



Curly Cherry Highboy

*Flame finials
and carved fans
complete this classic*

by Randall O'Donnell

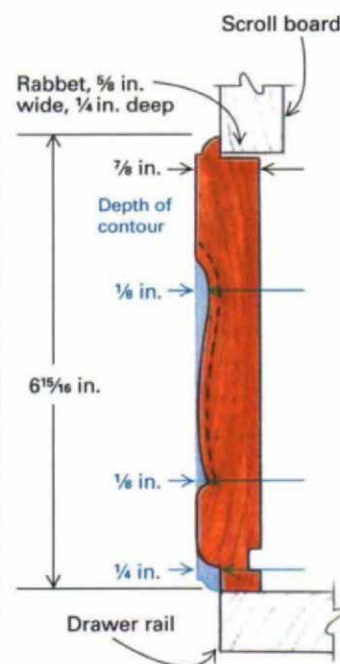
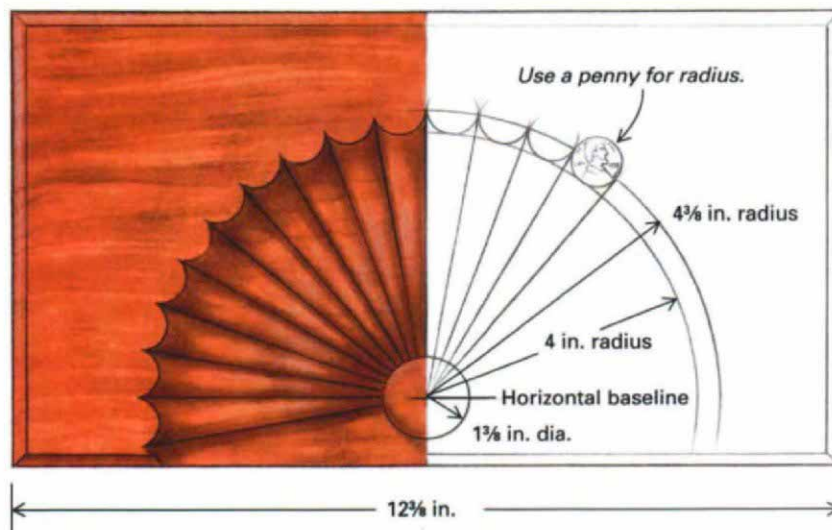
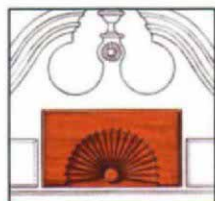
I imagine moving your household and three days later, packing up and moving again. That's what it's like to be an exhibitor at a furniture show. Setting up a booth is hard work. After the carpet was down and everything in place at a recent show, I caught my breath and watched as prospective customers walked into my booth to take a closer look at this highboy. It's almost 7½ ft. tall, and the figure of the curly cherry is exceptional.

Invariably, admirers would walk up to

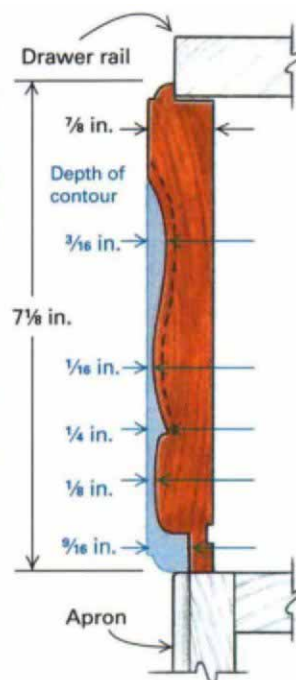
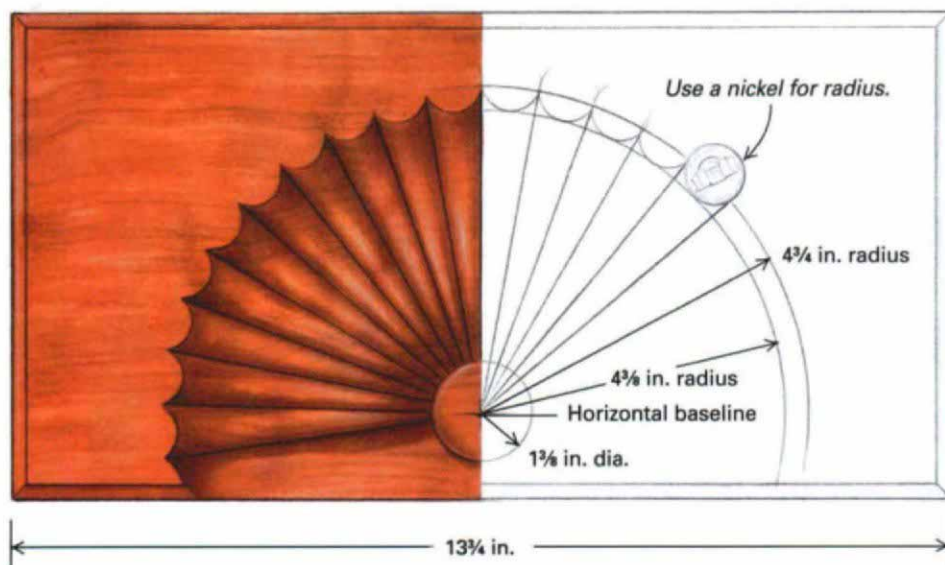
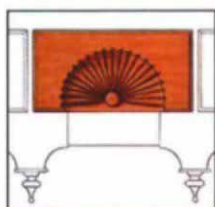
UPPER AND LOWER DRAWER FANS

There are three carved fans on this highboy: one on the center drawer of the upper case, one on the center drawer of the base and a third, much smaller, one at the top of the scroll board (see the drawing on p. 57).

Upper fan



Lower fan



the highboy and somewhat tentatively run their fingers over the fans carved into the two center drawers. Carving seems to serve as the touchstone of a piece (see the photo at left on the facing page). If the carvings look and feel right, customers stay to ask questions, take a brochure and, perhaps, place an order.

I make 18th-century-style furniture. Working within this form, I like to play with the details—to put my stamp on a piece. And nowhere is the ground more

fertile for expressing individuality than in carving. Although I have no reservations about using machines for preparing stock, carving is one of several things that I do completely by hand.

In the last two issues of *Fine Woodworking*, I described building the base and upper case of the highboy. Now it's time to carve the fans in the two center drawers and turn and carve the flame finials that crown the bonnet.

This highboy also has two smaller drop

finials in the base and a small, round fan carved in the center of the pediment. These parts use the same carving and turning techniques and are shown in the drawings on p. 57.

Lay out the fans with a compass and coins

The fans (or shells) in the center of the upper chest and lower base are one of the most eye-catching details on a highboy. There are many regional variations. I adapt

CARVING THE FANS



Fans carved into drawer fronts at the top and bottom of the case help give the highboy its distinctive look. The 20 rays in each fan are laid out and carved on a serpentine background.



1 *A coin for the scalloped edge—A penny is the right size for the upper drawer fan. A nickel fits the lower fan.*



2 *A scribe line marks the depth of the carved surface below the fan. This area forms the transition between the fan and the case rail.*



3 *To prevent wood from splintering into the hub surface, outline this area with carving tools.*



4 *Shape the fan background across the grain. Developing the S-shaped surface with mostly cross-grain cutting gives greater control over the tool.*



5 *Smooth the surface with a sculptor's rasp. A uniform surface makes carving the fan's rays easier.*

ed these fans from several Boston pieces.

To lay out a fan, I start by drawing a vertical centerline on the drawer front and then marking the horizontal baseline by eye (see the drawing on p. 53). The intersection of these two lines forms the center point of the fan. From this point, I scribe the outer radius, inner radius and hub diameter with a compass. These lines establish the overall size of the fan.

The fans are sized in proportion to drawer height, and each of these drawer fans has 20 rays. I found that the edge of a coin works well for laying out the ray spacing and scalloped edge. Starting at the center, I lay the coin on one side of the vertical cen-

terline so that the coin just touches the inner radius (see the top left photo above). I trace a semicircle around the coin, stopping at the outer radius.

I continue scribing the semicircles along the length of the arc and then repeat the procedure on the other half of the fan. I use a penny for the upper drawer fan and a nickel for the lower fan. With the spacing established, I draw lines from the center point to the scallops, marking the rays.

Because the lipped drawers stand proud of the case, the fan carving needs a transition to the horizontal rail below the drawer. To do that, I lower the surface of the drawer front immediately below the fan. I

complete the layout by setting the drawer front in the case and scribing a line on the lower edge of the drawer using the rail as a guide (see the top right photo above).

Carve the background and then the rays

A crisp scalloped edge heightens the contrast between the fan and drawer surface. To prevent wood splintering beyond the area being worked, I cut the outline of the hub and scallops into the drawer face with carving tools (see the bottom left photo above). Using a gouge with a sweep that closely matches the curve makes this easy.

The area on which the rays are carved is



6

Use a bench chisel to remove the waste below the fan. This surface provides the transition from the carved drawer to the case rail.

worked with gouges to form a shallow S-profile. This S-contour makes the finished fan sensuous. The serpentine effect can be further accentuated by the depth of the individual rays, so don't hog out too much material at this stage. I get the best results by removing the waste in a series of cuts along the curve. This is mostly cross-grain and skew-cutting (see the bottom center photo on the facing page), which minimizes the chance of taking too much material at once.

Once the bulk of the waste is removed, I smooth the surface with a sculptor's rasp (see the bottom right photo on the facing page). I don't use sandpaper until all carv-

ing is completed because grit particles left behind can quickly dull carving tools. Working the surface to the serpentine shape removes most of the ray lines between the hub and the inner radius. Now I redraw them.

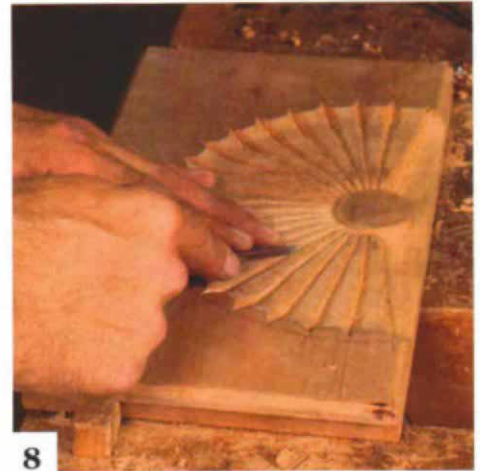
The rough-shaping for the ray surface is complete. I now hog out waste below the hub and bottom rays, making the transition to the rail on the carcass. A $\frac{3}{8}$ in. bench chisel works well for bringing this surface down to the line scribed earlier in the layout (see the photo at left above).

With the scallops and hub incised and the ray surface formed, I start carving the individual rays. A ray, in cross section, has a



7

A V-parting tool is used to define the rays. Because the surface is S-shaped, wood grain can change direction. Take care not to run tools against the grain, which could cause tearout.



8

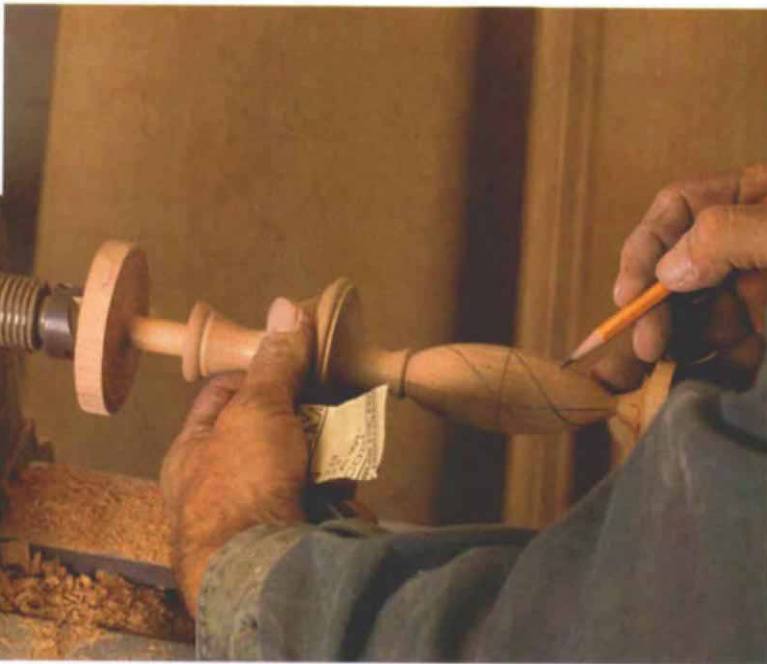
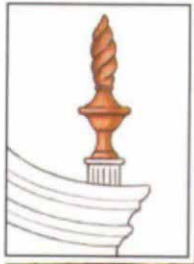
A successful fan carving is symmetrical. Shape the rays so they appear uniform in width and depth.



9

Sand the fan. The scallops and hub should not be rounded over.

CARVING THE FLAME FINIALS



1

A strip of paper wrapped around the finial creates a helix. The ends of the helices are brought to a point by eye.



2

Begin carving with a narrow veiner. Be careful not to cut into layout lines.

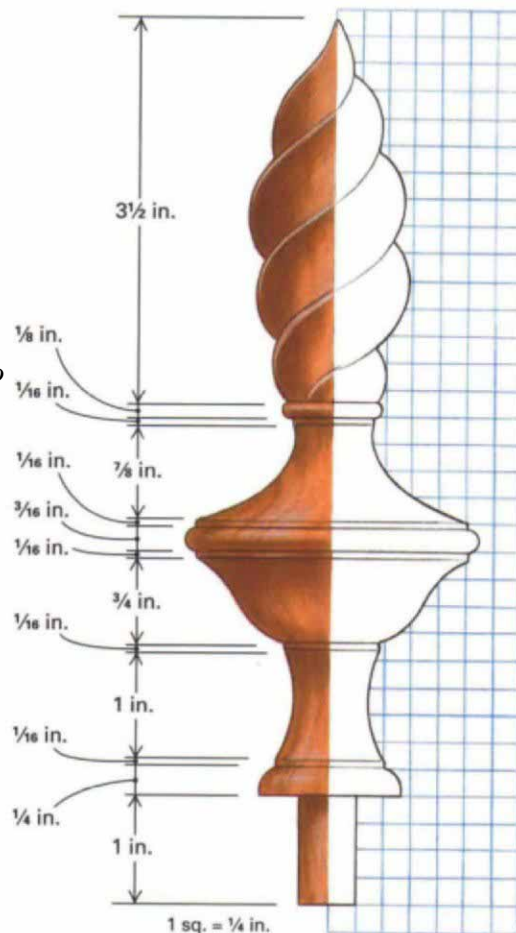


3

To form the flute, remove waste from between the helical grooves with a larger gouge.

Finial layout

Three flame finials cap the top of the upper case. Each has four flutes, which make one complete turn around the finial.



crowned shape. The height of the crown remains constant as the ray broadens, expanding from the hub to the scalloped edge. I begin carving the rays by defining the lines with a V-parting tool (see the top right photo on p. 55). Because of the serpentine surface, I have to change the tool direction so that I am always cutting downhill in relation to the grain. This helps me avoid lifting a big chip or having the wood split far ahead of the tool.

I use gouges to shape the rays. Starting from the V on either side, I cut along the ray, gradually working it to a rough convex shape (see the center right photo on p. 55). The faceted surface is smoothed into a continuous curve.

The hub is slightly tapered and crowned, but this detail is carved last. The hub can get nicked if you get too close with a V-parting tool or a gouge. These nicks are cut away with the final shaping. Periodically, I check the rays to make them the same, deepening the V between rays where it's needed. I crown the surface of the hub and taper the sides slightly. Finally, rifflers and sandpaper complete the fan (see the bottom right photo on p. 55).

Flame finials start on the lathe

These finials use the burning-torch motif that's seen on many high chests and tall clocks. The lower part of the finial is an urn, and the twist above it represents a flame. The overall shape is developed on the lathe, and the flame is then carved at the bench. The finials are made of 2 3/4-in.-sq. cherry stock.

I start by cutting the billets about 2 in. longer than the overall length of the completed finial (see the drawing at left) and then locating the center points for mounting them on the lathe. I turn the finial to shape and use a parting tool to establish the key diameters and gouges to cut and blend the sections together.

I turn a 1/2-in.-dia. by 1-in.-long tenon on the end of the urn, nearest the headstock. Then I turn the tip of the flame to 1/4 in. dia. and sand the entire finial. Even though the flame surface will be carved, a smooth surface makes it easier to lay out the twist.

The flame detail is somewhat like a screw thread—four grooves spiral up from the urn to converge at the tip to a point. Each groove (or flute) makes one complete turn. To lay out the flame, I mark the middle of the length of the turning. Then, using the indexing head on my lathe to hold the stock in position, I make four longitudinal

lines at 90° intervals. Using these lines on the flame section, I create the helical flutes by wrapping a strip of paper around the flame portion and scribing a line along the edge of the paper (see the top photo on the facing page). After all four helical lines are drawn, I blend the starting and ending points by eye. Now I can remove the turning from the lathe and saw off the waste at the ends.

Carve the flame with gouges

Holding turned pieces for carving can be a problem. The best solution I've found is to drill a hole slightly smaller than the finial tenon in a piece of scrap the size of a short 2x4 and jam the finial's round tenon into it. I can now clamp the scrap stock in my vise to position the finial at a comfortable angle and height.

I start denning the helix with a narrow gouge (see the center photo on the facing page), and then I work up to a gouge that is slightly smaller than the flute width (see the bottom photo on the facing page). Be careful not to cut into the helical layout line because this will alter the profile of the flame. I work each flute one at a time to avoid any mix-ups. After the flutes are carved, I smooth them with a round rasp and sandpaper.

Make the waist molding

When the fans and finials are completed, it's time to return to the highboy and finish the remaining details: the waist molding, plinths and finial caps.

The waist molding visually eases the transition between the base and the upper case. The molding, on the front and both sides of the case, also has a practical purpose. It keys the upper case to the base. I make the bead-and-cove profile on a shaper (see the waist-molding drawing detail at right). About 7 ft. of stock is needed to frame the front and sides.

To install the molding, I center the upper case on the base with the backs flush. This leaves a 1-in. gap on the front and sides to cover with the waist molding. I now measure and cut the molding stock. The molding is glued and nailed (with 4d cut nails) to the base unit. When the molding is in place, it's not necessary to fasten the upper case to the base.

Make the plinths, and mount the finials

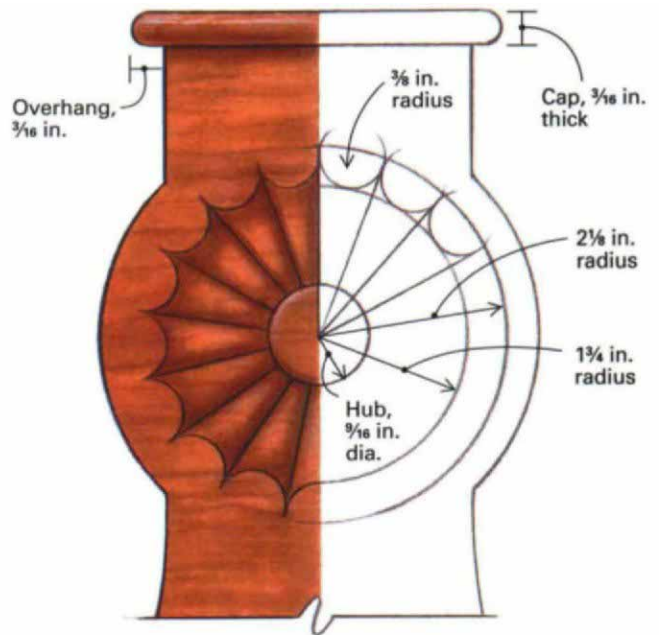
The finials on the upper corners of the bonnet sit atop small pedestals, also called

FINISHING TOUCHES

Scroll-board fan



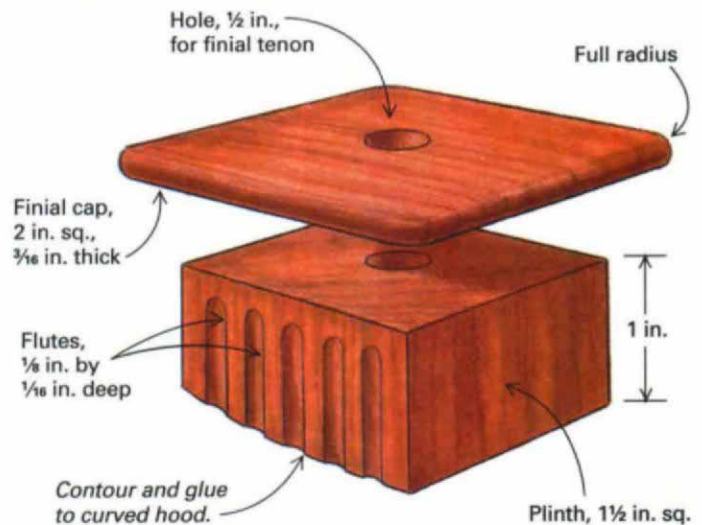
A carved fan punctuates the top of the scroll board. The fan has an outside radius of 2½ in. and a total of 17 rays.



Plinth and finial cap



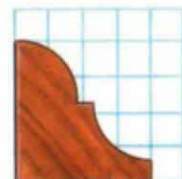
The plinth and the finial cap provide a base for the finial.



Waist molding

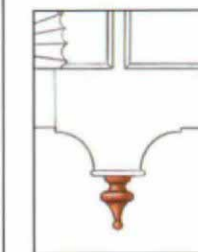


This molding holds the upper case in place on the base unit. It also provides the visual transition between these two large masses.

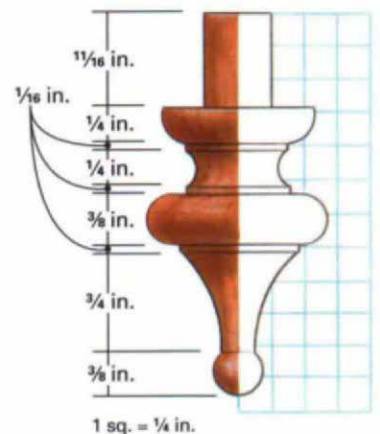


1 sq. = 1/4 in.

Drop finial



Tenons, ½ in. dia., attach two drop finials to the apron of the highboy's base. The finials are set on cap pieces 3/16 in. thick.



plinths. Each plinth is a 1½-in.-sq. by 1-in.-tall cherry block with a ½-in.-dia. hole bored through the top center for the finial tenon. Five ⅛-in.-wide, evenly spaced flutes are carved into the front face (see the plinth and finial cap drawing on p. 57).

The only trick to making the plinths is scribing the bottom of the plinth block to the curved hood, making certain that the plinth sits plumb. Here's what I do: Because the plinth is rather stubby, I temporarily fit a 2-ft.-long dowel into the hole in the plinth block. I use this long dowel as a sighting device.

I position the plinth block in the corner of the bonnet and, holding the dowel plumb, scribe the block to the bonnet curve. Because there's not much stock to remove to the scribe line, I use my belt sander. Then I glue the plinth blocks to the bonnet hood with contact cement—yellow glue doesn't work as well for this end-grain joint.

All five finials (three upper and two drop finials on the base) sit directly on a plinth cap. Each cap is a small piece of cherry stock, ⅜ in. thick with a full radius on all edges. The caps overhang the bases on which they are mounted by ⅜ in. on each side. A ½-in. hole is bored in the center for the finial tenon, and the caps are glued and nailed with brads to the plinths.

I don't glue the finials in place, so they can be removed when the highboy is moved. They are less likely to break or be damaged that way. Placing the finials on the highboy completes the woodworking portion of this project (see the photo at right on p. 52).

Apply the finish

Finish is such a personal preference. Advocates speak passionately for their favorite finishing materials and techniques. For me, the choice is simple—I use shellac. It's hard to beat for depth, luster and authenticity. Before applying the finish, I wet the surfaces to raise the grain. After the surfaces dry, I sand away the fuzz. I then apply a water-based aniline dye.

If you're unfamiliar with aniline dyes, experiment on scrap first to check the color. These dyes produce beautifully clear and vibrant colors, but they won't behave exactly like the oil-based pigmented stains you may be used to. It's easy to get lap marks if you're not careful. Using several coats of diluted dye is more predictable than trying to get the right color in a single coat.

After the dye is dry, I lightly rub the surface with a Scotch-Brite pad to remove any



THE UPPER CASE

This highboy's dovetailed upper case, with curved gooseneck molding and contoured bonnet, was covered in *Fine Woodworking* #118, pp. 34-41

Construction of the highboy's lower case, including its cabriole legs, interior framework and carved knee blocks, was described in *Fine Woodworking* #117, pp. 80-85.

additional raised grain. I then apply an oil-based glazing stain. Unlike the dye, glazing stain is very forgiving. It evens the base color and gives the look of 100 years of patina. I leave some residue in cracks and crevices to add to the aging effect.

After a 24-hour drying period, I start padding on shellac with a soft cloth. Between each coat of shellac, I lightly sand with a fine Scotch-Brite pad and wipe the

surface with a clean cloth. I used four coats of shellac on this highboy. Customers often request a final waxed surface. It certainly imparts a satiny depth, but wax attracts dust and fingerprints and always needs periodic re-waxing. I usually skip it.

Randall O'Donnell is a period furniture-maker who lives in the countryside near Bloomington, Ind.