



porch or patio candle lanterns



Discover a clever method for cutting half-lap joints safely and accurately with this fun and practical project. You can mix and match three heights to suit your style.

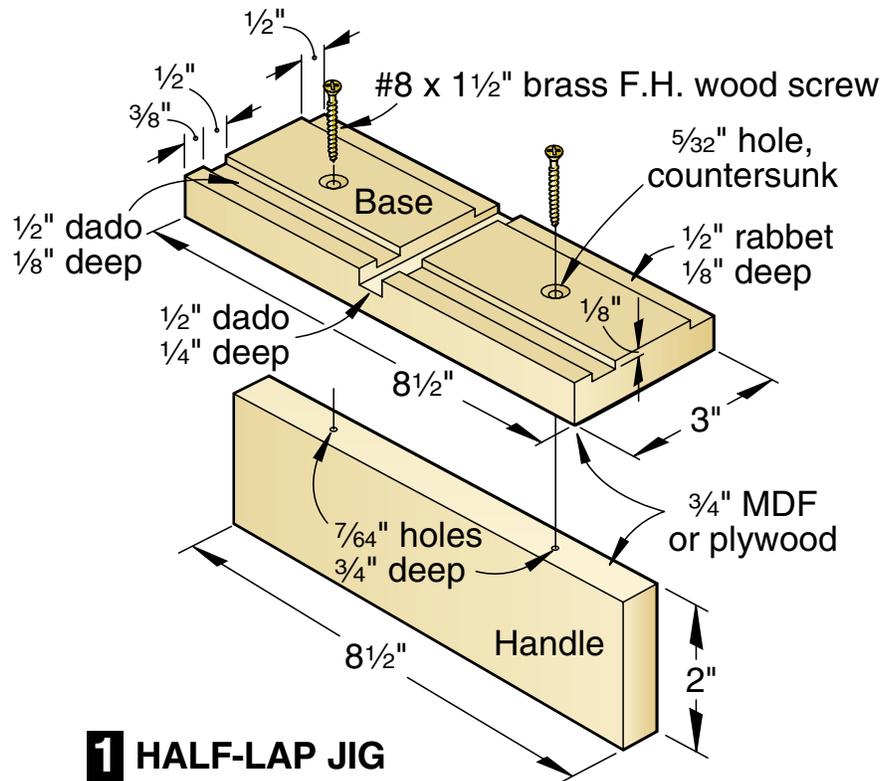
Note: Buy glass before you make the lanterns so you can size the base rabbet. (We used 1/8" cord glass.) To build the three different size lanterns, have your glass dealer cut four 3 9/16"-wide pieces each to 3 3/4", 4 3/4", and 5 3/4" long.

Make a jig first, then the stiles and rails

1 Make the half-lap jig shown on **Drawing 1** to cut the ends of the stiles (A) and rails (B).

2 Resaw and plane stock to 1/4" thick for the stiles and rails. The stock thickness must equal the depth of the center dado in the half-lap jig for accurate joints. Rip the stock into 1/2"-wide strips. (You'll need about 21 feet of 1/4x1/2" stock for the three lanterns shown.)

3 Crosscut the stiles (A) and rails (B) to the lengths listed in the Materials List.



1 HALF-LAP JIG



Keep the end of the stile or rail pressed against the saw fence when you cut the half laps.

4 Install a $\frac{1}{2}$ " dado blade in your saw, and add an auxiliary fence. Locate the fence next to the dado set. Now, lay a stile (A) into the dado in the half-lap jig. Place the jig facedown on the saw table with the rabbeted edge against the auxiliary fence, trapping the stile against the table. Push the stile against the fence. Cut a half lap on one end of each stile, and both ends of each rail, where shown on **Drawing 2** and as shown in **Photo A**. Reset the fence, rotate the jig, and cut the half laps on the lower end of each stile.

Assemble the sides

1 Referring to **Drawing 3**, glue and assemble the four sides for each lantern, keeping each side square.

2 Cut a $\frac{1}{8}$ " groove $\frac{1}{8}$ " deep in each side assembly, where shown on **Drawing 3**.

3 Bevel both edges of each side to 45° . (We beveled the edges with a router table and 45° chamfer bit.)

Make the bases

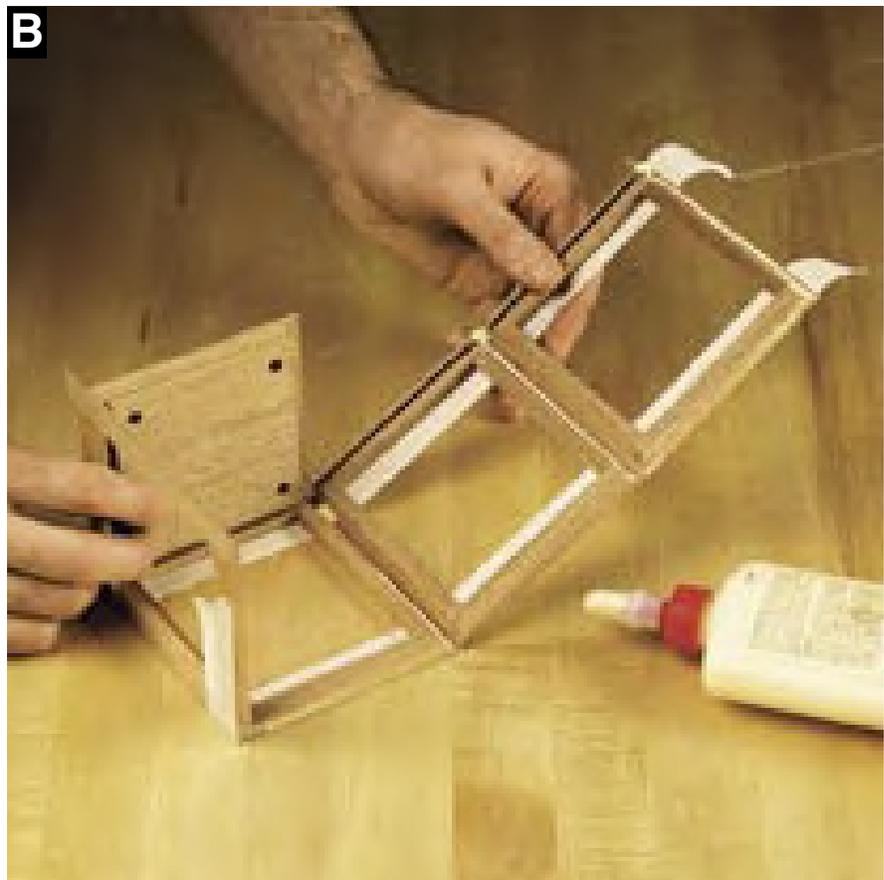
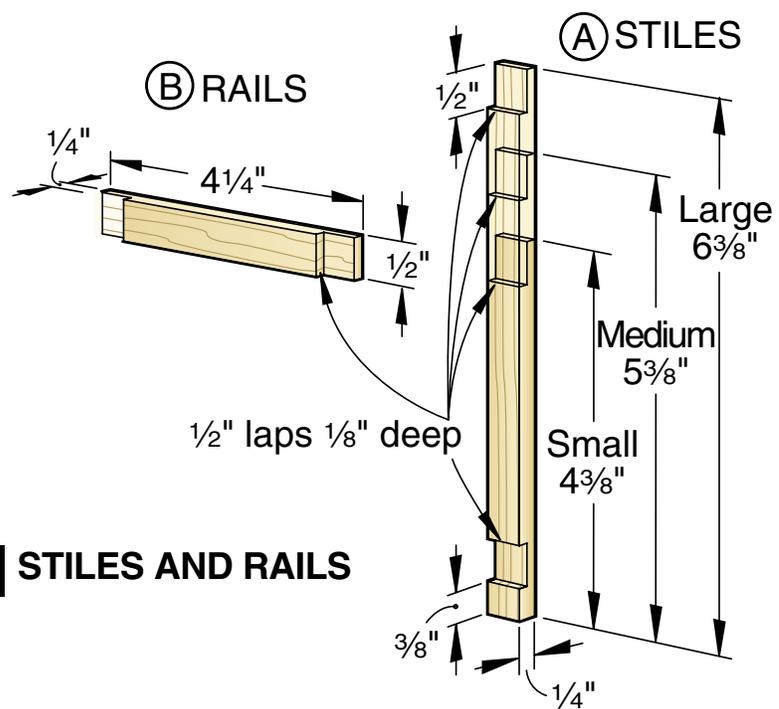
1 Cut the bases (C) to size. Cut the rabbets, where shown on **Drawings 3** and **3a**. Make the width of the rabbets $\frac{3}{16}$ " plus the thickness of the glass.

2 Drill four $\frac{1}{4}$ " drainage holes in each base, where shown on **Drawing 3a**.

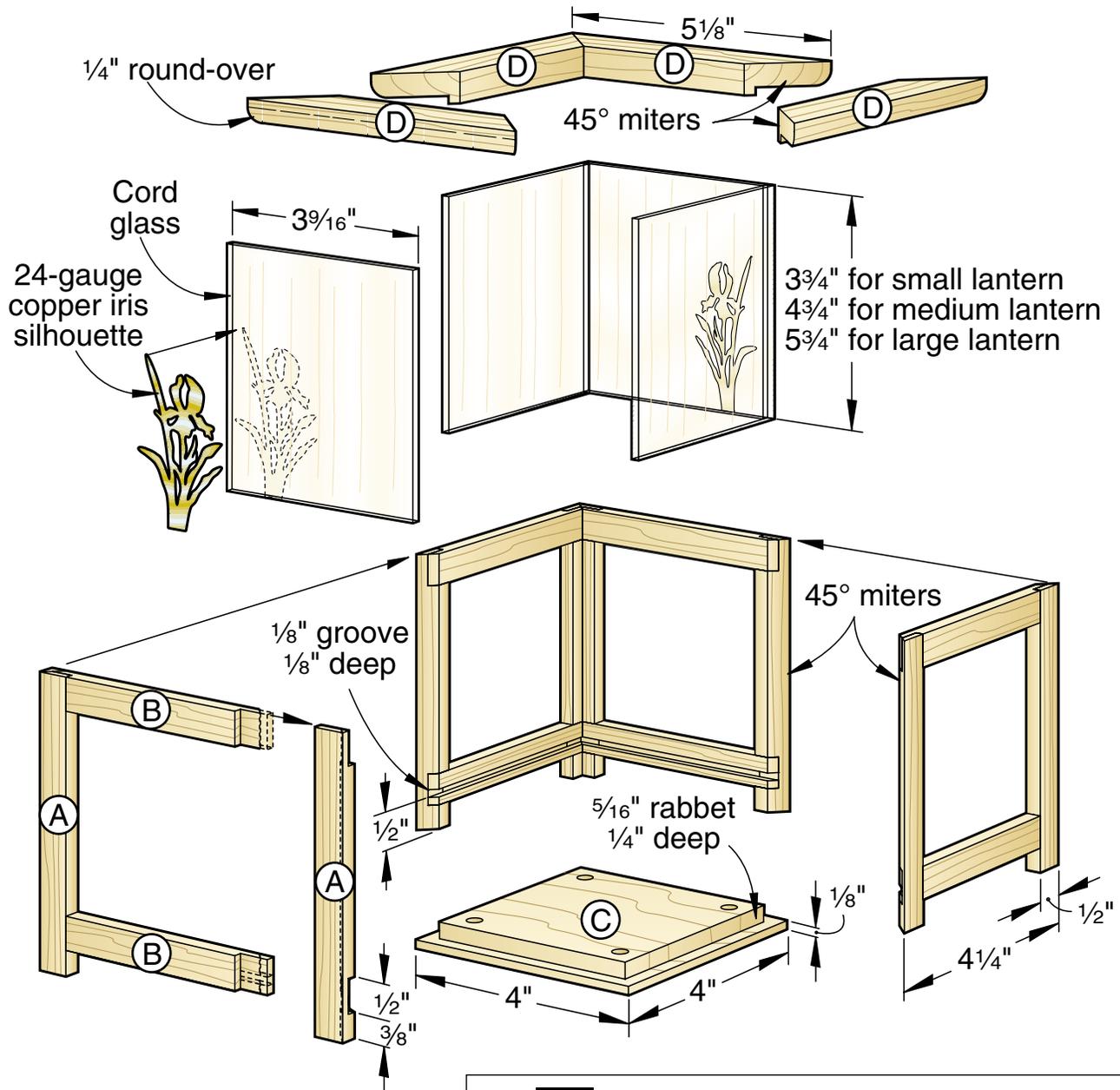
Glue up the lanterns, and make the trim

1 Lay four assembled lantern sides side-by-side on the workbench with the grooved and mitered faces down. Put strips of masking tape across them at the top and the bottom. Carefully flip the taped assemblies over.

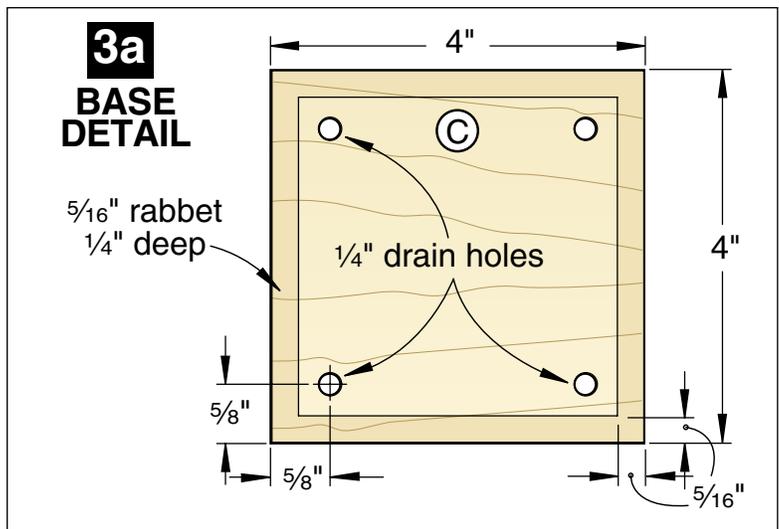
2 Apply glue to the sides' beveled edges. Place the tongue of the base (C) into the groove in one side (don't glue) and wrap the other sides around the base, as shown in **Photo B**. Similarly assemble the other two lanterns.



Wrap the sides around the base (C) and secure with strips of masking tape. Glue the miters, but don't glue the base into the grooves.



3 EXPLODED VIEW



3 Cut three 1/2x1x24" pieces of stock for the top trim (D). Rout a 1/4" round-over on one edge of each piece, as shown in Step 1 of **Drawing 4**.

4 Rabbet the stock with your tablesaw, as shown in Step 2.

5 Miter-cut the trim pieces (D) to length. Install the glass in the lantern, and dry-fit the trim pieces. The trim's 1/8" lip fits inside the glass. Glue and clamp the top trim frame together.

6 Cut out the copper iris motifs, using the patterns on *page 7*, and the instructions on *pages 6* and *7*.

Finish the parts, and install the glass

1 Sand all the parts. Apply a clear, exterior finish.

2 Slide the glass into the base grooves, smooth side out. Epoxy a top trim assembly in place.

3 Apply a dab of quick-set epoxy to the back of each iris cutout. Now, position the iris cutouts on opposite corners of the lantern.

4 Set a votive candle at the base's center. A long fireplace match or a butane fire lighter makes lighting the wick easy. ♣

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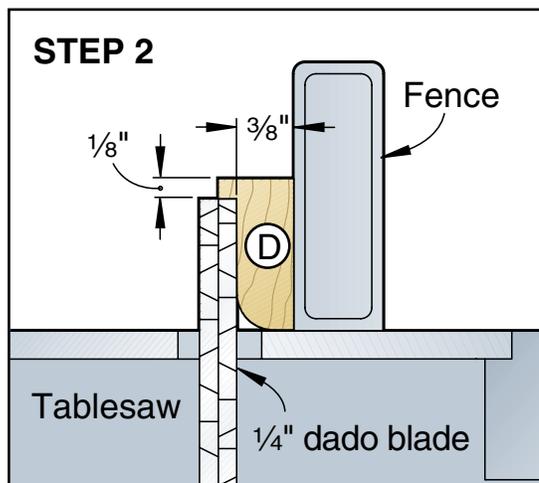
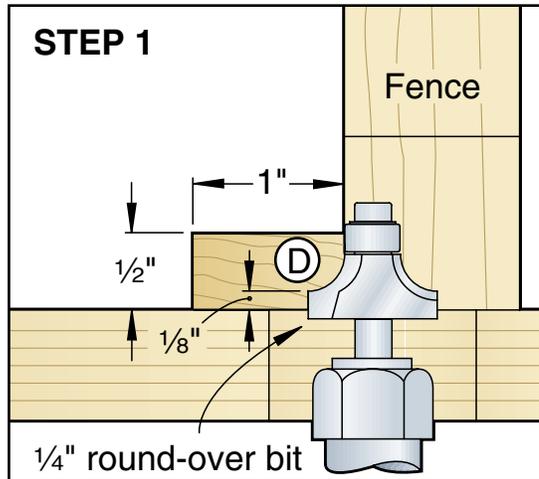
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Photographs: **Marty Baldwin**

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4 TOP TRIM



Materials List

Part	FINISHED SIZE			Matl.	Qty.
	T	W	L		
A small lantern stiles	1/4"	1/2"	4 3/8"	M	8
A* medium lantern stiles	1/4"	1/2"	5 3/8"	M	8
A* large lantern stiles	1/4"	1/2"	6 3/8"	M	8
B* rails	1/4"	1/2"	4 1/4"	M	24
C bases	3/8"	4"	4"	M	3
D* top trim	1/2"	1"	5 1/8"	M	12

*Parts initially cut oversize. See instructions.

Material key: M—mahogany.

Supplies: #8x1 1/2" brass flathead wood screws; cord glass, four pieces each 3 9/16x3 3/4", 3 9/16x4 3/4", 3 9/16x5 3/4"; quick-set epoxy; 24-gaugex4x10" copper.

Bits and blades: Stack dado set, 1/4" round-over and 45° chamfer router bits.

Create copper motifs

Here's an easy way to "metal" with a woodworking project and add to its styling.

Take a minute to see how the iris accents *at right* greatly enhance the appeal of the candle lantern. As you'll soon discover, there's no mystery to making them. For materials, you will need 24-gauge sheet copper, available at home centers, or hardware, crafts, and hobby stores. You'll also need a paper pattern (to be found on *page 7*), spray adhesive, 1/8" hardboard scrap, and the simple three-step process described below.



Cut the pattern

1 Rough-cut three pieces of 1/8" hardboard and two pieces of sheet copper to slightly larger than the paper pattern you wish to duplicate in copper. Using spray adhesive, make a sandwich blank, bonding together the five pieces, placing the copper where shown in the photo. Adhere the pattern to the sandwich top. Now, drill any needed blade start holes through the pattern for inside cuts, and scrollsaw the pattern to shape using a no. 2 blade (20 teeth per inch) at high speed.

Note: If you need only one motif, go with two pieces of hardboard and one piece of copper. For quality control, avoid scrollsawing more than two pieces of copper in this manner at the same time.



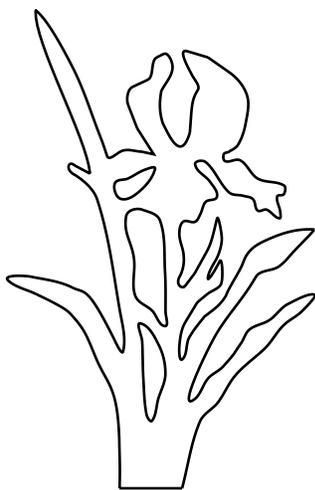
Sand the burrs

2 Carefully pry apart the scrollsawn sandwich, wipe off the adhesive from the copper motif with paint thinner, and rinse with water. Next, place the motif on a flat surface, and, with a sanding block and 220-grit sandpaper, sand the copper surface, removing any burrs along the edges of the piece.

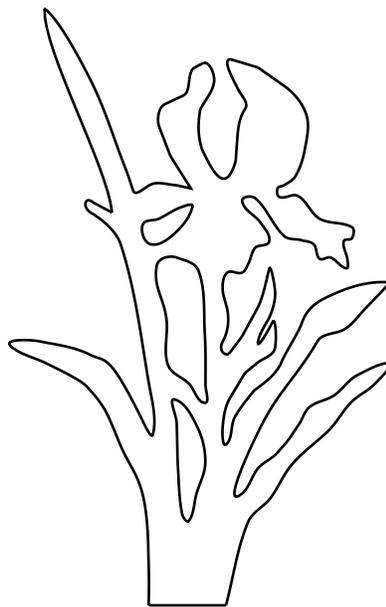


Apply the heat

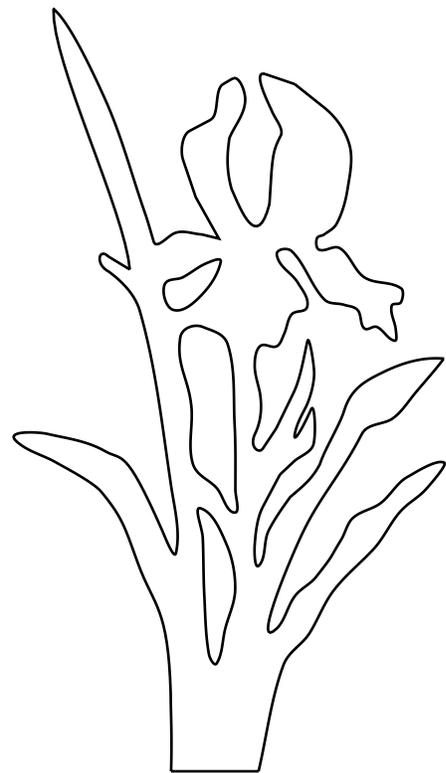
3 Place a piece of scrap copper on scrapwood. Using a propane torch on a low setting, apply heat to the copper, keeping the nozzle about three inches from the surface. Move the flame back and forth to avoid scorching. What you want is a pinkish orange coloration like that in the motifs at the *top of page 6*. Once you feel confident with the process, try flaming your motif, as seen *left*. ♣



SMALL LANTERN



MEDIUM LANTERN



LARGE LANTERN

FULL-SIZE PATTERNS FOR THREE DIFFERENT SIZE LANTERNS