Cat. No. 18, Gillian Wilson

Conservation: AH

YC

CvE

HP [Heinrich Piening, Bayerische Schlösserverwaltung, non-Getty]

CG [Cecily Grzywacz, formerly Getty]

GH [Gary Hughes, Getty]

MS [Michael Smith, Getty]

title: Mechanical reading, writing, and toilette table

place\_date: French (Paris), ca. 1760

attribution: By Jean-François Oeben (French, born Germany, 1721–1763, *ébéniste mécanicien du Roi* from 1760, master 1761)

materials: White oak\* veneered with bloodwood\*, kingwood\*, amaranth\*, padauk\*, barberry, holly\*, boxwood, sycamore, tulipwood, hornbeam, ebony\*, cedar; drawer of juniper\*; gilt bronze mounts; brass and iron mechanism and lock; silk

dimensions: H: 2 ft. 4 3/4 in., W: 2 ft. 5 1/4 in., D: 1 ft . 3 in. (73 x 74 x 37.8 cm)

accession\_number: 70.DA.84

## ***Description***

The table of rectangular form is supported on four cabriole legs that are five sided in section. The front, back, and sides of the body of the table are slightly bowed. The top is of conforming shape and is surrounded by a flat gilt bronze molding with a raised edge, forming a rim around the top. Each corner is set with a pierced gilt bronze mount consisting of a flared shell-like form above opposed C-scrolls centered by a leafy branch. This overhangs a curved and burnished shaft edged with a shell-like border and ending in a leaf. At each side of the table is an escutcheon, which takes the form of a shaped cabochon framed by C-scrolls, strap work, flamelike borders, and rising leafy scrolls, set below a nine petalled flower. On the right side the escutcheon is pierced twice, in its lower part with a keyhole to receive the key that locks the drawer below and with a circular hole through the center of the flower. This aperture receives the tool that winds the spring-loaded opening mechanism. The lower part of this mount has been cut away to allow for the opening of the drawer. The escutcheon on the left side is pierced solely with a hole for the winding tool.

Lifting handles have been attached to each side, formed by C- and S-scrolls, flame work set with kidney-shaped concave cabochons, and short leafy twigs. They appear to be attached upside down and may have once served as drawer handles on an earlier piece of furniture. Each foot is clad with a mount of similar but not identical form to those found on the writing and toilet table also in the Museum ([cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19)).

The tabletop is veneered with a panel of marquetry ([fig. 18-1](#fig-18-1)). Occupying most of the area is a bunch of cut flowers depicted as tied with a green ribbon bow. Among the flowers, which have very dark leaves and stems, tulips and roses may be recognized. Subsidiary stems branch from main stems and carry flowers of a different species with incorrect foliage for the type. Some of the flowers on the right-hand side appear to be of the daffodil family but are set on curving stems with roselike leaves.

The flowers are set on a field of amaranth, outlined by a stringing of holly and ebony. The outer edge of the tabletop is framed with a narrow border of green-stained wood outlined with holly stringing. It is interrupted with small circles of the same wood and at the cardinal points by an oval, kidney-shaped, and fanlike element. The four corners are set with similar fan motifs.

The friezes of the table are veneered with shaped panels of parquetry in bloodwood and kingwood, consisting of diamonds and parallelograms of contrasting woods placed to form chevrons or an illusionistic cube parquetry that may have been more readable before the woods faded to their present tones. The panels are all outlined in holly and ebony stringing, and the remaining areas of the sides and the legs are veneered with amaranth.

The body of the table is occupied at the lower level by a shallow lockable drawer that extends from the right ([fig. 18-2](#fig-18-2)). Above is a deeper drawer that springs open by mechanical means from the front of the table. It contains lidded compartments to either side of a lifting panel. The lids are veneered with panels of chevron parquetry and on their undersides with quarter-cut panels of tulipwood, all outlined with double stringing. The central panel is hinged, and when raised it can be supported by a manually activated lifting metal tab that fits into any one of a series of notches cut into the back. The face of the panel is lined with a bluish-green silk, surrounded by stringing. The lower part is hinged and forms a book or paper support. It is veneered with a narrow panel of tulipwood and is similarly outlined. Below the shallow, lidded compartment is a small drawer that may be mechanically released and is pushed forward with a spring. The remaining areas of the lidded drawer, its sides and interior, are veneered with amaranth.

## ***Marks***

Stamped “J.F.OEBEN” and “JME,” for *jurande des menuisiers-ébénistes*, on the underside of the front rail ([fig. 18-3](#fig-18-3)). The underside is also inscribed “4880” in chalk.

## ***Commentary***

The table is stamped “J.F.OEBEN,” for Jean-François Oeben.[[1]](#endnote-1) Unlike the table in the following entry ([cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19)), this table is mechanical. The top springs back, and the main frieze drawer opens when a key is turned in a lock on the right side of the table. In its form, mounts, and arrangement of its marquetry elements, this table is unique in Oeben’s oeuvre. The top is not of the usual kidney shape but is slightly convex on all four sides. Correspondingly, the profile of the front is bowed slightly, and it is not recessed at the kneehole. The shape of the lower profile is also unique, as is the greater height of the frieze area, caused by the insertion of a second drawer, opening from the side of the case. The model of the foot mounts is a rarely found variant of those seen in [cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19) and can be seen on two tables, one stamped and one attributed to Oeben in the Calouste Gulbenkian Museum.[[2]](#endnote-2) Corner mounts of the same model are found on a table attributed to Oeben in the Huntington Museum.[[3]](#endnote-3) They also appear on three other unstamped and unattributed pieces: a mid-eighteenth-century commode decorated with European lacquer,[[4]](#endnote-4) a *table de* *chevet* in the musée des Arts décoratifs,[[5]](#endnote-5) and a *secrétaire*-*commode* in the château de Fleury-en-Bière.[[6]](#endnote-6)

The table, unlike most of the mechanical pieces by Oeben, is devoid of any strip mounts following the lower profiles of the piece and outlining the legs. It is probable that the carrying handles are a later addition, for the model does not appear elsewhere on his work and are also somewhat incongruous on such a small and relatively light piece of furniture.

The cut flowers on the surface of the table are not contained in a basket or a vase, nor are they surrounded by an elaborate Rococo or strap work frame; instead, they are arranged loosely across the top, tied with a bow and backed by a strongly grained wood.[[7]](#endnote-7) At least four of the flowers are seen elsewhere on pieces by Oeben. The large open tulip ([fig. 18-4](#fig-18-4)) is found, in reverse, on the fall front and on the left-hand door below of a *secrétaire* in the Residenz, Munich;[[8]](#endnote-8) on the top of a mechanical table bearing Oeben’s stamp that was sold in Paris in 1993;[[9]](#endnote-9) among the flowers in the center front of a transitional commode formerly in the Bensimon Collection;[[10]](#endnote-10) and on a table attributed to this master in the Jones Collection of the Victoria and Albert Museum.[[11]](#endnote-11) It also appears on the center front of an earlier commode attributed to Jean-Pierre Latz.[[12]](#endnote-12) The quality of the cutting, shading, and arrangement of the woods forming the petals of this flower varies widely, the finest example being seen on this table.

The closed tulip on the left ([fig. 18-5](#fig-18-5)) is also found, in reverse, on the top of the Museum's other table by this master ([cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19)) and on the exterior surface of a lid in a table set with mounts bearing small castles, by Oeben and supposedly made for Madame de Pompadour, in the Metropolitan Museum of Art, New York ([fig. 18-6](#fig-18-6)).[[13]](#endnote-13) The open rose to the left of the closed tulip also appears on the above table, placed upside down, hanging to the left of the vase, and it is also seen on the top of the mechanical table in the Louvre that much resembles that discussed in cat. no. 19.[[14]](#endnote-14) The open rose on the extreme left, seen from behind, also appears on the left upper drawer of a table formerly with the dealer Partridge, which also bears the Tessin lily across the drawer fronts on the right side of the kneehole (see [cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19)).[[15]](#endnote-15)

The cube parquetry decorating the friezes of the table is found on a number of Oeben pieces; a *meuble à transformation* attributed to Oeben, which was sold at Sotheby’s Zurich in 1997, should be singled out.[[16]](#endnote-16) Not only are the sides, drawer fronts, and parts of the top veneered with this cube pattern, but the flowers on the top contain the same large open tulip and on the extreme left a repeat, in reverse, of the narcissus on the far right. Like the Museum’s table, the profile of the top is not kidney shaped but rectangular, very slightly convex on three sides and straight at the front, while the drawers below have flat fronts with no central recess.

A reference to a *table coulante* with a drawer in the side is listed in the *magasin* of Oeben’s inventory of 1763 (see [cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19)).[[17]](#endnote-17) It is given measurements similar to those of the Museum’s table, but no flowers are mentioned, and the piece was more fully mounted with moldings. But the similarity of the form and the size of the two pieces, the use of parquetry, and the darker bloodwood employed as a veneer for the legs and the remainder of the body all point to a date near Oeben’s death.

In 1949 J. Paul Getty noted in his diary that he had visited Cameron’s on Duke Street on October 7 and saw “a mechanical table by Oeben for L2,500.”[[18]](#endnote-18) On October 12 he wrote, “I authorized him [Frank Partridge] to take it [the so-called Josse *bureau plat*, J. Paul Getty Museum, acc. no. 67.DA.10] and the mechanical table—L8,000 for the two. He phoned me one hour later that the deal was closed.”[[19]](#endnote-19) The following day Fabre told Getty that the table was by Jean- François Oeben and that he had had it in his possession for some years.

In December of that year Getty was in Malibu, and on December 31 he noted in his diary, “Drove Mitchell Samuels to the Ranch at noon. . . . The mechanical table was partly open when unpacked, I succeeded in closing it but couldn’t get it to open again by turning the key, possibly I had wound it too tight. Mitchell said it was a great table. There are about 15 in the world, about 5 in America. He said my table was not as important as the three in New York, his 2 and the one in the Metropolitan Museum. He thought my mechanical table was by Oeben and of about the same value as my B.V.R.B. table [[cat. no. 9](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/9)].”[[20]](#endnote-20)

## ***Provenance***

–1949: B. Fabre & Fils (Paris, France) and Cameron (London, England), sold to J. Paul Getty, 1949; 1949–70: J. Paul Getty, American, 1892–1976, donated to the J. Paul Getty Museum, 1970.

## ***Exhibition History***

*Paris: Life & Luxury*, J. Paul Getty Museum at the Getty Center (Los Angeles), April 26–August 7, 2011; Museum of Fine Arts, Houston (Houston), September 18, 2011–January 2, 2012.

## ***Bibliography***

{{Getty and LeVane 1955}}, n.p, ill. p. 167–68; {{Wescher 1955}}, 118, 121, 129, fig. 12; {{Getty 1956}}, 80, ill.; {{Getty 1963}}, 123, ill.; {{Boutemy 1964}}, 215, fig. 23; {{Getty 1965}}, 153, ill.; {{Siguret 1965}}, 78–79, ill.; {{Bremer‑David et al. 1993}}, 51, no. 66, ill.; {{Ramond 2000b}}, 15–18, ill.; {{Wilson and Hess 2001}}, 36, no. 63; {{Stratmann‑Döhler 2002}}, 98–99, 184, no. 135; {{Bennett and Sargentson 2008}}, 65, 67, 68 n. 2, 68 n. 11, under no. 8, fig. 36, entry by Florian Knothe; {{Bremer‑David 2011}}, 45, fig. 27 (detail), 70–71, fig. 47, 116, no. 7.

## ***Technical Description***

The carcass of this small writing table is made entirely of white oak. The cabriole legs, which run to the top of the table, are connected to the back and side friezes with broad, shouldered mortise-and-tenon joints, visible in X-radiography. The front frieze, which spans only the lower part of the case, is connected to the legs with a simple mortise and tenon on either end. None of the mortise-and-tenon joints appears to be pegged. The left side and back frieze panels are each made of two stacked horizontal boards, butt joined, which together span the entire height of the case. The right side frieze, made of a single board, runs only across the upper part of the case, above the side drawer. The front frieze panel is also made of a single board and runs below the sliding drawer case. The side frieze panels are exceptionally thick (up to 7 cm at their centers) to accommodate the bulky barrel spring mechanisms that are set into deep mortises on the interior faces ([fig. 18-7](#fig-18-7)). The front frieze panel is also unusually thick (over 5 cm in depth at its center). The heavy construction of the case may have been considered necessary due to the constant tension on the structure from the spring-loaded release mechanism.

The case bottom is made of a bipartite frame-and-panel construction, using the front, rear, and left case sides as perimeter rails. On the right side, the fourth rail sits below the level of the side drawer, apparently attached to the legs with sliding dovetail joints. The medial rail of the case bottom is fixed to the front and rear rails with unpegged mortise-and-tenon joints. Each of the two case bottom panels is made of three boards, two wider and one narrower, rabbeted along their upper edges and fitting into grooves cut into the rails and legs. The panels are flush with the surface of the middle and right side rails, forming a smooth bed for the side drawer. Within this drawer compartment, an oak drawer guide is glued to the top of the panel, parallel to the back frieze. Along the front, the interior face of the thick front frieze serves as the guide for the side drawer.

The upper case bottom (above the side drawer and below the sliding drawer case) is constructed in a manner similar to the lower case bottom, though each panel is made of four pieces of wood rather than three. The panels and medial rail are flush with the top edge of the front frieze, making a smooth bed below the sliding drawer case.

The long, side drawer is located between the upper and lower case bottoms. The four drawer sides are connected to one another with three small dovetails at each corner, through-dovetails at the rear and half-blind at the front; at the front, the sides of the dovetails are covered by veneer. The drawer bottom is made of two oak boards of equal width, butt joined and with the grain parallel to the long sides. The bottom panel is rabbeted along the lower edges and held in grooves in the drawer front, sides, and back. The back side of the drawer is notched at the top to accommodate the mechanism that releases the central sliding drawer case.

The sliding drawer case fills the space above the upper case bottom and between the two case side panels. The case is constructed of four sides, joined with three dovetails at each corner. Two dividers, running from front to back, divide the case into three compartments. Each compartment has an independent bottom panel, formed of two oak boards, rabbeted along their upper edge, and secured in grooves in the case sides and dividers. The side compartments have hinged lids that open outward. Each lid is mitered on the hinged edge and is fabricated as an unusual variant of a mitered frame-and-panel construction. Each has a central panel whose grain runs side to side (parallel to the short sides of the lid). On each long side, cross-grain framing elements are attached with deep tongue-and-groove joints, visible in X-radiographs. Unusually, the mitered short side framing elements are simply butt joined and glued to the adjacent members, effectively relying on the veneer on the front and back of the panel to provide structural integrity.

The center compartment of the sliding drawer case is divided into an upper and lower section by a horizontal oak panel with side-to-side grain orientation, rabbeted along its lower edges and held in grooves in the case front, back, and dividers. Below this medial panel, the central compartment is fitted with a spring-loaded concealed drawer whose veneered front blends seamlessly with the geometric pattern of parquetry surrounding it. The drawer is constructed primarily from juniper; the exception is the front board, which is made from oak, veneered on the edges and the inside with juniper. The drawer bottom is made of three small quarter-sawn boards, with matching grain, arranged with the grain running from side to side. There is no handle on the front of the drawer. The drawer is opened by depressing a brass lever on the underside of the front edge of the sliding drawer compartment, below the drawer front. This lever releases a catch on the bottom edge of the drawer front, and the drawer springs forward, propelled by a thin, crescent-shaped iron spring, approximately 3 cm high and 20 cm wide. The spring is attached with two screws, at its midpoint, to the back wall of the drawer compartment behind the drawer.

The hinged bookrest covers the upper part of the central compartment. The main panel of the bookrest is made of two boards of oak, butt joined, with the grain running front to back. Cross-grain battens, or breadboard ends, are attached at the front and back edges with tongue-and-groove joints and are visible with X-radiography. When raised, the rest is supported by a brass tab that fits into one of several notches on the backside of the rest.

The tabletop’s main panel is made of four boards of oak with the grain running from side to side. The grain of the four boards is not perfectly quarter sawn, nor is the grain straight and parallel from end to end ([fig. 18-8](#fig-18-8)). At either end of the top, cross-grain battens are attached to the main panel with tongue-and-groove joints. Currently the top is counter veneered on the underside with oak veneer approximately 1.5 mm thick, with the grain running perpendicular to the main panel. The presence of butterfly repairs below the counter veneer (visible in the X-radiograph) suggest that the counter veneering may have been done at the time of a substantial intervention to repair cracks in the top. The cross-batten construction, which is designed to keep the top flat and straight, also makes the top vulnerable to splitting due to the different expansion and contraction characteristics of wood along and across its grain. It is interesting to note that in the Museum’s later model of this form, [cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19) (71.DA.103), the top was made without cross battens, relying instead on the use of three carefully selected quarter-sawn boards with perfectly straight grain to provide stability.

The table’s sliding drawer case spring mechanism is powered by a pair of matching main springs housed in barrels on either end of the table. Some other early examples of this form by Oeben employ an alternate spring release mechanism based on flat springs and crossed push rods ([fig. 18-9](#fig-18-9)). There is no evidence that the Museum’s table ever had a flat spring-type mechanism; however, during examination, the existing spring mechanisms were removed, and it became clear that there has been some modification to the mechanical system in the past. There are four, more closely spaced, old screw holes beneath the current iron mounting plates that appear to be associated with earlier, smaller, spring mechanisms ([fig. 18-10](#fig-18-10)) or perhaps even a gear wheel without a spring mechanism. One of the iron plates to which the current barrels are fixed bears an as yet unidentified stamp with the initials “MB” on it. The springs can be wound by a key on either side of the table. Two toothed rails, attached at either end of the underside of the table’s top, engage the teeth at the top of the barrel, while two other toothed rails, attached to either side of the sliding drawer case, engage with the teeth at the bottoms of the barrels ([fig. 18-11](#fig-18-11)). The drawer case’s rails have extraneous holes and wooden patches adjacent to them, suggesting that they have been repositioned, possibly at the same time as the springs were modified. Both on the top and on the sliding case, the toothed rails slide into U-shaped brass guide rails set into the case sides above and below the toothed wheel. The lower brass guides do not extend to the fronts of the legs. Small sliding blocks cover the front access to the brass guides. These can be removed to allow the toothed rails on the sides of the sliding case to be inserted or removed from the guides ([figs. 18-12.1](#fig-18-12-1), [18-12.2](#fig-18-12-2)).

The sliding mechanism for the top and case is activated with a second, smaller key that is inserted into an additional keyhole on the right side, beneath the one used to wind the mechanism (<https://www.youtube.com/watch?v=m5OxVgH-T1I&vl=en>, 1:05–1:08). Turning the key moves a lever that is mounted on a long iron plate, housed in the upper case bottom (<https://www.youtube.com/watch?v=m5OxVgH-T1I&vl=en>, 0:20–0:23). Moving the lever releases a catch at the center of the bottom of the sliding drawer case, allowing the case to slide forward, propelled by the springs.

Mechanical stops prevent the top and case from sliding too far forward or back. The top is constrained by iron rods that run vertically up through holes in the case sides. These project above the top surface of the case sides and into grooves cut into the underside of the top. At either end of the grooves, brass plates that limit the travel of the top are screwed in place (<https://www.youtube.com/watch?v=m5OxVgH-T1I&vl=en>, 0:57–1:17). The vertical iron stop rods are of different length on either end of the table because of the presence of the side drawer front on the right side. On the left side of the table, the rod runs through the entire height of the case side and is held in place by a small brass plate, screwed into the bottom of the case side, that covers the end of the hole in which the rod is held. This allows the iron rod to be easily removed from below so that the table can be disassembled. On the right side, the rod descends only to the level of the top of the side drawer, and the corresponding brass cover plate is located inside the drawer compartment. The cross rail that runs below the drawer front is also drilled with a hole to allow the rod to be inserted and removed from below, though there is no brass cover plate for this hole.

The forward movement of the sliding case is limited by threaded bolts that pass through the sides of the sliding case and project into a groove in the table’s case side, just below the lower brass U-channel (see [fig. 18-7](#fig-18-7); see also <https://www.youtube.com/watch?v=m5OxVgH-T1I&vl=en>; 0:46–:050). Brass stop plates are fixed at the front end of each groove, fixed with a single screw, to halt the forward travel of the sliding case.

The speed and force with which the mechanism releases can be roughly controlled by adjusting the tightness to which the springs are wound. The mainsprings of the mechanism do not, however, require winding after each operation of the mechanism; rather, the act of closing the table rewinds the springs to their prior state (<https://www.youtube.com/watch?v=m5OxVgH-T1I&vl=en>, 1:12–1:17), thus the springs only need to be fully rewound when the table has been disassembled and reassembled.

The table’s side friezes are veneered with a trellis parquetry with bloodwood diamond shapes bordered by kingwood bands. The fields of trellis parquetry are edged with a border strip of white holly and ebony and framed with bands of amaranth. This design is replicated on the sliding cases’ lids. X-radiographic examination of the trellis parquetry on the hinged lids revealed numerous small holes made by the placement of iron veneer pins during assembly. These small veneer pin holes indicate that the trellises were assembled in a sequence of individual gluing steps. Veneer pins were placed alongside a piece of veneer to stop it from sliding out of position during clamping and were removed once the glue had set. Subsequently, additional adjacent pieces of veneer were added, covering the pinholes. Although sometimes difficult to interpret, the pattern of pinholes can give clues to the order in which the veneering was executed. In this case, it appears that the amaranth border and adjacent stringing may have been glued in place first, followed by the kingwood trellis bars, with the bloodwood diamonds inserted at the end. At least on some edges, trimming of individual pieces of veneer was carried out after they were glued down, as indicated by knife marks visible, for example, along the top edge of the side drawer ([fig. 18-13](#fig-18-13)). The knife used was most probably similar to the shoulder knife illustrated in plate 293, figs. 11 and 12, in A.-J. Roubo, *L’Art du menuisier ébéniste*, 1774 (<https://archive.org/details/gri_33125009321973/page/n837>).

The interior surfaces of the three compartments in the sliding drawer case are veneered with a wood of the genus *Pterocarpus*, commonly called padauk or narra. This veneer appears to be original, though it is an unusual wood in ancien régime French furniture. In the Museum collections, the only other original use of padauk that has been found is for the secret drawers in the two coffers attributed to André-Charles Boulle, dating to the 1680s (82.DA.109). There are over thirty species of the genus *Pterocarpus* native to Africa and Asia. While the species and geographic origin of this example have yet to be identified, the genus was identified by microscopic anatomy and confirmed by chemical analysis. [[21]](#endnote-21)

Based on evidence revealed by examination of the marquetry decoration, X-ray analysis, and tool marks present on the table, it is likely that the majority of the floral marquetry on the table’s top was inlaid in the background amaranth veneer using a shoulder knife. The flowers and leaves were almost certainly produced by stack cutting, using a piercing saw, or fretsaw, to cut the individual pieces as well as many of the veins. Using a stack technique, two or even three nearly identical elements could be produced at once. Two of the five petaled flowers (probably jasmine) at the top left of the table’s bouquet are so similar that any differences can be attributed to a shift in the angle of the saw while the stack was being cut. The saw kerf (the gap left by the width of the saw) is about 0.2 mm on the flowers. Some of the individual elements from the flowers and leaves were sand shaded by placing them in hot sand until the desired level of singeing was obtained. The elements forming a flower were then drawn together into the flower shape and glued to a piece of paper, largely eliminating the saw kerfs between pieces. Once assembled, precut elements could be stored and saved for later use.

On this table the floral elements appear to have been inlaid in the amaranth background using a sharp knife, probably a shoulder knife, to cut away the background veneer, creating cavities to receive them. The fitting of the flowers into the background is very precise, with virtually no gap in most areas. Under careful inspection, there is little direct evidence of knife cutting in the form of small overcut marks or bending of the wood fibers where the knife cuts run across the grain. However, the flowers exhibit many sharp internal and external corners that show no sign of the turn of a saw blade, even at high magnification. This is in contrast to the saw-cut inlaying of the other Museum *table à coulisse* by Oeben (17.DA.103, [cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19)), where the fitting is not as precise and the turns of the saw blade are often evident on the perimeter of the flowers.

Although it is not possible to reconstruct the exact order in which the floral marquetry elements were inlaid, X-radiographs do show that in some areas, the stems of the flowers were inlaid first, and flowers inlaid over them. In these areas, the knife marks in the oak substrate associated with the inlaying of the stems continue underneath the flowers ([fig. 18-14](#fig-18-14)). This is further evidence that the flowers were not inlaid in the background veneer with a saw prior to gluing the marquetry down. Again, this is in contrast to the saw-inlaid marquetry of the other Museum table, where the X-radiographs show no instances of stem inlaying below flowers.

Most of the veining in the flowers and leaves of the marquetry was made using the marqueter’s saw. In addition, however, some additional veining (as well as shading on the ribbon and corner shell elements) has been added using an engraving tool, and these veins have been filled with either red or black mastic. The two types of veining are clearly distinguishable under magnification as the engraved lines end in sharp points while saw cut lines have a blunt, square end ([fig. 18-15](#fig-18-15)). Analysis by XRF suggests that the red filler (used in the central tulip) is made with vermilion pigment (mercury sulfide) and that the black filler is made with a carbon-based pigment.

Microscopic wood identification of the majority of the woods comprising the marquetry on the table’s top was not considered possible because the necessary sampling posed an excessive risk of damage to the marquetry; however, close examination under magnification indicates the presence of a great variety of woods. The bouquet of flowers, inlaid in an amaranth background, is estimated to be composed of holly, sycamore, barberry, boxwood, and, in small parts, a softwood similar to cedar. Many of the flowers executed in light-colored woods were originally dyed in bright colors, which have now faded almost completely.

One small fragment of veneer, about 4 mm across, was able to be lifted from the top for microscopic identification. This came from a previously damaged area of the dark leaves and stems of the flower bouquet. The use of dark, nearly black wood for leaves and stems has long been considered a distinctive and identifying characteristic of Oeben’s work. In catalogues and scholarly publications about Oeben (or the early work of his successor, Jean-Henri Riesener), this dark wood has variously been described as “ebony,” “dark stained wood,” or “black wood.”[[22]](#endnote-22)

The fragment of dark wood removed from the top was sampled and analyzed on its verso, without damaging the upper surface and overlying varnish layers. After analysis, the fragment was returned to its original location. Based on optical and scanning electron microscopy of anatomical features, the wood was reidentified as holly, naturally the whitest of woods. Further analysis demonstrated that the dark, almost black-colored holly was originally stained a shade of olive green using an unstable dye recipe, which has now deteriorated and darkened dramatically.[[23]](#endnote-23)

Initially, analysis by X-ray fluorescence spectroscopy (XRF) showed that the dark wood in the marquetry composition uniformly contains extremely high levels of iron. Since then, numerous other examples of darkened marquetry by Oeben have been analyzed by XRF with highly consistent results, including the Museum’s toilette table (71.DA.103; [cat. no. 19](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/19)), along with two pairs of corner cupboards (72.DA.39.1–.2 and 72. DA.69.1–.2; [cat. no. 17](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/17)), as well as related toilette tables at the Residenz München (inv. no. M33) and the Victoria and Albert Museum (1095–1882). The presence of high iron concentrations in darkened wood has also been found in the rolltop desk by Riesener in the Wallace Collection (F102). The most likely source of concentrated iron in the wood is from an iron sulfate mordant (known as *vitriol vert* or *couperose* in eighteenth-century France), which would have been used in conjunction with organic dye. Iron sulfate was widely available in mid-eighteenth-century Europe and was used by marquetry craftsmen to produce satin-gray, or *satiné gris*, stained sycamore maple backgrounds that were popular among Oeben, Riesener, and others in Paris at the time.[[24]](#endnote-24)

Further analysis of the fragment removed from the tabletop was conducted using high-performance liquid chromatography (HP/LC), which revealed the presence of a little used yellow dyestuff in the wood, called young fustic, derived from the wood of a small tree or shrub native to Europe, called smoke tree (*Cotinus coggygria*). Remarkably, the use of young fustic dye in the darkened leaves and stems of Oeben’s marquetry was confirmed through independent analysis by Heinrich Piening on a related table in the Residenz Museum, Munich (inv. no. M33) using UV-visible fiber optic reflectance spectroscopy (FORS). The HP/LC analysis did not find any blue dye compounds in the sample, although the most common recipes for green dyes in the eighteenth century called for the combined use of a yellow and a blue dye.

A search in the Getty Research Institute library of eighteenth-century manuscripts on the subject of dyeing textiles identified a subcategory of recipes for darker greens, variously called forest drab, bottle green, or olive green, that correlates well with the current analytical results. This group of recipes calls for dyeing with a yellow dye followed by an iron sulfate mordant that shifts the color of the dye from yellow to green. In particular, Ellis gives a recipe for “forest drab” that includes young fustic and iron sulfate.[[25]](#endnote-25) Interestingly, he notes that “this colour is inclined to darken.” Young fustic (*fustet* in French) was generally considered a poor-quality dye, not lightfast and, specifically, not suitable for making green in combination with indigo.[[26]](#endnote-26) Ellis, however, points out that “the colour it naturally produces is an orange yellow. It is often employed in greens, olives and drabs; if good it answers a valuable purpose.”[[27]](#endnote-27)

The results of the XRF analysis suggest that Oeben’s workshop used solutions averaging 10% (w/v) of iron sulfate in their iron/fustic dye recipe, far in excess of the concentration recommended in most recipe books today or in the eighteenth century. It is likely that an excess of iron sulfate deposited in the wood is directly responsible for the extreme darkening and deterioration of the wood. Iron-tannate dyes (whose chemistry is closely related to iron gall ink) are thought to produce sulfuric and/or acetic acid as they degrade.[[28]](#endnote-28) It appears that this inherently flawed iron/fustic recipe was used nearly exclusively in marquetry associated with Oeben and his workshop. Jean-Henri Riesener, who took over the Oeben workshop after his death, seems to have continued using pieces of veneer dyed with this recipe even after becoming a master in his own right. Riesener used the iron/fustic dyed wood far less than Oeben had, and it is not clear whether Riesener continued to dye wood with this recipe himself or if he was simply continuing to use stocks of dyed veneer that he inherited after the death of Oeben. The origin of the flawed dye recipe is a mystery. Cabinetmakers were notoriously secretive about their dying methods, as described by Roubo:

La teinture des bois est d’une très-grande importance pour les ébénistes. [ . . . ] Cependant les ébénistes ont toujours fait un très-grand secret de la composition de leurs teintures, afin de s’en conserver la jouissance exclusive, et de ne pas trop augmenter le nombre des ouvriers: de-là vient que la plupart des compositions dont les anciens ébénistes se servoient, ou ne sont pas venues jusqu’à nous, ou bien ont été mal imitées; et que celles dont on se sert a présent, ou sont défectueuses, ou bien, si elles sont bonnes, ne peuvent se perfectionner, vu que ceux qui les possèdent en cachent les procédés, non-seulement à leurs confrères, mais même à ceux dont la théorie pourroit leur être utile pour perfectionner la composition de leurs teintures.[[29]](#endnote-29)

It is entirely possible, however, that Oeben learned of the iron/fustic green recipe from textile craftsmen working in the tapestry workshops of the Gobelins Manufactory with whom he would have regular contact when his workshop was located in the Gobelins (1754–61). Such a recipe might have more stable over time when applied to textiles than it has proven to be for veneers, primarily because dyed yarn can be easily rinsed after dying. Rinsing can remove excess iron sulfate from textile materials quickly and effectively and thus reduce darkening and deterioration with age. Because of wood’s density and compact structure, the dying process is much slower than for textiles, with veneers often left to soak in the dye bath for months to ensure full penetration of the dye. Likewise, effective rinsing of excess mordant out of dyed sheets of veneer would have taken a considerable amount of time, and if the importance of removing excess iron sulfate was not recognized at the time, then inadequate rinsing could be an important factor in the blackening of Oeben’s foliage.

In order to try to understand the original palette of green tones that could be achieved on holly using a recipe of young fustic dye and iron sulfate mordant, a series of test squares of holly veneer were dyed using different concentrations of young fustic dye and iron sulfate mordant. The young fustic dye was prepared directly from shavings taken from locally grown smoke tree wood. Initial replication tests used pure, laboratory-grade iron sulfate as the mordant, but these tests resulted in an extremely dark green tone that seemed an unlikely choice for naturalistic rendering of foliage. Additional research into the composition of natural iron sulfate produced by European mines revealed that the iron sulfate available in Paris in the eighteenth century would have been sourced from several different regions of origin and would have been contaminated with significant amounts of copper and zinc sulfates as well as alum (potassium aluminum sulfate), magnesium sulfate, and other compounds.[[30]](#endnote-30) Using young fustic dye followed by historically accurate blends of impure iron sulfate for the dye mordant resulted in a range of muted greens that are probably representative of the original colors of the leaves and stems in Oeben’s marquetry ([figs. 18-16.1](#fig-18-16-1), [18-16.2](#fig-18-16-2)).

The central bouquet of flowers is tied with a ribbon of blue-dyed sycamore, now faded to green. This ribbon and the blue-dyed hornbeam cartouches around the perimeter (similarly faded) are the only originally dyed areas of marquetry to retain substantial coloration, thanks to the use of lightfast indigo-based dye. Many of the floral elements of the marquetry must have been originally dyed in bright colors, though currently these have faded to such a degree that they cannot be detected with confidence by eye. However, with the use of FORS, coupled with sophisticated spectrum-evaluation software and a large database of reference spectra, the original dye materials can be detected based on subtle characteristics of the light spectrum reflected from the individual pieces of wood. Heinrich Piening of the Bayerische Schlösserverwaltung collected fifty-nine reflectance spectra from marquetry elements on the top and identified several dyestuffs, including cochineal, brazilwood, indigo, and logwood. With knowledge of the dyes in hand, historically accurate replications of the dyed woods were made to determine a palette of reference colors for each element in the original marquetry. Most recipes were based on either Schweppe or Michaelsen and Buchholz.[[31]](#endnote-31) Examples of naturally colored wood veneers used in the original manufacture of the table’s marquetry were also obtained. All of the veneer reference materials were sanded and varnished with Roubo’s transparent *vernis de Venise*[[32]](#endnote-32) in order to present a good approximation of the final appearance of the veneers on the table when it was newly made.

Using these reference materials as a guide, digital imaging specialists at the J. Paul Getty Museum manipulated high-resolution images of the table, creating multiple masks and transformation layers to match the appearance of each element carefully to its corresponding reference sample. Color-controlled prints of the manipulated image were compared to the actual dyed wood samples, and subtle corrections were made iteratively. The shading and shadowing apparent in most of the marquetry are the result of sand shading of the individual pieces of wood that was part of the original production process; this was not enhanced digitally. In the blackened wood of the leaves and stems, the original sand shading can no longer be detected, so in these areas an imitation of sand shading was digitally applied. The resulting images ([figs. 18-17](#fig-18-17), [18-18](#fig-18-18)) present as accurate an image of the vibrant original appearance of Oeben’s marquetry as currently possible.

The table is decorated with thirteen gilt bronze mounts, including the molded rim of the top. Within each type, the mounts are consistent in their design and chasing, as well as in the texture and coloration of their versos; there are no obvious replacements or aftercasts. Nine of the gilt bronze mounts were analyzed for elemental composition using XRF. All were found to be made from brass alloys that are typical of eighteenth-century Parisian gilt bronze production, with zinc levels between 20 and 25%, lead between 1.0 and 3.0%, and tin between 0.5 and 1.0%. The alloy of the mounts was also found to contain impurities, such as silver, antimony, arsenic, nickel, and iron, at levels expected for the period. The handles and escutcheons were not found to be significantly different in composition from the other gilt bronze mounts on the table.

Eight pieces of brass hardware were also analyzed by XRF to determine their composition. These include upper and lower guide rails, both gear wheels, stop plates, and the side drawer lock housing. The guide rails for the sliding top were made by sand casting and have an alloy similar to the gilt bronze mounts. The gear wheels as well as the original stop plates are made from a typical sheet brass alloy of the period, with high zinc (ranging from 28 to 32%), lead around 1.5%, and little or no tin. The levels of impurities are similar to the gilt bronzes, but with little to no antimony. Only one brass stop plate (at the center of the bottom of the sliding drawer case) and the lock housing on the side drawer were found to have alloys not consistent with eighteenth-century production. These have very high zinc levels, at about 34 to 36%, and very low levels of impurities, suggesting that they are late nineteenth- or twentieth-century replacements.

1. For information on Jean-François Oeben, see {{Pradère 1989a}}, 252–63; {{Stratmann**-**Döhler 2002}}. [↑](#endnote-ref-1)
2. {{Coutinho 1999}}, 167–75, no. 14, inv. no. 749; 177–81, no. 15, inv. no. 579. [↑](#endnote-ref-2)
3. {{Wark 1979}}, 57, fig. 77; {{Bennett and Sargentson 2008}}, 65–68, no. 8. [↑](#endnote-ref-3)
4. {{Boutemy 1964}}, 208, fig. 2. [↑](#endnote-ref-4)
5. {{Janneau 1952}}, pl. 143. [↑](#endnote-ref-5)
6. {{Janneau 1930}}, pl. XXVa. [↑](#endnote-ref-6)
7. For similar arrangements of flowers tied with a bow, see {{Stratmann**-**Döhler 2002}}, 56, for the marquetry on a *meuble entre deux*, with tambour doors, ex. coll. Perrin; and 73, for a *secrétaire*, with the bouquet across the lower doors, ex. coll. Segoura. [↑](#endnote-ref-7)
8. {{Langer and Ottomeyer 1995}}, 128–32, no. 26; {{Stratmann-Döhler 2002}}, 60–61, 178. [↑](#endnote-ref-8)
9. Hôtel Drouot, *Tableaux meubles et objets d’art tapis–tapisseries, February 8, 1993* (Paris: Hôtel Drouot, 1993), lot 58, formerly in the Deane Johnson Collection, sold, Sotheby Parke Bernet, *Highly Important Furniture Decorations and Extremely Fine Continental Porcelain, December 9, 1972* (New York: Sotheby Parke Bernet, 1972), lot 97. [↑](#endnote-ref-9)
10. {{Stratmann-Döhler 2002}}, 53, 171. [↑](#endnote-ref-10)
11. Acc. no. 1095:1–3 1882. {{Stratmann 1973}}, 110–113, figs. 37a–c; {{Brackett 1930}}, 8, no. 18. [↑](#endnote-ref-11)
12. Sold, Christie’s, *Magnificent French Furniture: Formerly from the Collection of Monsieur and Madame Riahi, November 2, 2000* (New York: Christie’s, 2000), lot 20; {{Stratmann-Döhler 2002}}, 49, cat. no. 38. For a discussion of the relationship between the marquetry of Latz and Oeben, see [cat. no. 17](file:///Users/aheginbotham/Documents/ArlensFiles/%20ProjectFiles/Rococo%20Ebenisterie%20Edits/May%202020/17). [↑](#endnote-ref-12)
13. Acc. no. 1982.60.61, given by Jack and Belle Linsky. Metropolitan Museum of Art 1984, 210–12; Parke-Bernet Galleries, *Property of the Late Martha Baird Rockefeller, October 23, 1971* (New York: Parke-Bernet Galleries, 1971), lot 711; {{Stratmann-Döhler 2002}}, 124, cat. no. 121. [↑](#endnote-ref-13)
14. {{Alcouffe, Dion-Tenenbaum, and Lefébure 1993}}, 176–79; {{Stratmann-Döhler 2002}}, 93, cat. no. 119. [↑](#endnote-ref-14)
15. {{Stratmann-Döhler 2002}}, 121, cat. no. 155; ex. coll. Partridge Fine Arts Ltd., *Summer Exhibition 1984, June 4–July 28, 1984* (London: Partridge Fine Arts Ltd., 1984), no. 35. [↑](#endnote-ref-15)
16. {{Stratmann-Döhler 2002}}, 33 and 100, cat. no. 126; sold, Sotheby’s, *The Distinguished Collection of a Lady, December 9–11, 1997* (Zurich: Sotheby’s, 1997), lot 236; ex. coll. Herbert M. Gutmann, sold, Paul Graupe, *Sammlung Herbert M. Gutmann, April 12–14, 1934* (Berlin: Paul Graupe, 1934), lot 96. [↑](#endnote-ref-16)
17. {{Guiffrey 1899}}, 338. [↑](#endnote-ref-17)
18. J. Paul Getty Diary, July 29–December 31, 1949, October 7, 1949, 50. Getty Research Institute, IA40009. http://hdl.handle.net/10020/cifaia40009. [↑](#endnote-ref-18)
19. J. Paul Getty Diary, July 29–December 31, 1949, October 12, 1949, 52. Getty Research Institute, IA40009. http://hdl.handle.net/10020/cifaia40009. [↑](#endnote-ref-19)
20. J. Paul Getty Diary, July 29–December 31, 1949, December 31, 1949, 102–3. Getty Research Institute, IA40009. http://hdl.handle.net/10020/cifaia40009. [↑](#endnote-ref-20)
21. For the technique of chemical wood identification, see {{Schilling and Heginbotham forthcoming}}. [↑](#endnote-ref-21)
22. {{de Bellaigue 1974}}; {{Ramond 2002}}; {{Langer and Ottomeyer 1995}}. [↑](#endnote-ref-22)
23. {{Heginbotham et al. 2020}}. [↑](#endnote-ref-23)
24. {{Paulin 2008}}, 177–98; {{Paulin 2015}}. [↑](#endnote-ref-24)
25. {{Ellis 1798}}, 45, 66. [↑](#endnote-ref-25)
26. {{Hellot 1750}}, 606–7. [↑](#endnote-ref-26)
27. {{Ellis 1798}}, 20. [↑](#endnote-ref-27)
28. {{Smith et al. 2005}}, 89–94. [↑](#endnote-ref-28)
29. “Dying wood is very important to cabinetmakers. . . . [H]owever, cabinetmakers have always made great secrets of their dye recipes in order to preserve exclusivity and not increase the number of new workers too much. Hence, the majority of the recipes used by old cabinetmakers have not been passed on to us, or else wrongly copied; and those that are used at present are either defective, or if they are good, they cannot be improved because the people who know the recipes hide the process not only from their colleagues but also from knowledgeable people who know the theory of dying and could help them improve the composition of their dye recipe.” {{Roubo 1774}}, vol. 3, 792. [↑](#endnote-ref-29)
30. {{Schlüter and Hellot 1750}}, 618–42; {{Hickel 1963}}, 121–32. [↑](#endnote-ref-30)
31. {{Schweppe 1986}}; {{Michaelsen and Buchholz 2006}}. [↑](#endnote-ref-31)
32. {{Roubo 1774}}, vol. 3, 864–65. [↑](#endnote-ref-32)