

Tilt-Top Table

Clean lines and a clever pivot highlight this attractive and useful table

BY WILL MYERS

I found the inspiration for this table inside one of the handsome brick buildings of Tryon Palace in New Bern, N.C. Built as the residence and headquarters of North Carolina's British governor in 1770, Tryon Palace was seized by American forces in 1775 and served as the state capitol until 1794. Destroyed by fire in 1798, the palace was rebuilt to the original plans in the 1950s, and fitted with furniture appropriate to the period. The table that caught my eye was in the palace's kitchen building.

Commonly called a wine-tasting table, it has a round top that pivots on two pins so that it can be brought vertical and stored against a wall. There is a swing arm that looks like an inverted A in the frame that spins out to support the top when it's swung down for use, and rotates back flush with the frame when the top is up for storage.

The table I'll show you how to make here is slightly different from the one at Tryon Palace. It has a larger top, and I've given the feet a modern shape. Also, the original



SMALL FOOTPRINT

With the top swung up, the table fits neatly against a wall, freeing up floor space.



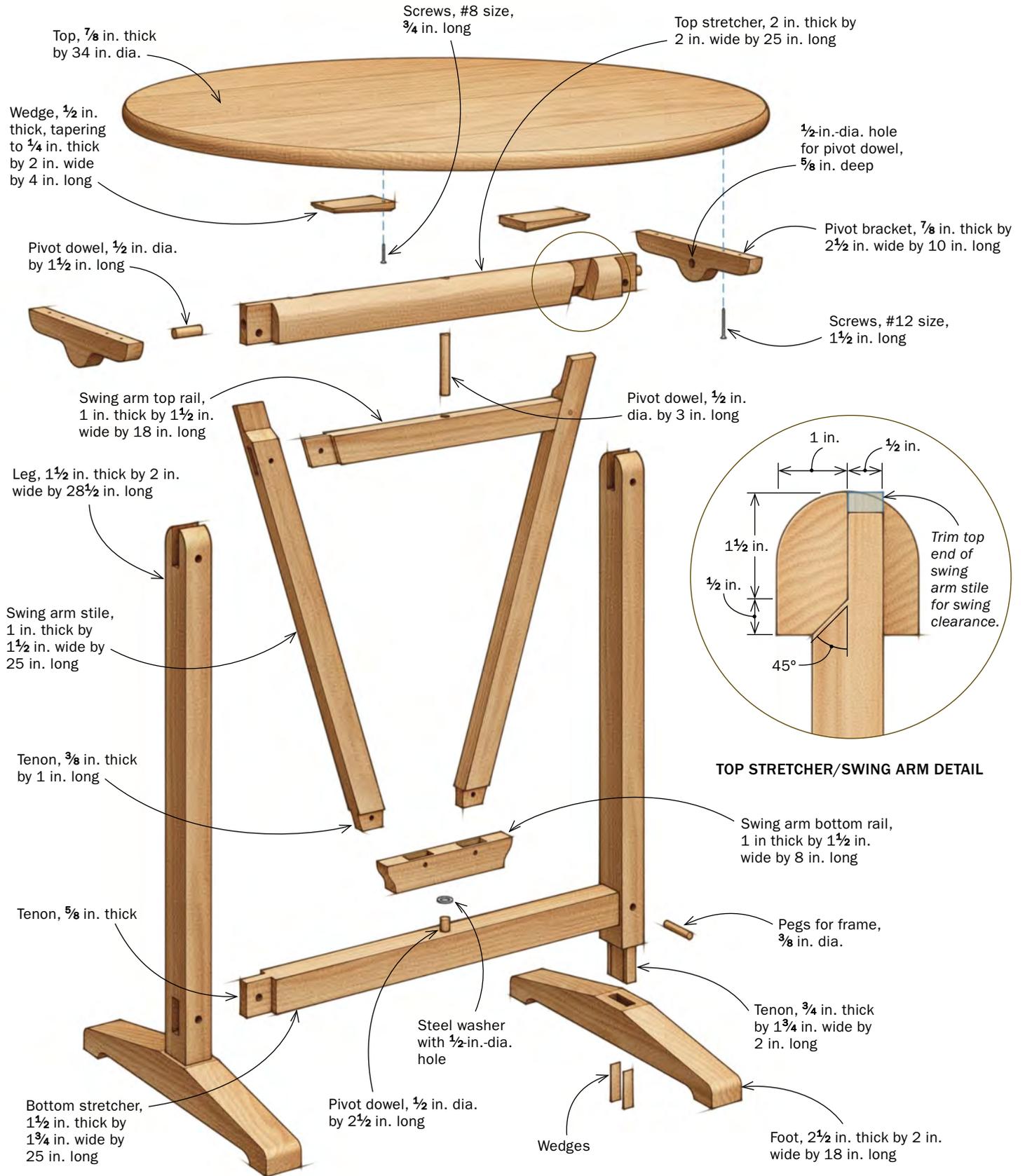
READY FOR DINNER

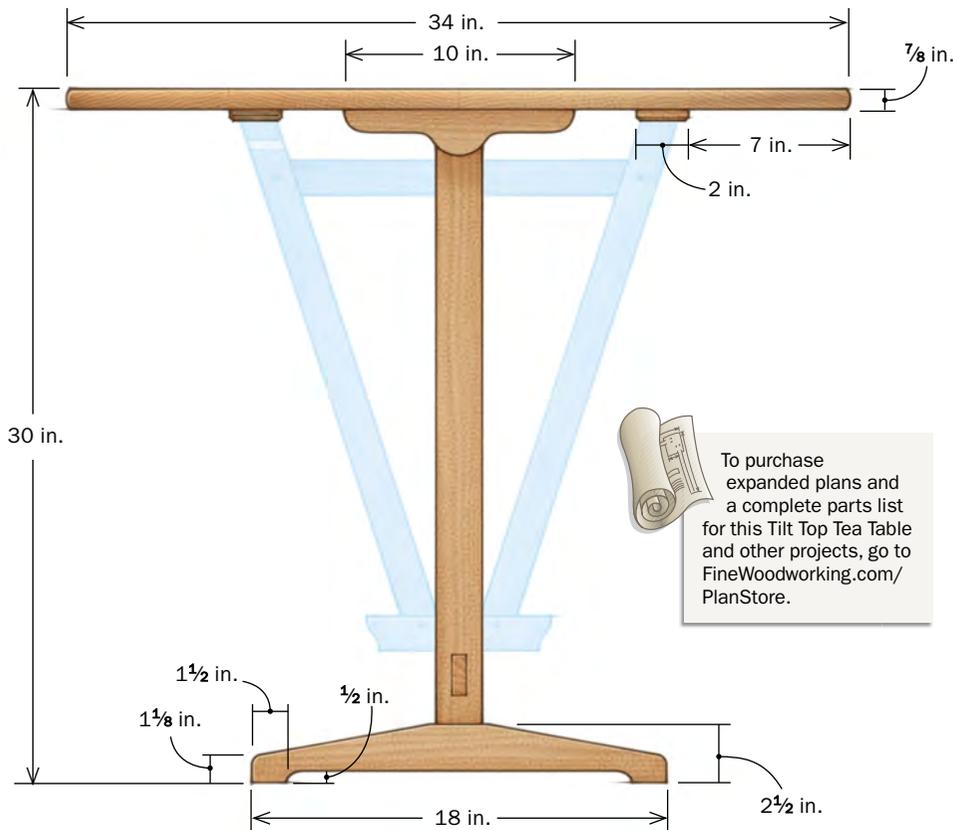
Swing the top down and you have a beautiful table ready for a cozy meal.



Beautiful, practical, and ingenious

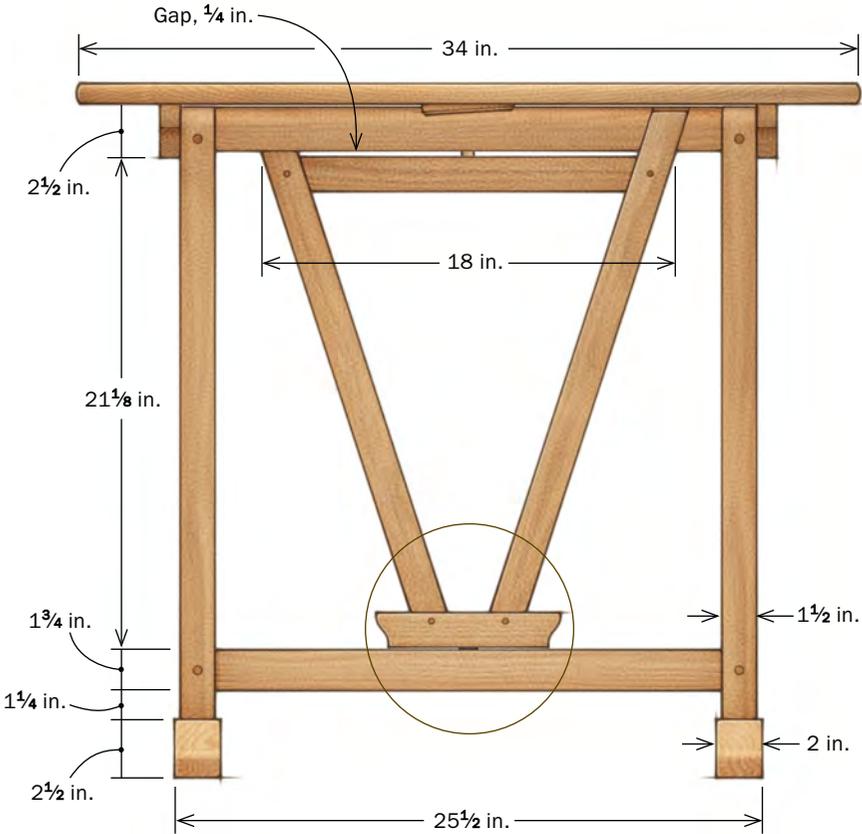
This is a great project to make with hand tools, as the joinery is almost all mortise-and-tenons. A rectangular frame supports the top, and a rounded top stretcher and pivoting swing arm allow the top to swing up for storage and down when you want to use it.



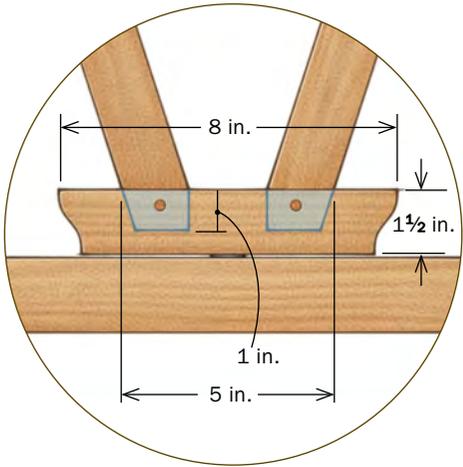


To purchase expanded plans and a complete parts list for this Tilt Top Tea Table and other projects, go to FineWoodworking.com/PlanStore.

END VIEW



FRONT VIEW



SWING ARM/BOTTOM RAIL DETAIL

was made from pine, perhaps chosen because its light weight would make it easier to move around. I've opted for cherry instead. This table isn't very large, and cherry isn't terribly heavy, so the extra weight won't be an issue.

This isn't a difficult table to make, and it's a great project for hand tools. I cut all the joinery by hand, and after milling, it took just a couple of days to make the table. It's a handy table to have in the house. It doesn't take up much floor space when not in use, and it is ready to seat four in a quick minute when company shows up.

Make the base frame

Beneath the table's round top is a rectangular frame that consists of two legs and two stretchers. You can make the feet at the same time that you make the frame, but don't attach them until right before you add the top. They'll just be in the way as you make and install the swing arm.

Because I cut all of the joinery with hand tools, I carefully lay out joint locations with paired parts, such as the legs, clamped together. After laying out all of the joinery, I chop the mortises with a chisel and mallet. I use the same technique for the slot of the bridle joint at the top of the leg.

Start with the frame

The structure of the table's base is fairly simple: two legs joined in a frame by two stretchers and stabilized by two feet. It's held together with mortise-and-tenon joinery, so it's plenty strong.

Round the top stretcher. After dry-fitting the frame, use a compass to lay out a half circle on each end of the top stretcher (right). Take the frame apart, and then round over the top of the legs with a chisel (far right). Finally, use a plane to rough out the arc on the top edge of the stretcher (below).



However, the through-mortises in the feet are better done by first drilling out the waste with a brace and bit, and then squaring them with a chisel.

Cut the tenons next. After they're done, dry-fit the legs and stretchers. The top stretcher must be rounded over so that the top can pivot, so assemble the frame, clamp it in your bench vise, and lay out the half circle with a compass. Pull the frame apart and rough out the roundover. On the top of the legs, I use a chisel and mallet to remove most of the waste, and then refine the curve by paring to the layout lines. For the top stretcher, I use a jack plane to round the top edge roughly at this point.

Now glue the frame together. After the glue has dried, clamp the frame in your bench vise and refine the roundover on the top stretcher. It doesn't need to be perfect to work well, but I get the facets as small as I can, and then run some



Glue up the legs. Spread glue on the joinery and then bring the parts together. Add clamps to keep the joints tight as the glue dries.



Peg the joints. After the glue has dried and you've drilled holes through the joint, spread some glue in the hole and knock in a peg.



Smooth the curve. Final rounding comes after assembly. It doesn't need to be perfect, but it should be straight. You can smooth small facets with sandpaper.

Make the swing arm

The tabletop is supported by a simple but ingenious mechanism: the swing arm, a four-piece frame that spins on two pins and stores flat within the frame when the table is not in use.



sandpaper over the surface to remove them.

Swing arm pivots on two pins

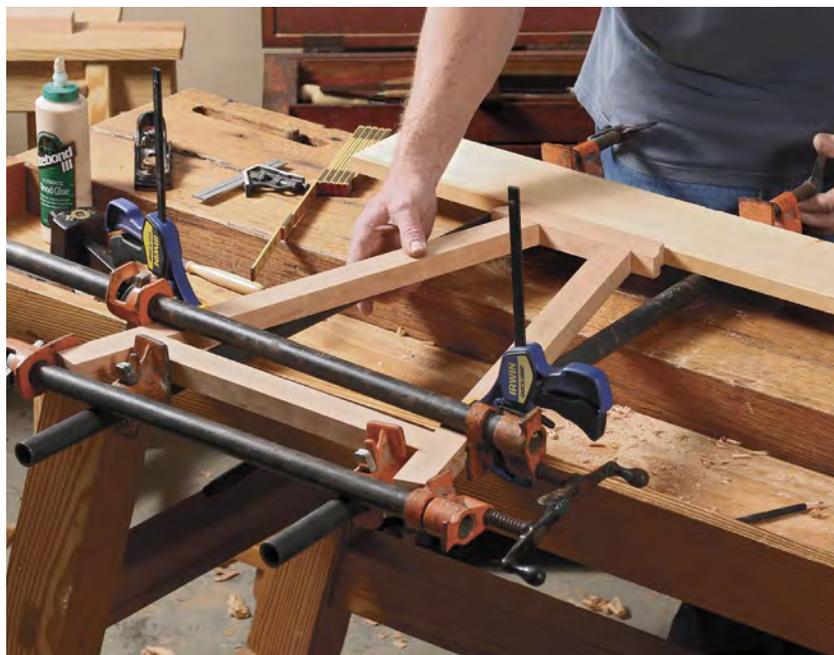
The best way I have found to make the swing arm and get a good fit is to lay the base frame on my bench and then lay the arm's parts on top of it. This method of layout quickly and accurately gives you the tenon and mortise locations for the entire swing-arm assembly.

To begin, mill the parts to their final width and thickness, but leave them a few inches too long, so you have some leeway when laying out the swing arm.

After you've laid the stiles on the base frame, place the rails on top of them. The bottom edge of the bottom rail should be just even with the top edge of the frame's bottom stretcher. The top rail should be about $\frac{1}{4}$ in. below the bottom edge of the top stretcher. With a pencil, mark the stiles where the upper and lower rails cross them. Before you move anything, also make tick marks on the rails to



No-fuss layout. Locate the two stiles on the base frame (top). Then, after placing the rails on the stiles, trace their location onto the stiles (above). Also, make tick marks on the rails to locate the edges of the stiles.



Big caul is a big help. Because of its width, the caul applies adequate pressure on the joints at the bottom of the swing arm, even with light clamping pressure, which is necessary to avoid damaging the top rail.



Dry-fit the swing arm. Place a washer over the bottom pin (so that the swing arm doesn't scrape the stretcher) and put the bottom of the swing arm on the pin (above). Then position the swing arm's top rail beneath the frame's top stretcher (right) and press a pin through the frame and into the swing arm.



Mark where the swing arm hits. The frame's top stretcher gets "pockets" so the swing arm can close flush with the frame. A snug fit isn't necessary, so make the pockets wider than the arm. After defining the sides of the pocket with a saw, remove the waste in chunks with a chisel (right), but be careful not to go too deep.



Swing arm needs a rabbet to match. Pivot the swing arm into the pocket and mark where the bottom of the frame's top stretcher hits the swing arm (above). After roughing out the rabbet with a saw, clean up the surfaces with a chisel (right).



Finish up with the feet and top

After installing the swing arm, you are ready to add the feet. They dance a delicate line between small enough for the table to remain compact when against a wall and large enough to steady the table when put to use.

Glue in the pivot pins. It doesn't matter if you glue the pins to the frame or the swing arm. Just don't glue them to both.



locate the edges of the stiles. Cut the mortise-and-tenon joinery.

Before you glue the swing arm together, prep the inside edges of the parts for finishing, and shape the ends of the bottom rail. After you've glued up the swing arm, it's time to install it in the base frame.

The swing arm mounts on two 1/2-in.-dia. pins. After drilling through-holes in the base frame and stopped holes in the swing arm, fit the lower pin into the frame (no glue), put a washer over it, and put the swing arm on it. Then align the hole in the swing arm's top rail with the one in the top stretcher and push the pin into place.

Now rotate the swing arm so that it presses against the frame. Trace around the arm's stiles where they hit the top stretcher. Remove the swing arm from the frame, and cut notches in the top stretcher to house the swing arm when it's not in use. Then cut mating rabbets in the top of the swing arm stiles. This allows the swing arm to close completely in line with the frame.

It's time to permanently install the swing arm. You can glue the pins into either the base frame or the swing arm. By spinning the swing arm when it's dry-fitted in the frame, you get a sense of whether the pin spins better in the arm or the frame. Glue it into the one in which it doesn't spin as well.

Attach the feet to the base now. Then, after making the top and the pivot brackets, attach the top to the base. Put the pivot pins into the ends of the frame's top stretchers, and fit the brackets to the pins. Screw them to the top. Finally, screw the wedges to the top. Apply your favorite finish, and then move the table into the house and enjoy its beauty and utility. □

Will Myers makes furniture in Hamptonville, N.C., and teaches hand-tool woodworking at The Woodwright's School in Pittsboro, N.C.



Wedge the feet. The wedges lock the tenon into the mortise, ensuring that the foot won't work free from the leg.



Attach the top. Keep the seasonal movement of the top in mind when spacing the bracket from the frame.



Wedges lock the swing arm. Size them so they provide enough tension to hold the arm open but not so much as to bow the top.