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Arts & Crafts Wall Lamp

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- Step by Step construction instruction.
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- Exploded view and elevation drawings.
- How-to photos with instructive captions.
- Tips to help you complete the project and become a better woodworker.

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Arts & Crafts Wall Lamp

Built in the Greene and Greene tradition, this beautiful wall lamp features stained-glass panels, a dyed mahogany framework and classic ebony accents. It takes only a small amount of stock to build, so you can spend a little extra on high-quality glass to complete the project properly.

Although the origins of this lamp lie in the ornate oil lamps that graced the walls of manors and elegant homes, our version is designed as an electrical fixture in a 21st century home. In a sense, it effectively demonstrates the transition of the Arts & Crafts movement itself, which connected two centuries, rural crafts and high technology.

For stock selection, we used mahogany for the major lamp components and ebony for the plug and spline details. The Greene brothers made extensive use of these two woods in their designs, so the combination is a fitting choice here. You won't need much of either material. You could also use quartersawn white oak with walnut accents if you prefer, to achieve an Arts & Crafts effect.

Expose 3/16" of the dado head cutter, then relieve the front face of the plate. Since the length of this dado exceeds half the length of the workpiece, leave a stub at the end to keep the wood from tipping into the blade as the dado gets wider.

Making the Wall Bracket Plate

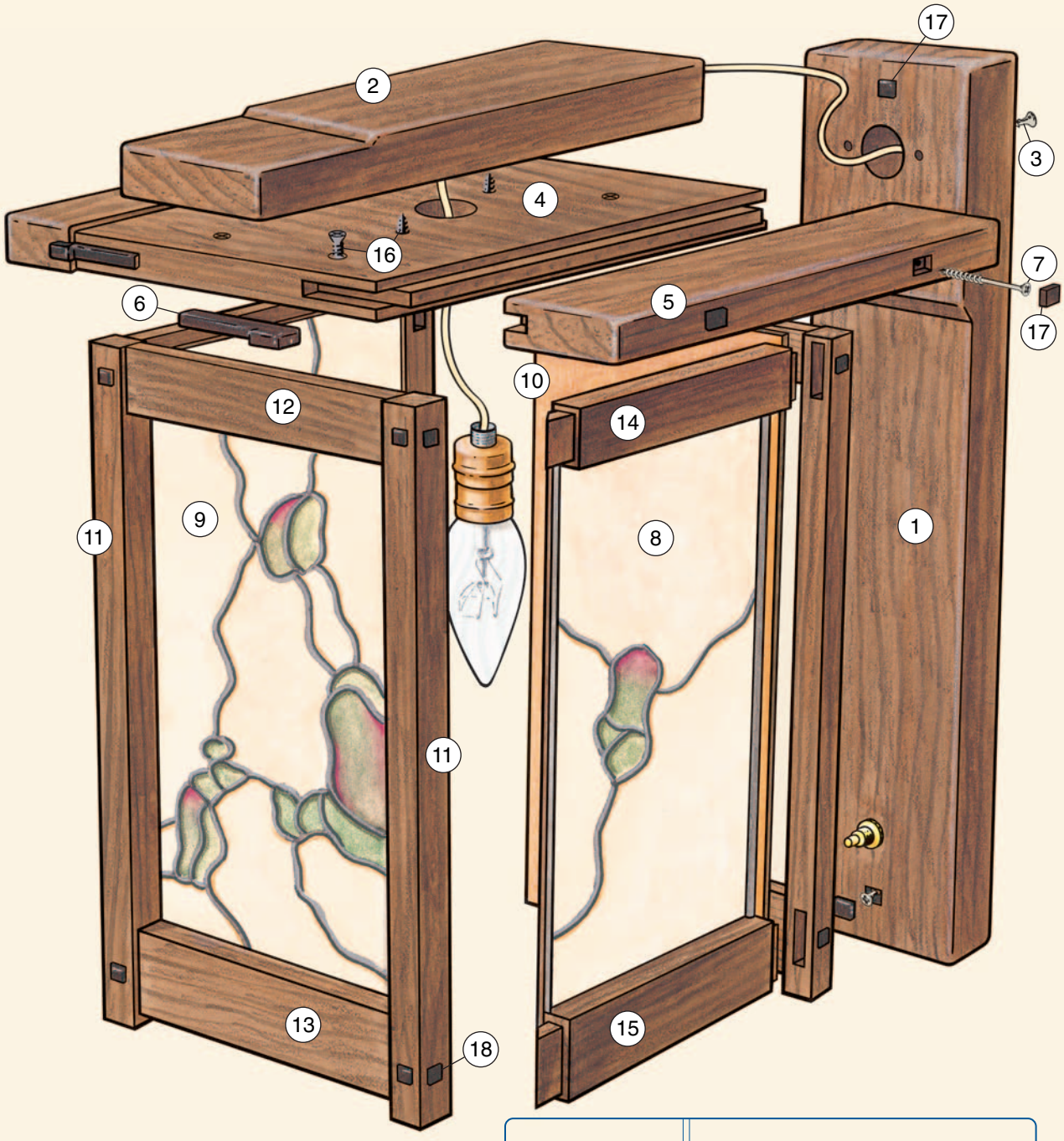
The wall lamp is mounted using a simple, L-shaped wooden bracket, and this is the first subassembly you need to make. Rip and crosscut the wall plate (piece 1) to the dimensions shown in the *Materials List* on page 69. Note that these dimensions are 1/4" longer than the final dimensions of the plate. That excess will allow you to remove material from the front face, creating a stepped effect—it suggests a classic Greene and Greene brother's "cloud lift" detail.

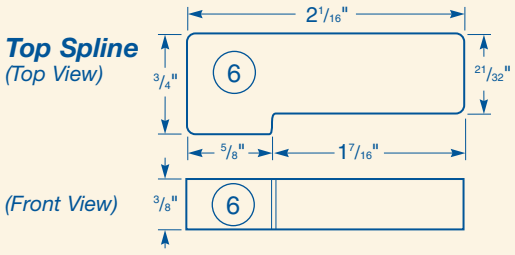
To create that look, install a dado head in your table saw and make sure your miter gauge is truly set to 90°. Make a series of repetitive cuts as shown in the *photo* above, saving the last 1/4" stub at the bottom to keep the piece from tipping down into the blade as you work. Mill the entire dado, then turn the piece over, install a standard crosscut blade and remove the bottom 1/4" stub to finish up the step.

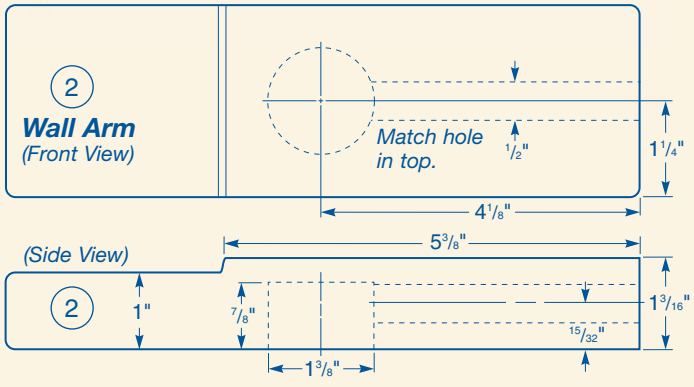
Use a Forstner bit to drill two 1"-diameter holes in the back of the plate, one stopped and the other all the way through (see the *Wall Plate Elevation Drawings* on page 69 for details), then chuck a 3/4" straight bit in your router to plow a groove between these holes (make several passes). The groove forms a relief area for the power cord that will pass through the top hole of the plate.

Next, lay out and chop the two 3/8"-square mortises in the plate for the mounting screws (refer to the *Drawings*).

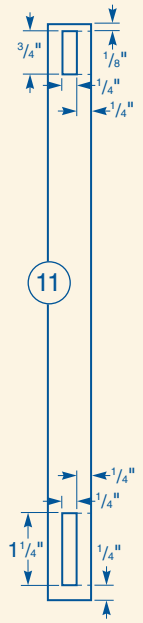
Wall Lamp Exploded View



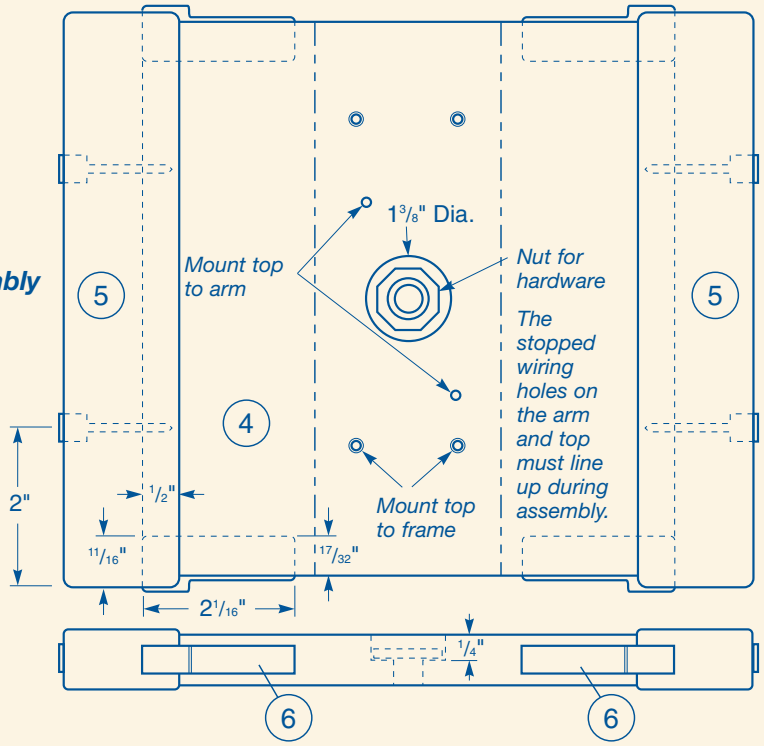




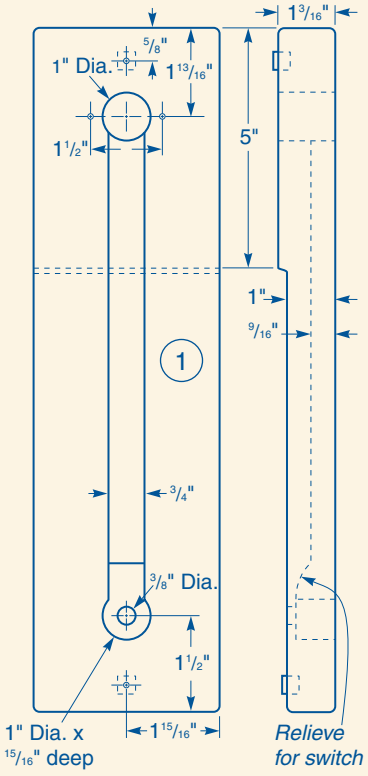
Frame Style
(Front View)



Endcaps, Splines and Top Subassembly Detail
(Top and Side View)



Wall Plate
(Front and Side View)



MATERIAL LIST – *Wall Lamp*

		T x W x L
1	Wall Plate (1)	1 3/16" x 3 7/8" x 14 1/2"
2	Wall Arm (1)	1 3/16" x 2 1/2" x 8 1/4"
3	Screws (2)	#10 x 3"
4	Top (1)	11/16" x 7 7/16" x 7 3/16"
5	Top Endcaps (2)	13/16" x 1 9/16" x 7 3/4"
6	Top Splines (4)	3/8" x 3/4" x 2 1/16"
7	Endcap Screws (4)	#6 x 2"
8	Stained-Glass Sides (2)	1/8" x 3 3/4" x 9 1/4"
9	Stained-Glass Front (1)	1/8" x 4 1/2" x 9 1/4"
10	Colored Glass Back (1)	1/16" x 4 1/2" x 9 1/4"
11	Frame Stiles (4)	3/4" x 3/4" x 10"
12	Upper Front and Back Rails (2)	1/2" x 1" x 5 7/16"
13	Lower Front and Back Rails (2)	1/2" x 1 1/2" x 5 7/16"
14	Upper Side Rails (2)	1/2" x 1" x 4 11/16"
15	Lower Side Rails (2)	1/2" x 1 1/2" x 4 11/16"
16	Frame/Top Screws (6)	#6 x 1 1/4"
17	Large Plugs (6)	3/8" x 3/8" x 1/4"
18	Small Plugs (16)	1/4" x 1/4" x 1/4"

Screws attaching the arm and plate should barely slip through the holes in the plate. The holes in the arm are about half their diameter.

The screw heads will be covered by square plugs—accents that are repeated throughout this project.

The last milling operation is to drill a through hole for the On/Off push button switch and the cord. Buy the switch before you size this hole so the switch fits correctly, and drill it at the location shown on the *Drawings*.

Building the Wall Bracket Arm and Assembly

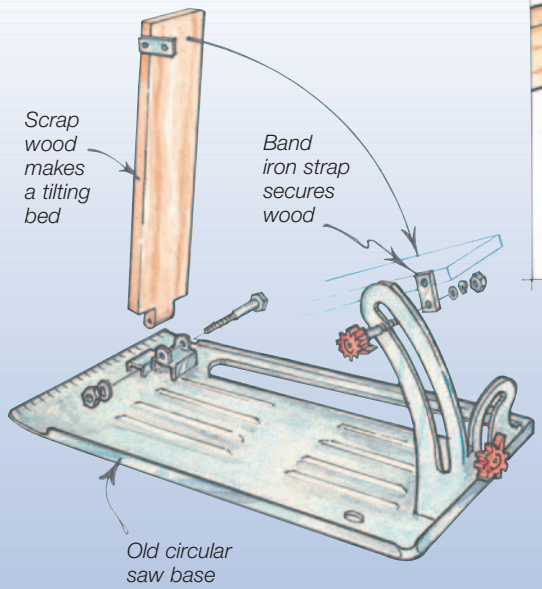
The arm for the bracket (piece 2) is cut from stock the same thickness as the plate. It, too, is stepped, so return to the dado head for your first milling operation. Since the lower step is less than half the length of the arm, there's plenty of stability in the workpiece for safe dadoing, so no need to leave a stub on the end this time around. Simply nibble away the waste, using your miter gauge as a guide.

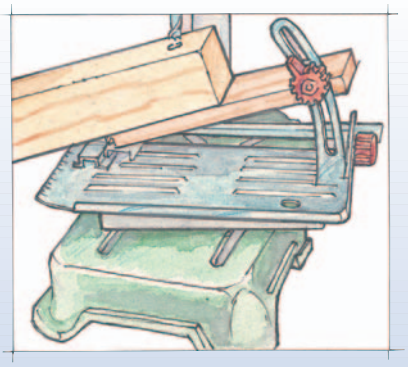
The thick end of the arm is attached to the plate with two screws (pieces 3). Refer to the *Drawings* for their loca-

QuickTip

Second Life for a Circular Saw Base

When your circular saw finally needs to be retired from service, the base can still serve a useful second life. Mount it to your drill press table and use it for boring angled holes. Here's what to do:

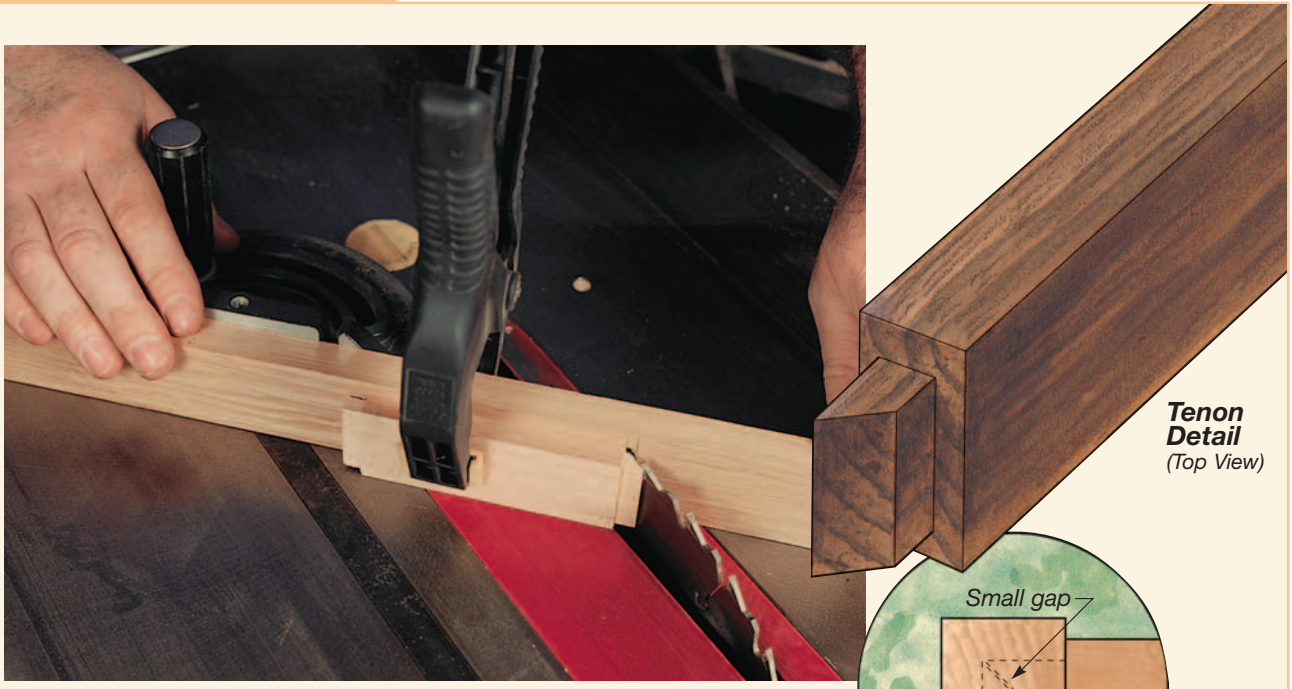


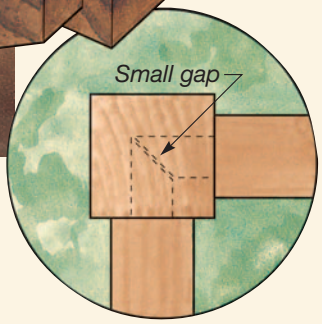


Notch the end of the scrap hardwood tilting bed to fit the hinge cradle on the old circular saw base, then drill a hole through the tongue you created, for a bolt.

Permanently tighten the bevel-adjusting knob to keep the tilting bed in a horizontal position.

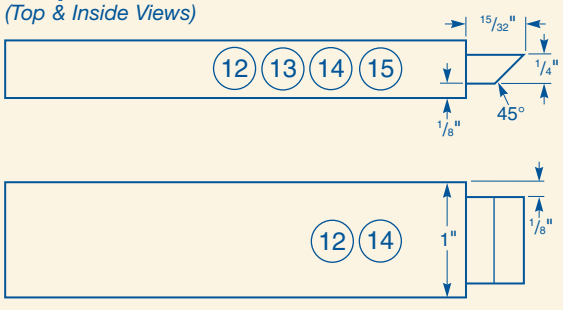
Technical Drawings

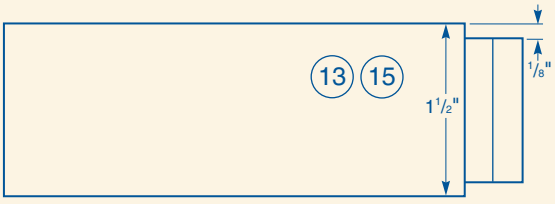




Tenon Detail
(Top View)

Lamp Rails
(Top & Inside Views)





tions, then drill your pilot holes, countersinking them for the screw heads. Now use your 1⅜" Forstner bit to form the stopped hole on the underside of the arm for the wiring. Assemble the two parts without glue to test their fit, then remove the screws.

Chuck an extra-long bit in your drill press to bore the 1/2"-diameter wiring hole that extends to the access hole you just made. Stand the arm against a tall fence on your drill press table and clamp it in place to ensure this deep hole passes straight through the arm.

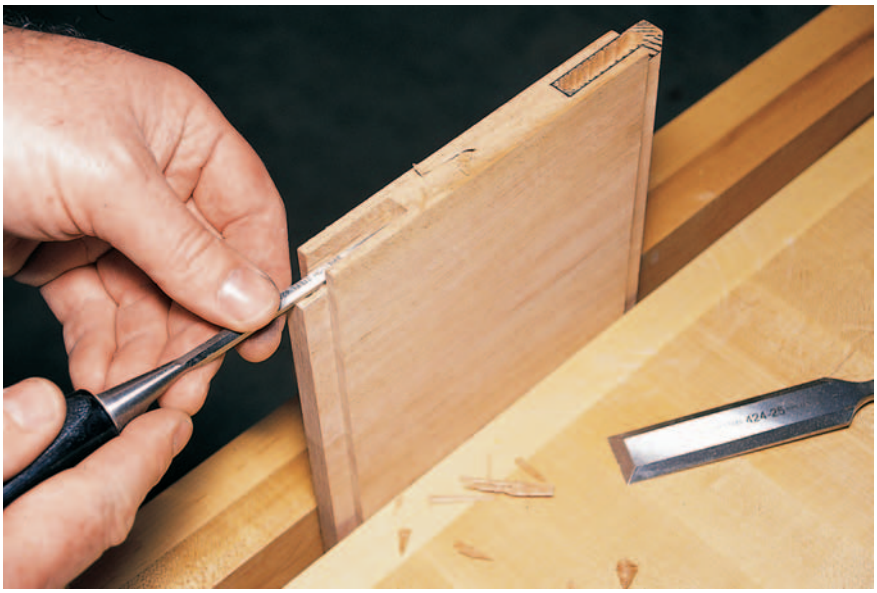
Adding Greene and Greene Styling

One hallmark of the Greene and Greene style was a soft, rounded edge treatment that added an exotic look to simple joinery. Admittedly, it's a tiny detail but one that really adds authenticity to the overall design. The goal here is to just break the sharp edges and corners with curves, not to make the piece look over-routed.

Chuck the smallest radius roundover bit you can find—1/8" works beautifully—in your router and gently round all but the back edges of the plate. Then mill all edges of the arm except the face that is joined to the plate. Use a fine-cut file and sandpaper to soften the transitional steps in both pieces, but make sure you don't leave scratches across the grain.

Forming a Top with Breadboard Accents

Asian in influence, the oversized top of this lamp is pure Greene and Greene. The top of our lamp (piece 4) is a simple board topped with a pair of breadboard endcaps (pieces 5). These



Clean up the mortises for the ebony splines in the top with a sharp 1/8"-wide chisel.

are narrow but slightly thicker boards with their grain across that of the top. The endcaps are grooved and joined to matching tenons with two screws each.

Start by installing a 3/8" dado head in your table saw and mill a groove in one long edge of each endcap (see *Drawings* for dimensions). Stay with the dado head to create the tenons on the ends of the top. Dry-fit the endcaps to the top to check their fit. Next, drill slightly oversized pilot holes through the endcaps to allow for wood movement. Chop square mortises to fit the ebony plugs that will later cover the screw heads. Return to the drill press and bore the stepped hole at the center of the top.

The Greene brothers used ebony accents to add stylized elements to their pieces. Typically, as with this lamp, these were exposed splines or screw plugs. Band-saw the four splines (pieces 6) to the shape shown in the *Drawings*, then lay out and chop their mortises in the endcaps and the sides of the top.

Break the exterior edges of the top and endcaps with sandpaper and assemble the endcaps to the top with screws (pieces 7): these are driven through oversized predrilled pilot holes. Don't glue the endcaps in place: the screws will hold them while still allowing for wood movement.

Stained-Glass Framework

The three decorative stained-glass panels (pieces 8 and 9) and the back panel (piece 10, a less expensive sheet of amber-colored glass), are protected and framed by a mahogany skeleton. Begin its construction by cutting the four stiles (pieces 11), the four front and back rails (pieces 12 and 13) and the four side rails (pieces 14 and 15) to the sizes outlined in the *Materials List*.

Lay out the four mortises in each stile, according to the dimensions and locations shown on the *Drawings*. Chop these mortises by drilling out most of the waste, then paring the edges of each with a sharp chisel. Cut the tenons on the rails using your saw's miter gauge and a sharp dado head (see *Drawings*), and then switch to your crosscut blade to form the miters on the ends of the tenons, as shown in the *photo* on page 71.

Next, locate and lay out the 16 small square mortises in the stiles, and chop these with a sharp 1/8"-wide chisel. The plugs that will fit these mortises are decorative. Dry-fit the rails to the stiles. When everything fits, break all the long edges of the styles and rails, but leave the ends as they are. Glue and clamp the framework together.

Applying the Dye

We used a water-based aniline dye to stain the mahogany to a rich, deep brown. Start the finishing process by sanding all the mahogany elements of your lamp with 120-grit paper, then raise the grain with a damp sponge. After it dries, sand with 220 grit. Add a small drop of dishwashing soap to the dye to break the surface tension and help the dye penetrate properly.

Apply the dye generously to the wood with a foam brush and wipe it off immediately with clean, soft paper towels to ensure even coverage. Be sure to wear disposable surgical gloves to keep from staining your hands. If the dye goes on too heavily in some places, use a paper towel dampened with distilled water to draw out some of the dye.

Finishing and Final Assembly

Pull on a fresh pair of gloves (your skin moisture can leave blotches on the dyed surfaces) and begin the assembly process by screwing the wall plate to the arm. Position the top on the arm by matching up the 1" holes at their centers. Drill pilot holes (see the *Drawings* for locations) through the underside of the top into the arm, then remove the top and drill pilot holes through the top side of the top for attaching the frame. After countersinking these holes, screw (pieces 16) the framework assembly to the top. Attach the top to the arm with

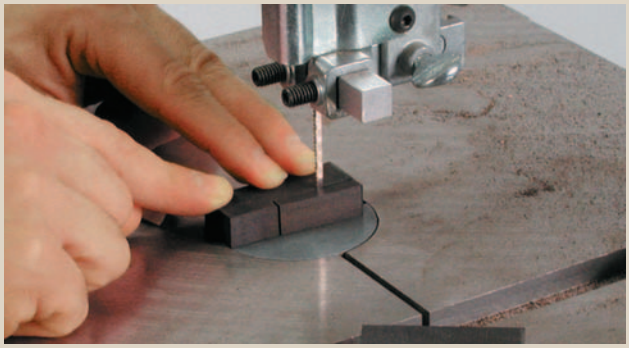
two more of these screws.

Spray the assembled lamp with three coats of satin lacquer, sanding between coats with 600-grit paper.

Make the decorative plugs (pieces 17 and 18) by crosscutting them from lengths of appropriately sized square sticks of ebony. Polish their top faces to gently break their edges before you crosscut and epoxy them into their mortises. Secure the glass panels in place with more epoxy. Next, install the On/Off switch and the lamp receptacle, and complete the wiring.

Be sure to use a small (40 watt) bulb and locate your lamp where it will serve both to light up a dark area and act as a wonderful accent piece that illuminates your woodworking skills.

FLOATING EBONY SPLINES



Start with a band saw to form the decorative splines, then complete their organic shape using files, scrapers and sandpaper.

Contrast, texture and shape are all created once the floating ebony splines are placed into the lamp's breadboard top. Cut them to shape on the band saw, then test their fit in the clamped-up top. The section of the splines that extends into the breadboard endcaps must float freely within the mortise. When you're satisfied with the fit, break all the exposed edges of the splines with sandpaper and polish them to an ultra-smooth finish.

Mahogany and ebony construction surround the stained-glass panels in this wall lamp. It is simply made, yet rich in details—the legacy of the Greene brothers' designs.