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Demi-Lune Sofa Table

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To cut his top to shape, the author uses a hewing ax, which is sharpened with a single bevel on one side. The tool does a surprisingly quick and effective job of shaping wood, especially when preceded by scoring cuts to relieve pressure.

Demi-Lune Sofa Table

In some ways, this demi-lune table is an imposter. Despite its curves, it's easier to make than it looks, whether you use hand tools as we show here or or power tools. From first glance, the table also appears to be made of mahogany and crotch birch, but it's actually a faux painted finish over ordinary softwood. What's true through and through is that the half-moon shape makes it an ideal choice for a hall or sofa table.

The completed table features details that lead a casual observer to imagine gold inlay and fine veneers.

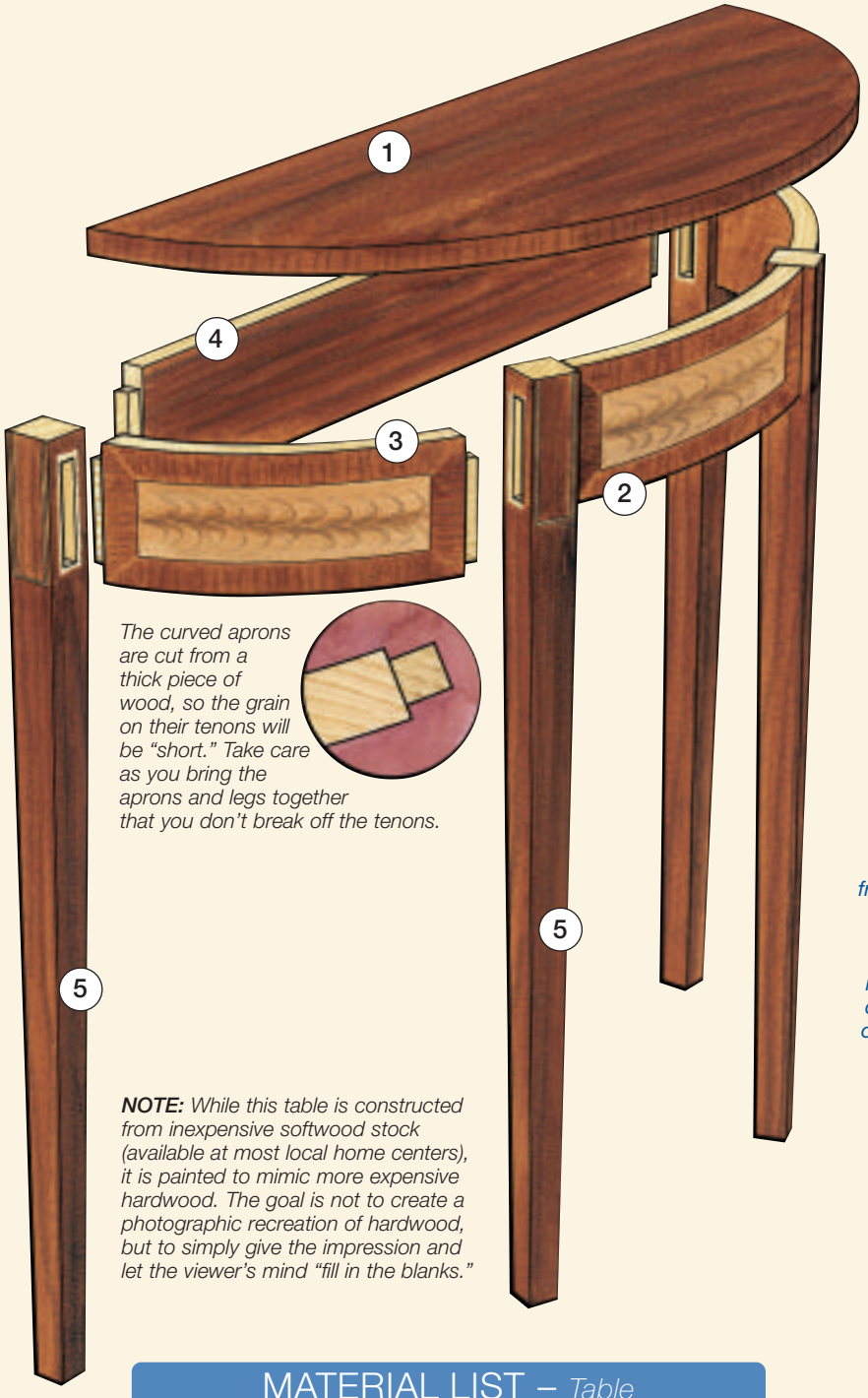
A demi-lune table is a classical furniture form that takes its name from the half-moon shape of its top. This top may be either semi-circular or elliptical. The continuous curve on the front of the table makes it a good choice for narrow spaces, while its straight back edge is ideally suited for placement where it will not be seen.

Typically a demi-lune table typically has two legs at the back corners and two legs spaced roughly equally across the curved front. Traditionally, these legs have been turned or square-tapered. The legs are connected by four apron rails, including a straight rail at the back and three curved rails across the front. For aesthetic reasons, many woodworkers prefer to make the front center rail longer than the other two curved rails.

Some demi-lune tables are extravagantly made, with expensive hardwoods, parquetry and inlays. This one is more provincial. It is painted and grained to imitate mahogany (see *detail photo*, page 154). We also painted gold stripes on the upper parts of the tapered legs. Because this table essentially has a painted finish, we were able to employ inexpensive, widely available materials: standard 3/4"-thick lumberyard pine for the top and the back rail and 2"-thick spruce for the legs and front apron.

Overall, the table shown here is 30" tall by 30" wide by only 11¼" deep, but feel free to vary the dimensions to suit

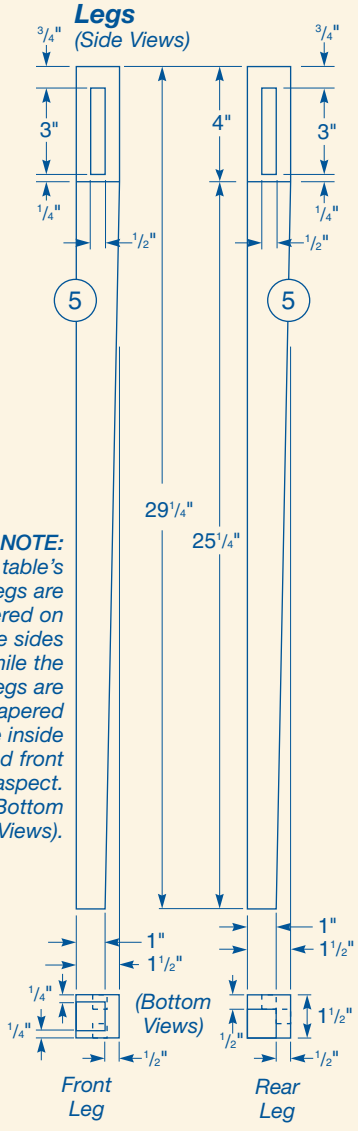
Table Exploded View



The curved aprons are cut from a thick piece of wood, so the grain on their tenons will be "short." Take care as you bring the aprons and legs together that you don't break off the tenons.

NOTE: *While this table is constructed from inexpensive softwood stock (available at most local home centers), it is painted to mimic more expensive hardwood. The goal is not to create a photographic recreation of hardwood, but to simply give the impression and let the viewer's mind "fill in the blanks."*

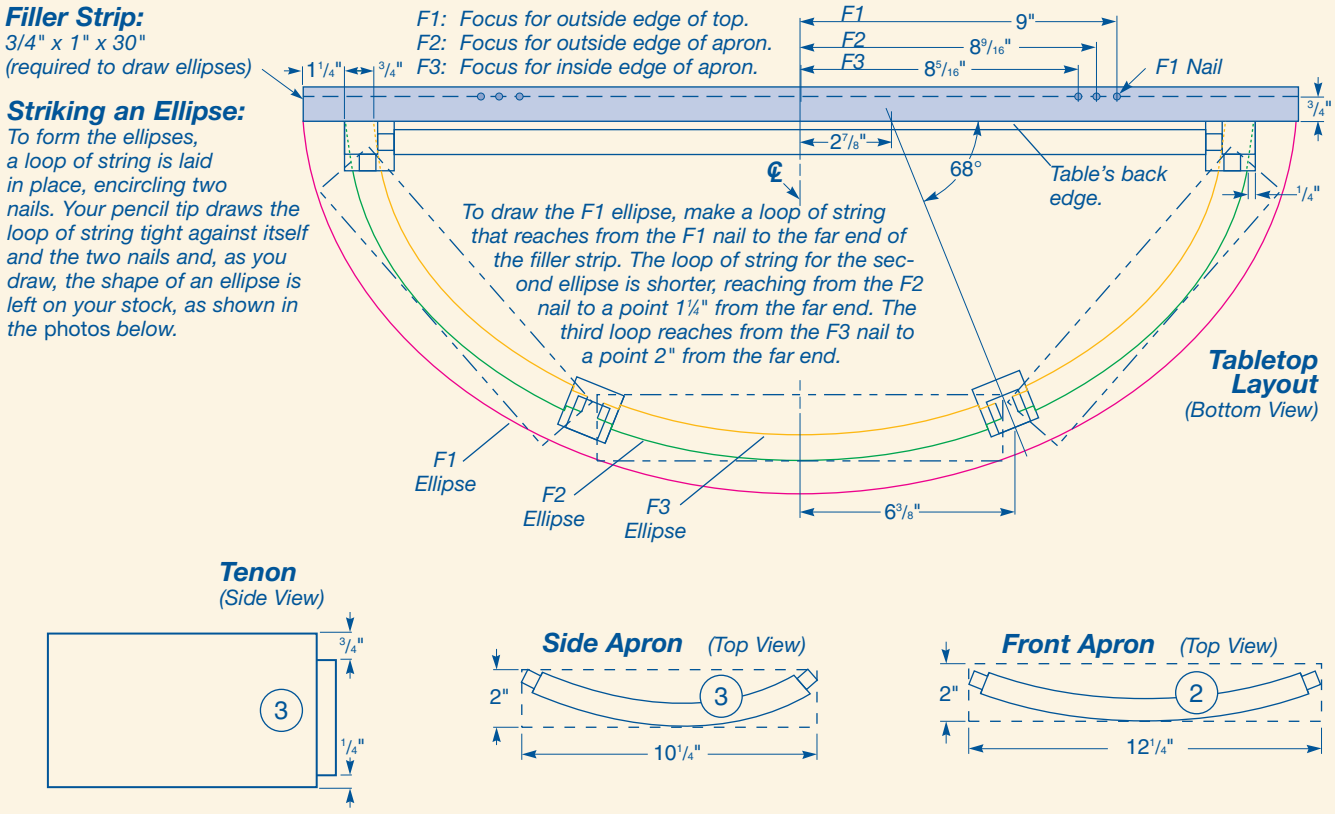
Legs
(Side Views)



NOTE: *The table's front legs are tapered on three sides while the rear legs are only tapered on the inside and front aspect. (see Bottom Views).*

MATERIAL LIST – *Table*

		T x W x L
1	Tabletop (1)	3/4" x 11 1/4" x 30"
2	Front Apron (1)	2" x 4" x 12 1/4"
3	Side Aprons (2)	2" x 4" x 10 1/4"
4	Back Apron (1)	3/4" x 4" x 25 1/2"
5	Legs (4)	1 1/2" x 1 1/2" x 29 1/4"

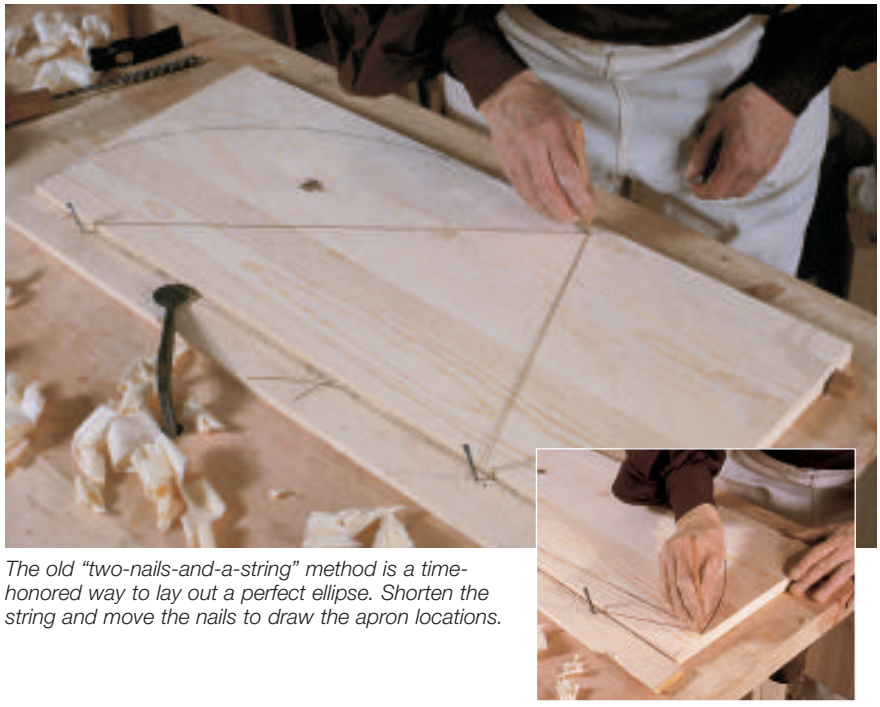


your purpose. Our author made his table entirely by hand with simple hand tools, but you can just as easily use power tools for this project to shortcut some of the steps.

Making the Tabletop

Demi-lune tabletops are sections of either circles or ellipses. Whichever you choose, make the tabletop (piece 1) first so it's available to use as a full-size pattern for laying out the legs and apron pieces.

To reduce the risk of warping, glue up several narrow boards for the top instead of using a single wide board. Since it will not be under stress, simple edge joints are adequate for the glue-up. Roughen the edges of your boards slightly with fine sandpaper to



The old "two-nails-and-a-string" method is a time-honored way to lay out a perfect ellipse. Shorten the string and move the nails to draw the apron locations.

FAUX WOOD GRAIN

The author's table was painted and grained to look like more exotic wood, such as this "crotch birch" detail. If you examine old furniture carefully, you'll notice corners and inside edges are darker than surrounding areas. Try to imitate those effects with your grain painting.

create more surface area and "tooth" for glue adhesion. On traditional pieces like this table, our author prefers to use hide glue—either hot hide glue or the bottled liquid variety—for all the joinery.

Once the blank for the top is dry, you can move on to laying out its elliptical shape. As you can see in the two *photos* on page 153, this is a fairly straightforward process if you use the traditional "two-nails-and-a-string" method. The curve was not quite half of an ellipse, so we had to make a temporary add-on strip to place alongside the straightedge of the top to hold the nails, which are always located on the major axis of the ellipse. For this layout, use a 3/4" x 1" x 30" strip of wood. Square a centerline across one face and gauge a line 3/4" from one edge. Then drive two nails into the strip, on the gauged line, equidistant from the center mark (see the *drawing* on page 153). Next, place your glued-up blank upside down and square a centerline across it, perpendicular to the back edge. Align the centerlines of the strip and the blank and clamp them together. Then run a pencil around the inside of the loop to mark out the elliptical shape of the top.

To accurately place the curved apron sections, you'll want to plot their locations on the underside of the top. Either draw the apron lines now by shortening your string loop and moving the nails as shown in the *drawing*, or mark them after you've shaped the tabletop, using a marking gauge that has two bumps on its face for following curved surfaces.

To cut the tabletop to shape, our author used a hewing axe, as shown in the *photo* on page 150. A regular axe or hatchet will also do the job. Chopping is actually quicker than sawing out the shape, but don't hesitate to use a hand saw or band saw if the axe is a bit intimidating.

If you do use an axe, hold the top

The author used a backsaw to cut the tenons for this table. Then he turned to his chisels to pare the tenons, creating a slight angle to accommodate the curved aprons.

blank upright on a chopping block and begin chopping at the center of the curve, working in each direction toward the ends. Make scoring chops into the wood to relieve pressure, then hew close to the final shape.

Use a hand plane or spokeshave for final shaping to the pencil line, again working from the center to the ends: you're always cutting "downhill" on the grain this way.

Making the Aprons and Legs

To begin making the aprons (pieces 2 through 4), lay out an accurate, full-size plan of the legs and apron sections on the underside of the top so you can work out the exact sizes and shapes. As described here, the apron pieces have tenons, and this is reflected in the *Material List* sizes. If you plan to use dowels or loose tenons as the main mechanical connectors, you'll have to subtract the tenon lengths.

We sawed the aprons from solid stock for several reasons. This table has relatively short apron pieces, without a lot of curvature, so they can be sawn from relatively thin blanks. Also, since the table was going to be painted, the paint hides the unusual long grain/end grain transition around the curve.

Some older tables along these lines had aprons curved only on the outside faces; the inside faces were left flat. On this small table, however, we felt the added thickness inside the aprons might make the table a little too top-heavy, so the the insides of the aprons are curved as well.

Select material thick enough to accommodate the curve of individual apron pieces. You can achieve these curves from 2"-thick blanks if you build the table to the same dimensions as shown here. For a little added strength, select wood with a slight curve to the grain to follow the curve of the apron.

Use your full-size layout on the underside of the top to determine the exact size and shape of your apron blanks. Transfer the curved shapes from your layout to the blanks with tracing-paper templates cut out and stuck to the blanks' edges with spray adhesive or thinned hide glue.

Saw the curves with a bow saw, band saw or bench axe. Fair them to final shape with a block plane and spokeshave. Cut the tenons on the ends of the apron pieces, taking care not to break the short, angled grain. Note that all the tenon shoulders (except those on the back apron rail) will be slightly angled to meet the faces of the legs. Your paper template will show you

An old-fashioned bow saw and a sharp eye are the traditional tools required for forming tapers on square legs. Today, the job would be done on a table saw with a low-cost tapering jig to ensure accuracy.

the shoulders' exact locations. Mark them out with a try square and a bevel gauge, then cut the shoulders and cheeks of the tenons with a tenon saw or band saw and pare them square and true with a chisel. Our author slightly undercut the tenon's front cheek to ensure a tight fit between the apron and the legs.

The legs (pieces 5) on most demilune tables have straight, square top sections to simplify the apron joinery, and they are either turned or tapered from there to the floor. For this table, we tapered the front legs on three sides, leaving the inside faces straight. Taper the back legs on the front and inside faces only (see *Elevation Drawing*). You can saw the tapers with a bow saw and fair them with a plane as we did for our table, or you could use a simple tapering jig on the table saw or band saw instead and cut the legs this way.

Assembling the Table

Apron assembly can be a bit tricky on this type of table because of the curved surfaces. As such, a band clamp is practically a necessity. If you don't have a band clamp, you can make a simple tourniquet from a rope or a strap to apply the same clamping pressure. As with all complex assemblies, a dry run will give you a chance to rehearse the glue-up and fix any small joinery problems. Don't skip this step.

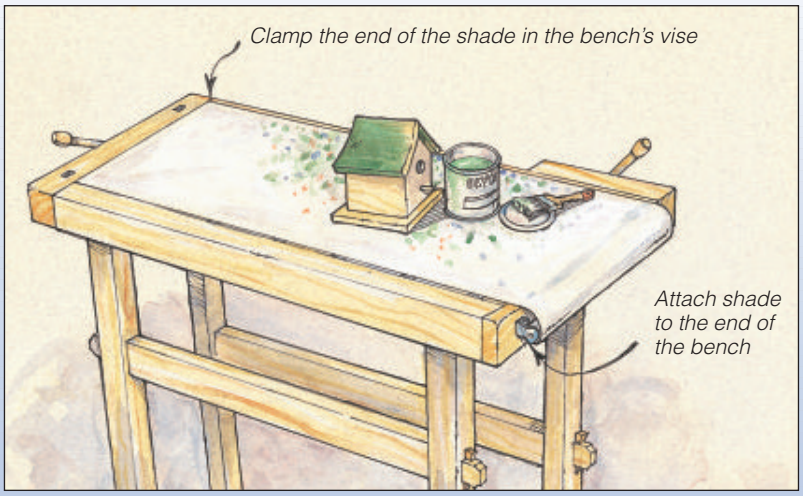
After you've successfully dry-assembled the table, you're ready to glue it up. For a complicated glue-up like this, a liquid hide glue—such as Franklin's Liquid Hide Glue or Patrick Edward's Old Brown Glue—will give you more working time to get all the pieces assembled before the glue sets.

Apply the hide glue to the mortises and tenons, assemble the parts, and tighten the band clamp around the entire leg and apron assembly to draw the shoulders up tight. Once the base unit is under clamp, invert it on the underside of the tabletop to make sure everything lines up with your full-size layout. Then stand the clamped unit upright on a flat surface and weigh or clamp it down to ensure that the finished table will sit flat of the floor when the glue dries and the clamps come off.

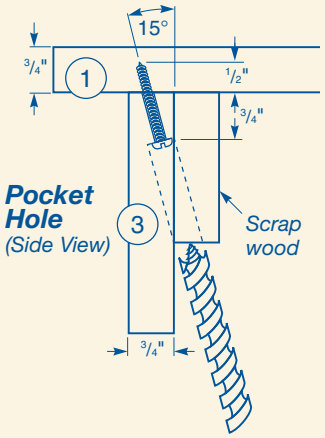
QuickTip

Bench Protectors Made in the Shade

To protect your workbench from paint or stain splatters, mount a white vinyl window shade roller to one end of the worktop. When you are ready to finish, just extend the shade across the bench. After the finish dries, roll the shade back out of the way. If you wipe off drips and spatters on the shade before they dry, the shade will last for a long while. When it does wear out, it's cheap to replace.



Technical Drawings



An auger bit makes fast work of excavating the "pocket" of a pocket hole. A block of scrap wood, clamped to the back of the apron, is essential give it some "meat" to bite into when starting the hole.

Attaching the Tabletop

After you've glued the base and cleaned up any excess squeeze-out, you're ready to attach the tabletop. Pocket screws are appropriate fasteners for this job. To create a pocket screw hole, make an angled excavation on the inside of the apron and drill a clearance hole for the screw, as shown above. You can cut the pocket with a gouge or drill it with an auger or drill/driver, but since the aprons are curved, a pocket hole jig won't work.

If you do drill a pocket, be sure to clamp a scrap block of wood to the back side of the apron to support the tip of the auger bit. Stop drilling at a point that will allow about 1/2" of the screw to protrude through the top edge of the apron. Then, drill a clearance hole through the center of the pocket to the top edge of the apron. Elongate the hole in a direction perpendicular to the grain of the top to allow for seasonal wood movement.

Creating a Painted Finish

This table is painted and grained to imitate fancier woods—mahogany and crotch white birch. To prepare for painting and graining, fill any holes or voids with putty. Work the putty into the voids with a putty knife or spatula, allow it to dry, then sand the surface to 150 grit.

To imitate mahogany, our author uses either a bright red or dull orange color for the base coat; for white birch, a white or cream-colored paint. Oil-based paint is the traditional choice. Brush it on to imitate long grain.

When the base coat is dry, mix up some "graining" shellac,—a combination of shellac and burnt umber pigment, maybe with a little black iron oxide added. Partially load your brush with this mixture, then brush it almost dry on a newspaper or paper bag. Using this "dry" brush, apply the graining shellac in the direction of the intended grain. If there are any areas you don't want to grain, such as joints, use a thin piece of metal or cardboard, or a broad putty knife, to cover over them. Build up a few layers of graining shellac, with intervening layers of regular unpigmented shellac, to help create the illusion of depth in the finish.

Details like cross banding, miters, stringing, stripes and different colored "wood inlays" contribute to the overall effect and help fool the eye.

When you're all finished painting and graining, apply a topcoat or two of satin spar varnish to protect the paint and impart a more uniform sheen. Then show off this imposter in all its glory!