

# Make a Top Float

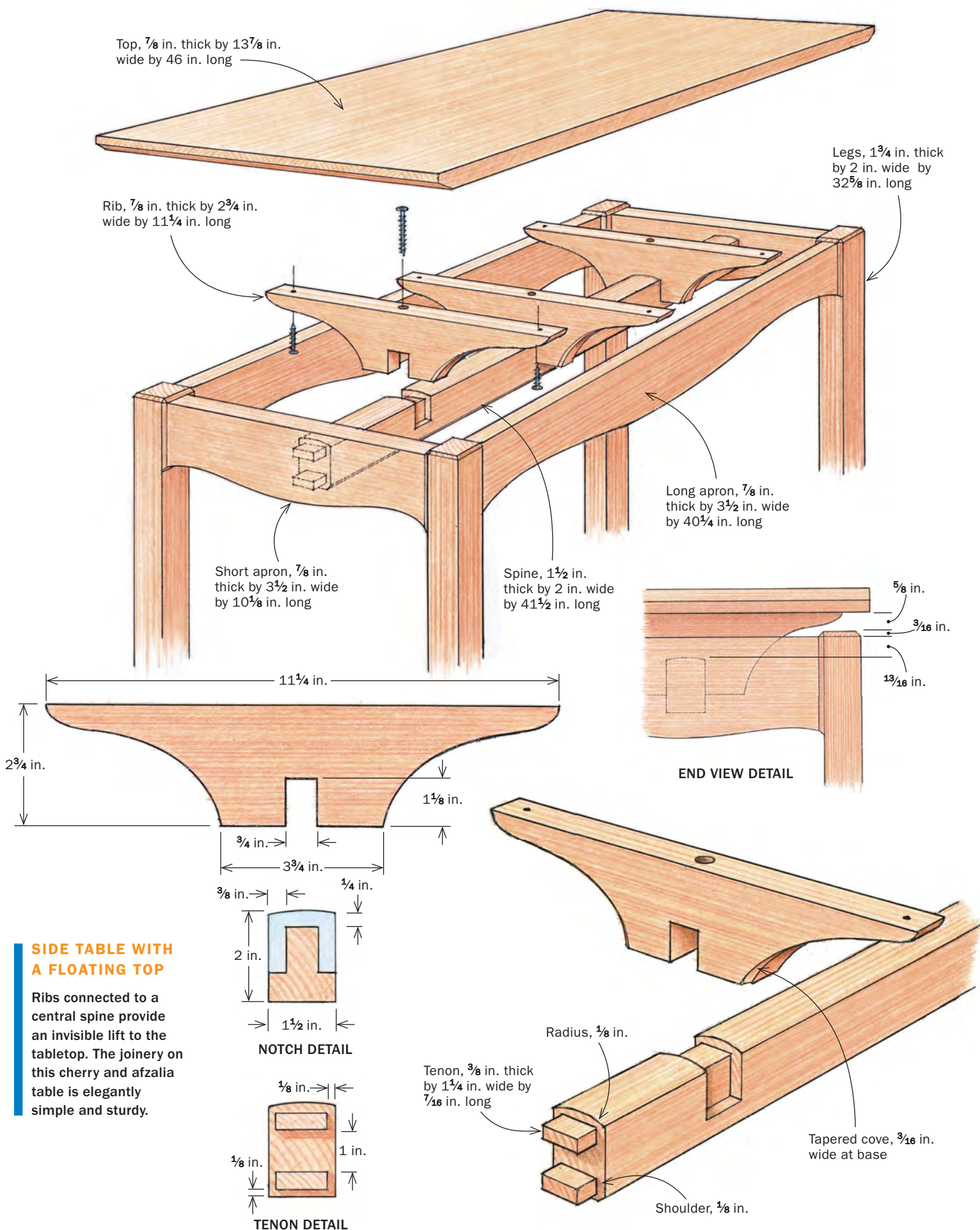
This hall table commission came with three requirements: contrasting woods, curved aprons, and a floating top. None of these elements is uncommon. In fact, they are done often and often overdone, so I tried to find a more subtle approach to each than is often seen. Curves of constantly changing radii have a more dynamic tension than a curve from a compass, so I gently shaped the aprons this way. Contrasting woods do not have to be black and white; two woods in the same color range with different grain character are a quieter form of contrast, so I used cherry and afzalia. For the floating system, I designed a structure that allowed the top to float without being the main focal point or blocking the flow of light between the base and top. The system will work for



An integral system  
is clever and subtle

BY DAVID WELTER





## SIDE TABLE WITH A FLOATING TOP

Ribs connected to a central spine provide an invisible lift to the tabletop. The joinery on this cherry and afzalia table is elegantly simple and sturdy.





## THE SPINE IS THE HEART OF THE STRUCTURE

To float this top, three support ribs straddle a long, notched spine that runs the length of the table.

**Start on the tablesaw.** The first step in creating the lap joint is notching the edge of the spine. Use repeated tablesaw cuts to create the notch.

**Mark, cut, and clean up the rest of the notch.** The sides of the stepped notch are cut by hand. After marking, chop out the waste, and clean up the top surface by hand with a router plane.



many table designs. Here I'll show how it works and how to build it.

## Designing the floating system

The separation, or reveal, between base and top first has to be wide enough to be noticeable. The detail might look great in front view on paper and at eye level on the workbench, but remember to look at the project as it will normally be viewed. You don't want to have to say "If you get down on your hands and knees, my cleverness becomes obvious." If the top overhangs the table base, the effect of separation is reduced. But the reveal shouldn't be too wide, either. If the space between the top and base is exaggerated, their relationship is distant, like a couple who have just had an argument.

Mock-ups are invaluable for this process. A mock-up drove me toward a solution that would not otherwise have occurred to me. A floating top can be designed in a number of ways. After experimenting, I ended up with a skeleton-like system consisting of a long spine running from short apron to short apron. The top





## THE RIBS SUPPORT THE TOP

These shaped components fit into the notches in the spine. The top is screwed to the ribs at each end.



**Lay out the shape.** For the sake of symmetry, the template has only one side. Flip the template over to mark the opposite end of the rib.



**Lay out the notch.** Line up center marks on the rib and the spine. Then lay out the notch in the rib.



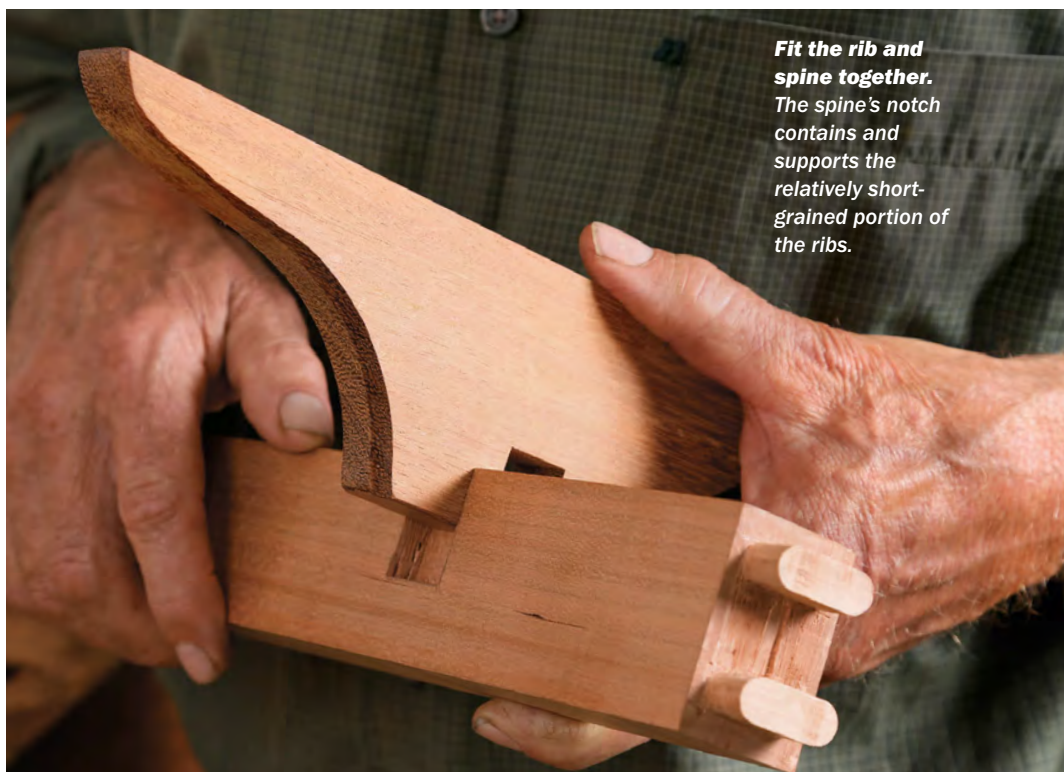
**Notch and shape the rib.** With the rib still square, cut the notch with repeat crosscuts on the tablesaw using a miter gauge. Once the notch is cut you can cut the rib's shape on the bandsaw.

sits on three ribs mounted to the spine. An added benefit of this method is that any discrepancies in the fit between the underside of the top and the ribs can be accommodated by planing the top of the ribs before installation.

### Spine first, then the ribs

The spine has three lap joints, one for each rib. Cut the spine slots a shade narrower than the thickness of the ribs. I cut the notches using a tablesaw and miter fence. Then I marked and cut the faces of the lap joint with a chisel and planed it clean with a router plane.

Cut and fit the rib notches before shaping. I did this on the tablesaw using repeat cuts. Off the saw, the notches should be slightly narrower than the spine; plane the spine surfaces to fit. I shaped the ribs



**Fit the rib and spine together.** The spine's notch contains and supports the relatively short-grained portion of the ribs.



## PREDRILLING

Once the joinery has been cut, predrill for screws to attach the ribs to the spine and the top to the ribs.

### **Connecting the rib to the top.**

You must allow the solid-wood top to expand and contract. After drilling the screw hole, slot it by drilling through it again at an angle. Then add a countersink. This will let the head of the screw nestle in just below the surface of the wood.



**Connect the rib to the spine.** Drill for the screw that will attach the rib to the spine. Drill the smaller diameter pilot hole first. After transferring that hole's location to the spine, drill a larger clearance hole in the rib, and finally a countersink for the screw head.

on the bandsaw and then smoothed them with a spokeshave, scraper, and file.

### **Final touches**

Once all the joinery is cut it's time to pre-drill for all the screw holes, glue the table base together with the spine in place, and attach the ribs to the spine. Finally, attach the top to the ribs. □

*David Welter, retired after 30 years at The Krenov School, builds furniture in Fort Bragg, Calif.*





## BRINGING IT ALL TOGETHER

Once the base is completely glued with the spine in place, add the ribs and the top.

**The final glue-up.** Once the first phase (short aprons to the legs) of the assembly is dry, glue the long aprons and spine between them.



**Attach the ribs to the spine.** Welter uses #12 screws to fasten the parts together. The halved joint is very snug; no glue is necessary.



**Marking for the screw holes into the top.** Hold the awl perpendicular to the top, ideally centered in the slotted holes.



**Use a wooden drill stop.** This regulates the depth of the screw hole in the tabletop. This is not the time to use a piece of tape as a depth guide and risk it slipping. That would give you a pilot hole straight through the top.

