Float the Top

Add lightness and distinction to any table

BY TIMOTHY ROUSSEAU

When you float the top of a table—lifting it up to create a gap between it and the aprons—you're contradicting centuries of sensible furniture making (traditional tops attach easily, and serve to stiffen the base). So why do it? For me, it's partly for the kick of doing something different. And partly for the visual interest and refinement it can bring to a piece.

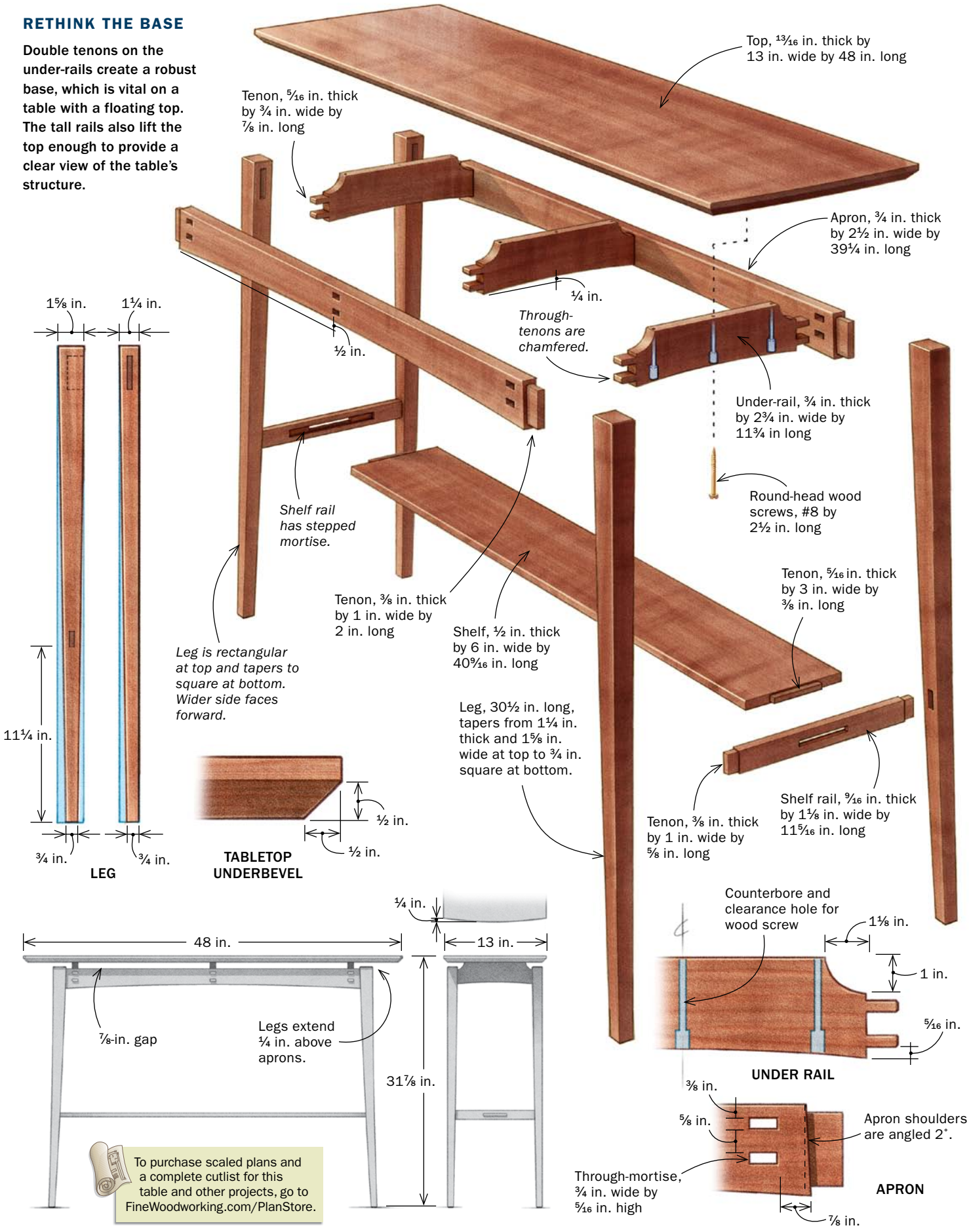
Some makers float their tabletops ½ in. or less, creating a dark shadowline, or reveal, below the top, which gives the table an air of mystery and makes you wonder what's holding up the top. I prefer to float my tops higher, so you can see right through to the structure underneath, almost as if the table were an exploded-view drawing. Either way, a floating top will add flair to your table.

Most tables can be made with a floating top, but if you want to expose the structure, it helps to do so on a tall table; on a coffee table, even a wide gap will rarely be

Photos: Jonathan Binzen

RETHINK THE BASE

Double tenons on the under-rails create a robust base, which is vital on a table with a floating top. The tall rails also lift the top enough to provide a clear view of the table's structure.

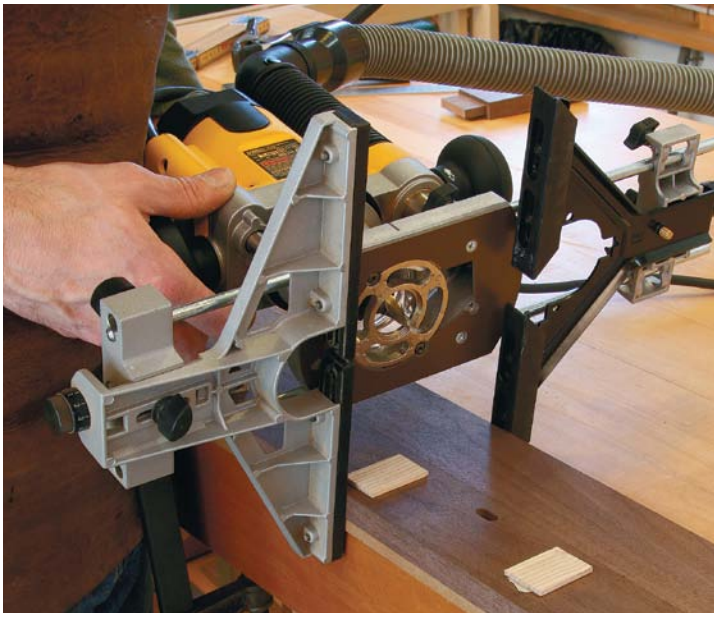


To purchase scaled plans and a complete cutlist for this table and other projects, go to FineWoodworking.com/PlanStore.

Drawings: John Hartman

ROUT THE MORTISES

Take the plunge. *Rousseau starts by cutting the top mortise. After setting the router's guide fence (silver), he snugs up a second fence (black) so the bit won't wander. A sacrificial board prevents blowout underneath.*



Quick stops. *Using double-stick tape, Rousseau affixes two pieces of scrap to the workpiece to limit the router's travel. He places the aprons side-by-side to provide a wider surface for the router to ride on.*

visible. I made a series of decisions in the design process to help expose the structure and create the floating feeling from every vantage point. First, I dispensed with end aprons and supported the top with under-rails inset from the ends. I designed the under-rails so they would lift the top ⅞ in. above the front and back aprons, providing a clear view underneath. To increase the sense of airiness under the top, I cut away the shoulders of the under-rails in deep curves and cut a shallow curve along their bottom edge. I also pushed the proportions of all the table's parts to the thin side, and made the top appear even thinner by giving it an underbeveled edge. The 6-in. overhang at the ends also helps.

I'll cover the parts of this table that support the floating top, giving you the fundamentals you need to build any table like it. For my complete video series on building this specific design from start to finish, go to FineWoodworking.com.

Double tenons beef up the base

Without the top adding strength to the table, you want to be sure the joinery in the base is rock-solid. I decided to join the under-rails to the aprons with double through-tenons. Multiple horizontal tenons provide the best joinery in this situation, since they maximize the long-grain-to-long-grain glue surface. Using

ADD A SPACER FOR THE SECOND MORTISE

Automatic spacing. *A spacer block enables Rousseau to cut the second mortise without readjusting the primary guide fence, though the second fence does need to move. Double-stick tape holds the spacer to the router fence.*

TWO SPACERS FOR TWIN TENONS

To cut the tenons at the bandsaw, Rousseau uses the gap spacer—which he used for routing the mortises—in conjunction with a tenon spacer.

DIAL IN THE TENON SPACER WITH A TEST PIECE

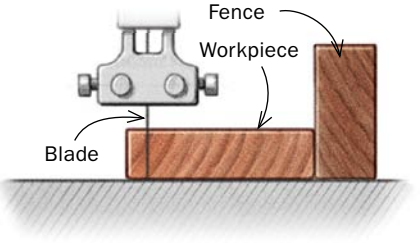
The tenon spacer's thickness equals the width of the mortise plus one bandsaw kerf. Once within range, Rousseau dials in the exact thickness of the tenon spacer by cutting a test tenon.

Any scrap will do for a test tenon. *Rousseau cuts the first cheek with the scrap against the bandsaw fence.*

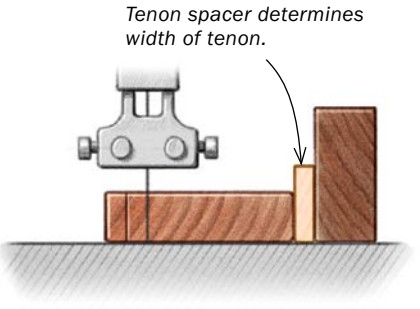
Drop in the tenon spacer to cut the second cheek. *Then crosscut freehand to chop out the waste.*

A snug fit means the spacer is finished. *If the tenon is too tight, Rousseau puts the spacer through the planer again. If the tenon is just a bit loose, he thickens the spacer with a piece or two of tape.*

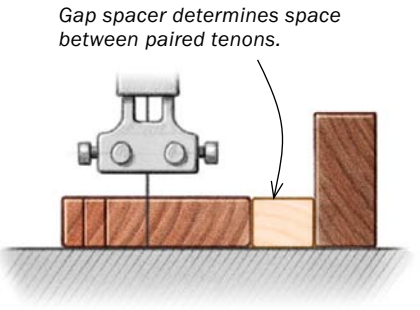
No spacer. *With the top edge of the rail riding against the fence, Rousseau cuts the bottom cheek of the lower tenon, stopping at his pencil line.*



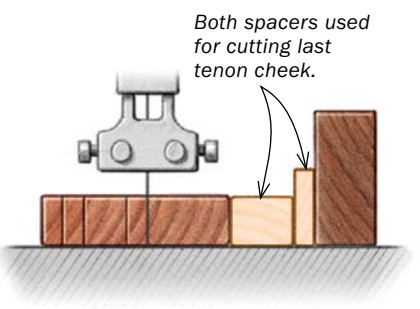
Tenon spacer. *Dropping the tenon spacer between the fence and the workpiece, Rousseau cuts the top cheek of the lower tenon.*



Gap spacer. *The gap spacer—the same one used with the router—rides between the fence and the workpiece to cut the lower cheek of the upper tenon.*



Both spacers. *The last cheek is cut with both the gap spacer and the tenon spacer riding between the fence and the workpiece.*



Curves lighten the look

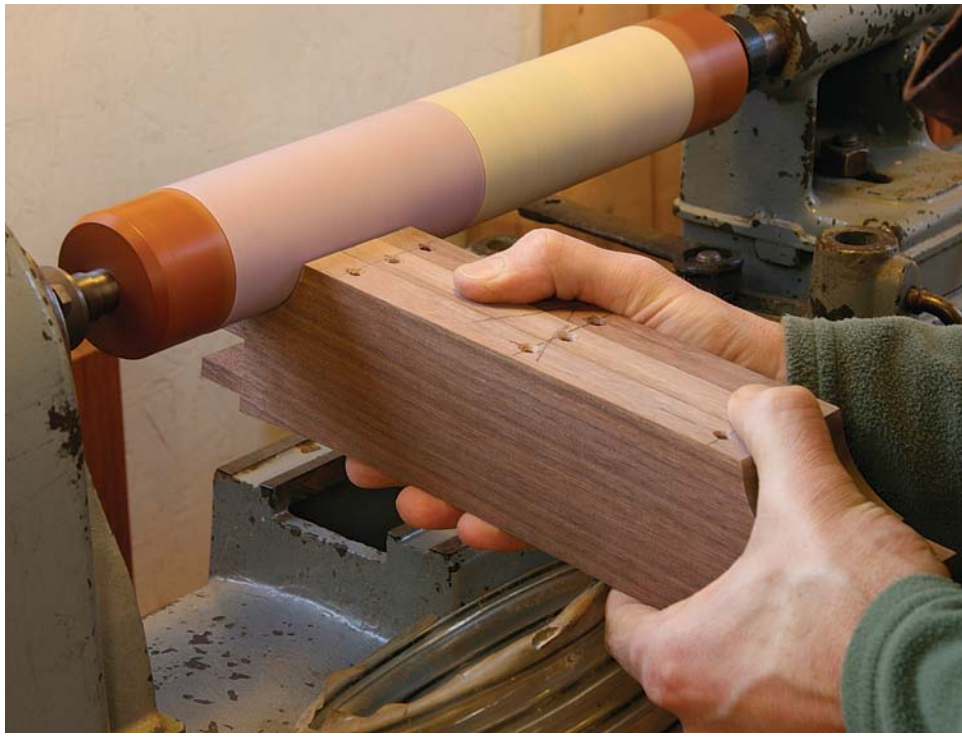
Stacked for sawing. *After chiseling the mortises square, Rousseau joins the two aprons with double-stick tape and saws the long curves on the bottom edge (right). After fairing the curve with a spokeshave, Rousseau leaves the aprons paired and does final smoothing with a scraper (below).*

one large vertical tenon would have given me much less glue surface and weakened the apron considerably. I used through-tenons—and left them proud—because I wanted to emphasize the unusual structure of the table. Someone wanting to keep the support structure hidden could use stopped tenons instead.

Double tenons might seem like a challenge. But I use a simple system of spacers to help cut perfectly sized and spaced mortises and tenons. The process is surprisingly quick. I use the same spacer with the plunge router and the bandsaw, so the gap between mortises is always identical to the gap between tenons. A second spacer determines the width of the tenons.

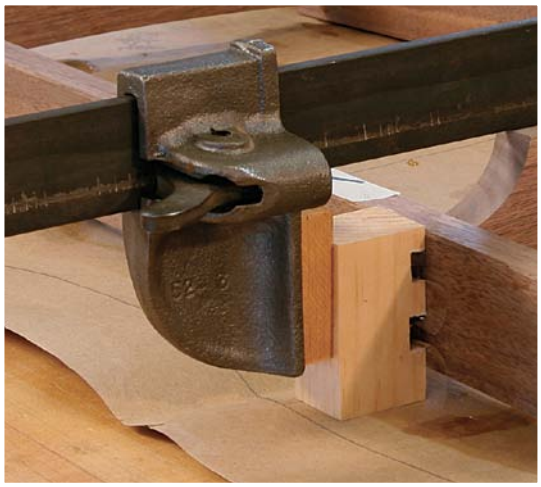
I also have a few tricks for laying out the joinery. When possible, I size furniture parts to match my measuring tools. In this case, the thickness of the rails—¾ in.—is the same as the width of my combination square's blade. So when I'm laying out the location of one of the under-rails on the apron, for instance, I just mark along both sides of the blade without moving the square.

To plunge-rout the mortises, I use two fences, making it nearly impossible for the bit to wander during the cut. I used to improvise a second router fence using a block of wood, but recently I bought a second guide fence and some metal rod to make extra-long rails so I can fit guide fences from either side of the router onto the one set of rails.



Tip for the tight curves. *To use his lathe like a spindle sander, Rousseau turned a hardwood cylinder and cut a slot along its length with a handsaw. He tucks the ends of the paper into the slot. Strips of double-stick tape on either side of the slot hold the sandpaper in place. Rousseau wraps three sheets of sandpaper side-by-side on the spindle, so he can progress from coarser to finer grit without changing the paper.*

Assembly starts with the apron



Clever clamping blocks. *Rousseau makes custom clamping blocks that accommodate the proud through-tenons. He faces them with packing tape to keep glue from sticking.*

When I bandsaw the tenon cheeks using my spacers, I can cut all 12 through-tenons with one fence setting. Since these will be proud tenons, I make them ⅛-in. longer than the thickness of the aprons. I bandsaw to just shy of the shoulder line. To remove the waste between the tenons I use a fretsaw, and then I chisel the shoulders clean. I handplane the faces of the under-rails slightly until the fit is perfect, then chamfer the tenon ends with a block plane.

Beveled top really floats

Because the tabletop is thin and only supported across half its width, it's important to select dimensionally stable lumber—quartersawn if possible.

Before ripping the top to final width, I bandsaw the two curving ends and clean them up with a block plane. I do the ends first so that when I later cut and plane the sides, I'll remove any end-grain blowout.

Finally, with a 45° bit in the router table, I cut a bevel around the underside. I clean up the surface with a block plane and finish by scraping and sanding. I put special effort into this, because when people come up to a table like this they run their hands over the edges and reach underneath, and I want it to feel as good as it looks. □

Timothy Rousseau builds furniture in Appleton, Maine, and teaches at the Center for Furniture Craftsmanship.

video workshop

Watch Rousseau build this table from start to finish in a members-only video at FineWoodworking.com/extras.

Inverted at the end. *After gluing the legs to the aprons and preparing all the parts for finish, Rousseau attaches the top with three screws through each under-rail.*