



Mission Coffee Table

We hope that you enjoy this free woodworking project provided to you as a special thanks for being a member of Lowe's Woodworkers.

Few trends from the 1920s remain strong today—except for the clean, simple furniture designs popularized by Gustav Stickley. The mission, or craftsman, style that Stickley helped make famous is still a fixture in showrooms and homes, bringing its rectilinear shapes and subtle curves to contemporary use. Mission means construction that's as sturdy as it is simple. Consider this end table: The piece captures the key design elements of mission furniture and becomes a family favorite that will last for years to come.

Instructions:

General: Cut all parts as you assemble the project, using the Cut List as a guide and adjusting as needed for fit. **Pre-drill** for and **countersink** all screws. Set all nails, fill holes with wood filler, and sand smooth.

Step 1: Build the leg assemblies. Note: Each leg is made up of four beveled strips for a continuous grain pattern.

a. For each leg, cut four strips 2¼ inches wide and 18 inches long (you'll trim the legs to their finished length of 17¾ inches once they are assembled and dry).

b. Bevel **rip** the **edges** of each leg **face**; set your saw blade to slightly more than 45 degrees. This step will help ensure tight joints when the legs are assembled later.

c. Lay out the strips with the edges touching and beveled cuts facing up (see Figure 1, Step 1). Place a strip of packing tape, sticky side up, under the full length of each joint. Press the strips down into the tape for a strong bond; make sure that the edges of the strips continue to butt up against one another.



PHOTOGRAPH: MICHAEL HANSON / STYLING: LEIGH ANNE MONTGOMERY

d. Apply glue to all beveled edges, and then roll the strips together (see Figure 1, Step 2). Secure the rolled-up assembly with a piece of tape on the last joint (see Figure 1, Step 3). Wrap the assembly with elastic bands (bungee cords or an inner tube cut into strips can help hold the assembly until the glue dries). Nail in several places along the joints to secure the pieces, and then set aside the assembly to dry (see Figure 1, Step 4). Repeat for the remaining legs.

e. After the glue dries, cut each leg assembly to length.

Step 2: Make the top.

a. Cut the top slats and top edge slats ½ inch longer than the length shown in the Cut List to allow room for trimming later.

b. Label the face sides of the top slats. On the back sides of the top slats, drill off-set **pocket holes** approximately 6 inches on center (see Figure 2). Do not drill pocket

holes on the two outside edges.

c. Apply glue to the adjacent edges of two top slats. Placing wax paper under the joint will keep the assembled top from sticking to the work surface as the glue dries. Lay the boards on a flat surface. Clamp a caul, or scrap-wood pad, across them to keep them flat, if necessary. Screw the joint together.

d. Repeat this process with the remaining top slats.

e. After the glue has dried, cut the slat assembly to the finished length.

f. Fit a router with a ⅜-inch rabbeting bit; cut a **rabbet** out of the top and bottom edges of each **end** of the slat assembly to create a **tongue** that is ¼ inch high and ⅜ inch wide (see Figure 3).

g. Cut a ¼-inch-high and ⅜-inch-wide **groove** in each breadboard edge using a table saw fitted with a dado blade, or a router fitted with a slot-cutting bit.

h. Attach a breadboard to each end of the slat assembly by applying glue to the tongue of the center top slat only (this will allow the top to expand and contract during humidity changes).

i. Sand the top.

j. Use a router fitted with a ¼-inch roundover bit to shape the upper edge of the top; use a ½-inch roundover bit to shape the bottom edge (see Figures 2 and 3).

Step 3: Build the end assemblies. Note: Each end assembly consists of two legs, a skirt, a stretcher, and three end slats (see Figure 4).

a. To lay out the arch in the first end stretcher, mark the start points of the arch ¾ inch in from each end. Mark the center of the curve 1½ inches up from the bottom edge of the stretcher. Bend a flexible metal ruler or a thin strip of wood to meet these points, and then mark the curve with a pencil.

b. Cut the arch, and use the first end stretcher as a template for the second; cut to shape.

c. Cut a ¼-inch-deep by ½-inch-wide rabbet along the entire length of the inside top edge of each end stretcher.

d. Cut a ½-inch-deep by ½-inch-wide rabbet along the entire length of the inside bottom edge of each end skirt.

e. Drill two pocket holes on the inside face in each end of the end skirt and end stretcher.

f. Place an end skirt between two legs so that the tops of all three pieces are flush; insert a ¼-inch spacer under the end skirt to offset the face of the end skirt from the face of the legs.

g. Attach the end skirt to the legs using glue and pocket hole screws.

h. Attach the end stretcher to the legs in the same manner as the end skirt, with the bottom of the end stretcher 2 inches up from the bottom of the legs.

i. Insert the slats into the rabbets in the skirt and stretcher so that the gaps between the slats and the legs are even; glue in place (see Figure 3).

j. Measure and cut ¼-inch-deep x ¼-inch-wide fillers to fit in the rabbets on both sides of the bottom of each slat, and then glue the fillers in place (see Figure 4).

k. Repeat for the other end assembly.

Step 4: Connect the end assemblies. Note: The end assemblies are spanned by side stretchers, side skirts, a top, and a bottom shelf (see Figure 4).

a. Lay out the arch in the first side stretcher, using the same technique as described in Step 3a.

b. Cut the arch, and use the first side stretcher as a template for the second; cut to shape.

c. Cut a ¼-inch-deep by ½-inch-wide rabbet along the entire length of the inside top edge of each side stretcher.

d. Drill two pocket holes on the inside face in each end of the side skirts and the side stretchers.

e. Attach the side skirts and the side stretchers to each end assembly using the same procedure described for the end assemblies in Step 3f.

f. Measure and then cut the center support to length.

g. Attach the center support between the two side stretchers so that its top is flush with the bottom of the rabbets in the side stretchers.

h. Measuring diagonally, check the assembly

for square; if it is out of square, pull it back into square using a bar clamp, and leave the assembly in place until the glue dries.

Step 5: Install the bottom shelf and top.

a. Carefully measure and cut the ¼-inch-thick plywood bottom shelf to size; you'll need to notch the four corners to fit around the legs.

b. Attach the bottom shelf to the rabbets in the side stretchers and to the center support using glue and nails.

c. To attach the top, first install corner blocks to the skirts using pocket hole joinery (see Figure 4). Center and drill an oversize hole through each corner block.

d. Position the top on the table frame so that there is an equal overhang from side to side and from front to back. Then use a washer and a pan-head screw to secure the top to the corner block, driving the screw up through the oversize hole into the top.

Step 6: Apply a finish to the table.

a. Sand the entire table.

b. Apply a stain as desired.

c. Brush on two coats of polyurethane, sanding between coats. Allow to dry.

d. Apply a coat of paste wax to the table, and buff to achieve the desired sheen.

Project #SP06FP2 ■

CUT LIST

Part Name	Material	Size (in inches)	Quantity
legs	1 x 6	¾ x 2¼ x 17¾	16
top slats	1 x 4	¾ x 3½ x 42¼	4
top edge slats	1 x 4	¾ x 3 x 42¼	2
breadboards	1 x 3	¾ x 2¼ x 20	2
end skirts	1 x 6	¾ x 1¾ x 12½	2
side skirts	1 x 6	¾ x 1¾ x 38½	2
end stretchers	1 x 4	¾ x 3½ x 12½	2
side stretchers	1 x 4	¾ x 3½ x 38½	2
center support	1 x 4	¾ x 1¼ x 15	1
end slats	¼ x 4	¼ x 3 x 11¾	6
fillers	¼ x 4	¼ x ¼ x ¾	8
bottom shelf	¼ plywood	¼ x 15¾ x 41½	1
corner blocks	1 x 4	¾ x 2¾ x 2¾	4

LOWE'S LIST

Lumber*

- 2 (4-foot-long) ¼ x 4s, red oak
- 1 (4-foot-long) 1 x 3, red oak
- 2 (6-foot-long) 1 x 4s, red oak
- 3 (8-foot-long) 1 x 4s, red oak
- 3 (6-foot-long) 1 x 6s, red oak
- 1 (48- x 96-inch) sheet of ¼-inch-thick oak plywood

Hardware & Supplies

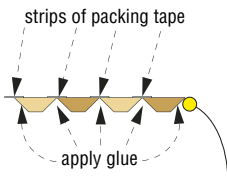
- 1 box 4d finishing nails
- 1 box (#8 x 1-inch) pan-head screws
- 1 box (#17 x 1-inch) wire brads
- 1 box (#18 x ¾-inch) wire brads
- 1 box (1¼-inch) PrimeGuard Plus screws
- 1 box (1¼-inch coarse) Kreg pocket hole screws (coarse thread)
- stainable wood filler
- wood glue
- packing tape
- polyurethane
- stain (Olympic, Golden Oak)
- paste wax

*Availability varies by market.

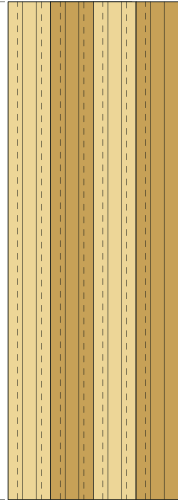
Figure 1

Step 1

Lay the four pieces of legs edge to edge on strips of packing tape. Apply glue to exposed edges.

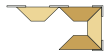


Top View
all bevels 45° plus



Step 2

Roll up leg pieces.



Top View

Step 3



Top View

Complete roll up and secure last joint with tape.

Step 4

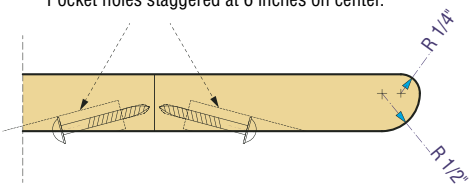


Top View

Wrap assembled leg with elastic bands in several places along the assembly. Nail two to three places along joint, and set aside to dry.

Figure 2

Pocket holes staggered at 6 inches on center.



TOOL LIST

- table saw
- miter saw (or handsaw with miter box)
- router with 3/8-inch rabbeting bit, 1/4-inch roundover bit, and 1/2-inch roundover bit
- dado blade set
- framing square
- power sander and various grits of sandpaper
- drill/driver with drill bit set, including #2 square driver
- Kreg ProPack Pocket Hole System
- pneumatic nail gun (or hammer)
- bar clamp
- tape measure
- flexible metal ruler
- pencil

Figure 3

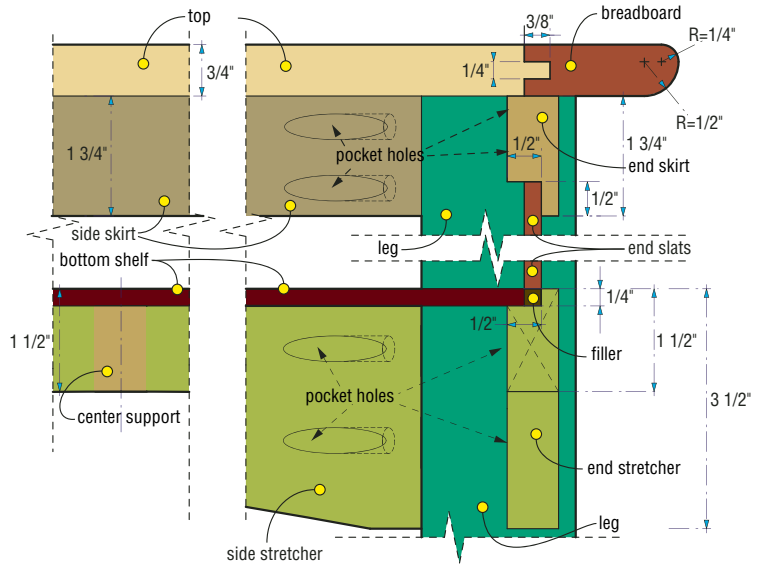
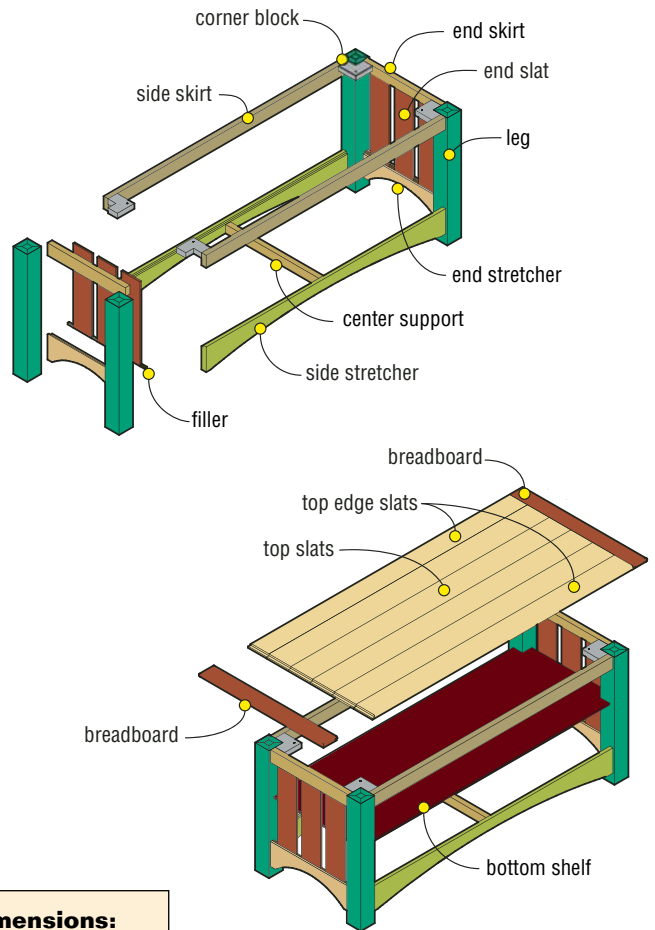


Figure 4



Finished Dimensions:

Height: 18 1/2 inches
Depth: 20 inches
Width: 46 inches