × 19.1 cm (20% × 7 ½ in.)
2007-45-20

22 STAIRCASE MODEL
France, mid- to late 19th century
Planed and carved walnut and ash
41.8 × 25 × 24 cm (16% × 9% × 9 in.)
2007-45-16

23 SEMICIRCULAR STAIRCASE MODEL
England, mid-19th century
Mahogany
101.6 × 71 × 39.6 cm (39% × 27% × 15% in.)
2007-45-15

24 DOUBLE STAIRCASE MODEL
Toulouse region, France, third quarter of the 19th century
Carved, planed, turned, and joined, walnut, mahogany, and inlaid satinwood
279 × 50.8 × 62.1 cm (11 × 20 × 24½ in.)
2007-45-18

25 DOUBLE-REVOLUTION SUPERIMPOSED STAIRCASE MODEL
Probably France, late 18th century
Joined, planed, bent, and carved pear, wrought brass wire, turned bone
76 × 67.3 × 67 cm (29% × 26% × 26% in.)
2007-45-11

26 STAIRCASE MODEL
France, mid- to late 19th century
Carved, joined, turned, bent, and planed oak
52 × 71 × 44 cm (20% × 27 ½ × 17½ in.)
2007-45-10

27 DOUBLE STAIRCASE MODEL WITH DOUBLE REVOLUTION
Made by "R.B."
France, second half of 19th century
Cherry
H × diam.: 48.6 × 39.5 cm (19% × 13% in.)
2007-45-9

28 CURVED STAIRCASE MODEL IN THE FRENCH STYLE
France, ca. 1850
Carved, planed, turned, and veneered walnut
30 × 28 × 43.8 cm (11% × 11% × 17½ in.)
2014-11-2

29 STAIRCASE MODEL
France, mid- to late 19th century
Walnut
62.6 × 92 × 31.5 cm (24¼ × 12% × 12% in.)
2007-45-22

30 SPIRAL STAIRCASE MODEL
France, 20th century
Lead-coated iron
Courtesy of Joan K. Davidson, lent to 2007 exhibition Made to Scale
James Hart: 3, 7–8, 12–23, 25–29
Ali Elai: 1, 5, 9–11, 24
Made to Scale: Staircase Masterpieces, The Eugene & Clare Thaw Gift, originally published on the occasion of the exhibition of the same name (October 13, 2006–June 3, 2007), was made possible in part by the Getty Foundation.

Second edition © 2018 Smithsonian Institution was made possible by the Eugene V. and Clare E. Thaw Charitable Trust.

Printed in United States of America