

# Light and Lively Side Table



I'm a huge fan of using continuous grain in my furniture. I think it clearly shows intention, which is something that I strive for. I want people to understand that the details in my work do not happen by chance. One common way that people use continuous grain is with drawers, where they'll use a single board for a row of drawer fronts, making sure to cut and sequence the fronts so that the grain appears to flow from one drawer to the next, interrupted only by the vertical

dividers that separate the drawers.

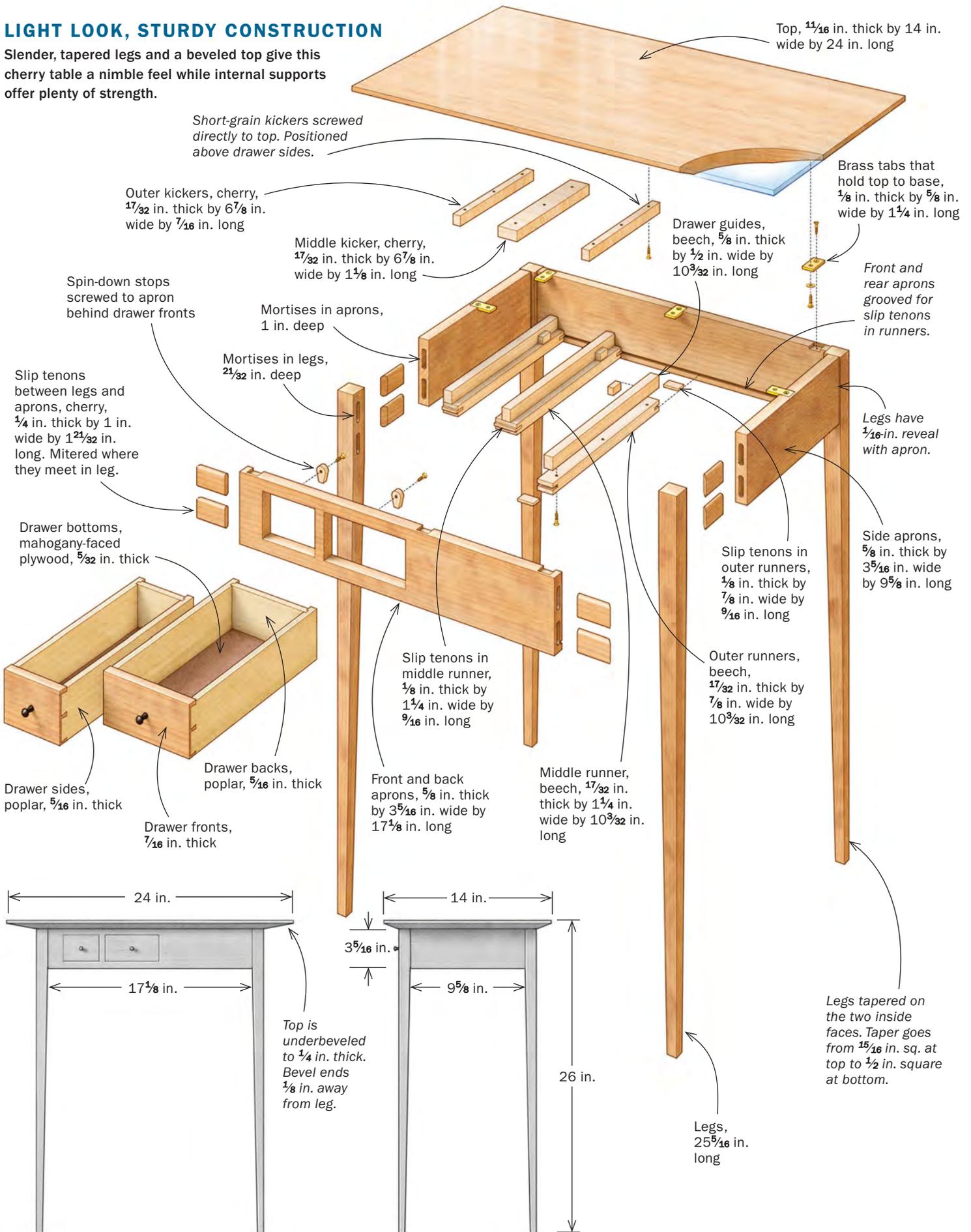
**Behind the front's  
flowing grain lie  
simple and smart  
building strategies**

**BY MIKE KORSAK**

When I can, like on this table, I take this approach a step further and cut out virtually all interruption, wrapping the grain across the apron as well as the drawer fronts. My method for achieving this is to rip the apron blank into three strips, cross-cut the middle strip to separate the drawer fronts from the rest of the apron, then reassemble the parts (minus the drawer fronts) back into a single apron. Done methodically, this technique produces an apron

## LIGHT LOOK, STURDY CONSTRUCTION

Slender, tapered legs and a beveled top give this cherry table a nimble feel while internal supports offer plenty of strength.



# Apron and drawer fronts

The table's entire front apron comes from a single board.

Top apron strip,  $\frac{5}{8}$  in. thick by  $1\frac{7}{32}$  in. wide by  $17\frac{1}{8}$  in. long

Middle segment (vertical divider), middle apron strip,  $\frac{5}{8}$  in. thick by  $2\frac{3}{16}$  in. wide by  $\frac{1}{2}$  in. long

Right segment, middle apron strip,  $\frac{5}{8}$  in. thick by  $2\frac{3}{16}$  in. wide by  $7\frac{13}{16}$  in. long

Left segment, middle apron strip,  $\frac{5}{8}$  in. thick by  $2\frac{3}{16}$  in. wide by  $1\frac{5}{16}$  in. long

Left drawer front,  $\frac{7}{16}$  in. thick by  $2\frac{3}{16}$  in. wide by 3 in. long

Right drawer front,  $\frac{7}{16}$  in. thick by  $2\frac{3}{16}$  in. wide by  $4\frac{1}{2}$  in. long

Bottom apron strip,  $\frac{5}{8}$  in. thick by  $1\frac{9}{32}$  in. wide by  $17\frac{1}{8}$  in. long

## SAWING



**Bandsaw the first long apron strip.** A bandsaw's narrow kerf removes less material, which better maintains the continuity of the grain. The workpiece should be extra wide and long to account for the kerfs.



**Joint the bandsawn edge.** The piece is still wide enough to let you use a jointer. Take a very light pass to remove sawmarks and true up your reference edge.



**Second rip separates the middle from the second long apron strip.** Keep the freshly jointed reference edge against the fence and use a steady feed rate to reduce sawmarks and cleanup.

and drawer fronts that have consistent, closely matched grain that appears to flow from one part to the next.

Less apparent, but equally interesting—at least for us woodworkers—is the way I construct the table's internals. I have an uncommon way of building the kickers, runners, and guides that reduces my headaches when fitting the drawers.

## Sliced and diced apron

I've made a few tables with this method, and I've streamlined the process. Because the vertical dividers between the drawers are short grain, I used to add long-grain splines to reinforce them. But then I realized this table and its drawers are small, and unlikely to be under much load. The splines started to look like a belt-and-suspenders step, so I omit them now.

Once I select the board for the front apron, I want to remove as little material as possible when cutting it up. This is important



**Crosscut the middle apron strip into the drawer parts.** Using a crosscut sled, Korsak separates the wide middle strip into the two drawer fronts, the narrow vertical divider between the drawer fronts, and the two pieces of apron flanking the drawers.

## GLUING



**Use the drawer fronts as assembly spacers.** Take five or six plane shavings from the same edge on each drawer front and wax around their perimeters. You'll glue up the front apron with the drawer fronts in place, and you don't want them interfering with the assembly or getting glued in.

because the more material that is removed, the harder it becomes to maintain the continuity of the grain pattern. So I used the bandsaw, with its thin kerf, instead of the tablesaw to rip out the three apron strips, and took only light passes with my jointer and handplane when jointing edges afterward.

To cut up the apron's middle section, I used the tablesaw and a crosscut sled.

With the front apron sliced and diced, it was time to start putting it back together. To begin the reassembly, I started by planing a few shavings off the top edges of the two drawer fronts. This ensured that the drawer fronts were ever-so-slightly narrower than the three other middle apron parts. I also applied a light coat of paste wax to the edges and ends of the drawer fronts. This way, I could use them as spacers when gluing up the other parts without inadvertently gluing them in place.

While the glue dried on the apron, I tapered the legs at the bandsaw and cleaned them up by hand. I also thinned the drawer fronts to  $\frac{7}{16}$  in. so they visually worked better with the thin drawer sides.

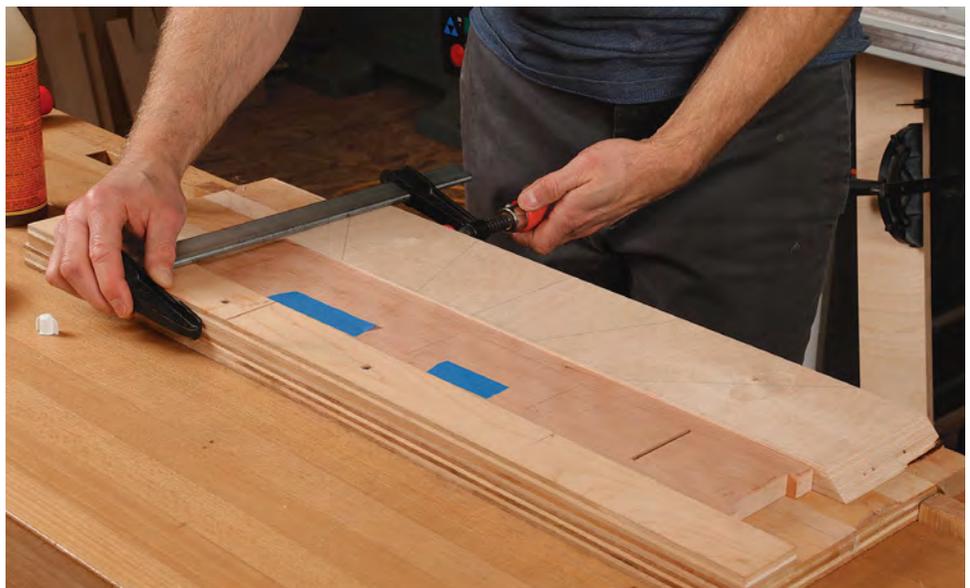
### Double slip tenons are stronger

Next up was the joinery for connecting the aprons to the legs and the runners. I almost never use integral tenons; I much prefer slip tenons. I find they are easier to make and yield a more consistent result.

I thought the aprons were too wide to use a single wide slip tenon for each leg.

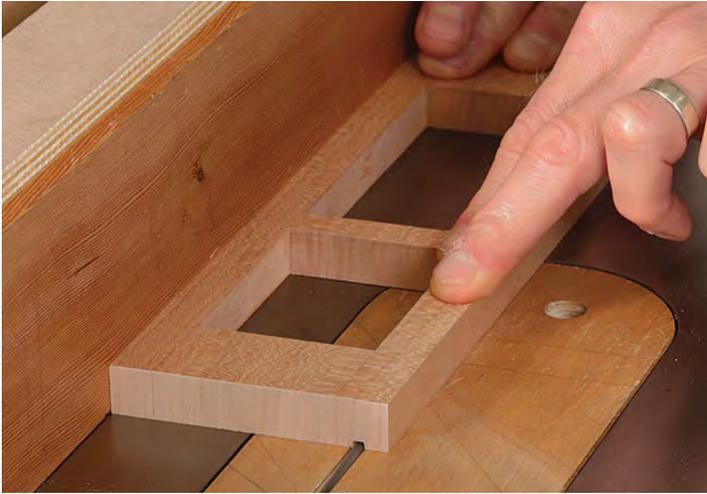


**Glue up the front apron one part at a time.** There are a lot of parts in play, so Korsak glues up the apron piece by piece instead of all at once. Blue tape keeps the unglued parts aligned and in place while the other parts get glued.



**Wide plywood cauls even out clamping pressure.** The top and bottom apron strips are long and narrow, so to help distribute clamping pressure across the whole assembly, Korsak uses wide cauls.

# Slip-tenon joinery



**Groove the front and back aprons for the runners.** After cutting the aprons to final length, Korsak runs a groove their entire lengths, making it easy to slide the runners into the correct position. He uses a flat-top rip blade.



**Legs and aprons connect with slip tenons.** Korsak uses a plunge router with a 1/4-in. end mill to cut the mortises. He mills the slip tenons from stock of the same species and similar grain as the aprons, in this case quartersawn cherry.

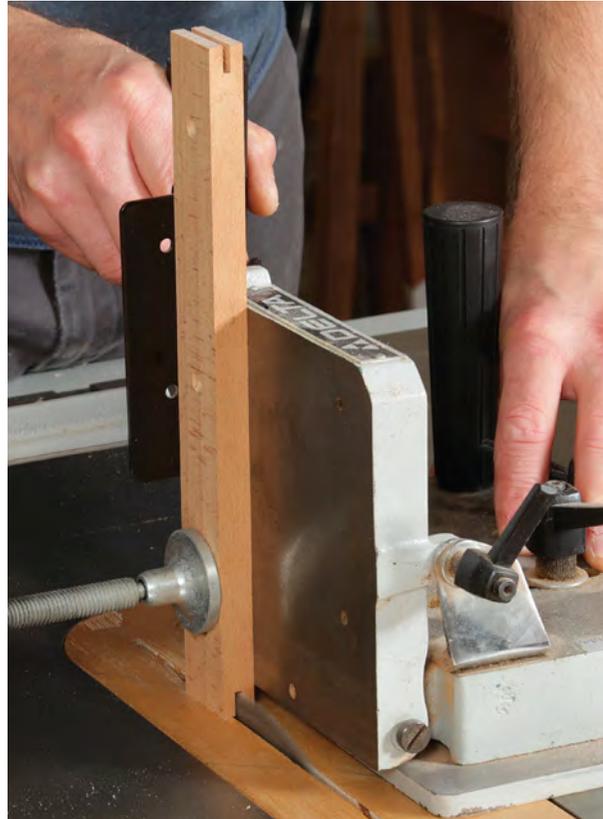
So instead of a single tenon at each joint, I used two.

When laying out the mortises, I reference off the top of the legs and aprons. The mortises are centered in the apron's thickness, but be sure to adjust your setup to account for the 1/16-in. inset. I find a spacer handy for this.

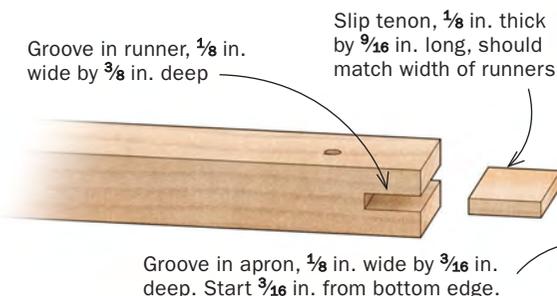
When selecting stock for slip tenons, I believe it's best to use the same material and same cut (quartersawn, riftsawn, etc.) as the parts the tenons will be mortised into. In the case of the table's apron, that meant quartersawn cherry. This is easy to do since there's always some waste that can be used for slip-tenon stock.

My normal practice with slip tenons is to fit each tenon to its respective mortise rather than just milling tenon stock to a certain thickness and hoping that all the tenons will fit their mortises. By fitting individual slip tenons, I can fine-tune the fit of each, ensuring nice tight joints all around. I use a block plane for the fitting and calipers to check my progress. This may sound like a lot of work, but it doesn't take that much time. To me, the extra time is offset by the benefits of having tight-fitting joints. As I fitted the slip tenons, I marked each tenon and its respective mortise, so that I knew which slip tenon went with which mortise.

Slip tenons also connect the runners to the aprons. The drawers in this table are small, and most likely won't carry loads of any real significance. So I felt comfortable



**Runners get an open mortise for a slip tenon.** Cut these slots using the same blade you used to groove the aprons. Position the slots so the tops of the drawer runners are flush with the bottom of the drawer openings.



using thin slip tenons to join the runners to the front and back aprons. Because the table and drawers aren't large, I run a groove the length of the apron rather than making stopped cuts for individual mortises. I used a flat-bottom rip blade to cut the grooves in the aprons and the slots in the ends of the runners. Groove the apron first, then position the slot on the runners so the runners' top face will be flush to the drawer opening. Before cutting the slots, dry-fit the table to get the length of the runners.

The last step in preparing the drawer runners was to drill and countersink them to accept the screws that will attach the drawer guides.

## Keep assembly methodical



**Glue the rear legs to the rear apron.** With the slip tenons glued in the legs, attach the apron to the legs. Korsak uses leather cauls to protect the legs from the clamps. Glue the front apron to its legs now too.



**Attach the side aprons and runners to the rear assembly.** After gluing the side aprons to each rear leg, attach the runners. Dry-fit the front apron and use it as a caul and to keep parts aligned. The runners are predrilled for the screws that will secure the drawer guides.



### Assemble in an afternoon

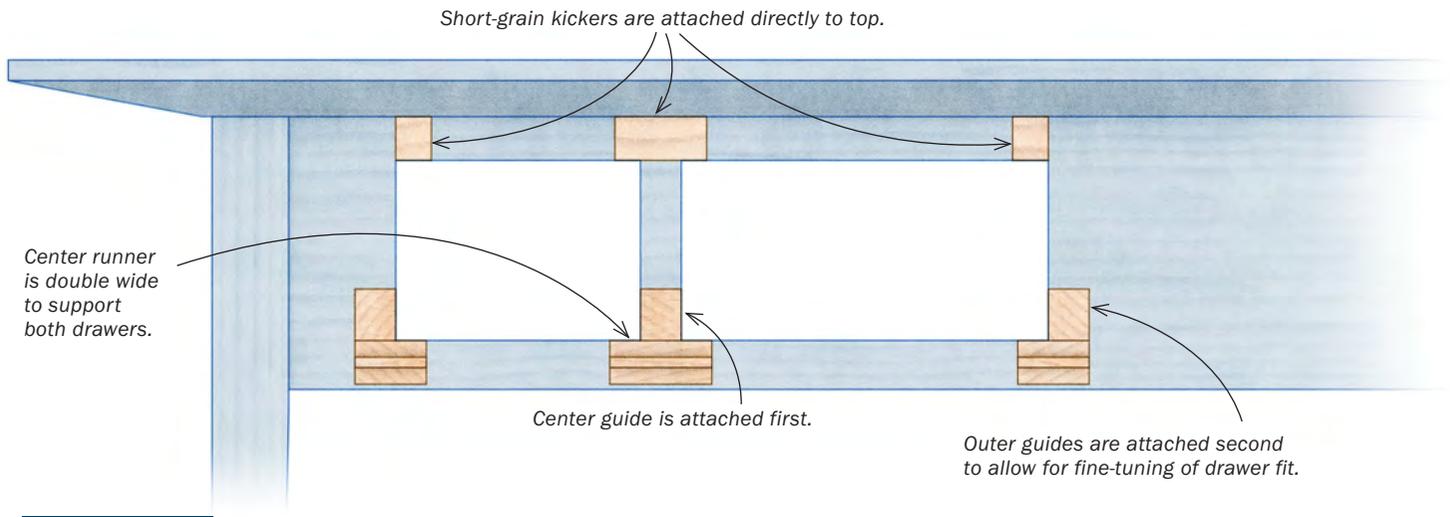
With the parts made and joinery cut, it was time for assembly. But first, I did final surface preparation on all of the visible surfaces of the legs and aprons. I used a smoothing plane before sanding to 320 grit. After cleaning the surfaces with a shop vacuum, I used a block plane to chamfer the corners of the bottom edges of all the aprons, as well as the corners of the legs.

When I embark on a complex glue-up, I always prefer to break it down into smaller units, as opposed to trying to assemble multiple parts at one time. Yes, it takes longer, but I much prefer taking my time and focusing on getting a single joint as close to perfect as I can. I have been party to enough "I'll just wing it" glue-ups to know that the results can be suboptimal.



**Glue the front assembly to the rest of the table.** Like before, have the tenons already glued in the legs. Then glue this assembly to the side aprons and runners.

# Novel solution for kickers and guides



## KICKERS



**Short-grain kickers move with the top.** Korsak makes kickers with their grain running the short dimension so he can attach them directly to the tabletop, knowing they'll expand and contract in concert with the top.



**Screw the top to the base.** Because attaching the top could realign things, Korsak attaches it to the rest of the table before installing and adjusting the guides. He drills the tab holes oversize to allow for seasonal movement.

Following that line of thinking, my first step was to glue the slip tenons into their respective leg mortises, letting me focus on good glue coverage and good contact where the mitered tenons meet. From there, I glued the front and back aprons to their respective legs, one leg at a time. Next was attaching the side aprons and runners to the rear assembly before finally bringing in the front apron. If you glued one part at a time until this point, this last glue-up will go as smoothly as possible.

After underbeveling the top to lighten its appearance, there's a special step: screwing the short-grain kickers to the underside of the tabletop. Instead of building these into the base, the traditional method, I attach them directly to the top. The short-grain strips will expand and contract with the top.

Before installing the guides and stops, I attach the top to the base. Screwing it on now makes installing the guides and stops a little trickier, but I think it's still smarter. If I waited until after, the top could rack the base, messing up the travel of the drawers.

## Guides, stops installed around drawers

My drawers are pretty traditional affairs: half-blind dovetails at the front, a lock rabbet at the back. The sides and back are quartersawn poplar, a stable wood that's easy to dovetail. The kickers are cherry, and the runners and guides are beech, more durable woods. And like the runners and kickers, the guides follow a nontraditional approach.

With the finished drawers in hand, I tailor-fit each drawer pocket by shifting the outer guides. To begin, with the table

## GUIDES

**Begin by attaching the center guide.** Glue and screw this in place. Position it so each drawer travels well, and the drawer fronts are parallel with the front apron.



**Loosely clamp an outer guide in place.** You want to be able to move the guides without them slipping too much. Position the clamps so they don't interfere with the drawer.



**Check the fit of the drawer and adjust the outer guide as necessary.** By leaving the outer guide loosely clamped, you can tailor-fit each drawer pocket to its respective drawer. Glue and screw the guide in place once the drawer slides true.

upside down, glue and screw the middle guide in place. Next, gently clamp an outer guide in place. You want firm pressure, but not so firm that you can't wiggle the guide if necessary.

Next, test the fit of the drawer. Do this with the table right side up to see how the drawer will move in real life, not upside down on your bench. When you're happy with the drawer's travel, tighten the clamps and screw the guide in place. Then you can add the stops, which I glue to both the runner and the guide. Have the drawers in place when figuring out where to place the stops. □

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## STOPS

**Install the drawer stops.** To keep the drawers from pushing in too far, Korsak adds small stops at the back of the drawer pocket. Glue these to the runner and guide.

