



Wooton Patent Desks

A Victorian innovation in office furniture

by Deborah Cooper

“With this Desk a man absolutely has no excuse for slovenly habits in the disposal of his numerous papers, and the man of method may here realize that pleasure and comfort which is only to be attained in the verification of the maxim, ‘A place for everything and everything in its place.’” (Advertisement, circa 1880, for the Wooton Cabinet Office Secretary.)

With dozens of pigeonholes and compartments, hinged and rotating parts, and elaborate exteriors, Wooton Patent Desks embodied the Victorian love of things adaptable, convenient and complex. Both in their construction and use, these desks reflect the drastic

changes in the manufacturing and business world during the 19th century. Wooton desks (see the photos above and others on the following pages), manufactured in Indiana from 1874 to 1897, were typical of the increasing use of mass-production techniques and machinery to yield high-quality furniture in quantities sufficient to satisfy the worldwide markets opened by expanding communication and transportation systems. The design of the desks provided an ingenious solution to the businessman’s problem of organizing the increasing volume of paperwork that accompanied the rapid expansion of business. From both the business and design perspectives, the Wooton Patent Desk earned the sobriquet “Desk of the Age.”



This Superior-Grade Cabinet Secretary, known as the Globe desk (shown open at left and closed at right), was made by the Wooton Desk Co. of Indianapolis, Ind., around 1880 and is one of the finest examples of its kind. Wooton Cabinet Secretaries were also sold in three lesser "grades"—ordinary, standard and extra—all of which were similar but distinguishable mainly by the amount and quality of the decoration on the external case, drawer fronts and writing flap (shown closed at left).

The founder of the desk-manufacturing company, William S. Wooton, was born in Ohio on May 12, 1835, the eighth of thirteen children. Records from the Friends Church show that prior to 1860, he was living near Terre Haute, Ind., where he was a member of the Honey Creek monthly meeting. By 1860 he had moved to Richmond, Ind., where he was listed as a patternmaker in the city directory. From April to December of 1869, Wooton was a partner in the Richmond furniture manufacturing firm of George H. Grant and Co., which mass-produced school, office and court furnishings. In 1868 and 1869, while working in Richmond, Wooton designed and patented a school desk and chair that could be folded together for easy storage and transport, demonstrating his interest in adaptable furniture, as well as his concern for protecting his inventions with patents.

When Wooton moved to Indianapolis in 1870, he established William S. Wooton and Co. During its first year of business and with only four employees, one of whom was probably Wooton, the company produced school furniture, office desks and church furniture valued at \$18,500. An early business card carried the

illustration of a school desk, which was probably the company's primary product at that time.

On Oct. 6, 1874, Wooton's Patent Cabinet Office Secretary, now known as the Wooton desk, officially came into existence when patent #155,604 was issued to William S. Wooton for "a secretary constructed in three parts, two of which are together equal in width to the other, each part being provided with compartments or pigeonholes suitable for storing books, papers, etc., and the lesser parts hinged to the greater part, to serve as doors to the secretary." The patent also described the hinged writing table and a locking mechanism for the doors. The accompanying patent drawing illustrated these points, as well as the basic form of the secretary, although it differed in several details from the desks that were actually produced. For instance, the writing table hinges shown in the patent drawing were replaced by pivots with supporting brackets; the locking mechanism, although operating like the one shown in the patent drawing, was recessed into the door; and the pigeonhole configuration shown in the drawing was also modified during production of the desks. Such differences in detail point to Wooton's overall concept of a convenient, capacious cabinet secretary as the significant part of the patent. A month after the date of the patent, Wooton, together with John G. Blake and Harmon H. Fulton, filed articles of association for the Wooton Desk Co., and rapid activity followed to begin production. On March 5, 1875, the *Indianapolis Journal* reported, "The Wooton Desk Co. will erect a factory this season with room for 150 men. Thus, from little industrial acorns do great manufactories grow."

On Jan. 18, 1876, only 15 months after patenting his secretary, Wooton was granted patent #172,362 for his Rotary Desk (see the two left photos on the following page). The patent describes pivoted or hinged cases installed in the ends of desks that provided more shelving and pigeonholes than available on a more conventional desk, and, at the same time, made the storage area easily accessible. The actual mechanism for hinging or pivoting the cases was not described, but Wooton did point out that the panels inside the kneehole had to be curved to accommodate the rotating cases.

Both these patents reflect Wooton's goals as an inventor. He seemed less concerned with gadgetry, mechanisms and the technical aspects of desk construction than with the larger questions of the user's needs. He saw the trend toward bigger business and realized new devices were needed to cope with the changes. His inventions offered efficient, compact utilization of space, as well as convenient access to high-capacity storage and filing systems. Wooton desks were used by all kinds of businessmen, including those at the forefront of industrial and financial development. John D. Rockefeller owned one, as did railroad magnate Jay Gould and President Ulysses S. Grant.

In spite of the worldwide success of his furniture business, by 1880 Wooton had turned away from it to devote his full energy to various Quaker ministries across the country. After he sold the business, it was renamed the Wooton Desk Manufacturing Co. and continued to produce desks in Indianapolis and Richmond, Ind., under various owners until 1897. When Wooton died on Aug. 26, 1907, his obituary remembered him only as a well-known evangelist and religious organizer who as a young man spent his spare time in cabinetmaking.

The age of the Wooton desk—Throughout the 20 years that Wooton desks were produced, the basic form remained the same, although there were numerous modifications in the details of functional design and decorative styling. In tracing the changes, one can distinguish an early period of experimentation followed by increasing standardization. The early desks display various com-



Photo: Courtesy of Richard and Eileen Dubrow Antiques

Wooton's Rotary Desks featured pedestals with pigeonhole cabinets that pivoted open. They were available in only two grades, standard and extra, but came in an array of styles, including flat top, roll-top and cylinder top. The standard-grade flat-top oak desk with a single rotary tier (left) was the simplest example of this style, while the extra-grade cylinder-top two-tier rotary desk (below), with its burl-veneered panels and incised designs, was one of the most ornate.



Above: The Eastlake pattern secretary was an attempt to capitalize on the popularity of Charles Eastlake's book *Hints for Household Taste*, which decried excessive ornamentation. The plain pattern secretary (below) was developed after the Wooton Co. moved to Richmond, Ind., in 1884. It was similar to the original ordinary-grade desk, but was even plainer.



Building the king of desks

by Gene Lehnert

A Wooton desk is a magnificent piece of furniture. Even though the Victorian-age filing system is a little outdated, I think the Wooton Cabinet Secretary offers several advantages over a flat-top desk. I've seen a Wooton used quite effectively as a credenza behind a conventional desk, and as a home office, the 100-plus pigeonholes provide a hiding place for everything. Just as the manufacturer claimed in the late 1800s, it is unquestionably the "king of desks."

Building a Wooton Cabinet Secretary is an involved process that touches on almost every facet of woodworking: carcass joinery, box-in-box construction, turning, carving, engraving, joinery, pigeonhole construction, shaping moldings and veneering; it also requires leather work, metalwork and even cardboard work (used

for the ledger-card file boxes). The drawing on p. 57 shows how a Wooton desk goes together and it gives the overall dimensions of a black walnut secretary I built (also shown in the top, right photo on p. 56). It is a reproduction of a standard-grade desk that I measured during a repair job. My material costs ran around \$1,600, which included leather for the writing surface; brass for the hardware; veneer for drawer fronts, writing flap and exterior raised panels; as well as about 150 bd. ft. of black walnut and 90 bd. ft. of pine for drawer parts and pigeonholes and as structural material in the main case and doors. The following construction tips aren't intended to cover everything you need to know to build a Wooton, but an experienced furnituremaker with adequate time

binations of shelves, drawers and pigeonholes and the exterior designs varied from desk to desk. But by 1876, the Wooton Desk Co.'s first illustrated catalog showed the company had developed standardized designs that allowed it to adopt more efficient mass-production techniques to meet the increasing demand for its products.

The 1876 catalog showed six different models of Rotary Desks, each in two grades: standard and extra. They included flat-top, roll-top and cylinder-top desks with rotary cases installed in both ends or just one; there was also a Partner's Desk with rotary cases installed in all four corners. The secretaries in the catalog were offered in four grades—ordinary, standard, extra and superior. The catalog illustrations were carefully drawn in great detail and match numerous extant desks. Further, existing desks match each other in the configuration of interior compartments and in the stylistic detailing on the exterior. The variation that appeared in earlier secretaries was no longer tolerated; in fact, special requests for pigeonhole alterations were refused. An 1875 letter from the Wooton Desk Co. to Spencer Baird at the Smithsonian Institution states that the company was “so hurried in getting out our desks that we cannot at this time undertake any changes in interior arrangement of desks.” According to the *Indianapolis News* of April 14, 1876, the factory was producing 150 desks per month and marketing them to customers worldwide.

The significant difference between the grades of Cabinet Secretaries and Rotary Desks was not in function but in decorative style and ornamentation. All grades of Wooton desks had similar pigeonhole configurations and were constructed primarily of black walnut from Indiana forests. But the amount and complexity of the exterior ornamental detailing and the type of veneer used on the raised panels depended on the grade of the desk. The ordinary grade had no veneer. Burl walnut adorned the standard grade; maple or Spanish cedar trimmed the extra grade; and the most expensive veneers—holly, satinwood and ebony—embellished the superior-grade desks.

By using grades to distinguish its models, the company clothed its desks in robes of increasing richness so they could be sold in a variety of markets. At a time when cabinetmakers earned about \$2 per day and a seven-piece suite of parlor furniture could be purchased for \$55, even the smallest ordinary-grade secretary was expensive at \$100. The standard-grade secretary cost between \$135 and \$165, depending on the size of the desk, and the extra grade sold for between \$200 and \$250. The superior grade (shown in the photos on pp. 52-53) cost from \$500 to \$750, which was so expensive for the time that even John D. Rockefeller purchased an extra-rather than a superior-grade secretary.

Between 1880 and 1884, the Wooton Desk Manufacturing Co. changed its marketing approach. The ordinary and superior grades had proved unpopular and the company stopped marketing them. Further, the concept of grades was replaced by an emphasis on pattern, which allowed production of more models in the standard-grade category. The Wooton Desk Manufacturing Co. then sold four *patterns* of desks: the standard pattern and the extra pattern, which looked the same as before, and two new patterns, the Queen Anne and the Eastlake (shown in the top, right photo on the facing page). The Queen Anne pattern is well represented among surviving desks, which attests to its popularity. On the other hand, Eastlake pattern secretaries, named after furniture-design writer Charles Eastlake, are rarely encountered today.

One other pattern of secretary was developed, probably after the company moved to Richmond, Ind., in 1884. The interior of the new plain pattern (see the bottom, right photo on the facing page) was only slightly simpler than the other desks, but the exterior was plain indeed. There was no decorative gallery, no carving and no veneer to contrast with this oak secretary. Some of the exterior moldings had chamfered edges and others were reeded, but the effect was simple and utilitarian. Perhaps the design simplicity reduced the cost of production and put the selling price within reach of new customers, because this pattern is well represented among surviving desks.

The plain pattern seems to have been the company's last success. During the 1870s and 1880s, when large pigeonhole files were a viable solution to the businessman's needs, the company had merely to keep pace with popular taste in furniture design. But by the 1890s, it was the functional rather than the decorative aspect of Wooton desks that had become old fashioned. The increase in paperwork had outgrown the limited storage capacity of a Wooton desk and pigeonholes were being replaced by the widespread use of manila folders and file drawers. Unlike the easily remodeled decorative style of the desks, the functional design was bound by the patent specifications. It could not be significantly redesigned and the product still be called a Wooton Patent Desk. And so the time passed when Wooton's ingenious invention could be called the “Desk of the Age.” □

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and patience should be able to glean enough to draw a plan and build a similar desk.

Base: The rectangular area of the base is sized to fit the main case, and the side pieces, or legs, extend to support the doors. I laminated the legs from five pieces of ¾-in.-thick stock and doubled up both cross pieces. It would have been nice to use a shaper with knives ground to the leg molding profile, but I achieved the same results with multiple router passes using three different router bits. The door support bumper helps prevent the doors from sagging and keeps the mating doors positioned when closed.

Main case: The case must be solidly built and securely joined to the base to support the hinged doors and writing flap when open. The ¾-in.-thick side frames are mortised and tenoned together,

and their front edges are doubled to create a 1½-in.-wide surface for the hinges. I reinforced the rail-and-stile joints of the side and back frames by gluing and screwing ⅝-in.-thick pine boards across them on the inside of the case, although this was not done on the original. The bottom is glued and screwed into rabbets in the sides, and the top overlays the sides and is screwed and glued to the top rails of the side and back frames. The two horizontal dividers are glued and screwed to the top of the pine reinforcing boards that run front to back. I glued and screwed 2x2s to the case bottom to secure the case to the base.

Door cases: Door construction is similar to case construction except for the curved parts at the top. I bent the curved rails, which have an outside radius of 12 in., by kerfing their back sides and soaking them in water. I cut the blanks for the C-caps and the



Left and right: Lehnert patterned his desk after a Wooton standard-grade cabinet secretary. He took great pains to reproduce the details, including 40 cardboard drawers, incised decorations on the writing flap and intricate patterns on the hinges. Below, left: A trophy-plate engraving machine is used with a double-size template to carve the hardware patterns onto a brass sheet. Then the hardware's outer shape is sawn. Below, right: Lehnert uses a Mill-Route duplicating machine to rout the design on the writing flap panel. The Mill-Route works like a pantograph: it guides a router via a stylus that is moved around a full-scale pattern of the desired design.



front and side panel moldings with my bandsaw circle-cutting jig. Note that the inside radius of the front panel moldings is $\frac{3}{4}$ in. smaller than that of the C-caps to accommodate the deeply inset curved panel. The panel is a $\frac{1}{4}$ -in.-thick pine board, which I soaked for a day so it would be pliable enough to bend. I then glued and screwed it to the back side of the curved rails and applied the walnut burl veneer to the panel after it had fully dried.

As with the main case, the framework is reinforced by $\frac{5}{8}$ -in.-thick pine boards glued across the joints inside the door cases. The left door is $\frac{1}{16}$ in. narrower than the right door so the moldings on the right door are centered when the doors are closed. The center moldings overhang the right door by $\frac{5}{16}$ in. to span the $\frac{3}{16}$ -in. gap between the doors and to overlap the left door by $\frac{1}{4}$ in.

The decorative groove (false frame and panel) on the inner sides of the door cases is routed with a template and guide bushing. The door latch operates via a T-handle connected to a 14-in.-long steel rod running through the inside of the right door. An old-fashioned keyed door-lock mechanism is mounted under the escutcheon on the door case. When the handle is turned, a notched latch engages a hook on the main case and a lock strike on the left door.

Pigeonholes: The pine pigeonhole boards are trimmed with solid walnut splined onto their front edges, which adds a dramatic color variation. I cut and dry-assembled the outer frame of the pigeonhole sections first, to ensure they fit perfectly inside the cases. I used a dado blade on the tablesaw and a sliding crosscut table with a hold-down clamp to cut the shallow dados for joining the parts.

Engravings: The original Wooton desks had decorative cast hinges and escutcheons. But when I found it would cost about

\$3,000 to set up and cast the hardware for one desk, I decided to engrave it instead. I made charcoal rubbings from an original desk and photo-enlarged them to double size. Working from these copies, I used a scroll saw to make $\frac{1}{8}$ -in.-thick plastic templates and engraved the brass hardware using a two-to-one trophy-plate engraving machine (see the bottom, left photo). I then sawed the outer shape of each particular piece of hardware, spray painted them black and removed the paint from the engraved surfaces with steel wool. The decorative design in the bird's-eye maple veneer on the writing flap was routed similarly. Here, though, I used a Mill-Route duplicating machine (made by Progressive Technology, Box 672525, Houston, Tex. 77267) and a one-to-one pattern (see the bottom, right photo).

Detailing and finishing: The decorative appliqué and carved elements of the gallery were roughed out on the bandsaw and then carved to final shape and assembled. I sanded all surfaces to at least 200-grit and most to 600-grit before finishing. Much of the furniture built during the Victorian period was varnished and so I wanted to follow suit. However, the vertical surfaces, pigeonholes and numerous carvings and moldings intensified problems with varnish runs and sags. I solved these problems by using Bartley's Clear Varnish (available from Bartley Collection Ltd., 3 Airpark Drive, Easton, Md. 21601). This gel varnish is applied like an oil finish; it's rubbed on with a cloth and the excess is wiped off almost immediately. For the pigeonholes that were too small to get my hand into, I applied the finish with a cloth wrapped around a stick. □

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Wooton desk construction



Gallery is doweled, not glued, to top.

Right-door case, 44 $\frac{1}{4}$ "Hx20 $\frac{1}{16}$ "Wx12"D

Right-door pigeonholes, 43 $\frac{1}{16}$ "Hx18 $\frac{1}{16}$ "Wx10 $\frac{3}{4}$ "D

Routed pattern

Upper main-case pigeonholes are 23 $\frac{3}{16}$ "Hx37 $\frac{1}{4}$ "Wx11 $\frac{3}{4}$ "D.

Cover flap for top pigeonholes

Writing flap, 1 $\frac{1}{4}$ "x23 $\frac{3}{16}$ "x37 $\frac{1}{16}$ "

Left-door pigeonholes, 43 $\frac{1}{16}$ "Hx17"Wx10"D (contains mail drop box)

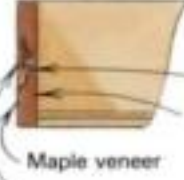
Left-door case, 44 $\frac{1}{4}$ "Hx19 $\frac{1}{4}$ "Wx12"D

Track and stop for flap support



Detail: Cross section of drawer front

Drawers have half-blind dovetails in front and through dovetails in back.



Inset rosette
Walnut, $\frac{1}{4}$ " in. thick

Maple veneer
Drawer pull

Detail: Curved panels

Burl veneer

Lower main-case pigeonholes are 20 $\frac{1}{16}$ "Hx37 $\frac{1}{4}$ "Wx11 $\frac{3}{4}$ "D.

Panel, $\frac{1}{4}$ " in. thick, is curved, veneered and glued to inside of kerf-bent frame.

Main case, 49 $\frac{1}{4}$ "Hx40 $\frac{1}{2}$ "Wx14"D

Attach case to base with 2x2s.

Support bumper for closed doors

Base

Pine boards reinforce frame joints.

Pivot hinges for writing flap

Cardboard drawers

Handle is linked to latch with steel rod through groove in side.

Detail: Exterior of right door

C-cap molding

Center moldings overhang $\frac{1}{16}$ " in. to overlap other door when closed.

Pigeonhole case

Panels, $\frac{1}{16}$ " in. thick, are veneered and glued to flat walnut panels, $\frac{3}{8}$ " in. thick.

Handle

Panel molding

Stile is kerf-bent to a 12-in. outside radius.