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Walnut Burl Humidor



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Walnut Burl Humidor

A basic exercise in veneering, this attractive 20-cigar humidor with Spanish cedar lining can easily be converted to a stationery holder or jewelry box by simply omitting the lining. We used walnut burl to give the outer panels a rich, warm appearance as well as to provide a continuous grain pattern all around the box.

Fine cigars are built up in layers, each one formed by tightly hand-wrapping leaves one upon the next until perfection is achieved. This humidor is also defined by layers. On the outside is a skin of fine veneers, while the core is a box of 1/2"-thick solid mahogany. The inside layer of Spanish cedar may be omitted if the box is to serve as a home for stationery, photographs, jewelry or other treasures. But whatever its ultimate role, the best part of building it is the wonderful veneering workout it offers, on a scale that even beginning woodworkers will find welcoming.

Making the Mitered Sides

We chose Honduras mahogany for the sides of this humidor: it's readily available, comes in wide boards, and is both flat and stable enough to form a perfect base for veneer. Begin construction on the sides by ripping a 36"-long board to 5 1/8" wide, then set it face-up on your workbench.

The easiest way to ensure a continuous pattern in the veneer on the

outside of the humidor is to apply a single piece to the board you just cut, then crosscut it to length after the glue dries: this process will yield the front, back and both sides (pieces 1, 2 and 3). Working with burl veneer (piece 4) can be tricky, especially if it's your first time around. To ensure success, follow the step-by-step instructions (see page 119) for treating and clamping veneer.

When the glue is dry, crosscut the four pieces to length on your table saw according to the dimensions given in the *Material List* on the next page (after first verifying that your miter gauge is indeed set at exactly 90°). Then set the blade to 45° and carefully miter the ends (see *drawings* on pages 120 and 121), without shortening the pieces.

Reset the saw to create the groove for the bottom (also shown on the *Technical Drawings*), cutting it in two passes. Then stay at the table saw to cut the bottom (piece 5) to size. This is also a good time to cut the top (piece 6) to size.

Use clear plastic strapping tape

Humidor Exploded View

(the 2" wide variety from 3M works best) to attach the ends to the front, as shown in *Figure 1*. Then tape one end to the back, preserving the grain pattern across all three joints as you work. Apply glue to the miters, insert the bottom (don't glue it in), assemble the box and tape up the last joint. Stretch more tape, as tight as you can, across the joints to draw them snug, then make sure the assembly is square before setting it aside to dry.

Veneering the Top

The best way to successfully veneer a pattern is to cut all the parts to size, then tape them together before gluing them onto a substrate (in this case, the mahogany core of the top). Begin by trimming the center (piece 7) to size, then add the mitered ebonized band (piece 8) and the ash matting (piece 9). See the *Top, Veneer Pattern Drawing* on page 120 for layout details.

Center the taped-up assembly on the mahogany top and glue it in place. At the same time, apply veneer (piece 10) to the bottom face of the top, to create a balanced panel that will better resist warping. A lower grade veneer is fine here—it will be ebonized anyway.



Figure 1: Clear strapping tape is the perfect clamping solution when it comes to applying equal pressure to mitered box sides.

MATERIAL LIST – *Humidor*

	T x W x L
1 Front (1)	1/2" x 5 1/8" x 11"
2 Back (1)	1/2" x 5 1/8" x 11"
3 Sides (2)	1/2" x 5 1/8" x 5 7/8"
4 Case Veneer (1)	5 1/2" x 36"*
5 Bottom (1)	1/4" x 5 5/16" x 10 1/16"
6 Top (1)	1/2" x 6 7/8" x 12"
7 Top's Center Veneer (1)	3 7/8" x 9 1/8"
8 Top's Ebonized Banding (1)	1/32" x 1/8" x 27"
9 Top's Ash Matting (1)	1 3/8" x 37 3/4"
10 Top's Underside Veneer (1)	6 7/8" x 12"
11 Bottom Bullnose Molding (1)	1/4" x 1/2" x 37"
12 Feet (4)	5/8" x 2" x 2"
13 Feet Nails (8)	1" Brads
14 Hinges (2)	Brass, Quadrant Style
15 Cedar Liner - Top (1)	1/4" x 4 7/8" x 10"
16 Cedar Liner - Bottom (1)	1/4" x 4 7/8" x 10"
17 Cedar Liner - Front & Back (2)	1/4" x 4 3/8" x 10"
18 Cedar Liner - Sides (2)	1/4" x 4 7/8" x 4 7/8"
19 Hygrometer (1)	50mm Solid Brass
20 Hygrometer Ring (1)	Brass Mounting Ring
21 Humidifier (1)	The Tube™

* Note: This veneer is listed slightly oversize to allow for trimming.

QuickTip

Smoother Shifting on Your Table Saw

Table saw blade height and tilt adjustments will be easier to make if you apply the correct lubricant to the gears. What's the best lubricant to use? If the gears on your saw are already stiff, chances are what's currently there is petroleum-based grease. Use a spray-on automotive grease remover and bristle brush to remove it (and the accumulated sawdust crud that it collects), and replace it with silicone-based spray or a dab of paste furniture wax. Either of these options will repel sawdust and wood pitch, which will keep those gears meshing smoothly.



Figure 2: The safest way to make your small moldings is to rout the profile on a wider board, then rip off the edge on your table saw.

Making the Moldings on a Router Table

At this point, turn your attention to the router table to create some interesting details for this piece. You'll start with a bullnose molding (piece 11) for the bottom edges of the sides and then change bits to cut the edges of the top and feet (pieces 12).

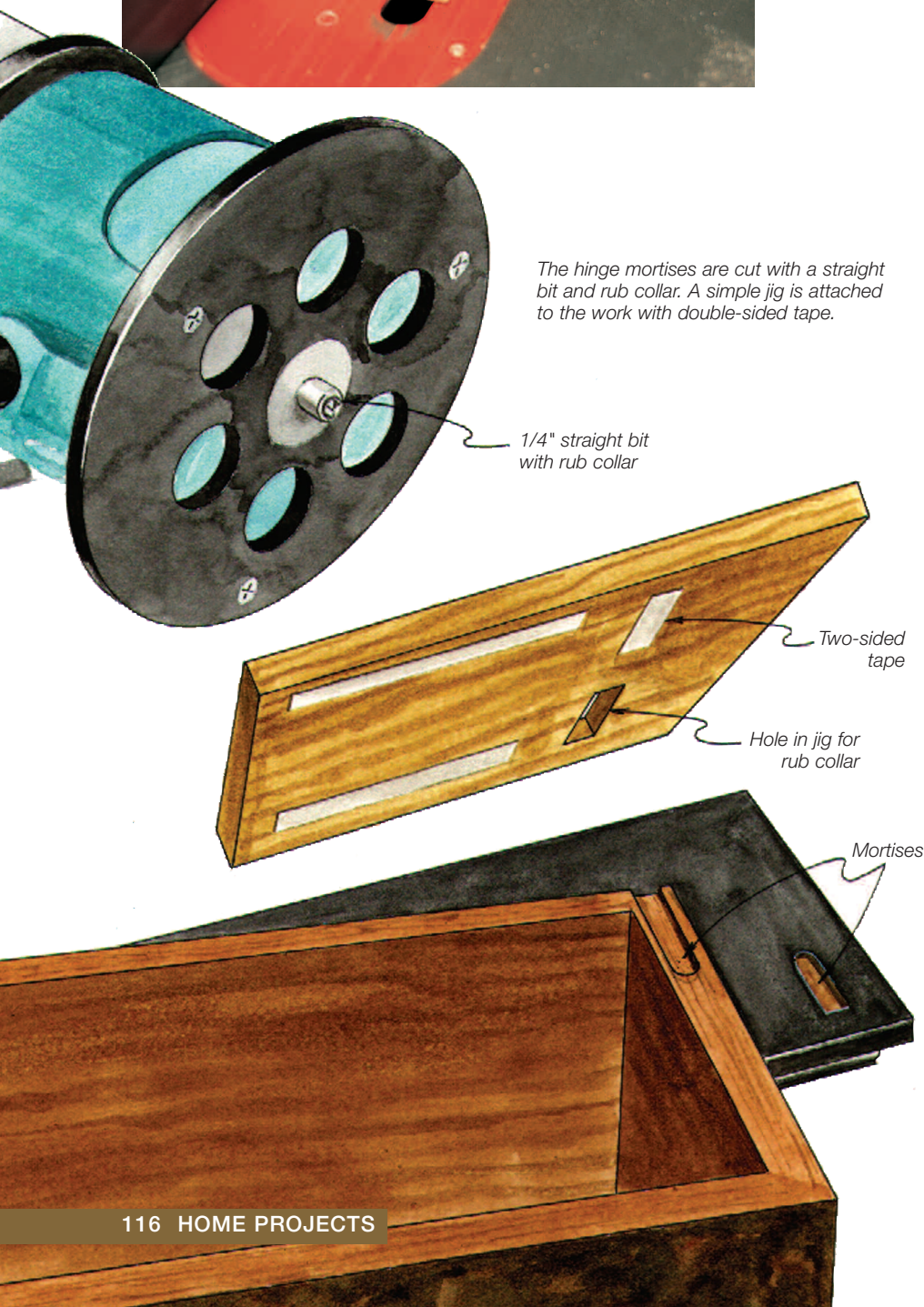
The bottom bullnose is cut with a 3/16"-radius half-round bit. If you already own a 1/4" radius bit that creates a 1/2"-wide bullnose, this will also work but it might not look as elegant. For safety reasons, form the profile on the edge of a wider board, then rip off the molding on the table saw, as shown in *Figure 2*.

The edge profiles on the top and feet are cut in a two-step process. Begin by milling a cove with the workpiece standing on edge and using a 1/2"-diameter cove bit chucked in the router (see *Figure 3, inset*). Now move the fence, install a roundover bit with the guide bearing removed, and run the piece through again to make the second cut (see *Full-Size Section View* on page 121 for dimensions). As with the bullnose molding earlier, it's safer if you machine the feet on a larger piece of stock and cut them to size later.

Ebonizing...A Little Black Magic

Before installing the feet, bottom trim and box top, all three are ebonized. To do this, sand the top thoroughly, then apply masking tape to your glued-up veneer pattern. Apply a primer and two coats of matte black paint using an over-the-counter aerosol can. Sand between coats with 400-grit paper to remove any dust nibs.

Glue and clamp the bottom trim in place, then install the feet with glue and two small brads (pieces 13) in each. Rout mortises for the hinges (pieces 14)



The hinge mortises are cut with a straight bit and rub collar. A simple jig is attached to the work with double-sided tape.

1/4" straight bit with rub collar

Two-sided tape

Hole in jig for rub collar

Mortises

in both the bottom face of the top and the top edge of the box, according to the dimensions given in the *Technical Drawings* (you should double-check these locations as your stock may not match ours exactly in all dimensions). The easiest way to create the mortises is with the simple jig (see *Hinge Mortising Jig* on page 120). This is just a template for a standard guide bushing (also called a rub collar) that guides a 1/4" straight bit. Since this is a rather tricky cut, we recommend that you practice with scrap stock before milling the actual workpiece.

After installing the hinges, remove them and sand the project one last time before applying a semi-gloss finish: sprayed lacquer or brushed polyurethane are both good options. When the finish dries, reinstall the hinges and turn your attention to the Spanish cedar inserts.

Adding a Cedar Lining

The cigars in this humidor will be enclosed in an air-tight, six-sided Spanish cedar compartment. This species is rich in

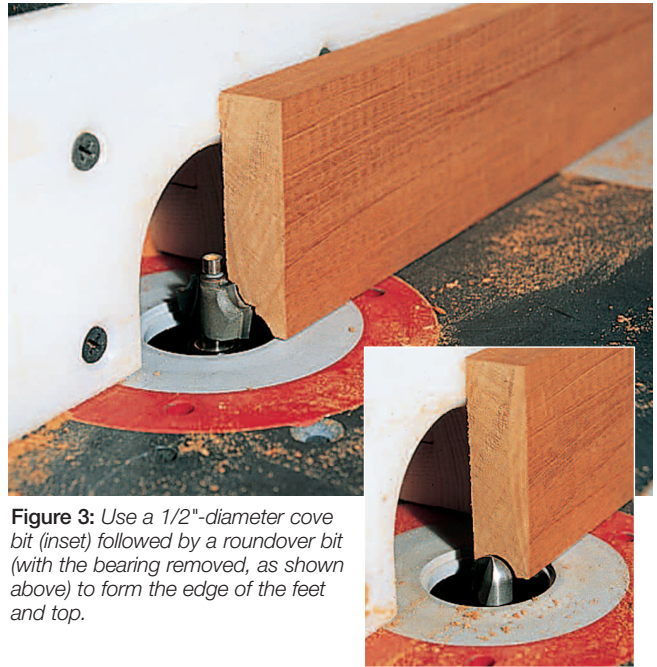
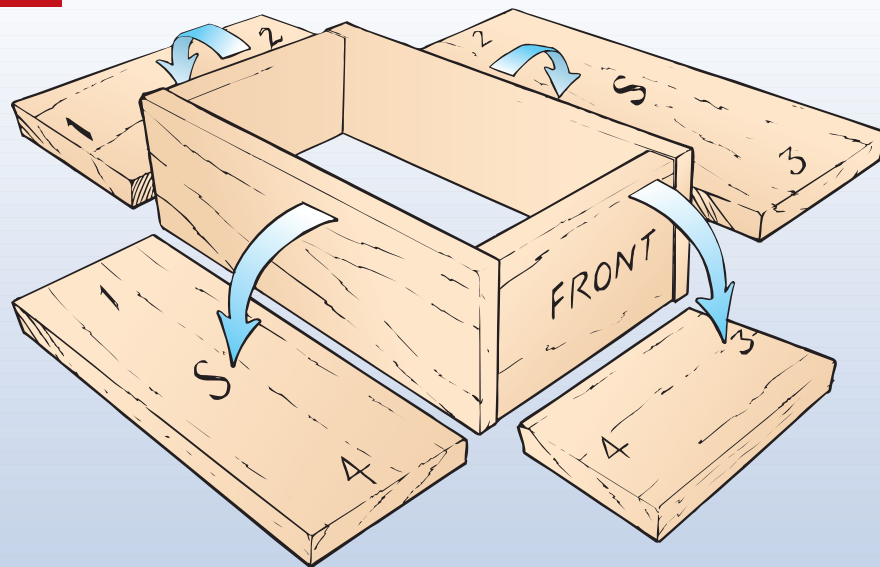


Figure 3: Use a 1/2"-diameter cove bit (inset) followed by a roundover bit (with the bearing removed, as shown above) to form the edge of the feet and top.

QuickTip



Ordering Dovetail Joints on a Box

Adding dovetail joints to the corners of a box can get you into trouble if you don't keep the parts oriented carefully. The above illustration shows a good method for ordering each corner joint. Make a small sample box to keep on hand in the shop every time you need to lay out a box worth of dovetails, to remind you of just how to arrange the parts and organize your joint-cutting procedure.



Figure 4: Drop the Spanish cedar bottom and sidewall liners in place, but don't glue them in so you can replace them in a decade or two.

aromatic oils that enhance the flavor of the smoke, which explains its popularity among humidor builders. You probably won't be able to find Spanish cedar at your local woodworking store, but it's easy to find from specialty internet lumber suppliers as well as from Rockler. Don't use aromatic red cedar—it won't impart the same pleasant taste.

Make the compartment by cutting liners for the top, bottom, front, back, and ends (pieces 15, 16, 17 and 18) to the dimensions given in the *Material List*, then trim their edges at 45°.

Drop the bottom and side liners in place without any glue (see *Figure 4*), then dry-fit the top gently in place. Put a dab of hot-melt glue on each corner of the top, and add a couple more dabs down the middle. Then, working quickly before the glue sets, gently close the lid tight. Wait a couple of minutes before opening, to allow the glue to fully harden.

Installing Humidity Controls

Regulating the humidity level in your humidor is important: you don't want your cigars to dry out. To monitor

the humidity level, purchase a small surface-mounted hygrometer (piece 19) and secure it with a brass ring (piece 20) and screws to the cedar on the humidor lid. Humidity is added to the cigars' environment by means of a self-contained torpedo shaped humidifier (piece 21), similar to the one in the opening *photo* on page 112.

Now all that's left to do is select twenty or so fine cigars, open a dignified old bottle of brandy and sit back to admire your magnificent new walnut burl humidor.

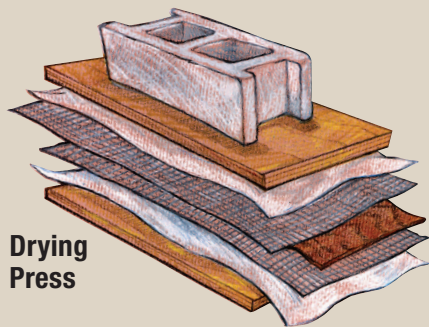
QuickTip

Trimming Laminate without Burning

Trimming plastic laminate can lead to burned pilot bearings on your router bits. This typically happens if the bit encounters excess contact cement along the edges of the laminate. One way to reduce the burning and keep your bits cleaner is to apply a thin coating of petroleum jelly to the bearing before you begin trimming the laminate. It will help prevent melted glue from sticking to the bit.

VENEERING BASICS

As burl and highly figured veneer dries after slicing, it tends to become wavy and brittle. Over-the-counter glycerine treatment will solve this problem. Just soak your veneer in the water-soluble treatment (see the package for diluting instructions), then place it in a shop-made drying press, as shown below.



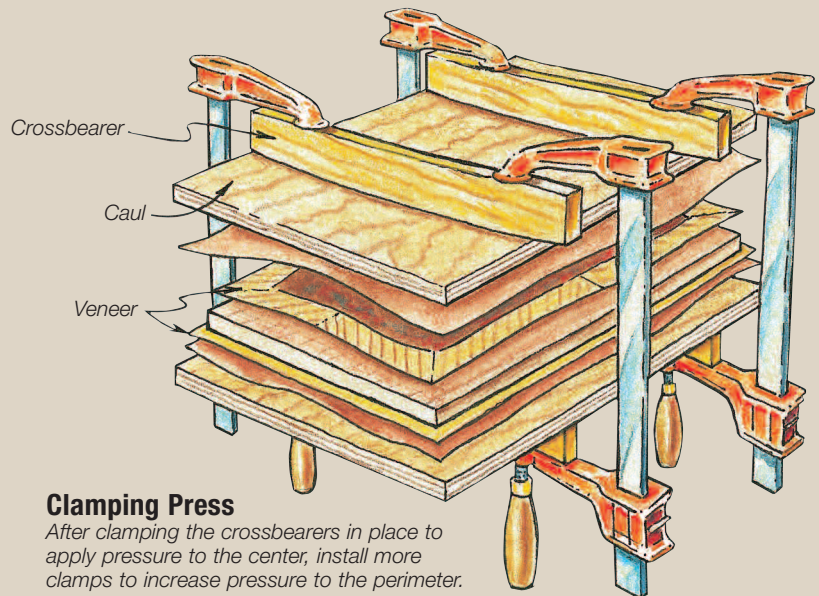
Drying Press

The press is basically a sandwich with the veneer at its center. On either side are layers of window screen, kraft paper and 3/4" plywood. Place a heavy weight on top and then leave the entire assembly to dry for a couple of days.

Once the veneer is removed from the press, it's important to use it within a few hours: figured veneer tends to have memory, and it will quickly return to the wrinkled, wavy stage if allowed.

Gluing Up Veneer

To glue veneer to a substrate, you need to build a simple veneer press. The most convenient and versatile ver-



Clamping Press

After clamping the crossbearers in place to apply pressure to the center, install more clamps to increase pressure to the perimeter.

sion is made with a couple pieces of plywood (known as cauls) and several bow-shaped clamping beams (crossbearers). Apply a thin even coat of regular white or yellow woodworking glue to both sides of your substrate (white glue is preferable because it's more elastic). After cutting the veneer slightly larger than the substrate to allow for trimming, set the pieces in place. Lay kraft paper between the veneer and cauls and use the crossbearers to apply pressure to the center of the press as you clamp. Once everything is locked in place, add additional clamps around the perimeter. The goal is to provide even pressure across the entire piece.

Creating Patterns

To make the top of the humidior, join several pieces of veneer to create a pattern. This is simply a matter of cutting the elements to size and taping them together from the top before using your veneer press.



A veneer saw or sharp knife works well to make these cuts; just be sure to score the veneer before you trim across the grain to avoid tear-out. After the glue dries, peel or sand off the tape.

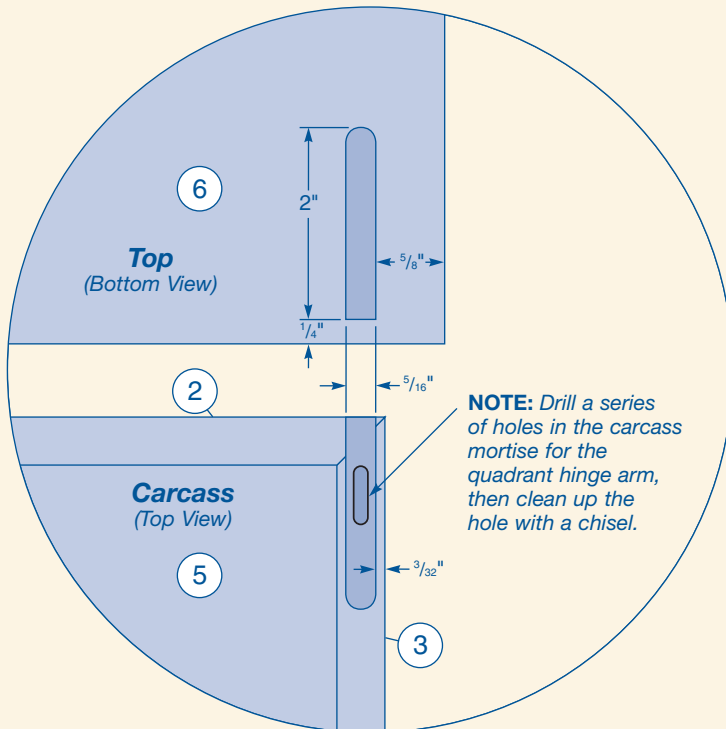


Carcass Assembly
(Top view)

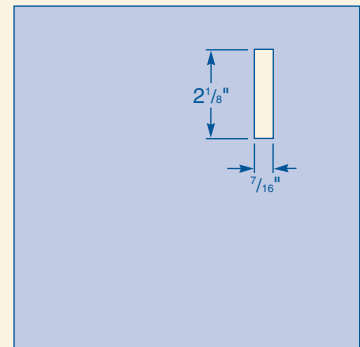


NOTE: When preparing stock for the carcass assembly, apply a single piece of veneer (piece 4) to a long board and then cut and miter it to size. Just be sure to preserve this continuous grain pattern when you assemble the carcass.

Hinge Mortise Detail



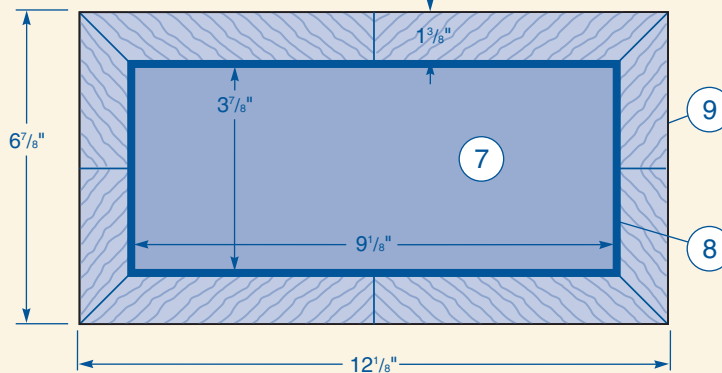
Hinge Mortising Jig
(Top View)

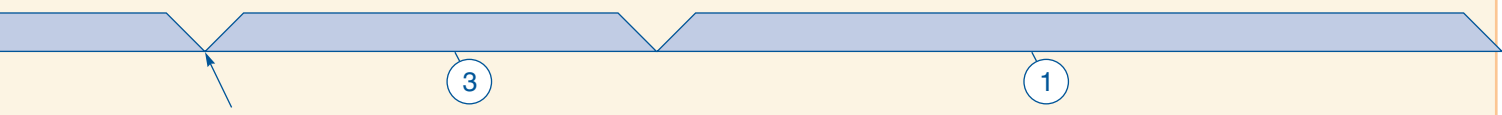


After laying out the hinge locations on the top and sides, chuck a 1/4" straight bit with a 3/8" O.D. rub collar in your router. Position this jig (with double-sided tape) over your layout to template-rout mortises for the hinges.

Top, Veneer Pattern
(Top View)

The taped pattern is trimmed to final size after glue up.

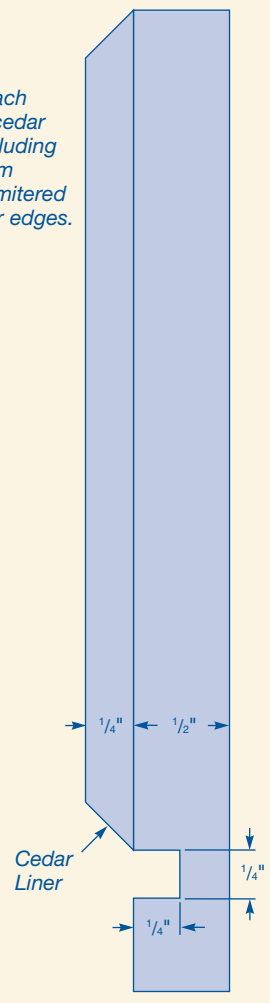




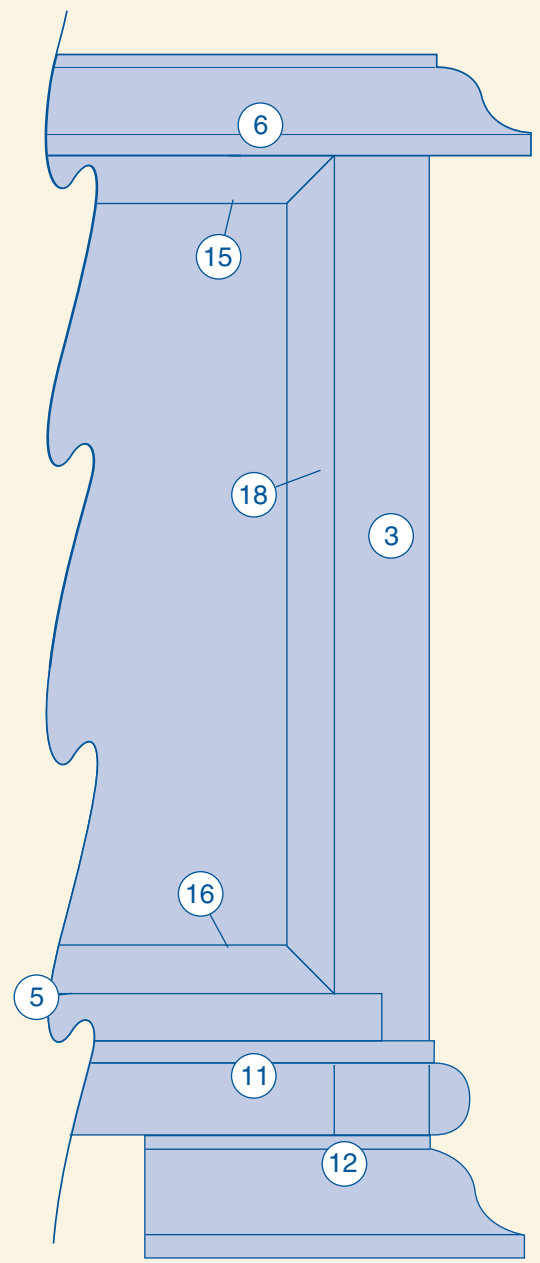
Use clear packing tape to secure these mitered joints during glue-up, as shown in Figure 1 on page 114.

Front, Back or Side
(Section View)

NOTE: Each piece of cedar lining, including the bottom piece, is mitered on all four edges.



NOTE: The groove that holds the bottom is cut into the front, back and sides.



Humidor
(Full-Size Section View)