

Photo by Al Parrish

STICKLEY OTTOMAN

After half a dozen Morris chair plans, we decided it was time to help you put your feet up and relax.

A Morris chair (heck, almost any chair) just isn't complete without an ottoman to prop your feet on. Sadly, by the time you finish building the chair you're usually so glad to have

completed the project that the ottoman gets delayed until later. Well, now is the time!

We've published a number of plans for Morris chairs in Popular Woodworking (most recently in

by David Thiel

Comments or questions? Contact David at 513-531-2690 ext. 1255 or david.thiel@fwpubs.com.

our special “Great American Furniture” publication, available online at popwood.com) in varying styles and by several designers. After looking at dozens of comparable ottomans, we selected a traditional and simple design from Gustav Stickley.

The #300 ottoman we used as a model is one of Stickley’s earlier pieces. Originally offered with a hard leather seat, it sold for \$7.50 in the 1912 catalog. Recent auctions have seen this simple piece sell for as much as \$800.

The dimensions on our project match Stickley’s, but we’ve updated the seat material to adjust the cost (as well as to make it a little more comfortable).

How to Build It

As far as furniture projects go, this is pretty simple. But it does give you a chance to work on a hallmark joint of Arts & Crafts furniture – the mortise and tenon.

There are four mortises per leg, but for the first-time builder the construction method used is very forgiving. The blind tenons, including the ones in the top rail

joints (which ultimately are hidden by the upholstery) make this project pretty simple.

The simplicity of the mortise-and-tenon joint is spruced up a little on this piece with the addition of pegs, which make the joints more solid and add a nice decorative touch.

The more significant step only sharp-eyed woodworkers will notice at first is to make the legs from multiple pieces of wood. By doing so, the highly figured quartersawn white oak shows on all four sides. Mother Nature hasn’t figured out how to do this yet, but we have.

Also, if upholstery is something that has kept you from trying this type of project before, don’t sweat it. I’m hardly an upholsterer myself, and everyone who has seen my ottoman seems to think it turned out pretty well, so we’ve included a short story about the upholstery (see “Upholstery Made Easy” on page 61).

Four-faced Legs

Quartersawn white oak is one of the features that dresses up the plain styling of Arts & Crafts fur-

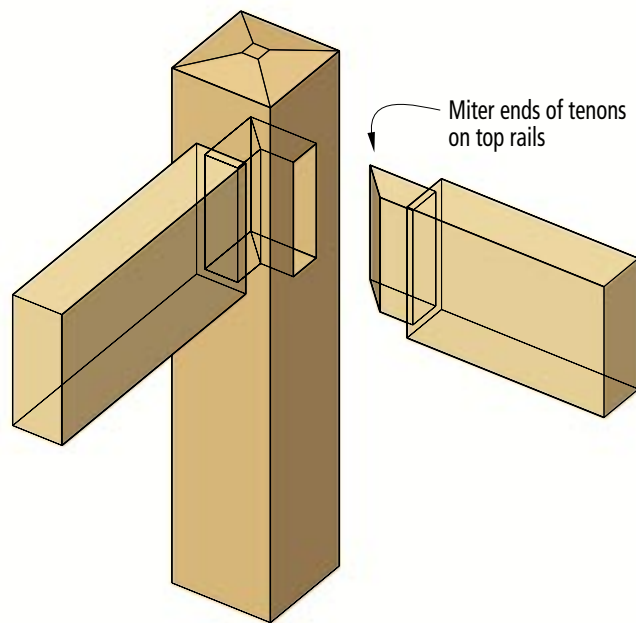
niture. Cut from the center of the log out to the bark, the orientation of the growth rings runs almost perfectly perpendicular to the face of the board. This reveals splashes of “ray flake” that are beautiful to behold, but they only happen on the perpendicular faces.

There are a couple of good ways to give the legs this “ray flake” on all four faces, but Stickley chose

to simply add quartersawn veneer to the two flatsawn faces, which I copied.

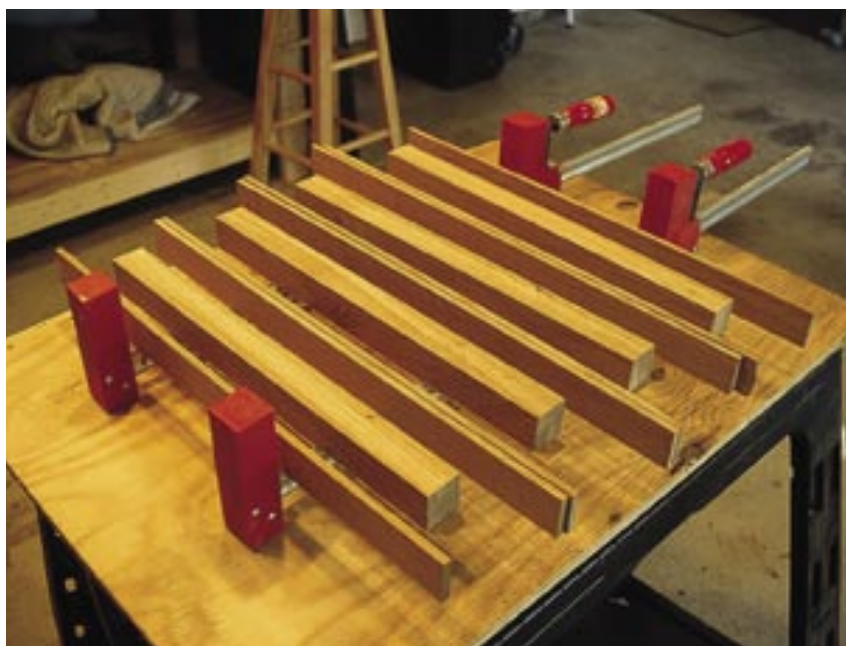
Start making the legs by cutting eight leg halves that are $7\frac{1}{8}$ " x 2" x 16". The $7\frac{1}{8}$ " thickness will require you to start with 4/4 rough lumber, but ultimately the oversized dimensions will be to your benefit, as you’ll see.

First, glue each of the four leg



Top rails and leg joint

To offer four faces with quartersawn white oak on each leg, the leg centers are glued then planed to $1\frac{3}{8}$ " x $1\frac{3}{8}$ ". Then the $\frac{1}{8}$ " or $\frac{1}{4}$ " oversize “skins” of quartersawn veneer are glued to the flat-sawn faces. After the glue dries, plane the legs to their finished $1\frac{1}{2}$ " x $1\frac{1}{2}$ " dimension.



Choosing the best grain pattern to face “forward” is a tough call. In any case, take a close look at the grain on the pieces for your legs and mark the tops to offer the best look.

pairs together, face-to-face, orienting the best quartersawn grain pattern to the outside. When the glue has dried, square one corner of each piece on the jointer, then size each leg (using your table saw, then your jointer for a final pass) to 1⁵/₈" (across the face that shows a seam) x 1³/₈" or slightly larger (across the quartersawn face).

These dimensions will allow you to add ¹/₈"-thick veneer to the two layered faces, then run the entire leg down to 1¹/₂" square, leaving an almost invisible veneer face on two sides.

Next, run eight veneer pieces to ¹/₈" x 1³/₄" x 16". If ¹/₈" is thinner than you're comfortable running on your planer, leave it at ¹/₄" – just know that you'll have to plane more off those faces after glue-up. Glue the veneer pieces to the leg blanks, making sure the veneer extends over all the edges.

After the glue has dried, trim the veneer pieces flush to the leg centers (I used a No. 3 hand plane). Then run the veneer faces through the planer (alternating sides on each pass) until the leg is 1¹/₂" square. Trim the legs to length for a four-faced leg.

Making the Holes

The next step is to find where you want the mortises to be on the legs. First determine the orientation of the legs (best faces out), then use the illustrations on page 60 to mark the mortise locations.

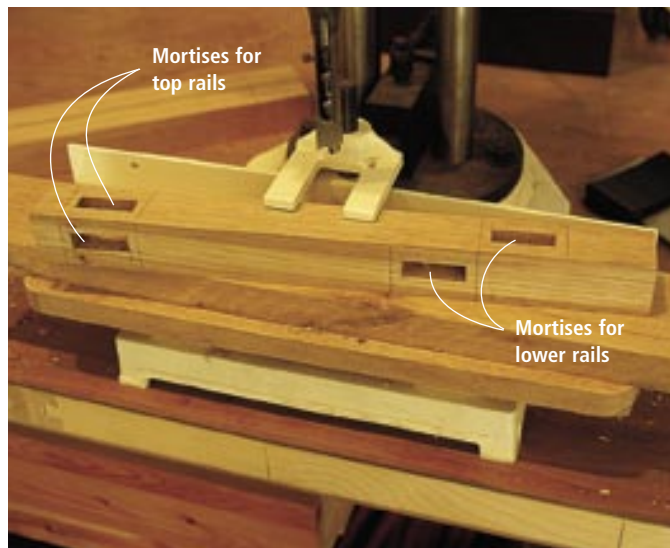
The mortises can be ³/₈" wide, and that's fine, but to be honest with you, I had a ¹/₂" mortise chisel in my mortiser, so that's where they ended up. I cut the mortises 1¹/₁₆" deep to allow an extra ¹/₁₆" for glue squeeze-out. Cut the mortises, then be sure to clean the chips out of the bottoms so the tenons will seat properly.

Filling the Holes

I cut my tenons on the table saw with a single combination blade. If you have a dado stack on hand, use it. A dado stack will allow you to cut your tenons faster.

Because my mortises are ¹/₂" wide, all of the shoulders on my tenons are ¹/₈". This makes it unnecessary to change the blade height when moving from face to edge shoulders.

Because the top rails all are at the same height on the legs, the tenons will bump into each other



The mortises for the top rails are on adjacent inside faces and intersect in the middle of the leg. The mortises for the lower rails are staggered to fit one on top of the other. I used a benchtop hollow-chisel mortiser to make quick work of the mortises, but a router (or even a chisel and mallet) will work just as well.

before fully seating against the leg. Take a minute to miter the ends of the tenons on the top rails so they can meet without interfering with the fit. Because the lower rails are staggered in height, this isn't a problem.

With all the tenons cut, test-fit the ottoman. Assemble both ends, then insert the longer rails between the two assemblies. The

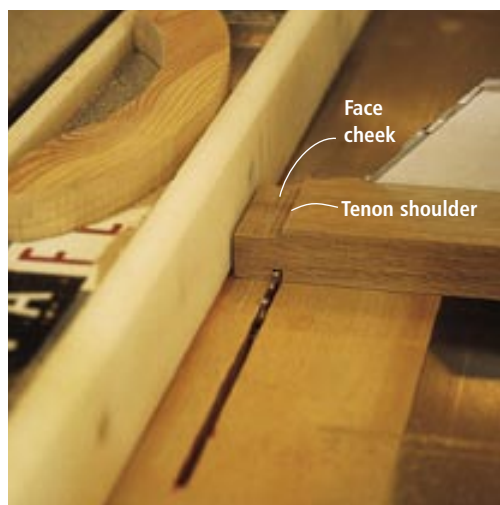
tenons should require a little wiggling to slip all the way into the mortises, but you shouldn't have to bang on them with a hammer. Check to be sure that all the shoulders fit flush against the legs without any gaps. When all the joints are acceptable, go ahead and disassemble the frame.

Topping the Legs

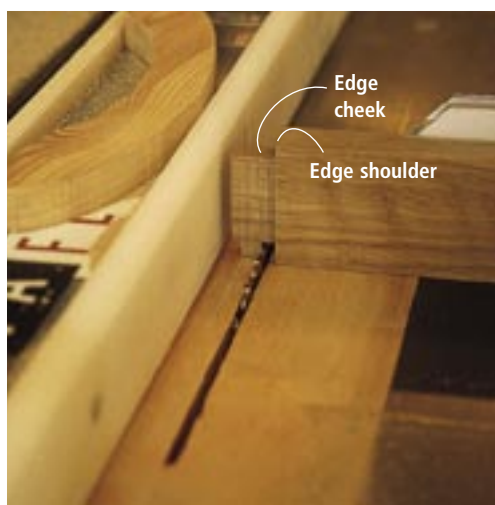
When laying out the mortise locations on the legs, you will probably notice that the top rails will sit 1" short of the tops of the legs. Don't freak out – you didn't do anything wrong. This extra space leaves room for the upholstery material and space for you to bevel the tops to dress them up a little.

Dig through your toolbox for a combination square or other similar tool that will help you mark a line ¹/₈" down from the top of the leg on all four faces.

Then set your disc sander's table to a 12° angle and, using a miter gauge on the sander, slowly bevel the tops of the legs on all four sides. This will leave a ¹/₄" x ¹/₄" square at the top. This bevel is a great detail.



The shoulders for all the rail tenons are made with little fuss on the table saw. Define the shoulder on the first pass using a miter gauge for support, then nibble the rest of the material away, backing the piece away from the rip fence.



Cut the adjacent shoulders and cheeks in the same manner. I'm using a combination blade here, which leaves a corduroy-like finish on the cheeks. Because of that, I've left the tenons oversized and will use a shoulder plane to pare them to fit.



One of the most visible details on the ottoman is the shallow bevel on the leg tops. You could make the cuts using a table saw or miter saw, but I took advantage of a benchtop disc sander that let me fine-tune the bevels as I went.

Steel Edge or Mineral Grit?

Now is the appropriate time to smooth the wood to the surface finish that you prefer. While we'll often just tell you to sand through grits from #100 to #220, there is another option here.

Because of the possible dramatic effect of the grain in the quartersawn white oak, preparing the wood to best present the grain is important. When you sand wood you effectively tear the ends of the fibers to smooth the wood surface. This leaves a feathery end to the grain structure and can obscure

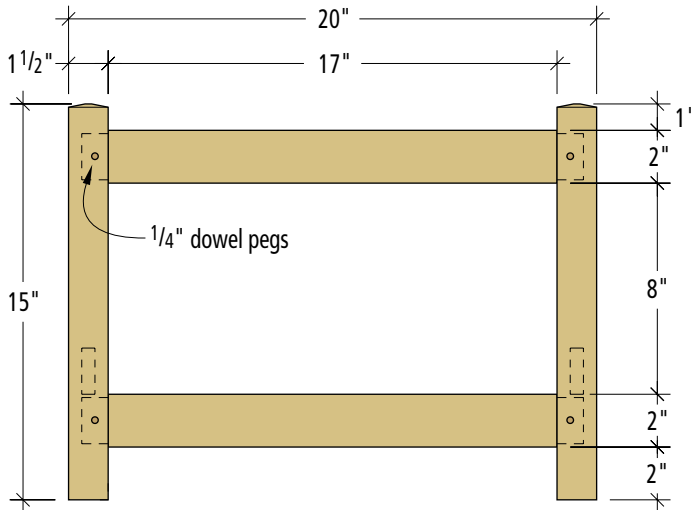
the grain pattern and affect the way the wood takes a stain.

A better method for this project is to cut the ends of the fibers using a hand scraper or scraper plane. With a little extra effort (and a lot less dust) you can leave crisp ends on the fibers that will really let the ray flake pop when you add the finish.

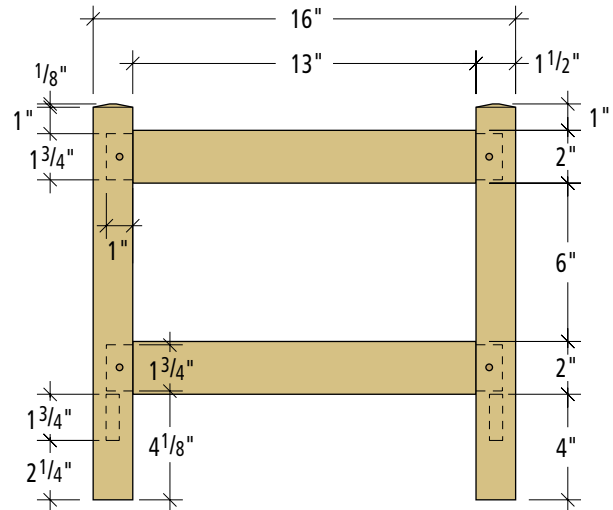
Ready for Assembly

With all the pieces test-fit and sanded (or scraped), you're ready to put the ottoman together.

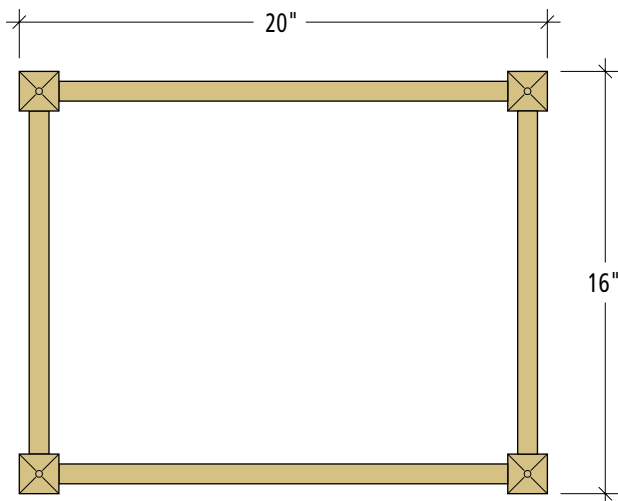
Just as with the test run, as-



Elevation



Profile



Plan

semble the ends first, applying glue to the inside of the mortises, lightly covering all four walls. Applying the glue to the mortise rather than the tenon will keep glue squeeze-out (and clean up) to a minimum.

With the ends assembled and clamped, go ahead and insert the long rails and clamp them as well. You're nearly done.

A Bunch of Pegs

The last detail before finishing is to peg all the tenons. I use 1/4" red oak dowel stock for this step. You can use white oak, but the white oak dowels are harder to find at the store, and the red oak makes the pegs stand out a bit more on the leg once color is applied.

Chuck a 1/4"-diameter bit into your drill and use a drill stop collar or a piece of tape to make the 1" depth necessary to drill through

the tenon and into the opposite wall of the mortise.

Mark all the peg locations, then start drilling. You can peg the holes as you go (add the glue to the hole, not the peg) or wait until all the holes are drilled before starting to glue.

Cut all the pegs 1/4" longer than the depth of your holes. Then, when the peg is fully seated in the hole, trim the excess with a flush-cut saw with little or no set to the teeth. If you don't have such a saw, slide a piece of cardboard under the blade to keep from scratching the face of the leg. (Another option is to build "A Jig for Precision Trimming" that Nick Engler discusses in "Ingenious Jigs" on page 34.)

Do a little more sanding or scraping around the pegs and you're ready to break out the dye.

Color Me Nutty Brown

As mentioned, quartersawn white oak can be amazing to look at, but a finish designed to enhance the wood helps a lot.

I use a water-based aniline dye to put the first layer of color on the wood. Because the dye is water-based, it will raise the grain when applied. So to prepare the wood for finishing, I first wipe down the entire piece with a damp cloth (just water) then hand-sand the piece with #220-grit paper to knock off the burrs.

Next, add the aniline dye and let it dry overnight. Then it's time for a coat of brown glaze. The glaze is a stain, but it's the consistency of thin pudding and will lay on the wood and fill the grain slightly. Let the color infuse the grain, but be sure to wipe off the excess or it will hide the wood.

Let the glaze dry overnight

again, then you're ready for your favorite clear, protective top coat. With a project this size, I often use lacquer in a spray can with good results. The rest is upholstery. Use the story below to help you through these steps.

Then you're ready to put your feet up and relax. **PW**

SOURCES

Woodworker's Supply
800-645-9292 or woodworker.com

1 oz. • J.E. Moser's Golden Amber Maple water-based aniline dye #844-750, \$13.99

Woodfinishingsupplies.com
866-548-1677

1 qt. • Valspar warm brown glaze, #WL6100-25, \$10.99

UPHOLSTERY MADE EASY

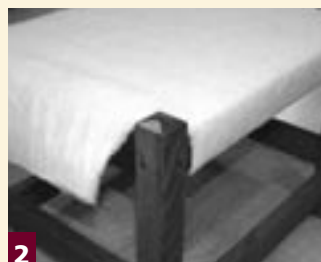
If you've been waiting to tackle a first upholstery project, this is a simple one. All you need are a few yards of black muslin (or similar material), some foam block, batting and a finished cover of your choice.

You can find all the materials you need to upholster furniture at your local craft-supply store or fabric store. I bought all of my materials at a local Michael's.

As you can see, I used my pneumatic stapler (a wide-crown is great if you have one, but narrow-crown will work in a pinch), but you can use standard upholstery tacks as well. The photos walk you through all the steps except the finished cover, which is the same as the last batting layer (shown in photo 4).



Start by mitering the corners of the muslin around the legs and tacking the edges to the inside of the rails, tightening the material as you go.



Cut out the corners of the batting sheet and wrap it around the legs and rails, tightening as you go. Tack the batting to the inside of the rails.



A layer of 2" foam will add cushion. The piece should be cut to fit just inside the rails and will lay in place on the first batting layer.



A second layer of batting holds the foam in place. It is cut and attached exactly as the first layer, but keep tightening the material to maintain a uniform look.



A top layer of muslin covers the batting and foam. The corners are miter-cut, then folded around the legs to avoid loose strings and unraveling.



The final muslin layer is tucked around the rail and tacked at the center. Then work out towards the legs, rolling and tacking as necessary. Trim any excess.