

Creating an attractive tabletop



Part 2

Edge-jointing and glue-up

BY BOB VAN DYKE



WHERE WE LEFT OFF...

In **Part 1** (FWW #207), we chose the lumber, milled it to dimension, selected the final sequence of the boards, and marked them with a large triangle.

There are a lot of ways a tabletop can go wrong. In this second article of my three-part series on making a tabletop, I'll address two more common pitfalls, showing you how to make joints that will stand the test of time, and how to keep the boards aligned during clamping. That alignment makes a world of difference when it comes to post-glue-up planing and sanding.

Put a spring in your joints

The first step is to run the adjoining edges of each board over the jointer to form the glue joint. Check that the jointer fence is

at 90°, but alternate the faces of boards against the jointer fence to cancel any error in the jointer setup. If one edge measures 91°, the angle on the adjacent edge will measure 89° and the boards will lay up flat. Sometimes this means jointing against the grain and risking tearout, so make light cuts with a slow feed rate.

To ensure that the joint closes along the edges of the boards, take a bit more wood from the middle than from the ends, creating a slight gap in the middle of the joint. This is called “springing” the joint. As the clamp pressure closes the gap in the middle, the joint will only get tighter toward the ends of the boards.

Spring-joint the edges



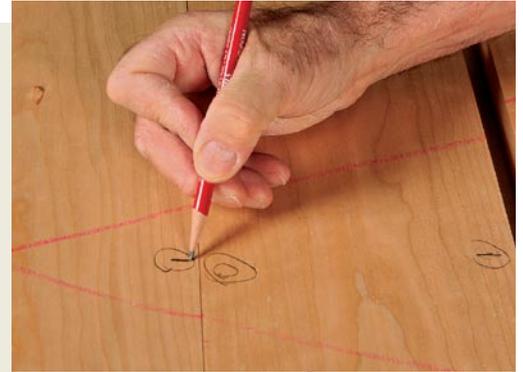
Is it square? Adjust the jointer's fence so that it is 90° to the outfeed table just past the cutterhead.

TIP

ALTERNATE FACES AGAINST THE FENCE

If the jointer fence is not exactly 90°, you can still achieve a flat tabletop by putting one board facing inward (I) against the fence and the adjacent board facing out (O).

Alternating faces when jointing will make up for any fence inaccuracy. (Angle is exaggerated for clarity.)



To spring the joint, set the jointer to take a light cut and use a slow feed rate. Begin the cut by exerting a small amount of downward pressure on the board as it goes across the cutterhead. When about 6 in. of the board is on the outfeed table, push down hard on the board with your left hand just past the cutterhead. Continue with this slow feed and heavy pressure until about 6 in. remains. At that point, lighten up on the board until you're exerting almost no downward pressure, and finish the cut. Do the same to the adjacent board.

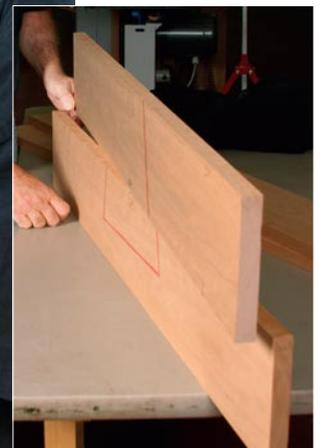
The gap in the center will be too small to see, but you can test the joint by standing the boards up with their sprung edges together. Now try to swivel the top board. The points of contact at either end should provide enough friction to prevent this. If the top board swivels on the bottom one, you have a small lump somewhere. Rip 1/16 in. off the sprung edge of one board, spring it again, then re-test the joint. If you still feel the swivel, re-joint the other board.

Level the joints as you glue them up

A properly made butt joint will be stronger than the wood itself, eliminating the need to add biscuits or dowels for strength. As a matter of fact, biscuits and dowels can sometimes hinder you from



Vary the force. While jointing each edge, bear down in the middle to create a very shallow hollow (left).



No swinging allowed. If the sprung joint has been cut correctly, the two boards will not move when placed edge to edge. If they pivot (above), then one or both boards need to be ripped and re-jointed.

Glue up in sections



Don't spare the glue. Van Dyke applies a generous bead of glue on one edge, spreading it out with his finger.



Press and rub. Place the glued edge against its mating edge and slide the two surfaces back and forth to distribute the glue evenly.



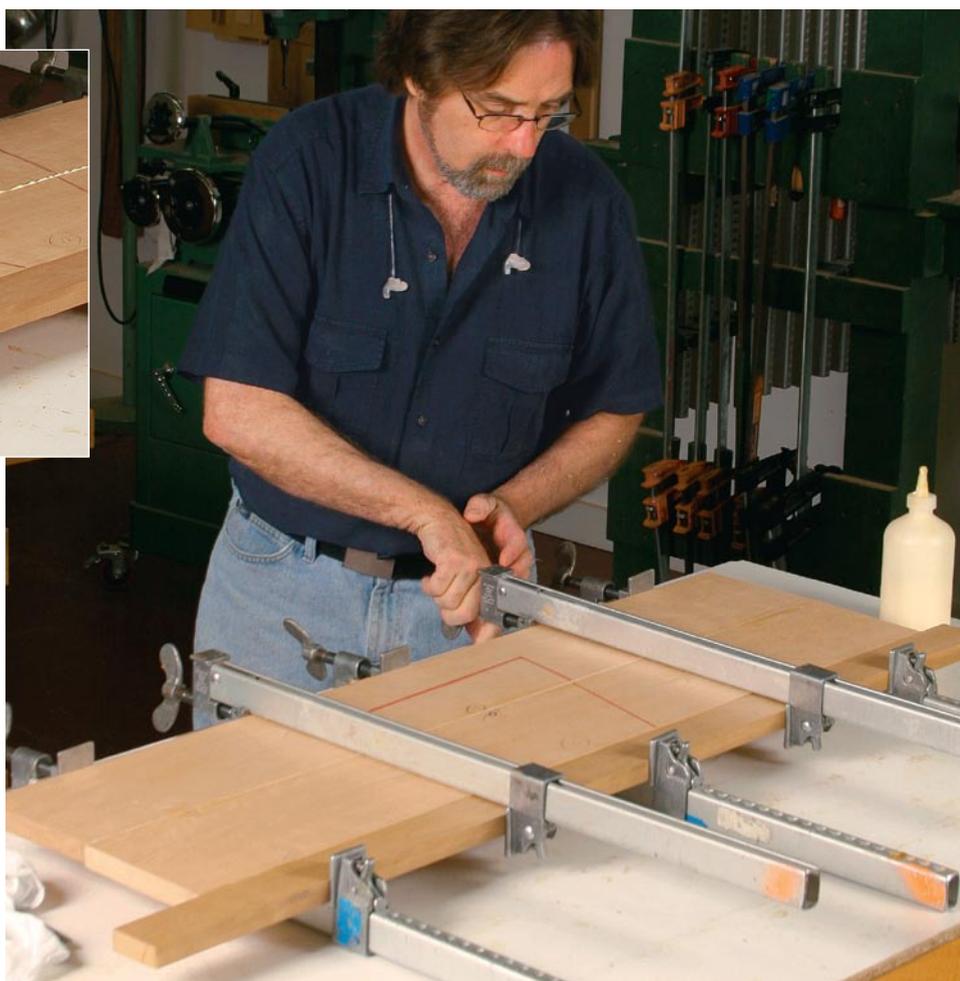
Align and clamp. Apply light force, aligning the surfaces with your fingers. Use a caul on the face that will be glued to the other half.



Easy cleanup. Before putting on the top clamps, scrape off most of the surplus glue with a putty knife.

aligning the boards during glue-up. A common problem is that the glued-up top will be wider than your planer. The simplest way to handle this is to divide the top into two or more subassemblies, each one sized to fit through the planer. Then glue the two subassemblies together, leaving very little flattening to do on the completed tabletop.

A level surface to clamp on is very important because you do not want any distortion. I use a flat sheet of melamine cut to the size of my benchtop, which also protects it from glue drips. I



More force applied. Place clamps on top of the glue-up. Then tighten down all of them, applying firm, even pressure.

Flattening for the final glue-up

Don't get lost. You are about to plane away the large triangle that marked the sequence of all four boards (below). To keep the correct order, mark the adjacent ends of the boards (right).



typically will use an odd number of clamps, in this case three on the bottom and two on top. Placing clamps on the top and bottom helps equalize pressure and produces a flatter glue-up.

Space the bottom clamps evenly and lay out the boards on top of them, using the triangle you drew earlier as a guide.

After applying the glue, make sure the triangle lines are aligned, then tighten the middle clamp slightly, pushing down on the joints to align them. Work your way out to the ends, maintaining moderate clamp pressure and aligning the joints as you go. Remove any glue squeeze-out before putting on the top clamps.

Once all the clamps are in place, apply an even amount of pressure to each one. Turn over the assembly and remove the excess glue between the clamps. Place a straightedge across the boards in several places to make sure uneven clamping pressure hasn't bowed the workpiece. Adjust the clamp pressure if necessary.

After the subassemblies dry, run them through the planer to remove any misalignment between the boards. Then flip them end for end and plane the other side parallel. Plane them down to less than $\frac{1}{32}$ in. over final thickness, taking light cuts near the end to minimize tearout. Now repeat the glue-up procedure, this time gluing the two subassemblies together. Take extra care to get a flush glue joint as you have very little surplus thickness to work with.

Once the glue dries, you're ready to flatten, dimension, and smooth the tabletop. I'll describe how to do that in the third and final part of this series (look for it in *FWW* #210). □

Final assembly. Pay close attention to board alignment when clamping the two subassemblies to form the tabletop. Doing so will minimize the work needed to flatten the top later.

