



# Stickley Done Lightly

Banquet-sized Craftsman  
table looks leaner  
in curly maple

BY REX ALEXANDER

Craftsman-style furniture is traditionally made of fumed, quartersawn white oak. Gustav Stickley was one of the champions of the Craftsman movement, and his name is synonymous with a distinctive style of blocky, muscular furniture. In Stickley's 1909 book *Craftsman Homes*, he talks about native woods and how to use them. "Oak is a robust, manly sort of wood and is most at home in large rooms which are meant for constant use, such as the living room, reception hall, library or dining room."

The oak version of the table shown here was first featured on the cover of *FWW* #122. That photo illustrated my article about building an Arts-and-Crafts side chair. After the article was published, I received many calls—not about the chair, but regarding the table.

One client wanted a lighter, more feminine pick of wood: figured maple. She chose a design I had already used for an oak table. Its inspiration came from Stickley's No. 657 library table and Frank Lloyd Wright's rectilinear furniture. With a top measuring 48 in. by



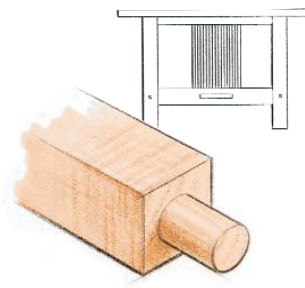


110 in., it's meant for entertaining large groups. Even with bulky legs to support its mass, the use of curly maple (finished in a light tone) gives the table a more feminine, lighter presence.

Birds-eye maple was my customer's wood of choice. But I knew it would be nearly impossible to find birds-eye in the large dimensions required:  $\frac{3}{4}$  in. thick and 10 ft. long. We settled on curly maple. Birds-eye was selected as a secondary wood, and its use was limited to the spindles.

### Buying lumber by the log allows book-matching

Finding 200 bd. ft. of curly maple in the lengths I needed also proved to be difficult, so I sought out a timber broker and sawyer. I decided to buy whole logs and have them resawn, which would take extra work and time. But it was worth the trouble because I was able to tell the sawyer just how I wanted the logs cut. Using wood from the same tree guaranteed that I would be able to



## SQUARE SPINDLES, ROUND TENONS

Making the spindles round in a PVC pipe jig on the radial-arm saw is faster than using traditional methods for machining square tenons.



**Cutting round tenons on square stock.** Slip two pieces of PVC pipe over a spindle. Carefully rotate the spindle against the radial-arm saw's fence and a stop block while moving the cutterhead, fitted with a dado blade, to remove the waste.



match the figure and color. (For more on locating a sawyer and cutting logs, see *FWW* #128, pp. 52-55.)


My customer told me that she didn't want her table to appear "too bossy," that is, she didn't want it too wild with figure. So I had the logs flitchsawn (sawed completely through in successive layers). This method yields a combination of flat or tangential grain and quartersawn or radial grain. I ended up with boards that had a lot of curl in the quartersawn areas and calmer grain in the flat-sawn areas. The areas of greatest curl were on the outside edges of the log.

I like to use air-dried wood because it machines cleaner, with less tearout. But air drying, I was told, wasn't an option with the curly maple. Curl is actually an abnormality to maple, and it causes stress in the wood. Kiln drying, I was told, would help stabilize the maple. Well, I hate to imagine what that stack of lumber would have looked like if I had air dried it. Curly maple was an apt de-



A man with glasses and a mustache, wearing a green short-sleeved shirt and blue jeans, is using a blue hand planer on a long, light-colored wooden plank. The plank is resting on a workbench. Sawdust is being kicked up by the planer. In the background, there are various workshop tools and equipment.

# No Jointer? No Problem

A small, light-colored wooden table with a jointer built into its base. The jointer has a hopper for shavings and a collection box.

I made the mistake of purchasing a used light-duty jointer many years ago. For several months the machine tugged on my patience because it would not heed my commands to mill lumber flat. Then I made peace with it. I distanced myself from this dog of a tool, which now lies in its own corner of the shop, its bite and growl silenced, the unplugged power cord curled peacefully about its legs.

Long planks, such as the 10-ft. pieces used to make up the Stickley tabletop, present a difficult milling challenge when they are warped and twisted. Jointing them flat can waste much material. I relied on my carpentry background and tools to solve the problem.

**1** Before you begin to scribe, you need a fairly flat surface on the edge of a board to write on. If the edge is rough and ragged, snap a line and cut off the waste with a circular saw. The opposite edge can then be ripped straight on the tablesaw. Trim the ends as well.



**2** In cabinet work, I often have to scribe a flat cabinet to fit a warped wall. I flipped the concept on its head and found a way to scribe a crooked board using a flat surface for reference. Then I use the scribe marks to guide a powered hand planer and flatten one face.

Use a tablesaw and its long outfeed table to serve as a guide for scribing warped stock. It's important that you take the time to level the outfeed table to the exact height of the tablesaw. Also, make sure the table's surface doesn't suffer from dips or other imperfections.

When a plank is badly warped, balance it on the outfeed table and tablesaw using weights or blocks of wood to prevent one corner from sitting too high. So when you scribe, you end up splitting the difference between high and low spots.





**3** After scribing, flip the plank over, and remove waste with a power planer, paying close attention to the scribed line. Finish up using a No. 7 jointer plane. To check your progress, flip the plank over onto the outfeed table and see if it rocks.

You don't have to completely flatten every square inch of the plank before resorting to a thickness planer to true the other side. As long as the plank won't rock as it goes through a planer, the other face can be trued. You do have to remove any bow because a thickness planer can temporarily compress the bow out of a board as it passes through. Once the second face is true, flip it over, and send the first face through the machine to clean it up.



**4** Squaring an edge comes next. Because I don't own a working jointer, I have an alternative method for jointing. I chuck the board in a vise and use a power hand planer fitted with a homemade carriage that keeps the tool square to the edge. Take light passes and sight along the edge to check your progress.

**5** A power planer can only get you so far. I get a good glue edge by jointing stock on a router table. My router is attached under the side extension of my tablesaw, which allows me to use the tablesaw's fence for routing, too. For jointing, I made an adjustable, auxiliary fence that fits over my rip fence.

I use pieces of  $\frac{3}{4}$ -in.-thick melamine for my auxiliary fence and attach it to the saw fence using L-brackets and carriage bolts. Alternatively, you can use an adjustable router-table fence (*FWW* #90, p. 57) that allows you to offset one-half of the fence relative to the other. To joint a board, adjust both fences in the same plane, and then adjust the rip fence to take off only  $\frac{1}{32}$  in. Joint a few inches of a board, turn off the router and reposition the outfeed half of the auxiliary fence flush against the jointed section.

I've had good results jointing edges using a  $\frac{1}{2}$ -in. solid-carbide up-cut spiral bit or a  $\frac{3}{4}$ -in. carbide-tipped straight bit. After jointing one edge, rip the other side using the tablesaw, and joint that edge on the router. Correct any slight imperfections using a No. 7 jointer plane. Then slightly hollow out the center of each glue edge with a scraper to avoid a starved joint. I don't use biscuits or splines to align boards. I do, however, glue up only two or three planks at a time so that I don't go crazy trying to keep everything flat.



**6** After letting a panel dry overnight, I use a No. 80 cabinet scraper to remove gluelines and any tearout left by the power tools. On a tabletop this big, it's easier to just hop aboard, and go to work on your hands and knees. —R.A.



scription of the lumber's condition after kiln drying (for more on flattening lumber, see pp. 82-83).

## Variations on a Stickley theme

The grain—rays or flecks—found in premium quartersawn oak adds visual interest to Stickley's rather simple furniture. I used curly maple to achieve a similar effect by matching up the most-figured planks and gluing them up for the massive top.

Stickley was a stickler for uniform figure on his work. Because legs made of solid stock only show quartersawn figure on two sides, he solved the problem by making legs from four mitered quartersawn sections (see *FWW* #121, pp. 54-57). Some people solve the problem by simply gluing quartersawn veneer on two faces. Because this table has an altogether different look and feel

## Subtop keeps the base from racking



The subtop, a piece of  $\frac{3}{4}$ -in. plywood with solid edges glued to two sides, fits into a rabbet cut into the long upper rails of the table's base. Four large holes in the subtop house screws that hold the tabletop in place. The holes are larger at the top than at the bottom to allow the screws to move as the tabletop adjusts to seasonal changes in humidity. —R.A.



**Screw and glue subtop to rails.** The author squares up a slight misalignment in the base using a pipe clamp, then glues and screws the subtop in place.

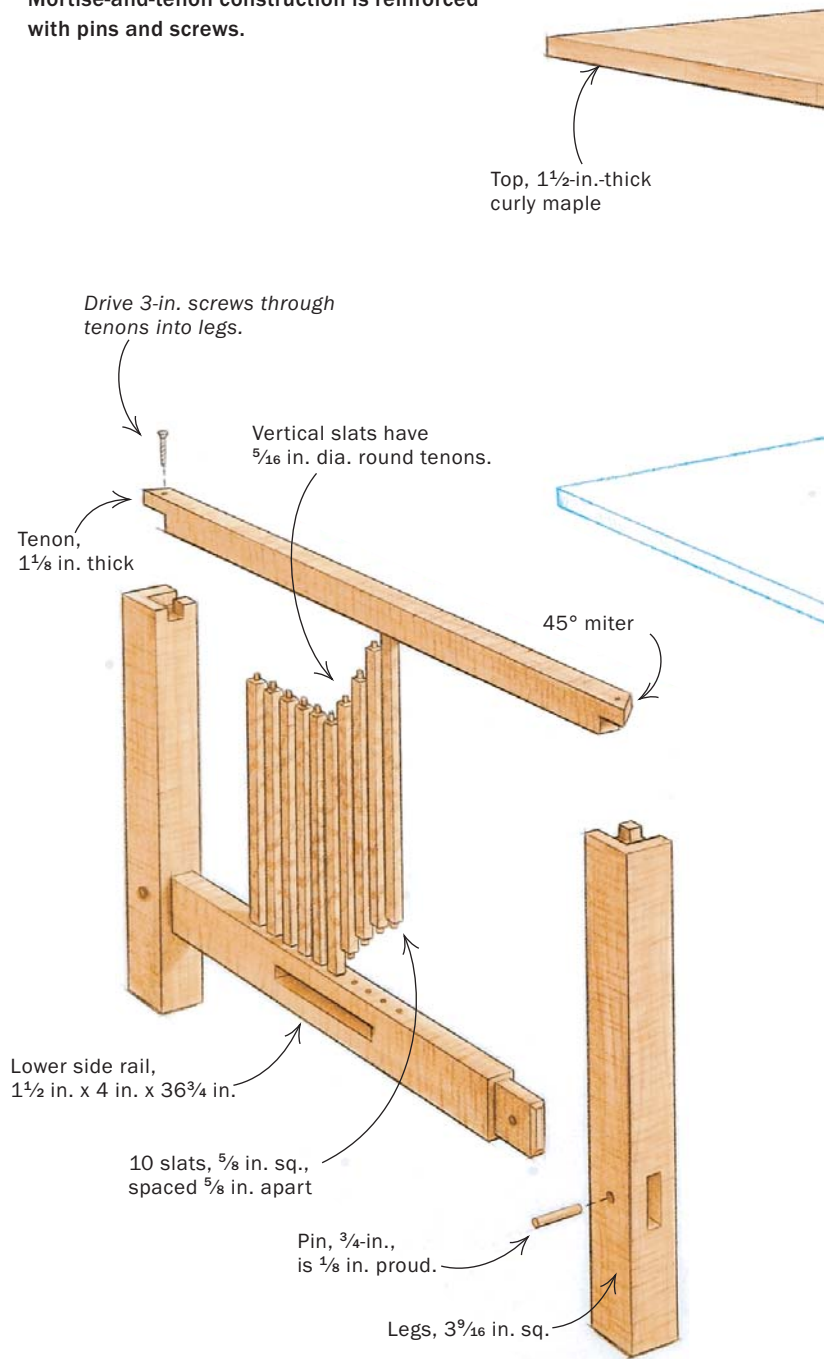
from standard Stickley, I laminated two pieces of  $\frac{8}{4}$  book-matched stock for the legs and left it at that.

The spindles are best machined after you have dry-fit their matching components, which I use to mark off the location of the tenons. I machine round tenons on the ends of the spindles using a radial-arm saw, a dado blade and two short sections of PVC pipe that allow me to rotate the stock evenly.

Using the assembled rails as a marking guide, I lay out the tenons on a piece of scrap spindle stock to set up my radial-arm saw. I fit the radial-arm saw with a dado blade and position a stop block to establish the tenon's length. Before cutting, I slip a piece of plastic pipe over each end of a spindle, keeping the ends exposed. Be sure there is no slop in the fit. I place the stock against the stop block and back fence and make a cut (see the photos on p. 81). Then I rotate the spindle about  $90^\circ$  and make successive cuts to all four sides to remove most of the waste. I round over the tenons by carefully spinning the spindle/pipe fixture against the stop block and fence while moving the dado head back and forth.

## ARTS-AND-CRAFTS DINING TABLE

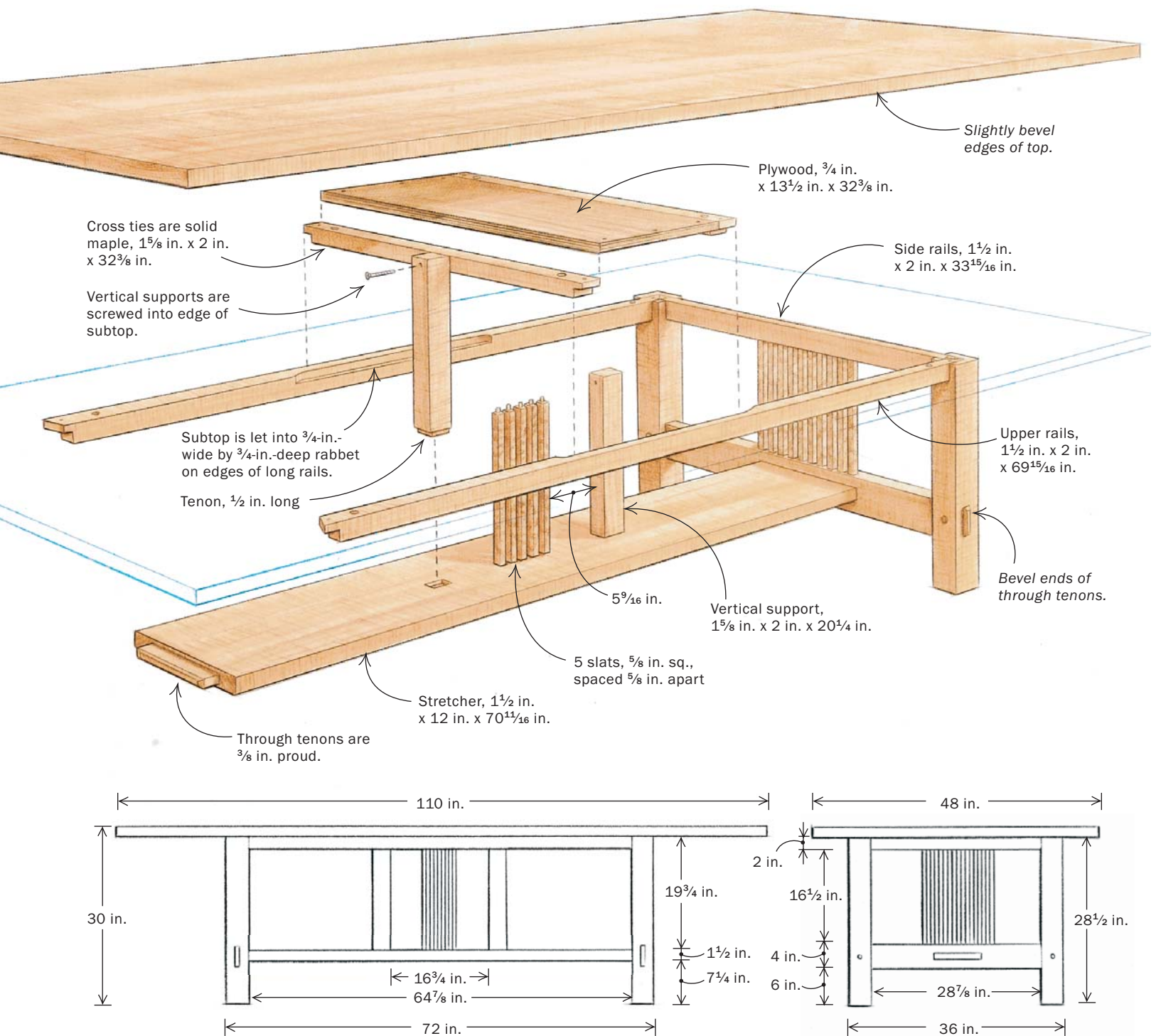
Mortise-and-tenon construction is reinforced with pins and screws.



Hidden beneath the tabletop is a subtop, a piece of  $\frac{3}{4}$ -in. plywood with solid maple edges (cross ties) on two sides. A subtop has several purposes: It houses the mortises for the spindles attached to the stretcher, keeps the long side rails from flexing and helps keep the top flat. The subtop is screwed and glued to the rabbet in the long upper rails (see the photos above). Two vertical supports, which are mortised into the stretcher, are screwed to the cross ties of the subtop.

The subtop, as well as rails, are drilled out for screws to fasten the top. The large top will move considerably with seasonal changes in humidity, so I make the screw holes wide enough to allow the screws to move with the wood. I drill 1-in.-dia. holes  $1\frac{1}{8}$  in. deep





from the top of the aprons with a Forstner bit. From the bottom of the apron, I drill toward the 1-in. holes using a #8 countersink bit.

### A recipe for finishing

Before applying the finish, I use a Stanley No. 80 scraper; then I sand beginning with 220-grit, going through 600-grit. All edges are relieved slightly using a block plane or file and sandpaper.

I use a combination of oils, polyurethane and beeswax. First I heat boiled linseed oil in a pan on an electric hot plate outside my shop. Just before it begins to smoke (usually at about 120°F), I remove it from the burner and liberally apply it to the table and base with a rag using rubber gloves to protect my hands. After about 20

minutes, I wipe it off and let it dry for 24 hours. I repeat the process two more times for a total of three coats. After the last coat of linseed oil has dried for three days, I apply three coats of an equal mixture of tung oil and polyurethane, letting each dry for 24 hours.

My top finish coat consists of equal parts beeswax, tung oil and boiled linseed oil. I melt the beeswax in a double boiler, remove it from the heat and add the other ingredients. When the mixture cools, it develops a creamy texture. I apply that with my hand and wipe it off with a rag. After a day, I'll apply one more coat and buff it with a clean cloth. □

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