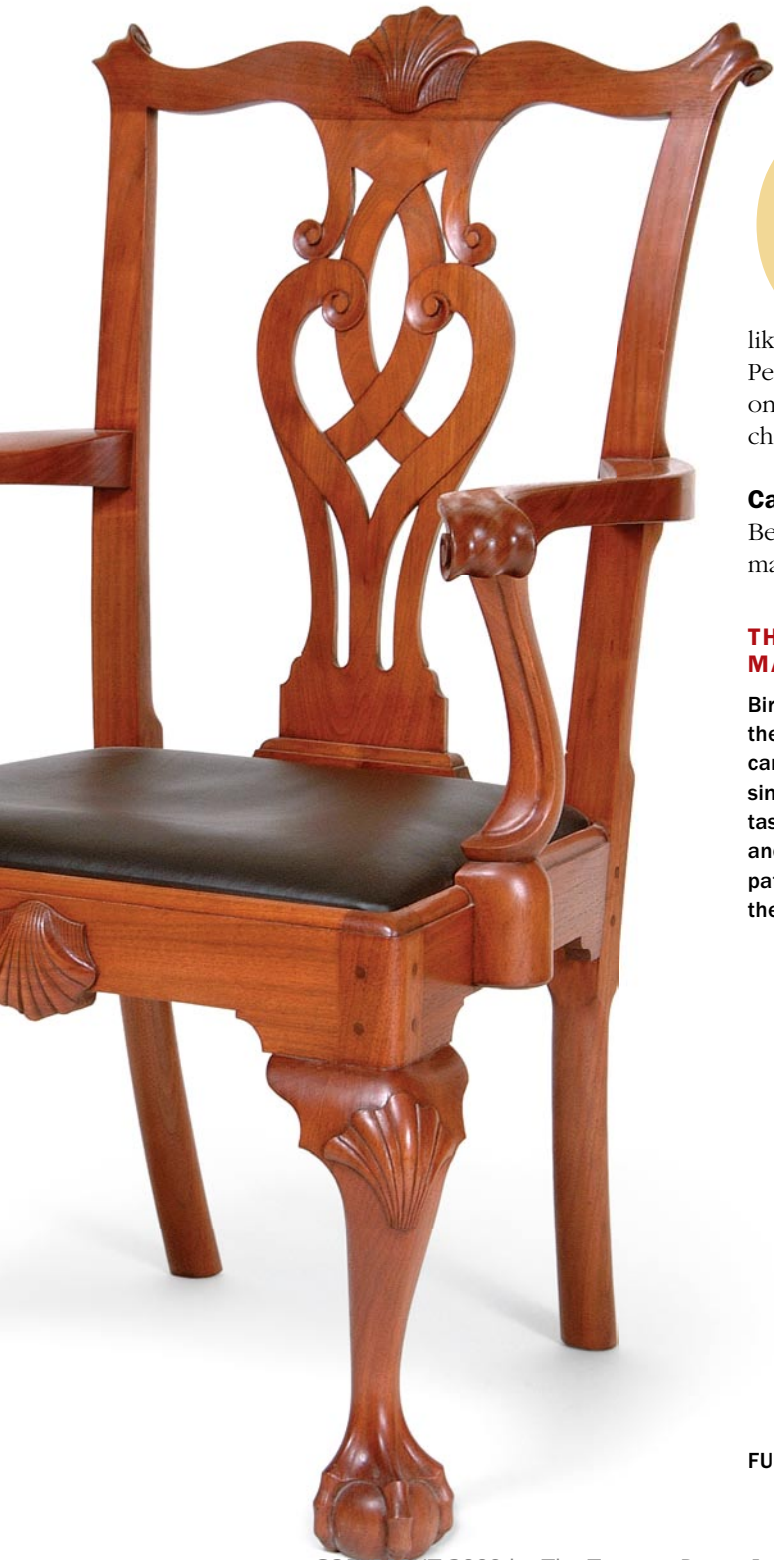


master class

Carve a shell on a cabriole leg



BY LONNIE BIRD



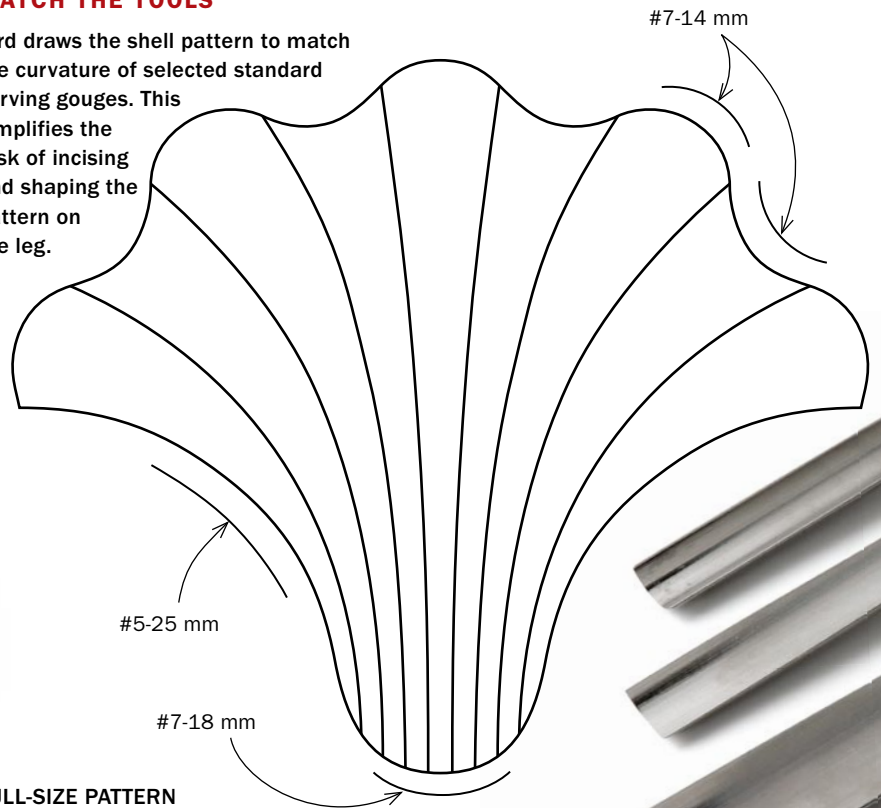
One of the surest ways to embellish a piece of furniture is to add a carved element or two. Although the thought of carving your furniture can be intimidating, some carvings are easier to create than you might think. This shell on a cabriole knee is a good example. Based on the ones found in Pennsylvania, the shell carving was used on chairs, tables, and case pieces like dressing tables, often in several places on the same piece of furniture. Pennsylvania chairs, for example, can have one shell on the crest rail, one on the seat rail, and one on each of the knees. Together, they unify the chair parts, adding considerably to the overall look of a piece.

Careful layout is critical

Begin the layout by photocopying the pattern of the carving below, magnifying it as needed. To cut out the pattern, place the paper on a

THE PATTERN'S CURVES MATCH THE TOOLS

Bird draws the shell pattern to match the curvature of selected standard carving gouges. This simplifies the task of incising and shaping the pattern on the leg.



FULL-SIZE PATTERN

Photo, this page (left): Lonnie Bird

Layout



flat piece of scrap wood and use carving gouges to create a series of overlapping cuts that match the outside shape.

You'll need three gouges for this: a #7-14 mm to incise the concave and convex lobes, a #7-18 mm for the semicircular bottom, and a #5-25 mm to incise the long curve between the lobes and the bottom. Later, you'll use these same gouges to incise the pattern's outline on the leg.

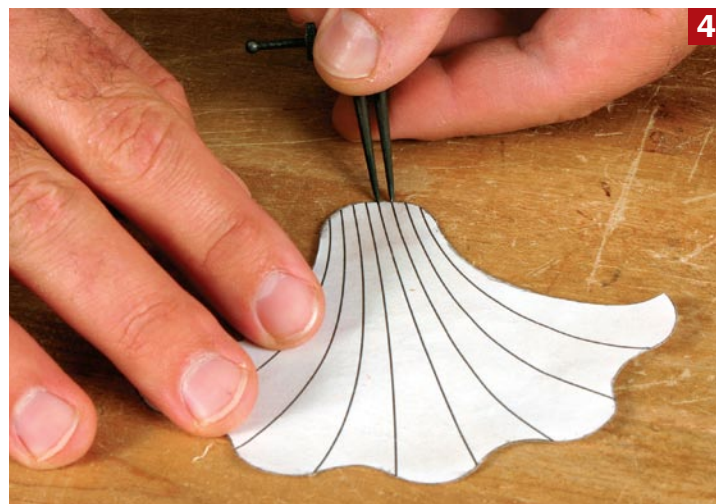
To draw the shell on the knee, place the pattern on the leg and trace around the perimeter. Because the leg is curved, it may be difficult to keep the pattern tight against the wood. After tracing, expect to do a fair amount of freehand sketching and blending of curves to get the perimeter to look right.

To ensure equally spaced lines for the lobes, use dividers to transfer measurements from the pattern to the leg at the top and bottom points of each lobe. Connect each pair of points with a smooth, flowing arc. Each arc has a mirror-image mate; draw the arcs in matching pairs. Use the arc at the edge of the shell as a guide for the first line. Afterward, each line guides the layout of the next.

Begin carving with the perimeter

The next step is to incise the perimeter of the shell. This is done using the same gouges you used to cut out the pattern. Beginning with the central convex lobe at the top of the shell, gently rotate the first gouge along the curve of the layout to create a light incision. Then, work your way around the perimeter. As you outline each convex and concave lobe, carefully flow each curve into the previous curve to create one continuous, undulating line. Avoid using a mallet or incising too deeply. Forcing the chisel deep into the leg at this stage can crush the edges of the shell and cause irreparable damage.

The next step is to carve away the surrounding wood so the shell ends up slightly proud of the knee. I use a long 1/2-in.-wide paring chisel here for better leverage and control. Watch the grain and always cut "downhill" to avoid digging in and spoiling the surface. Make only light cuts, no more than 1/32 in. or so. Then, blend the relieved surfaces into the curves



Transfer the pattern to the leg. After cutting out the paper pattern of the shell, use a pencil to trace the pattern's outline onto the leg (1). Next, establish the spacing of the lobes. Use a pair of dividers to capture the width of each lobe at its top (2), then transfer the dimension to the layout (3). Do the same at the bottom end-points (4).

Connect the layout points freehand. To get smooth, evenly spaced curves, you may need to erase and redraw all or part of each line.

Carving



Incise the shell perimeter. Use gouges to incise the entire perimeter of the shell.



Carve the area around the shell. Bird uses a paring chisel to remove material around the shell until it sits about $\frac{1}{16}$ in. above the leg.



Outline the lobes. Establish each of the lobes by using a V-parting tool to cut along the lines drawn earlier.

of the leg. Examine the shell outline carefully; if necessary, trim the edges lightly to improve the balance and flow. Repeat the process until the shell stands about $\frac{1}{16}$ in. proud of the leg.

Outline and shape the lobes

Use a V-parting tool to outline the lobes, taking care not to carve too deeply at first. To shape the lobes, begin by rounding the center convex lobe using a #5-12 mm gouge, with the bevel up. Start each lobe by cutting away the sharp corners until the two cuts meet in the center of the lobe. You may need to deepen the V to create a smooth contour.

As the Vs converge and the lobes get narrower, switch to progressively smaller gouges like the #8-8 mm and #8-5 mm. Continue rounding each lobe past the apex of the knee toward the base of the shell. Eventually the rounding will disappear. A close look will show that the V-shaped lines at the base of the shell are not rounded.

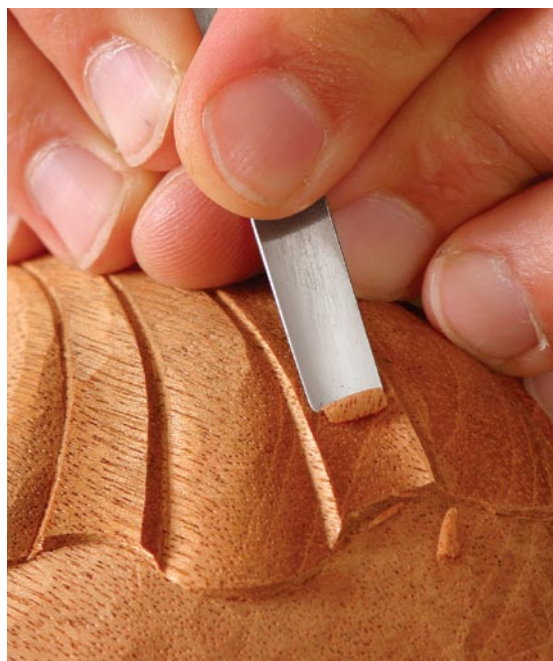
The two sharply curved outer lobes are typically the most difficult to carve, running across the grain in a spot where the leg's shape also makes carving a challenge. I like a back-bent gouge for this task.

Use the same series of gouges, bevel down, to carve the concave lobes. Again, start at the top of the carving and work back toward the shell's base. A sharp ridge forms as you hollow each lobe. Like the lobes themselves, each ridge should flow smoothly with no interruptions to the curve.

Once the shell carving is complete, use a card scraper to smooth the facets from the surrounding surfaces. □



Shape the convex lobes. Use a gouge with the bevel edge faceup to round the sharp edges of each lobe. Begin by rounding at the edges of each lobe (left) and work toward the middle. Use narrower gouges as you work your way down the shell (right).



Shape the concave lobes. Use your gouges bevel-edge down to create the hollowed shapes. Make sure that the ridges at the top of the V-grooves remain smoothly curved.

Lonnie Bird builds furniture and operates Lonnie Bird's School of Fine Woodworking (www.lonniebird.com) in Dandridge, Tenn.