

# Bedside Table

This small project features stout joinery and angles that will challenge your skills

BY GARRETT HACK

I love building small tables. They are not only fun, quick to make, and useful (or saleable), but they're also perfect for trying new designs and techniques. In my teaching, I have found they are ideal projects to improve hand-tool and joinery skills.

This sweet little table is loaded with lessons and challenges. It's also a great showcase for creating strong joinery in delicate parts. It features splayed, tapered legs, slightly angled joints, and two asymmetric drawers that fit not-exactly-square pockets. I'll show you how to build this piece, and give you tips on how to deal with angles.

## Taper and mortise the legs first

The legs taper from top to bottom. Before cutting them it's a good idea to make a full-size pattern out of thin material. The pattern should show the joinery locations, as well as the foot layout.

I trace the pattern on the stock and cut the tapers on the band-saw. Then I clean up the sawmarks and refine the taper using a smoothing plane. Once I have all four legs made, I play with their arrangement to pick the best show faces. Then I mark the legs so I maintain the proper orientation while cutting the joinery.

I chose to make  $\frac{5}{16}$ -in.-wide mortises for these fine legs, allowing for adequately strong tenons

yet not weakening the legs as  $\frac{3}{8}$ -in.-wide mortises could where two mortises intersect in the back leg. To maximize twisting resistance, my apron tenons are as wide as possible, nearly the entire height of the aprons. And to preserve the overall strength of the mortise, the top section is much shallower and is angled to accept a haunched section of tenon.

I cut most of the mortise on a horizontal slot-mortiser and the shallow angled section by hand with chisels. While cutting the six mortises for the aprons, I also cut the mortises for the bottom drawer rail, so that I can cut the

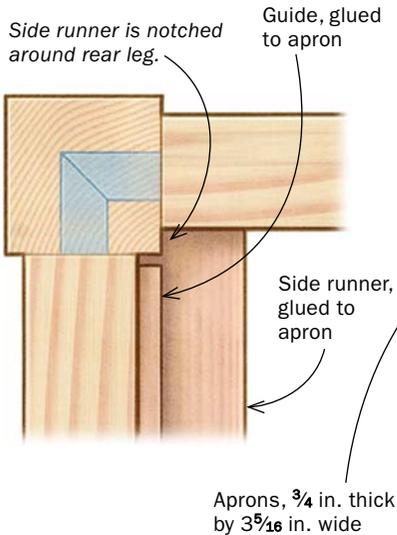




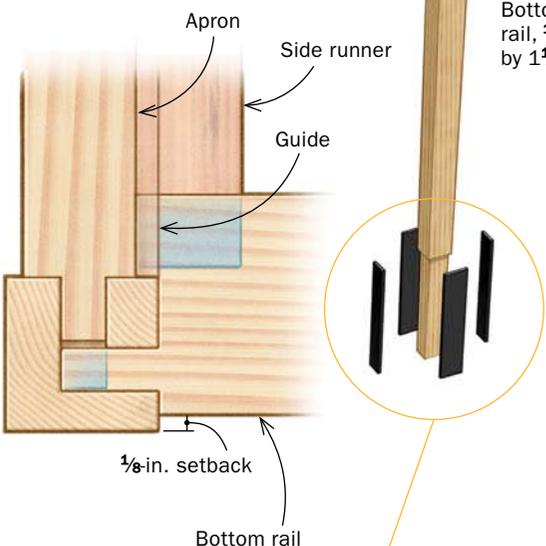
# ELEGANT AESTHETICS, RUGGED CONSTRUCTION

For this small table, Hack used tight-grained Douglas fir—a soft but tough wood that ages to a beautiful reddish brown—and Brazilian tulip for the drawer faces to create a contrast of color and grain. The table has slender parts, so it relies on well-engineered, strong joints for its survival.

## LEG JOINERY

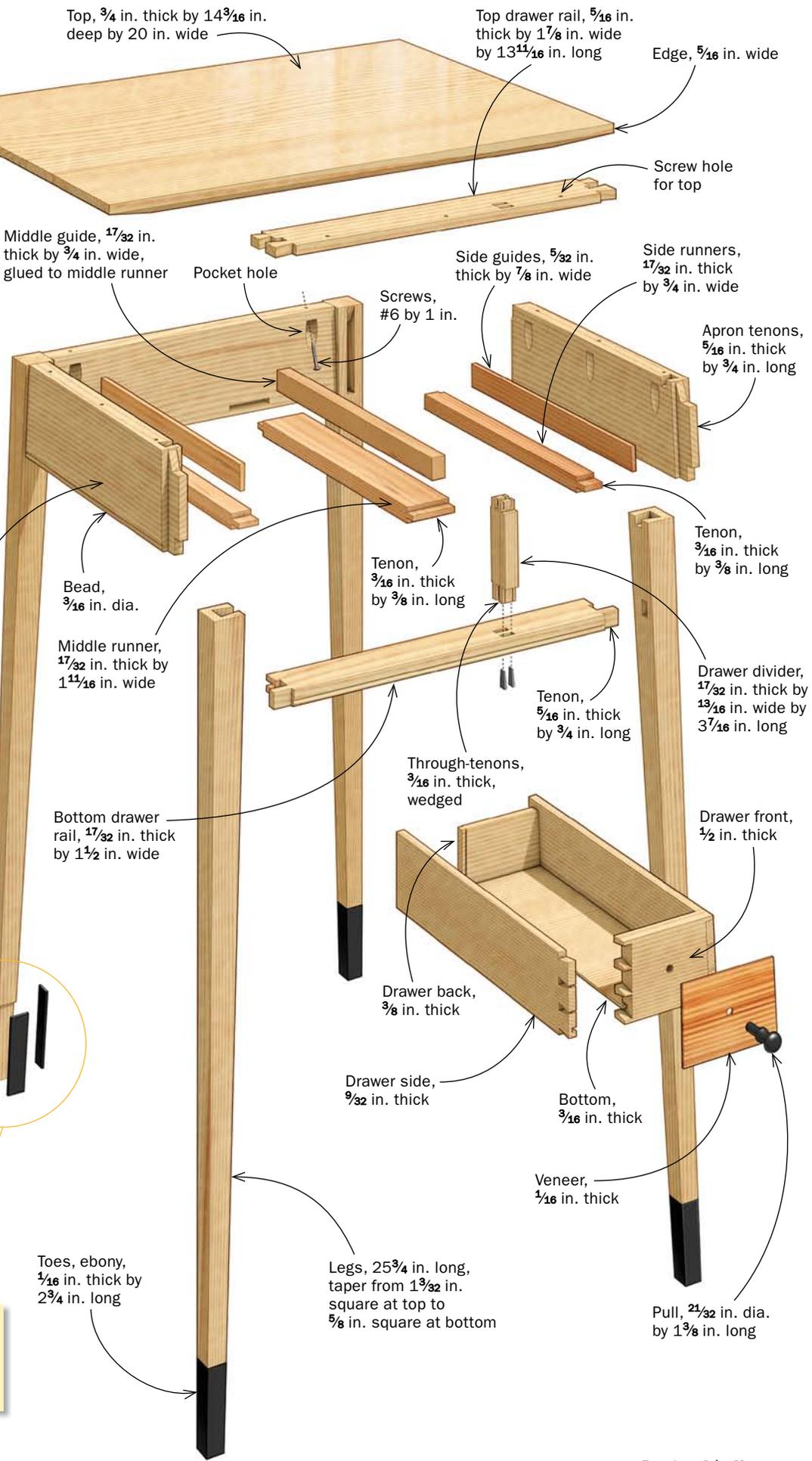


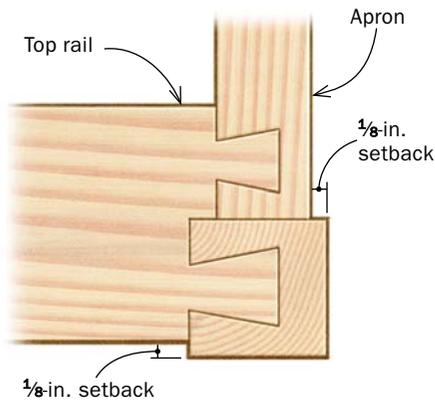
## BOTTOM RAIL JOINERY



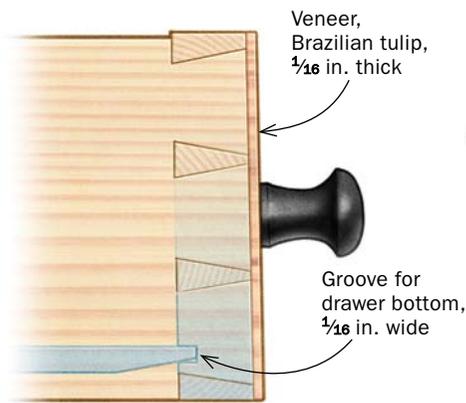
## Online Extra

Hack covered this process in detail in a previous Master Class (“Make your legs stand out with inlaid feet,” *FWW* #239). To learn the technique, go to [FineWoodworking.com/extras](http://FineWoodworking.com/extras).

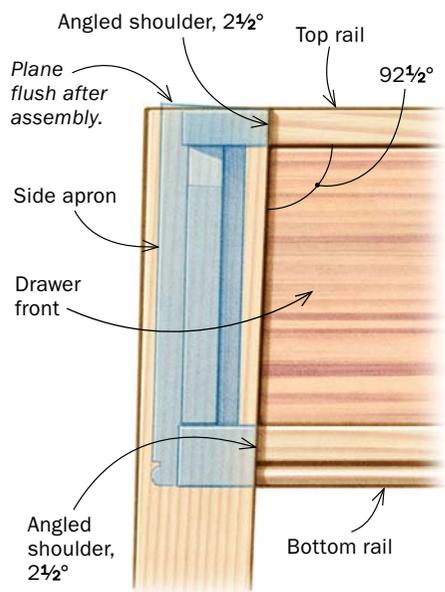




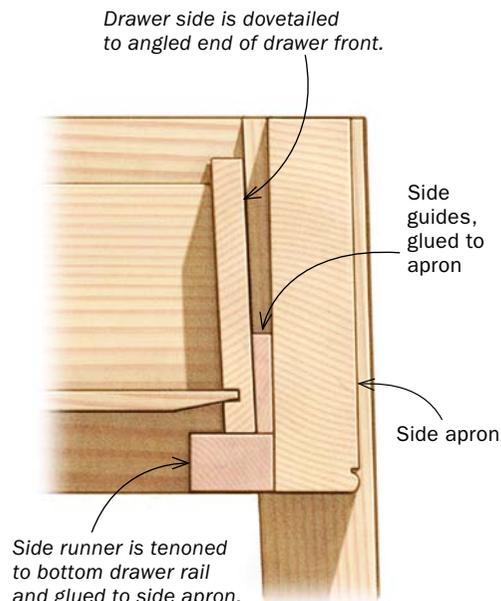
**TOP RAIL JOINERY**



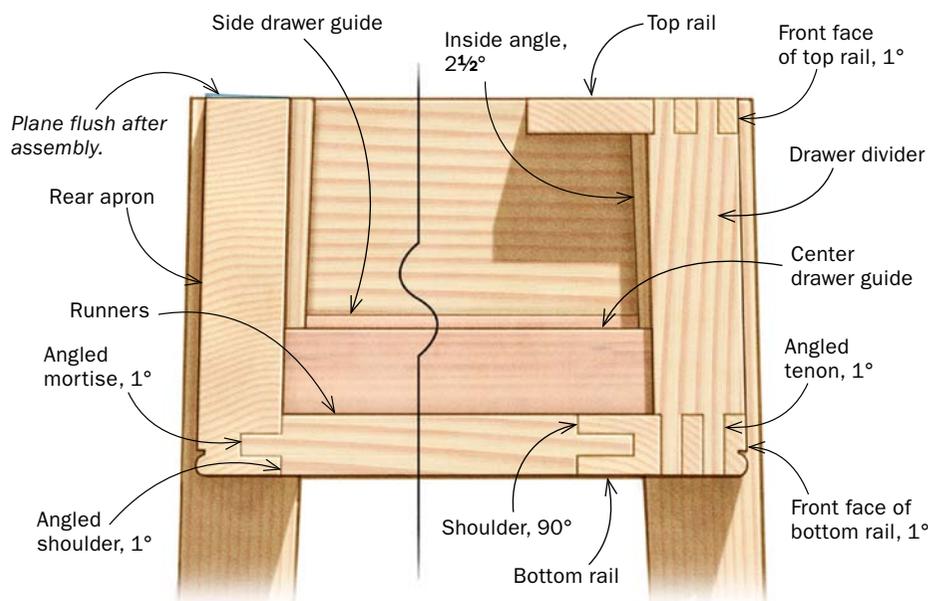
**DRAWER SIDE VIEW**



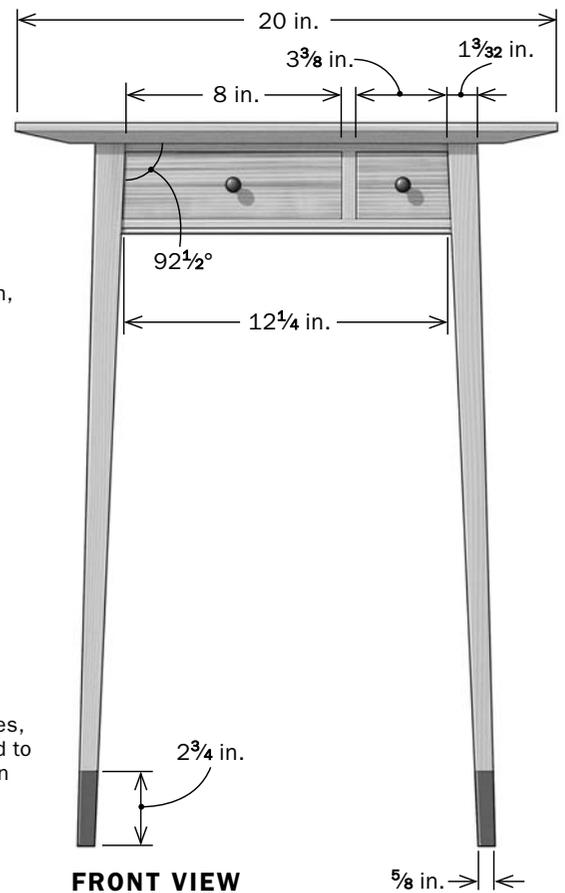
**ANGLED JOINERY FRONT VIEW**



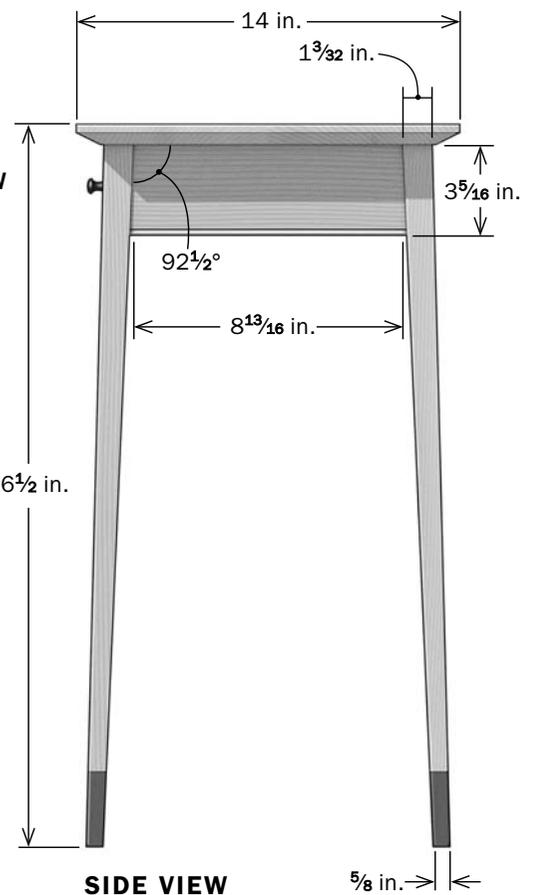
**DRAWER CROSS SECTION FRONT VIEW**



**CROSS SECTION SIDE VIEW**

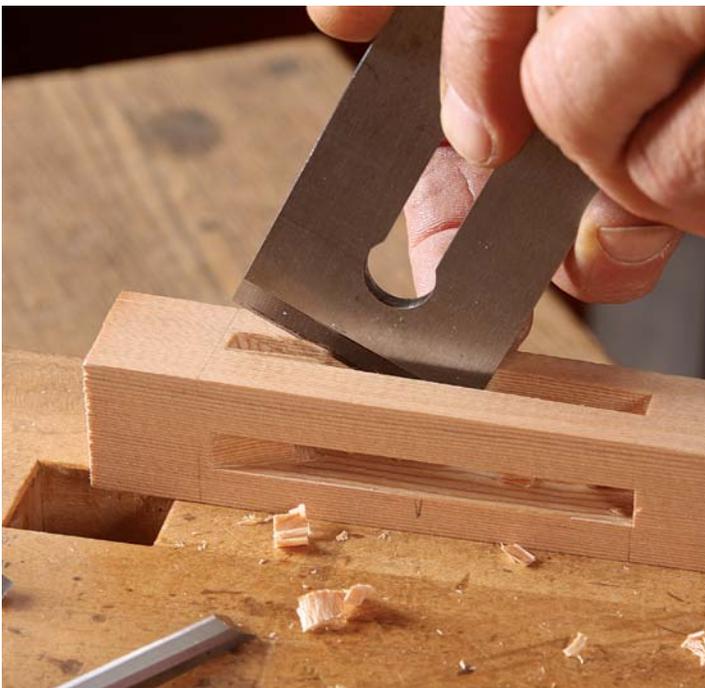


**FRONT VIEW**



**SIDE VIEW**

## Leg mortises are first



**Make way for the tenon haunch.** After cutting the mortises, Hack cuts an angled ramp at the top of the mortise to accommodate the tenon haunch. He uses a chisel (top). To guide the chisel work, he scores the ramp wall with a plane blade, registering it against the mortise wall (bottom).

rail tenons later with the same setup as the aprons.

### Match aprons to the leg angle

In addition to being tapered, the legs are splayed. To create the splay, I cut the ends of the aprons at  $2\frac{1}{2}^\circ$  using the miter gauge of my tablesaw. Before working on the tenons, I use a shopmade scratch stock to bead the bottom edges of the aprons and bottom drawer rail.

I cut the tenon cheeks using a tablesaw tenoning jig, and then I cut the shoulders with the aprons flat on the tablesaw. I register the angled ends of the aprons against the fence, which creates perfect angled shoulders. I cut and fit the tenon haunches using a handsaw and chisel.

### Drawer rail is angled, too

With the aprons tenoned, I tenon the bottom drawer rail using a tablesaw tenoning jig. Here, the tenon is angled slightly (outside angle  $1^\circ$ ) to ensure that the rail ends up level once installed. This rail also wraps around the back of the leg for added glue surface and stability. I fit each end to its leg by careful work with a saw and chisel. After dry-fitting the rail into the table, lay out and cut the mortises in the rail for the drawer divider. I angle the mortise walls with a chisel to accommodate the splay.

The rail also has three mortises for the drawer runners—a wide one at center and two narrower ones on the ends. After I cut the joints, I slip the runners into place and plane them flush with the top of the rail. The rear apron is also mortised for the center runner. It aligns with the mortise in the lower front rail and is the same size, but is angled  $1^\circ$ . The side runners get glued into the lower front rail and to the side aprons during assembly. With the apron and bottom rail joinery finished, I use a gouge and drill to cut the pocket holes for attaching the top.

### Do some leg work before glue-up

Before assembly, you need to add the ebony toes at the bottom of the legs. I covered that in a previous Master Class (“Make your legs stand out with inlaid feet,” *FWW* #239). Then trim the tops of the legs. To get a clean cut at the proper angle, assemble a leg and apron, place a bevel gauge on the outside face, aligned with the top edge of the apron, and then knife a line across the leg. Using the gauge, transfer the line across the other outside face of the leg and cut to the lines with a handsaw. You’re ready for glue-up.

### After assembly, complete the drawer pockets

The top drawer rail, which dovetails into the front legs and also into the side aprons, is added after this initial assembly. The double dovetails add to the drawer pocket’s strength by resisting both tension and compression forces. The shoulders of the dovetails are angled to match the leg splay.

## Then cut the apron tenons



**Get the splay right.** The angled ends of the apron create the table's splay. They are cut at  $2\frac{1}{2}^\circ$  using a miter gauge on the tablesaw (above). After cutting the tenon cheeks using a tenoning jig, Hack cuts the shoulders with the apron flat on the tablesaw and the angled end riding against an auxiliary fence that is raised to give clearance for the offcut (right).

### Cut the haunch.

Lay out and cut the tenon haunches. Make the straight cut from the end first, then come in at an angle.



### Make the miters.

The apron tenons are mitered and meet in the middle of the leg. Hack cuts the miters on the tablesaw and trims the mating tenons to fit using a block plane.



**Trim the legs.** The legs are left overlong for mortising, then trimmed. To get a clean cut at the proper angle, first dry-assemble a leg and apron. Place a bevel gauge on the outside face, aligned with the apron's top edge, then knife a line across the leg. Transfer the line across the other outside face. Cut to the line with a handsaw.

## Assemble the base



**This glue-up won't be square.** After gluing the rear apron to the rear legs and setting that assembly aside to dry, glue the front legs to the bottom drawer rail (above). Use a bevel gauge to check that the splay angle is correct. Glue in the drawer runner, then glue the side aprons to the rear legs, and attach that assembly to the front legs and runner (right).



**Dovetail the top rail.** Lay the rail on top of the legs and use a knife to transfer the dovetails to the leg and apron.



**Add the top rail and divider.** First glue the divider into the lower rail, then add the top rail. Clamp across the top rail, and above and below the divider (left). Add the wedges (above) and plane them and the tenon flush.

## Fit and install the drawers



**Set the angle with a bevel gauge.** This setting (left) will guide the work. Only one end of each drawer front gets angled. Hack marks the angle on the drawer and planes slowly up to it (above).

Before laying out the top rail joinery, plane the top of the base flush. Place the rail in position on top of the legs and knife the underside where it will fit around the leg and against the side apron. Use these lines to lay out the stepped shoulders for the two dovetails. Cut the dovetails and shoulders, reposition the rail on the legs, transfer the dovetails, and saw and chop out the sockets. Now mortise the rail for the drawer divider, angling the mortise walls, and drill and countersink the holes in the top rail for attaching the top.

Make and install the divider. Cut the divider tenons at 90° but angle the shoulders slightly for a snug fit with the angled mortises. The tenons are wedged, so cut the slots in them at this point, too. Next, glue the top rail in place and to the divider and then tap in the wedges. Finally, make and install the drawer guides.

### Add the top and build the drawers

The tabletop is made from two nicely matched boards and is beveled on the underside and along the four edges. The underbevels are wider on the sides than on the back and front, which looks good. I saw the bevels by hand, following my layout lines.

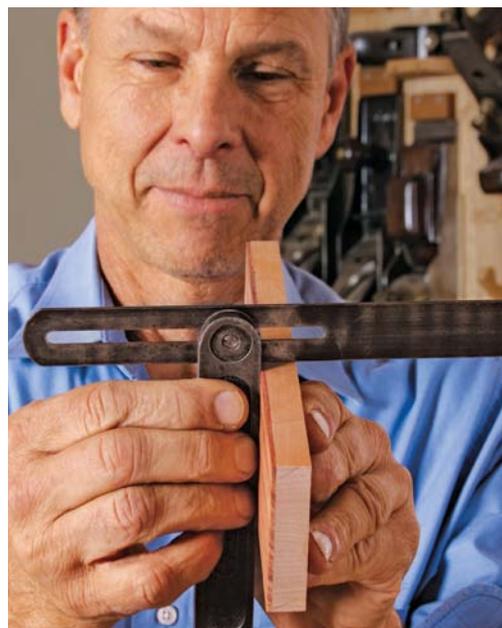
The last step is building the drawers. I laminate the Brazilian tulipwood veneer to the Douglas fir drawer fronts first, then I fit each front to its opening. With a splayed table, the outside ends of the drawer pockets are not square and the top and bottom edges of the drawer fronts need a small bevel. I fit the drawer front barely snug to its opening end to end, top to bottom, and then cut the drawer joinery. Groove the drawer sides, and then cut and fit each bottom.

For a finish, I used shellac, specifically seedlac, which has a reddish hue that beautifully warms the fir and tulip. □

Contributing editor Garrett Hack teaches woodworking around the world.

[www.finewoodworking.com](http://www.finewoodworking.com)

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**Angle the top and bottom too.** The top and bottom edges of the drawer fronts get a small bevel (1°). Again, use a bevel gauge to guide the plane work (left). The drawer front should fit snug in its opening (below) before you cut the joinery.

