

The Queen Anne dressing table is a rather special woodworking project. The piece itself is beautiful, a lovely example of the fine lines and proportions that characterized the period. And it is a perfect exercise in all aspects of 18th-century cabinetmaking skills, including mortise-and-tenon carcase construction, sculptured cabriole legs with turned-pad feet, shell carving and drawer dovetailing. When you've completed a dressing table, you've really made a table *and* a small chest of drawers, so you will have mastered many of the skills needed to produce other period pieces.

Queen Anne dressing tables actually date back to the first half of the 18th century. They were extremely popular during this period because they are attractive and multifunctional, capable of serving not only as a dressing table, but also as a side or serving table and a basic work surface. Most people today call this furniture form a lowboy, although that term didn't appear until the end of the 19th century, when it was mentioned in the August, 1899, issue of *House Beautiful*. Frequently made as companions to matching high chests, called highboys, Queen Anne dressing tables were scaled-down versions of the base on highboys, with all the same features and basic proportions, hence the term lowboy.

The delicate and graceful nature of the lowboy's form suggests it is a feminine piece. Designed to be placed against a wall, its top is seldom molded on the back edge, as it invariably is at the front and sides. Additionally, the backboard is usually made of a secondary wood, such as pine or chestnut, and is obviously intended to be hidden. The lowboy I've designed adheres closely to the essential elements of the Queen Anne period. So while the result isn't an authentic reproduction, it could well have been an



18th-century New England piece. The lines of my dressing table are quite similar to pieces typically made in Connecticut, although cherry would probably have been the preferred wood instead of the tiger maple I used. Acorn drops, vestiges of the William and Mary period, have been omitted and the apron has a deep, ogeescrolled profile. The top drawer also reflects the period preference over earlier three-drawer arrangements. The fan carving, sometimes referred to as a sunburst, is really a stylized shell, another trademark of Queen Anne furniture.

Making the cabriole legs—The cabriole legs, which extend the full height of the dressing table, greatly enhance the structural integrity of Queen Anne pieces, but they have one serious drawback: the grain on the leg posts runs in opposite directions to that on the case sides. Seasonal expansion and contraction of the case sides resulted in cracks on many Queen Anne and Chippendale highboys and lowboys. However, to maintain the authenticity of the piece, I have joined the case frame in the traditional manner.

Proceed by milling the leg blank square, making it large enough to accommodate the offset leg post and the curve of the leg shaft, shown in figures 1 and 2 on the facing page. Cut the blank clean and square at both ends, leaving an extra inch on the leg post end. This keeps the lathe drive center from damaging the finished leg post and prevents scrapers, planes and sanding blocks from diving off the end of the stock, thereby altering the shape of the post. Any imperfections are easily removed by cutting off the extra inch after the leg is completed.

Begin laying out the legs by making a full-size template for the legs based on the dimensions given in figures 1 and 2. Then, draw layout lines in pencil across the blank to mark the leg's main transitions: the top of the foot, the top of the knee (the bottom of the



Although not a true replica, this lowboy incorporates the features found on Queen Anne pieces made in Connecticut during the 18th century. The ogee-scrolled apron is reminiscent of the acorn drops found on earlier William and Mary pieces, while the cast brass bardware, typical of later Chippendale styles, was also frequently found on later Queen Anne furniture.

leg post), the length of the shoulder where the knee bracket will attach and the exact finished length of the leg, plus the extra inch at the top of the post. Clamping the four leg blanks together will speed up the layout and ensure that all the legs will be identical. Use a marking gauge to lay out the width of the leg posts. The incised gauge lines are more accurate and easier to follow than pencil lines, which are easily smudged and too thick for precision.

Trace the curve of the leg on the blanks while holding the template so the back of the leg post and the back of the foot are flush with one edge of the blank. Reposition the template on the adjoining face, aligning the back of the template with the same corner, and trace again. The intersecting corner forms the inside of the leg, so orient the pattern to present the best figure on the leg's front.

For the turned-pad foot, draw diagonals from corner to corner on both ends of the blank and mark the center with an awl or punch. Consult the leg detail in figure 1, and then use a pencil compass to draw the major diameter of the foot, 2^{3} /₈ in., and the smaller pad, 1^{3} /₄ in., on the bottom of the blank. Make the lines dark, so they can be seen while the stock is rotating on the lathe. This will enable you to turn the feet to the correct diameters without using calipers.

Before mounting the blank on the lathe make a single crosscut, as shown in the detail in figure 1, into each of the two adjacent outside faces of the blank to separate the top of the knee from the post, which is not cut to size until after the leg is carved. The crosscut makes a clear stopping point for carving the cabriole leg and the oversized post will be easier to clamp in the vise and turn on the lathe. The full-dimension blank will not only be better balanced on the lathe, but it will prevent the drive center from being dangerously close to the edges, as it is with a fully sawn post. Also, the leg post is less likely to become marred during carving. Now, following the template pattern you traced earlier, bandsaw the leg shape out of the square blank. Cut the inside and outside contours on one face first, save the waste and then tape it back on the blank to bandsaw the other face.

Study the detail of the leg given in figure 1 for the general shape and dimensions to complete the legs. To begin, center the bandsawn leg on the lathe, with the foot at the tailstock end, and turn the major diameter of the foot. Next, mark the height of the foot pad on the cylinder, and then turn the pad to size, shaping the sides of the foot to the correct profile. I scrape the pad with a parting tool because it's difficult to cut with a gouge or skew in such a small area. Use the tip of a skew chisel to make a shallow groove at the top of the foot as a reference point for carving the foot and the ankle. You can also turn a small shoulder above the incised line, which rounds off the arris at the back of the ankle and causes the three other thin corners to flake off. With the skew, shape the curved profile of the foot and turn a crisp corner between the upper part of the foot and the pad. Then, sand the foot on the lathe.

Shape the lower leg, from the knee to the top of the foot, using a drawknife, followed by a spokeshave, a patternmaker's rasp and cabinet scrapers. This may be done right on the lathe or by clamping the leg in a vise. Pare the back of the ankle a bit beyond the bandsawn line for a more graceful definition. I bandsaw the leg post, keeping the sawn face as smooth as possible, and then use a scraper to smooth its surface. A knife cut at the top of the knee helps maintain crisp definition between the knee and the post. With a chisel, pare the sawmarks off the knee and smooth it with a patternmaker's rasp and a file, but leave the shoulder crisp where the knee bracket will be applied. Finish up smoothing and shaping the leg by sanding. The inside curve of the leg, underneath and behind the bracket, is simply pared with a chisel and carving gouges, and need not be sanded.

Case and drawer construction—Although sugar, or hard, maple is the most common native hardwood used in Queen Anne furniture, most Connecticut lowboys were made from cherry, a wood that was favored either because of its availability or because it is easily finished to resemble the more stylish imported mahogany. I chose tiger maple as the primary wood for this piece because of its incredible beauty, in spite of the difficulty of carving the fan in



The central drawer runners are mortised into the back of the carcase and rest on a cleat nailed to the back of the front apron. A brace mortised into the back of the carcase and into the middle borizontal divider keeps this drawer from tipping when opened.

such wild grain. For the sides and top I was fortunate to have available full-width tiger-maple stock. The back was made from a single, wide pine board and all internal drawer parts, as well as the cleats and drawer runners, were also made from pine.

I made the sides and the back out of one-piece, 14-in.-wide boards; if you need to glue up the sides, do not use more than two boards for authenticity. Cut tenons on the sides and back, as shown in figure 2 on pp. 68-69 and figure 3 on the facing page, and chop their respective mortises in the legs. The mortises are located so the outside of the leg posts will be flush with the sides and back. Make a cardboard template (I prefer oak tag) from the dimensions in figure 2, and then clamp the side pieces together to bandsaw the scallops on the bottom of both sides. After test-fitting the joints, you can begin work on the front of the case.

The front apron is tenoned into the leg posts in the same way as the side and back panels. Prepare the apron stock as shown in figure 1 on p. 68, and cut the tenons on both ends. Then, use a cardboard template to lay out the scalloped profile and bandsaw it as you did the side panels. After making the front apron, joint and plane the two horizontal dividers and cut the dovetails on both ends. The shoulder-to-shoulder length of the horizontal dividers is identical to the shoulder-to-shoulder length of the front apron. The top divider is dovetailed into the endgrain at the top of the leg posts, which holds the case together. I've seen rectangular tenons used to install this member, but dovetails are probably stronger here and were more common. (For more information on cutting sliding dovetails, see FWW #79, pp. 54-57.) Scribe the dovetail pockets from the horizontal dividers themselves and cut them into the front leg posts. As you proceed, check the joints for accuracy so they will fit perfectly. Lay out and cut the pockets for the vertical dividers on the top of the apron and the underside of the lower horizontal divider.

I usually wait until after the piece is assembled to cut the two short, vertical dividers to length. This way I can measure the required length directly from the piece and have more room to install the central drawer runners and the front apron cleat that supports them. The two central runners for the three bottom drawers are mortised into the backboard, as shown in the photo below, and sit on a cleat nailed to the inside of the front apron, as shown in figure 3 on the facing page. Pockets in the cleat keep the runners in position. The outside runners are nailed directly to the case sides. In addition, two braces mortised into the top horizontal divider and the backboard, and another brace mortised into the middle divider and the backboard, shown in the photo at left, prevent the top and center drawers from tipping when pulled out. The outside runners for the top drawer prevent the two outside bottom drawers from tipping. Lay out and cut all of the mortises for these braces and runners in the horizontal dividers, the backboard and the apron cleat. Then, dimension the three braces and cut the tenons.

Now you can begin to assemble the case. I like to start by gluing the two back legs to the backboard, and the front apron and horizontal dividers to the front legs. Make sure that the front section is square; the back should be squared automatically by the shoulders on the wide backboards. The back and front assemblies will sandwich the rest of the case. With the back placed flat on the workbench, test-fit the sides in the rear legs and insert the three braces into the mortises in the backboard. Then add the glued-up front assembly to complete the sandwich. If everything fits well, disassemble the case and put it together again with all joints glued and clamped. After the glue has set, pin the tenons for the sides, back and front apron in the leg posts.

Rabbet a piece of $1\frac{1}{6}$ -in.-square pine to form the four L-shape drawer runners that are nailed directly onto the case sides, as



shown in figure 3. These runners support the top drawer and one side of both outside bottom drawers. Make the two T-shape central runners that serve all three bottom drawers as detailed in figure 3. They are glued and slipped in place once the cleat has been nailed to the front apron, and their rear tenons are fitted to their respective mortises in the backboard. Now cut the two vertical dividers to length, dovetail both ends and glue them in place.

The drawer construction for this lowboy is typical of the period, as shown in figure 2 on pp. 68-69. Its sides and the top of all drawer fronts are rabbeted to overlap the front of the case, and all the edges are lip-molded the same as the shell front drawer shown in figure 4 on p. 73. While the drawer sides join the back with through dovetails, the front is joined with half-blind dovetails. The underside of the ¹/₂-in.-thick bottom is beveled along the front and sides, like a raised panel, to fit into a ¹/₄-in. dado in the front and sides. The bottom slides under the drawer back and is nailed to the back's bottom edge. I size the drawers to allow ¹/₁₆-in. clearance between the drawer and the opening on the top and each side.

Do not assemble the central bottom drawer until after the shell carving is finished. You can prepare all the rabbets, the lip molding and the dovetailing, but the unattached drawer front is much easier to carve.

Applied knee brackets-The knee bracket serves to balance the protruding knee of a sculptured cabriole leg and visually separates

the leg from the apron, easing the transition between the curved knee and the flat apron. It also reinforces whatever scroll work or scalloped carving is employed in the design of the apron. An applied bracket, as used on this lowboy, is glued to the corner formed by the protruding leg shoulder and the face of the apron. As shown in figures 1 and 2, the bracket usually terminates in a point or a scrolled bead, pointing down and away from the apron. Sometimes an applied bracket runs the full length of the apron, between the knees of the legs at both ends. However, this type of bracket is commonly found on tea tables or sometimes on the ends of a lowboy or highboy base, and the bottom edge of this full-apron knee bracket is generally scrolled.

The size and proportion of the knee bracket are important to the overall design of a piece of furniture, so make the drawings and templates for the bracket as you develop the rest of the design. Begin making the knee brackets after the legs have been fully shaped, sanded and attached to the apron. Some people prefer to apply the bracket to the leg and carve it before the leg is joined to the rest of the piece. Although the individual legs are easier to hold on the bench, I prefer to fit the bracket to the leg and the apron after the two adjacent surfaces have been permanently joined.

I make all the knee brackets for a piece of furniture out of one piece of wood. This large stock is easy to grasp when bandsawing the bracket profiles, and it enables me to keep my fingers away from the blade. The thickness of the bracket stock is easily determined by measuring the distance that the knee protrudes beyond



The knee bracket is firmly held for carving by a drywall screw through a scrap block that is clamped in a bench vise (left). A small groove carved on the back of the knee bracket (center) traps excess glue and prevents squeeze-out on the face of the apron dur-

ing glue-up. The tool marks from the gouge even up the underside of the joint between the knee bracket and the leg and further add to the authenticity of this piece (right). The face of this joint is smoothed with files and sandpaper to match the contour of the leg.

the face of the apron. I usually add another $\frac{1}{16}$ in. to $\frac{1}{8}$ in. to this measurement to account for any variation between the other knees on the piece. The width of the bracket stock is determined by the width of the brackets, as indicated in figure 2. Make the stock at least 4 in. or 5 in. longer than the total height of all your brackets to provide a handle when you saw the last bracket. Try to match the bracket stock to the legs in both color and grain pattern and run the grain in the bracket in the same vertical direction as the grain in the leg. You may need to go through a bunch of stock to find a piece that will match a highly figured wood like tiger maple, but then again, knee brackets don't amount to very much material.

To determine the shape of the knee bracket, hold the stock against the apron and the vertical leg shoulder and trace the contour of the knee. Trace all the brackets against their respective knees, and number the brackets and leg shoulders accordingly. Make a template from your front-view drawing and use it to transfer the outline to the bracket. Then, bandsaw the bracket from the stock and use a chisel to shape the curve on the outside of the bracket. A thin drywall screw holds the tiny knee bracket to a small carving platform, which is clamped in a vise, as shown in the left photo above. Smooth the curve with a file and finish the bracket with sandpaper.

Before gluing the bracket in place, cut a shallow groove on its back, about ¹/₈ in. from the top edge, as shown in the center photo above. This groove will trap any excess glue and eliminate squeeze-out onto the apron when the bracket is applied. Spread glue on the surface behind the groove and on the other vertical face, which attaches to the leg. Do not apply glue to the apron or leg. Then, press the glued-on bracket in position for a couple of minutes, until it doesn't fall off. If you've made a tight-fitting shoulder, the bracket should stay without any fastenings or clamping. When the glue has set, use a chisel to pare the joint between the bracket and the leg, and sand it smooth. A gouge can be used to smooth the concave area of the joint on the underside of the bracket, as shown in the right photo above. Textures are important in period furniture reproductions, so you needn't make this surface machine perfect. **Carving the shell**-One of the most important characteristics of Queen Anne case furniture is the judicious use of carved motifs. Shells, or shell-like fans or sunbursts were most popular and often carved on the drawer fronts of highboys and lowboys. No better decorative element could have been drawn from nature to lend emphasis to the graceful lines of Queen Anne furniture.

The surface of the hub is flush with the face of the drawer front, while the recessed area below the hub is carved to the depth of the front apron. The quickest and most accurate way to determine the depth of this recess is to set the drawer face in its opening and scribe a line on the bottom edge of the drawer front along the face of the apron.

Laying out the fan on the drawer front is done in stages as the carving progresses. Begin by locating the center point, from which the fan's radii are drawn, on the vertical centerline of the drawer front, $^{11}/_{16}$ in. above the bottom edge. Using a small divider with a sharpened leg, scribe the 1-in.-dia. center hub. The scribed line will help guide the carving chisels. Scribe the fan's $6^{1}/_{2}$ -in. diameter onto the drawer face, and then scribe a $6^{1}/_{6}$ -in.-dia. circle inside the larger one to represent the width of the arc termini of the rays. The rays terminate in arc segments of $3^{1}/_{4}$ -in.-dia. circles and are $\frac{5}{6}$ in. wide where they contact the circumference of the fan. Because the fan's center point is located above the bottom edge of the drawer, the fan covers more than 180°, as shown in figure 4 on the facing page, but it terminates at the edge of the lip molding.

There are 17 rays, and the odd one is centered on the vertical centerline of the drawer front. After you have located the central ray, set your dividers to $\frac{5}{4}$ in. and lay out the other rays. Use a $\frac{3}{4}$ -in.-dia. round template made of lightweight metal, such as aluminum flashing, to lay out the arcs of the ray termini. Notice that the rays are S-shape in cross section to mimic the undulating contour of concave shell carvings. Carving the rays is simplified if the entire ray area is first relief-carved to a uniform contour, as shown in figure 4. Shape this area with shallow-radius gouges, and smooth it with coarse sandpaper.

Each ray must now be defined on the contoured field. Simply draw the rays on the surface using a pencil and a flexible straightedge as a guide. The rays are spaced a bit less than ¹/₈ in. apart at the

hub, and this can be determined by eye or laid out with dividers.

Fan carvings do not require a huge assortment of carving chisels; gouges can be used to shape convex surfaces as well as concave surfaces. To begin carving the rays, first incise a shallow groove along the layout lines using a straight chisel. Then, use a V-parting tool to begin to define the rays. The V-parting tool is useful only during the early stages of the carving. I use a combination of straight chisels and gouges to create the convex lobes, although any tool that works well for you is appropriate.

Lightly define the arc termini with a gouge of the correct sweep or incise them carefully with an X-Acto knife. Do not cut too deeply, but just enough to define a crisp edge. The convex lobes must be carved so that they end neatly at these termini, and various chisels and gouges will get the job done.

When all the rays are fully carved, sand them lightly with tiny pieces of folded, 120-grit paper. Shell carvings need not be sanded perfectly smooth, and, in fact, a few carved facets will add to the semblance of authenticity. I try to make my carvings as smooth as possible using chisels and gouges; I sand very little because it quickly dulls a crisp edge and diminishes the lively character of a carving. Burnishing can be effective, especially in the grooves of this fan carving. Rub these areas with a flat stick of hardwood sharpened to a knife edge, and renew the edge as it becomes dull from abrasion.

Finally, use a sharp knife to incise the circumference of the fan and carve the arc termini to meet it. The layout line will enable you to remove the chips cleanly. When the carving is complete, finish assembling the drawer and test it for fit. (Mack Headley offers more on carving a scallop shell in *FWW* #61, pp. 47-51.)

Installing the top—This lowboy has a top that is made from one 20-in.-wide board of exquisite tiger maple. This is an exceptionally large dimension for any native hardwood, so two boards are usually glued together. Again, three boards are almost never seen on period pieces and should be avoided on a reproduction.

The ogee-shape edge of the top can be cut with a router or roughed-out on a tablesaw and carved by hand. Because the shape does not conform to any standard router bit, a little experimentation will be necessary if you decide to use that method. You could also make several passes at various depths and distances from the edge with a $\frac{1}{2}$ -in. core-box router bit to shape the concave portion. The rest of the contour can be shaped with a block plane and scraped and sanded smooth by hand. The top is fastened to the base with 10, 10-1¹/₄ flat-head wood screws, which are driven through the top horizontal divider and the glue blocks that are attached to the case sides, as shown in figure 3 on p. 71.

Finishing–The choice of finishing materials and application methods will determine, more than anything else, how a piece will look. The techniques I offer reflect my own attitudes toward making Queen Anne furniture and represent the fruit of many trials and errors. I strongly suggest that you experiment with whatever finish you plan to use before applying it to a piece of furniture, and keep a written journal of these experiments and their results.

I find it easiest to handplane, scrape or sand the furniture components before they are assembled. Period furnituremakers probably did the same, particularly since sandpaper was a precious commodity. They expended little energy in smoothing tool marks or surface imperfections where they wouldn't show, as on the underside of a tabletop or the inside of a chest of drawers.

To me, wood coloration is a two-step process. The first step produces a base color, which homogenizes the various parts of a piece into a unified whole and serves as a foundation for stains

Fig. 4: Carved drawer front



and paints applied in the second step. Aniline dyes produce a good base color: they penetrate well, without masking the wood's natural figure. Although it is particularly difficult to color maple so that it looks antique, I've had good success by first applying Lockwood's Early American Maple (available from W.D. Lockwood and Co. Inc., 83 Franklin St., New York, N.Y. 10013), an amber aniline dye, as a base color.

After the dye is fully dry, lightly sand the raised grain with 220-grit (or finer) paper. You will have to reburnish the fan carving and maybe touch up the lobes with 400-grit sandpaper. Then coat the piece with graining liquid (available from Stulb, Box 297, Norristown, Pa. 19404) and rub it off immediately, leaving residue in cracks and corners to tone down the aniline dye and add some artificial aging to the piece.

For a top coat, I want an easy-to-repair hard surface film that can be built up with three or four coats. I used to mix my own oil-andvarnish solutions, but I've found Minwax Antique Oil Finish (available from The Woodworkers' Store, 21801 Industrial Blvd., Rogers, Minn. 55374-9514), a mixture of linseed oil, varnish, tung oil and mineral spirits, to be effective right from the can. Applied with a brush or rag, it becomes tacky in a few minutes and can be buffed to a glossy sheen. At least three coats are required to produce a good finish. The only drawback of this product is its short shelf life, so buy it fresh and in small quantities. Drawer sides, backs and bottoms are sealed with a single coat of a mixture of two parts boiled linseed oil and one part turpentine.

Hardware – Casting was the most practical method of producing back plates and escutcheons and it is still the preferred method for the best and most historically accurate hardware. I use authentic cast hardware from Ball and Ball, 463 W. Lincoln Highway, Exton, Pa. 19341: four brass pulls (#C9-036 antique), one brass escutcheon (#C9-036E antique) and one 5%-in.-dia. brass knob (#G17-136 antique). □

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