



crestonWood
Furniture and Shop Design

Arts & Crafts SIDE TABLE PLANS



By Dan Phalen

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COMPLETED SIDE TABLE

Here's what we're trying to build. The components are all rectilinear, small, easy to fabricate. Anyone with a decent saw, a square, a drill press and a router can construct this side table in a couple of weeks. You might have to suspend your day job, but it can be done.



MATERIALS LIST

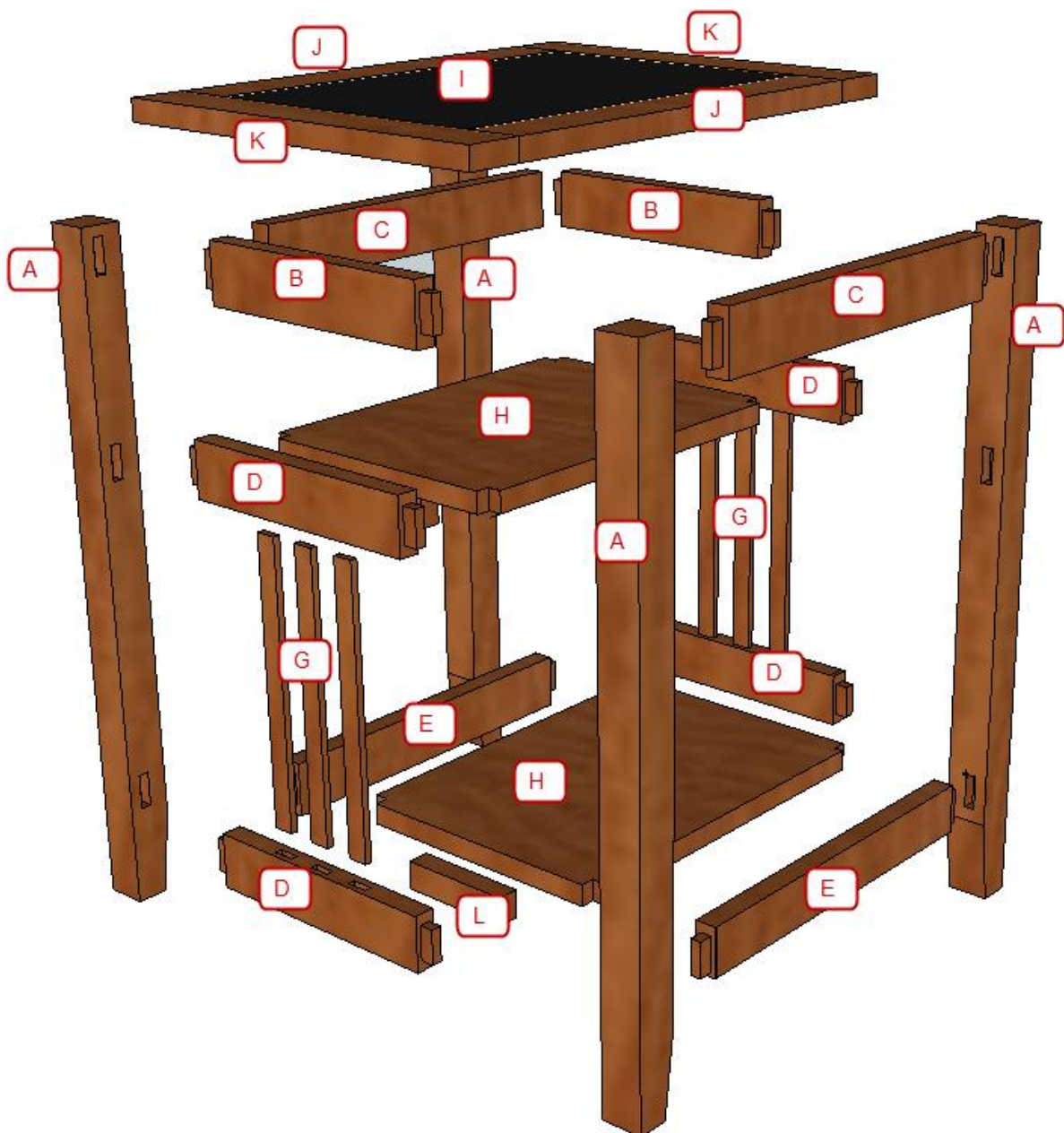
ID	Part	Qty	T	W	L	Material
A	Legs	4	1 1/2	1 1/2	24	Cherry
B	Side Aprons	2	3/4	2	16	Cherry
C	Front & Rear Aprons	2	3/4	2	14	Cherry
D	Side Stretchers	4	3/4	2	10	Cherry
E	Front & Rear Stretchers	2	3/4	2	10	Cherry
G	Slats	6	1/4	3/4	10 1/2	Cherry
H	Shelf	2	3/4	10	14 1/8	Cherry/Jatoba
I	Top	1	3/4	10 3/8	17	Birch Ply*
J	Top Edging, Front/Rear	2	3/4	2	17	Cherry
K	Breadboard End	2	3/4	2	14 1/4	Cherry
L	Shelf Cleat	4	7/8	7/8	4	Cherry

*NOTE: The best plywood for this purpose is a 9-ply material.

EXPLODED VIEW

The table is fairly simple to build because the components are symmetrical—that is, identical sides, identical front/rear legs and aprons. All mortises and tenons are 1/2D x 3/8W x 1 1/4H, all tenon shoulders 3/8 inch. As most of the parts are interchangeable, you should mark them with making tape or chalk as you cut and dry fit.

The two side aprons and four side panel stretchers are identical. Likewise, the front and rear aprons and stretchers for the lower shelf are identical. All are 2 inches high, 3/4" stock. The only differences are the mortises for the slats in the side-panel stretchers.



MILL AND MARK WORKPIECES

I found it easier to go to the table saw and cut my workpieces first. Get them laid out, marked with chalk or masking tape as to which corner each fits. I like to use “LF” and “LR” for left front and left rear, respectively, and “RF” and “RR” for the right side. That way I don’t get confused and make a mistake.

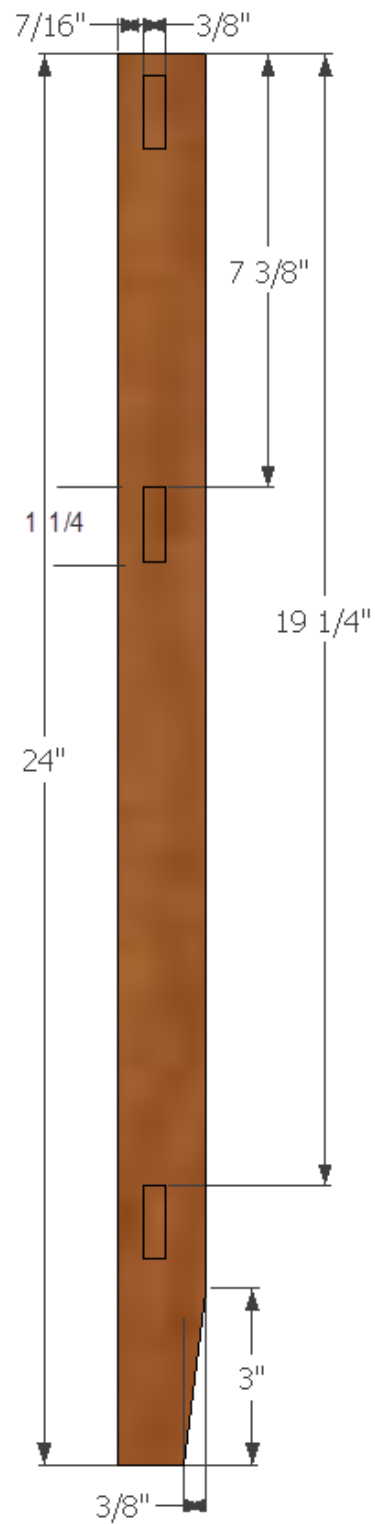


LEGS

Mill four (4) pieces of 4/4 hardwood stock to 1 ½ x 1 ½ x 24 inches.

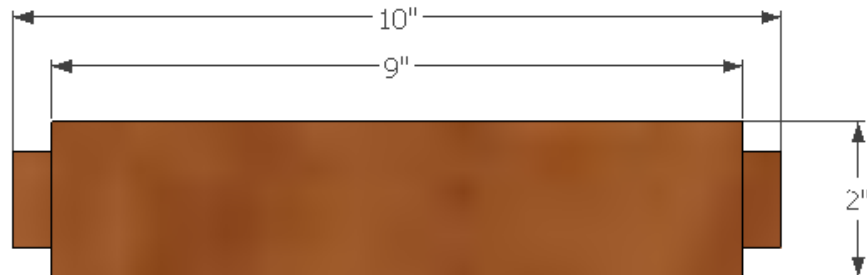
Do not cut mortises or bevels yet.

Set the legs aside.



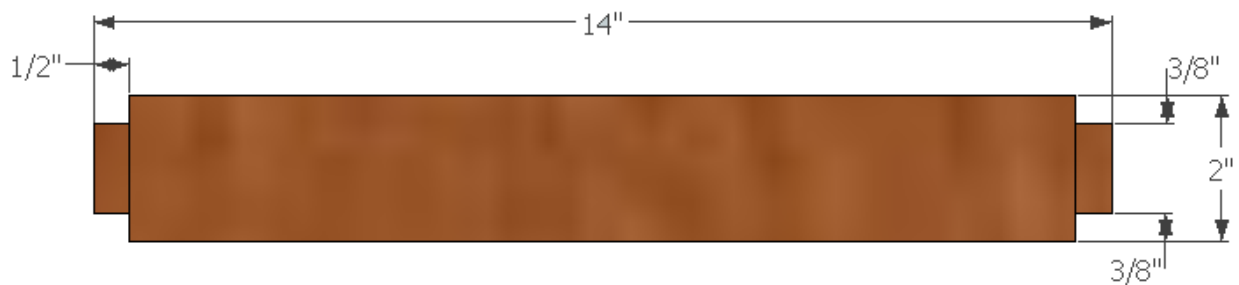
SIDE STRECHERS AND APRONS

Mill the six parts **B** and **D** to 10" overall by 2". Cut tenons when finished.



FRONT AND REAR STRETCHERS AND APRONS

Mill four pieces, parts **C** and **E**, from 3/4" stock to 14" overall length by 2" width.

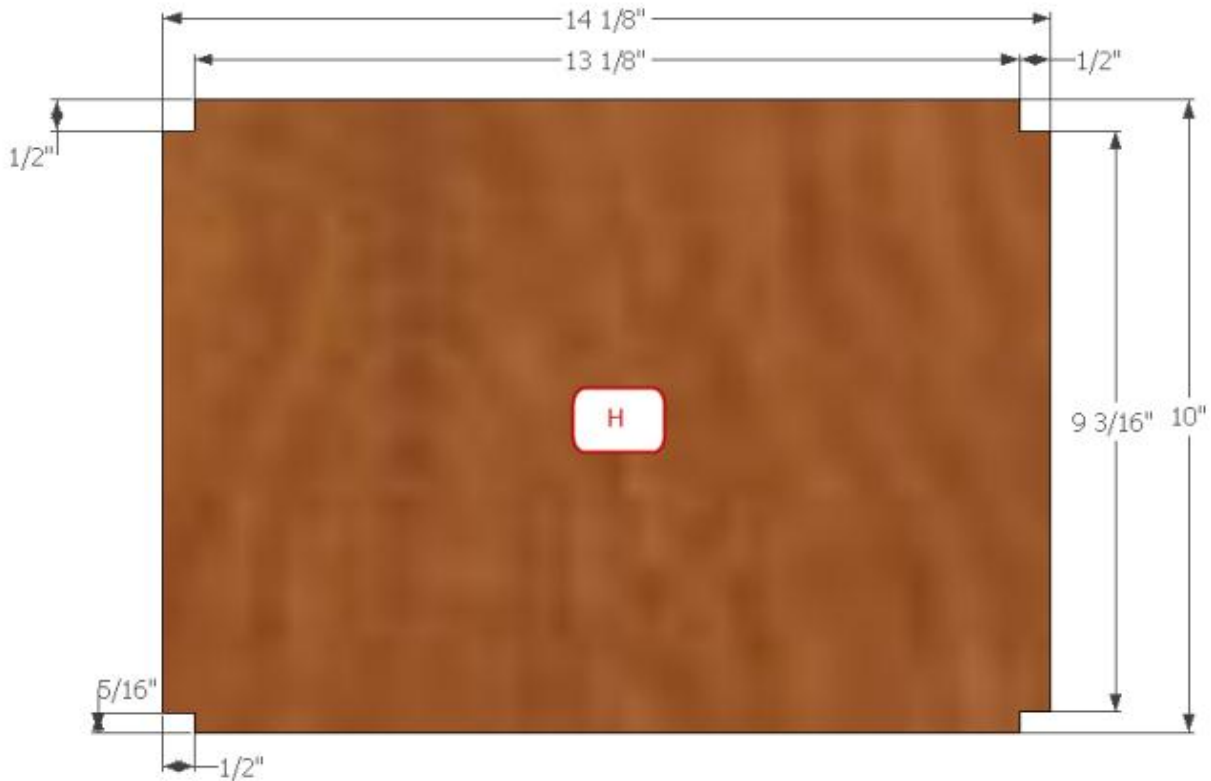


First cut stock laid out before mortise & tenon cuts

SHELVES

Cut the two shelves (**H**), from 4/4 or 3/4 stock to $14\frac{1}{8}''$ x $10''$ as shown.

DO NOT CUT THOSE NOTCHES YET. You may need to adjust later when you find your mortise and tenon work is off by a sixteenth or so. Just set the shelves aside, or maybe polish them up with 320 grit sandpaper.

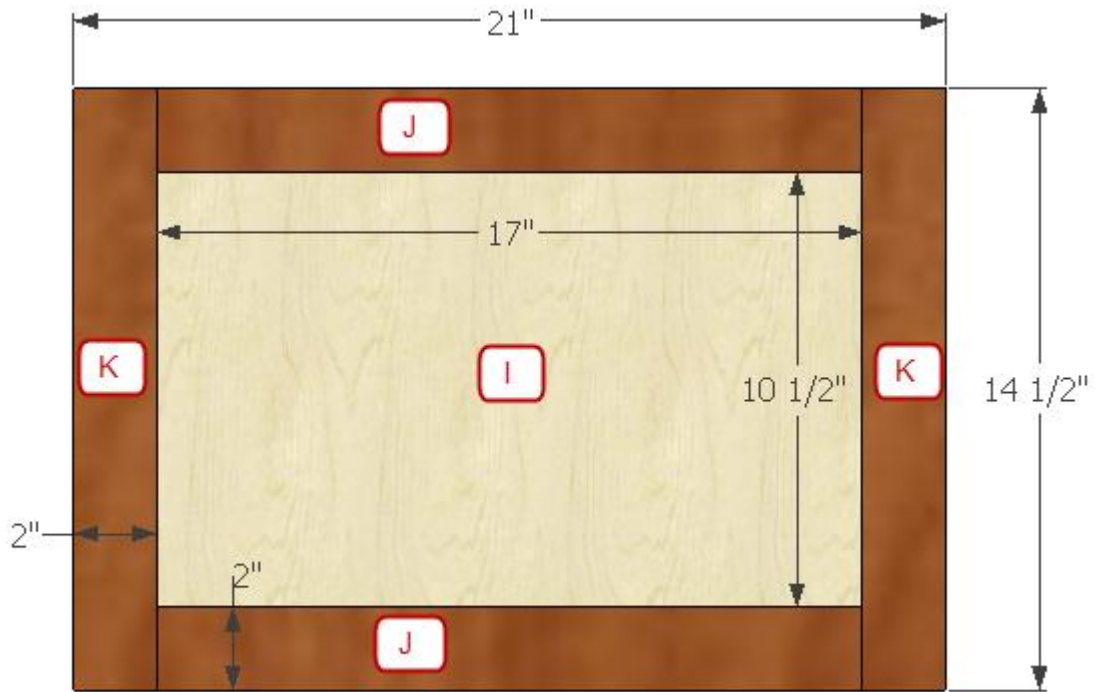


CLEATS

You could cut the Shelf Cleats (**L**) at this point if you have some cutoff stock left. Nominally $1''$ by $1''$ or take $1/8''$ off. Four (4) inches length. You might cut from a long piece and cross cut the lengths on the band saw.

TOP

Cut the top center as you see fit. I used birch plywood and applied a black laminate because (a) it will match the office desk I'm building, and (b) I'm sloppy with drinks and don't care to mark up a beautiful cherry top.



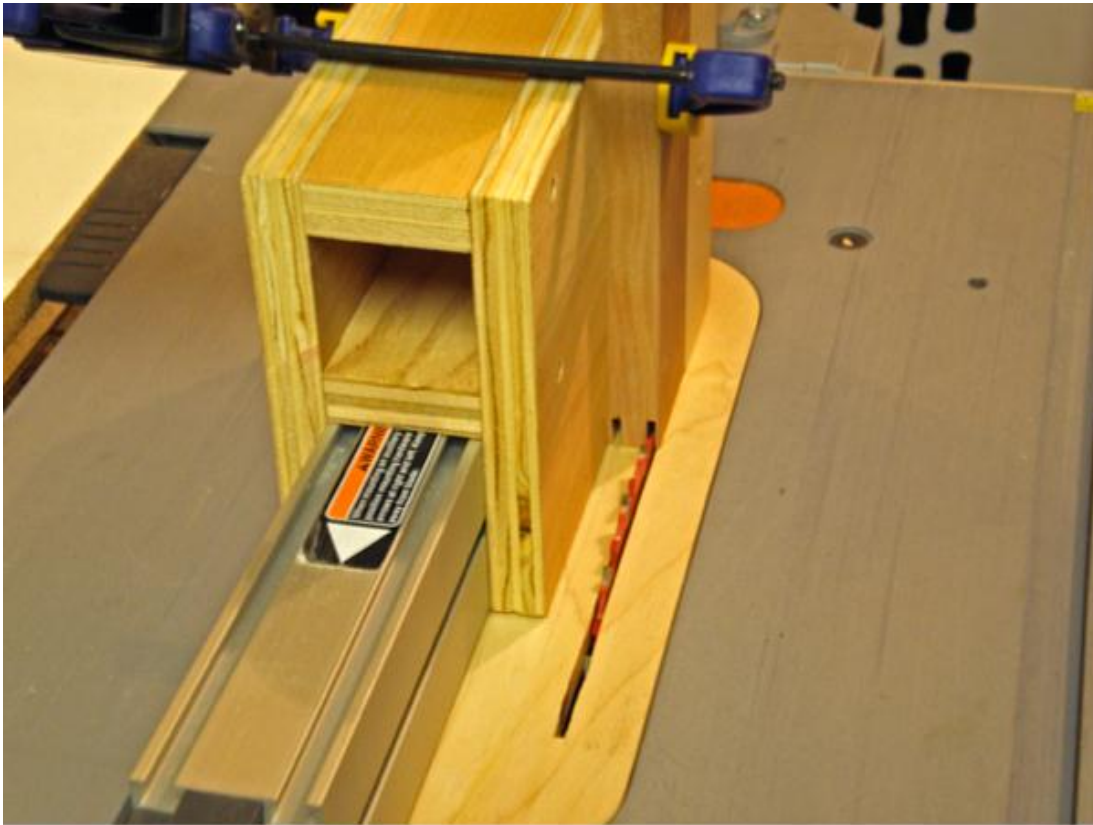
Join front and rear edging (J) to top (I) with biscuits. Test for end-to-end fit before cutting breadboard ends (K), then join breadboards to table.

TENONS

DO NOT CUT THE LEG MORTISES YET. You need to cut tenons and assemble your Side Panels first to make sure of the space between the side stretchers. After you've at least dry fitted the Side Panels you'll have a better idea of the exact measurement that will fit stretchers to legs.

All tenons for this project are the same: 1 1/8" high by 3/8" wide by 1/2" deep, centered across the cross-section 3/8" top and bottom, 3/16" either side.

Cut the tenons on the table saw and/or band saw. I prefer the table saw with a shop-made jig:



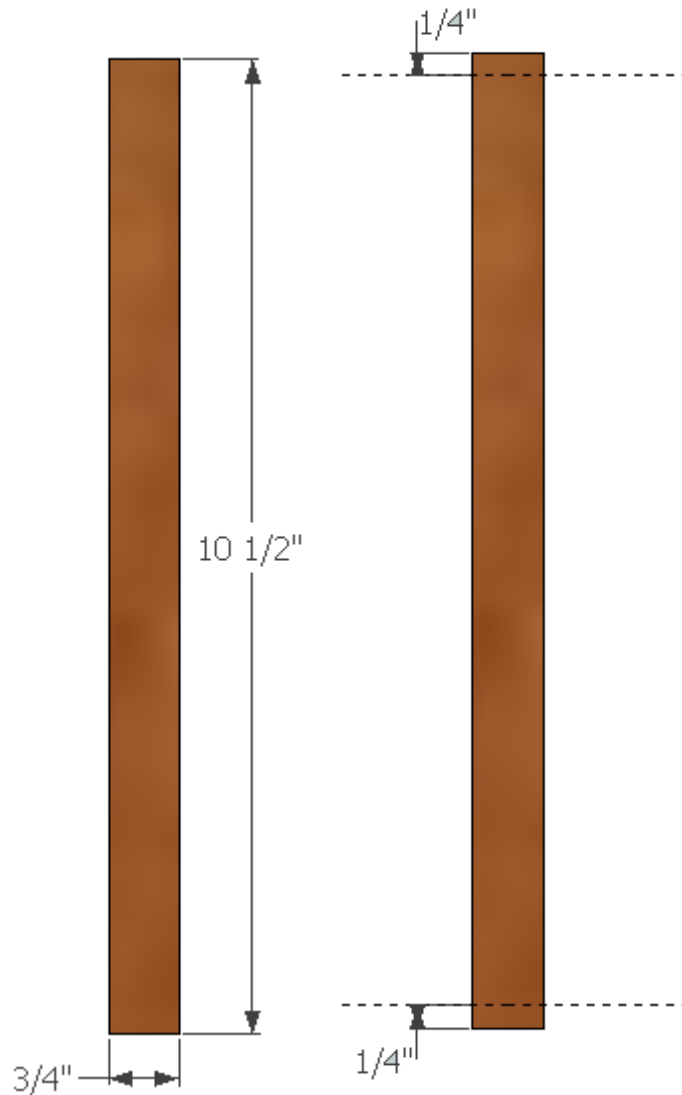
Cutting the tenons with TS jig

MAKING THE SIDE PANELS

The side panel component fit determines the exact placement of matching leg mortises, so we'll construct the side panels now.

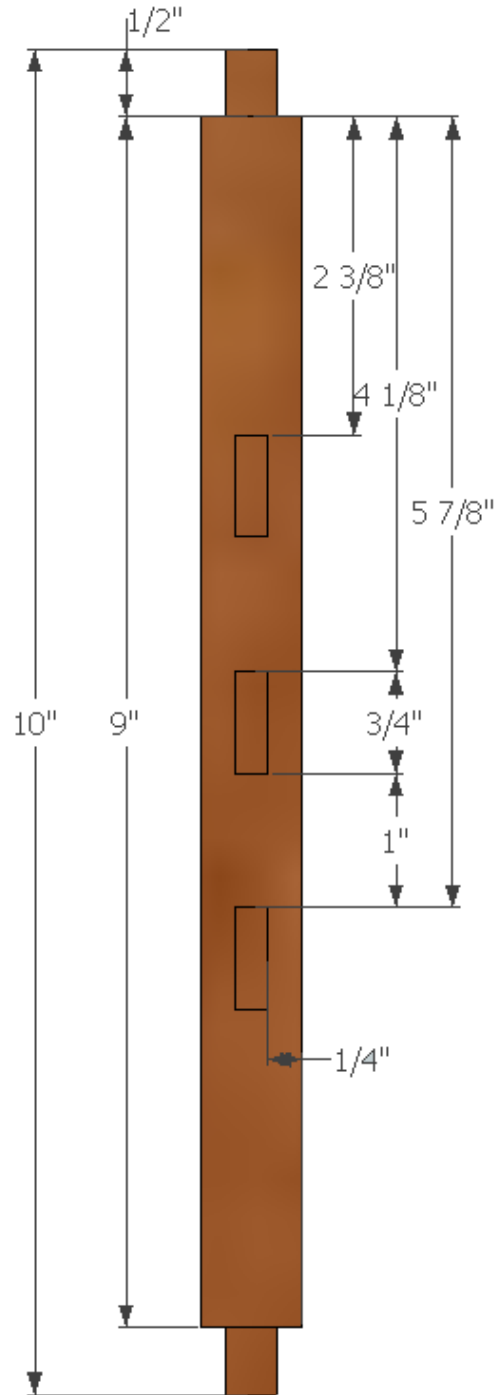
MILL THE SLATS

Now for the slats. Mill six pieces to $3/4"$ by $10\ 1/2"$. The $10\ 1/2"$ allows for a $1/4"$ mortise depth at either end.



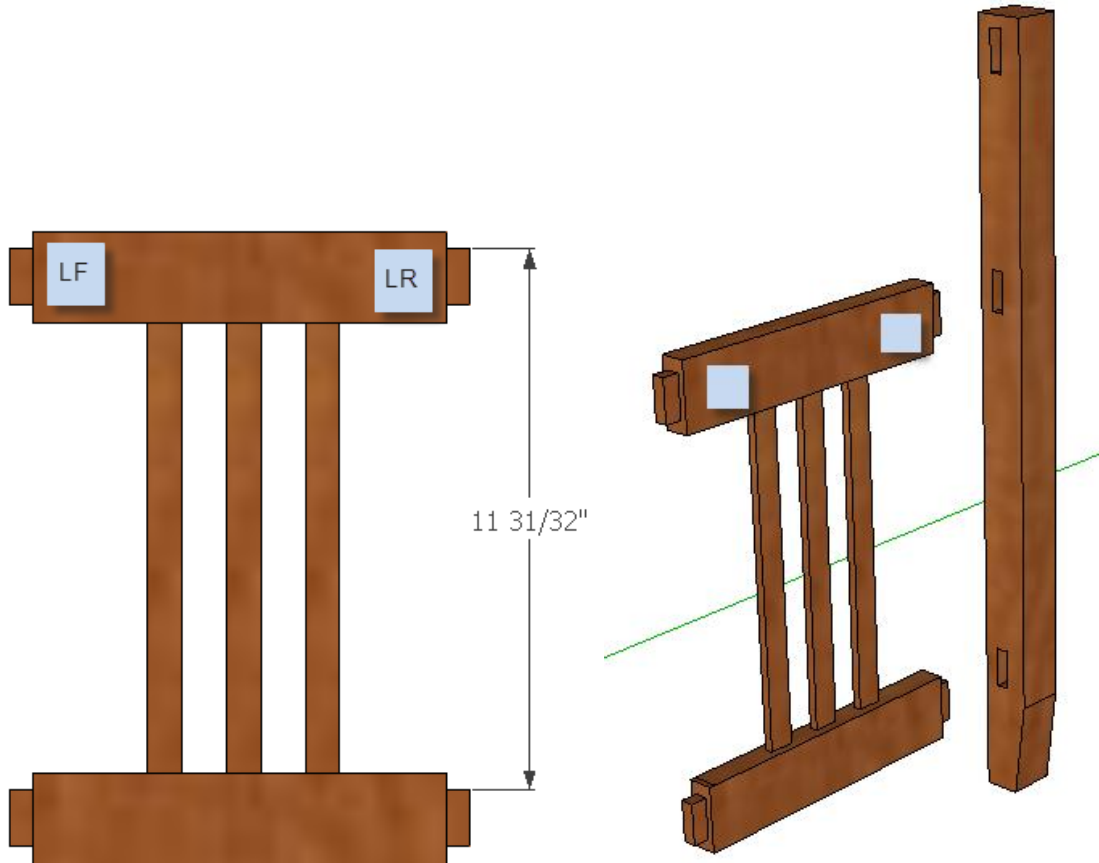
MORTISE THE SIDE STRETCHERS

The mortises for the Side Panel slats are very small. First, mark your mortises with a pencil or marking knife. Then drill a 1/4" hole at each end of the mortise and work with a 1/4" mortising chisel. Or, if you have a hollow-chisel mortiser you don't need my instructions.



ASSEMBLE THE SIDE PANELS

This is the proper time to glue the slats to the stretcher mortises. The dimension shown is an example of how close your assembly might be to a nominal 12", but no cigar. Check this measurement carefully before marking the matching leg mortises.



I attached masking tape on the inside surfaces of the stretchers as shown. So my Left Rear leg ought to show up on the right of this picture.

PREPARE APRONS FOR TOP

Before we hook up the aprons to the legs, we need to pre-drill them for the top fasteners.

DRILL APRONS FOR TOP FASTENERS

If you want precise cuts for the Figure 8s, do the job on a drill press, but do it while the aprons are loose. Once they're glued to the legs, you'll have to use a hand drill, and since your drill hole extends over the apron edge, you get into support issues.

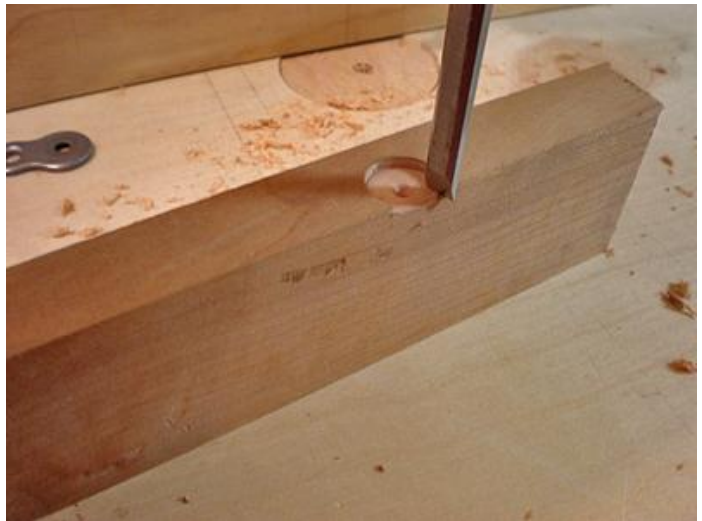


Drilling instructions follow on the next page.

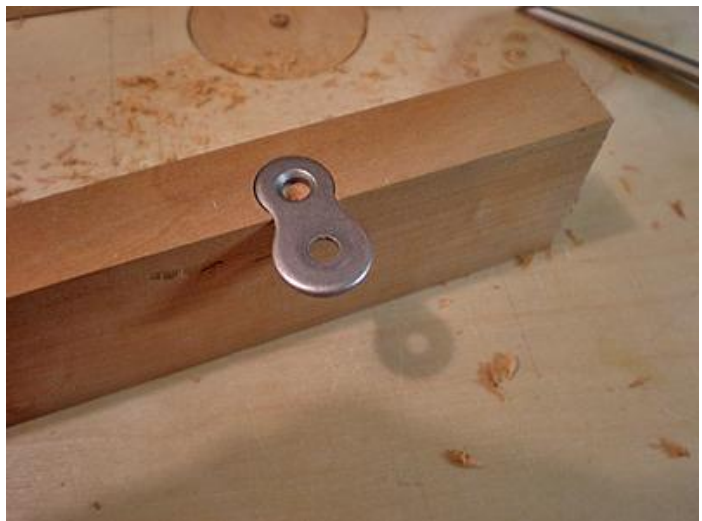
Using a 9/16" dia. Forstner bit, drill the tops of all three aprons 1/8" deep for figure 8 fastener pairs.



Pare the shoulders with a chisel to allow the fastener to fit.



The top of the fastener should be flush with the top of the apron.



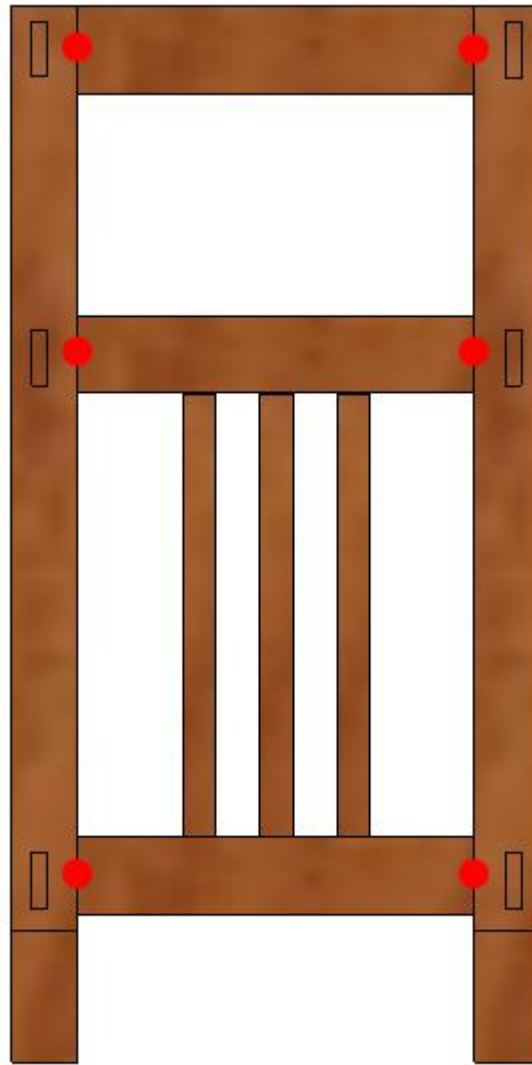
SIDE ASSEMBLIES

Each side is comprised of front and back leg, apron, and side panel assembly. There are six glue joints, three for each leg, as shown below.

ATTACH SIDE PANELS TO LEGS

Glue the side panel stretcher tenons to the leg mortises. Pre-finish if that's your choice. I recommend applying any stain before glue-up because of the tight inner spaces, and also because excess glue won't interfere with the staining effect. I also recommend using masking tape to protect exposed surfaces.

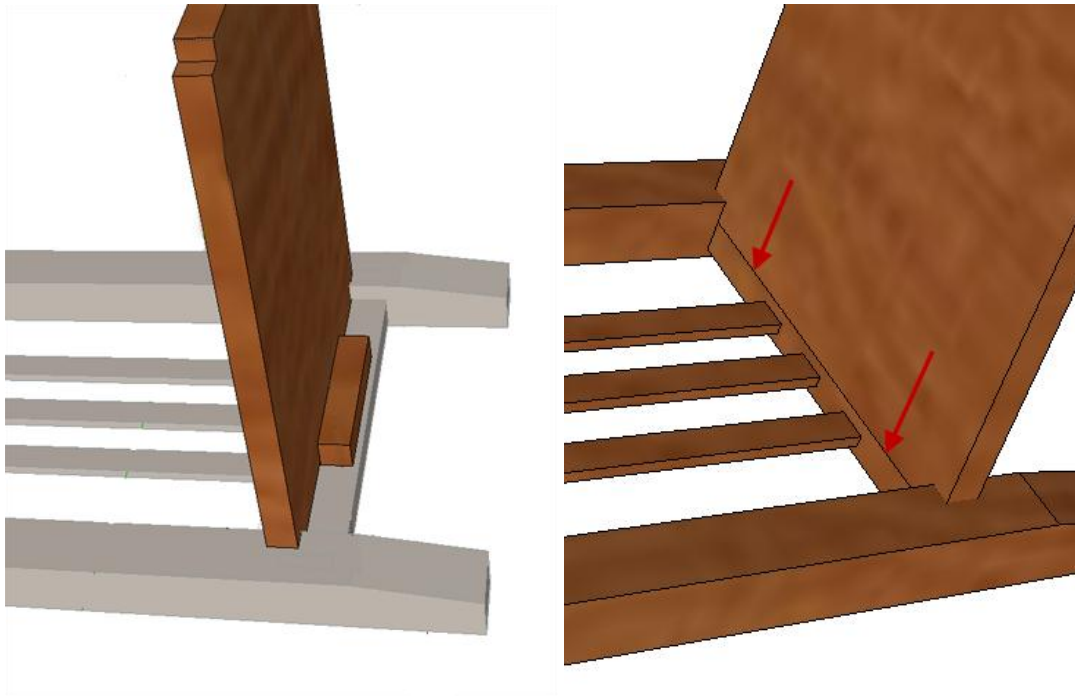
Once the legs are on, you have less room for brush and hand.



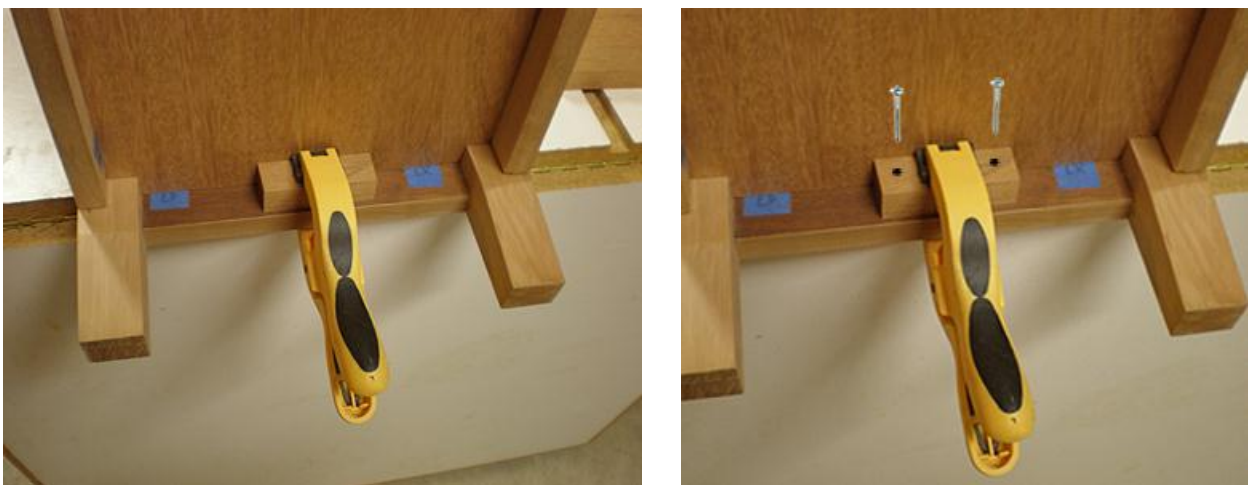
FIT LOWER SHELF TO CLEAT AND LEGS

The fit for the shelf leg notches is critical. Careful and precise measurement can mean the difference between a snug fit and unsightly gaps and protrusions.

Once you've cut and trimmed the notches for a good fit between the legs, turn the side assembly outer side down on a work surface. Fit the shelf notches around the legs, being careful to bring the shelf upper surface flush with the top of the lower stretcher. This is the time to do any paring of shelf surfaces to insure a snug, square fit.



Now place the support cleat flush against the underside of the shelf and clamp it against the stretcher.



Remove the shelf if you need space for a drill and/or your knuckles. Drill and countersink a hole in the cleat on either side of the clamp. Attach cleat with screws.

Repeat with upper shelf and top stretchers until your two side assemblies resemble the picture below.



FINAL GLUE-UP

Test fit the front and rear aprons and front and rear stretchers for fit with the shelves.



Now is the time to make adjustments.

When you are ready for final glue-up, make sure you have plenty of clamps



FINAL ASSEMBLY

With the sides and aprons glued in place and the lower shelf secured to both cleats, you're ready to attach the top.

The issue at stake here is tool space. You have barely 5 inches between the top of the upper shelf and the bottom of the apron, and just under 7 inches from shelf to top. Here's what I recommend.

1. Detach one cleat from its stretcher but leave it attached to the shelf. Keep the other cleat attached to the opposite stretcher but detach it from the shelf. Set the upper shelf with its attached cleat aside.
2. With the project standing on its feet, attach the Figure 8 fasteners to the tops of the aprons.
3. Invert the top on a work surface and invert the frame on top of it.
4. Position the frame on the top until it is centered. Clamp the aprons to the top.
5. Mark and drill a Figure 8 hole at two opposing corners. Drive screws into those holes.
6. Mark and drill the rest of the Figure 8 holes into the top, and drive screws.
7. Turn the entire assembly rightside up.
8. Take the top shelf at an angle until the uncleated end clears the side stretcher cleat, while the notches still fit around the legs.
9. Drop the cleated end of the shelf until it lines up with the holes you already drilled into its top stretcher. Drive screws through the cleat into the stretcher.
10. Drive a screw upward into each end of the top shelf.

The following illustration gives an idea of the process (right front leg removed for visibility).



This process may take a little sweat and a few choice words about the clown who designed this thing, but you'll eventually get 'er done (before Christmas, anyway).

Your A & C Side Table is now ready for your choice of final finish.

CUSTOM CAPABILITIES

Of course you can change this design to suit your needs. My choice of sizes was dictated by the table's intended location. You could make it taller, wider, deeper, or all three. You could also reposition the top shelf to your choice of height. You might even increase the apron height, or insert a drawer instead of the top shelf space.

The possibilities are endless, but this design should get you started. I recommend you consider using Google Sketchup if you plan to make your own design. I caught many mistakes there before building.

FINISHED APPEARANCE

Here is how the Arts & Crafts Side Table looks in my room, with all my junk on it.



THAT'S IT!

This completes the plan drawings for my Arts & Crafts Side Table. Enjoy and let me hear from you about your success with it.

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