TAUNTON'S

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PROJECTS
Entry table with stand-out joinery; Ladderback chair

TECHNIQUES
Sleek drawer pulls; Bandsawn bridle joints

THE BASICS
Essential tool kit for layout

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Gem of a Drawer Pull

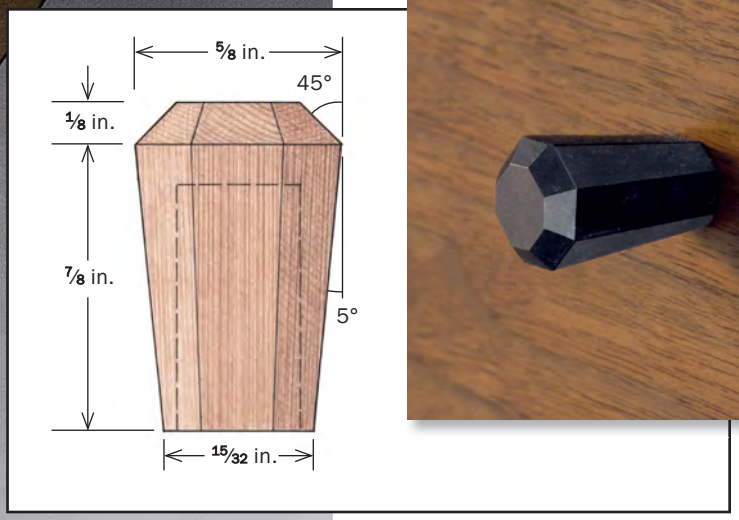
Clever jigs produce a complex shape with speed and precision

BY MIKE KORSAK

I designed these faceted drawer pulls, which were inspired by gemstones, for a silver chest I made several years ago (see Designer's Notebook, *FWW* #262). More recently, for a dresser with 10 drawers, I made a slightly modified version of the same pull. I used machines almost exclusively to make them and developed a jig-based process that allows me to produce any number of pulls that are consistent in shape and size. The jigs ensure that I can work safely and efficiently despite the pulls' small size and complex shape. The chest of drawers required 16 pulls, but I made perhaps 30, so I would have some to use for testing the jigs and machine setups and others for future use.

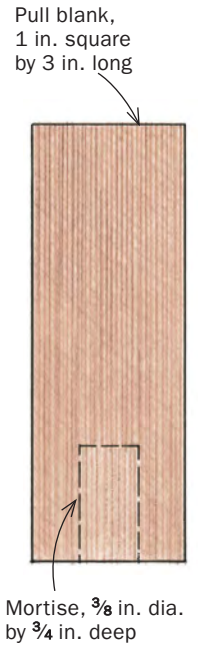
Jigs for a gemstone

I made two jigs to use on the bandsaw and two additional jigs (sleds, really) to

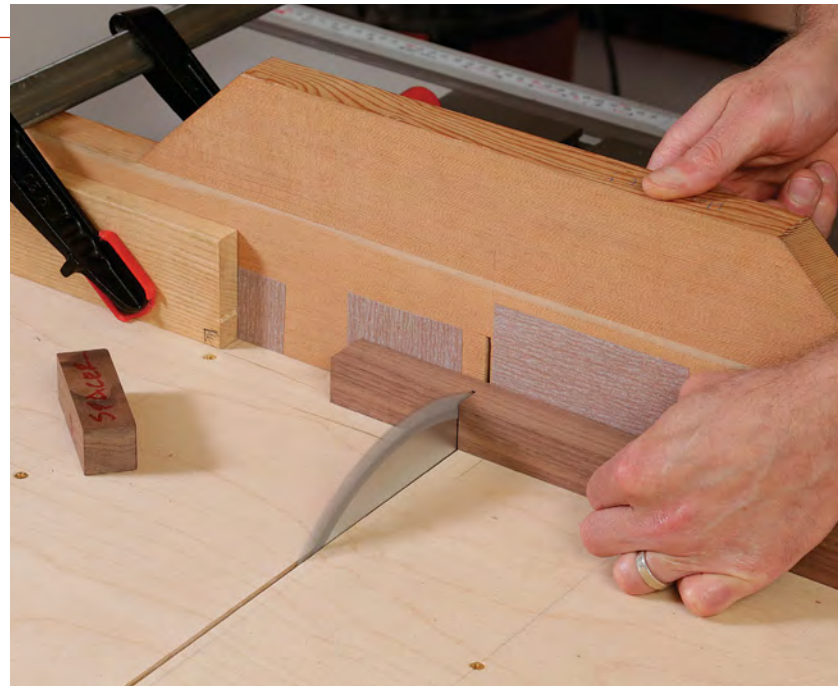


Drawings: Vince Babak; photo, this page (left): Mike Korsak

BLANKS AND TENONS



Beautiful blanks. *After milling the pull stock perfectly square, Korsak uses a stop block and a spacer to crosscut it, getting clean, uniform cuts without trapping the blank between the stop block and the blade.*

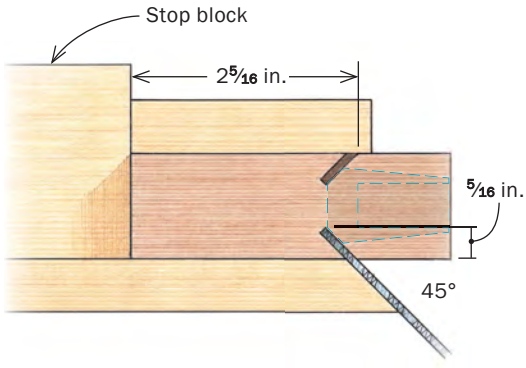


Make the mortise dead center. *The shoulder at the base of the pull is very narrow, so be sure to center the hole for the tenon precisely.*

Unturned tenons. *To get long-grain slip tenons, cut stock from the end of a plank and turn it end-grain up. A tenon cutter creates the tenons and the bandsaw frees them from the blank.*

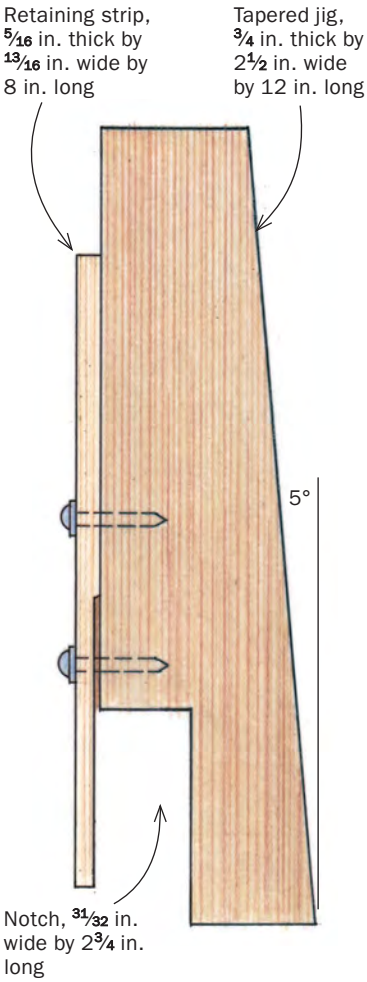
Photos, except where noted: Jonathan Binzen

SQUARE FACETS FIRST



Short facets on the tablesaw. *With the blade angled at 45°, make the first four cuts, each with a different face of the blank resting on the jig.*

Long facets on the bandsaw. *Make a tapered jig to saw the long facets. The bevel-gauge angle determines the angle of the facets.*



Snug fit for safe sawing. *To keep the pull blank secure in the jig's notch, Korsak relieved the inside face of the retaining strip; when you tighten the end screw you tighten the jig's grip.*

use on the tablesaw. I cut the short facets at the end of the pull on the tablesaw and the long facets on the bandsaw. One of the jigs for each machine required a V-groove to cradle the square pull blank when it is rotated 45°. The finished pulls are tapered octagons, so the ability to mill stock accurately while it's rotated 45° was essential, and the V-grooves allowed for that.

If you plan to make pulls using the jigs I show here but you want your pulls to be a slightly different shape or size, you may find the biggest challenge is having to run a blank through the entire process

before you see what the finished pull looks like. If the shape isn't quite right, the jigs and setups have to be modified and the sawing steps repeated. I ended up making three prototypes before I was happy with my pull, and that took a fair amount of time. But the upside was that once things were dialed in, it was fast and efficient to make a large number of consistently shaped pulls.

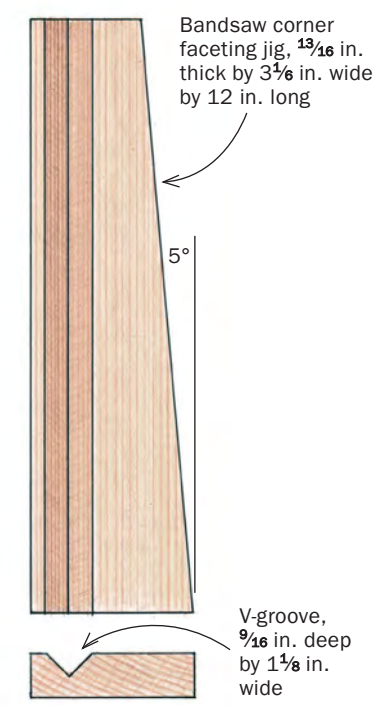
Nice blanks and slip tenons

Although my pulls are 1 in. long, I made the blanks 3 in. long. The extra length made it far easier to secure the blanks in the jigs and kept my fingers from close proximity to the sawblades.

I milled the blanks carefully, making certain they were good and square. Although by the end of the shaping process all four faces of the pull are removed, the blank's faces are critical as reference surfaces throughout.

The jig-based process I used to make the pulls relies on slip

CORNER FACETS



Jigs for cutting corners need a V-groove. *Korsak made stepped cuts on the tablesaw to rough out the groove, then routed it clean with a V-groove bit. The groove holds the blank securely for faceting the four corners.*

Slicing on the bias. *With a stop block screwed in place behind the blank, Korsak makes tapered stopped cuts with each of the blank's four corners in turn cradled in the V-groove.*

COMPLETE THE PULL

The final facets. *Cut the last four short facets at the tablesaw (right) using a jig with a V-groove. Before making those cuts, though, trim off the crenellations created by previous cuts (above), which can create problems at the tablesaw.*

Free the pull and flatten the facets. *At the bandsaw, Korsak carefully crosscuts the pull from the blank. Then he smooths the facets by drawing the pull across the sole of a block plane.*

tenons rather than integral ones. This afforded me better access for sawing the pull's long facets and enabled me to use a block plane to clean up those facets at the end of the machining process.

Needing the grain to run the length of the tenons, I made a crosscut 5 in. from the end of a wide board. I stood the offcut upright against the fence at the drill press and used a plug-cutter to make a row of round tenons from the blank. Then I freed the tenons from the blank at the bandsaw. It's a safe and simple way to make a batch of uniform round tenons quickly.

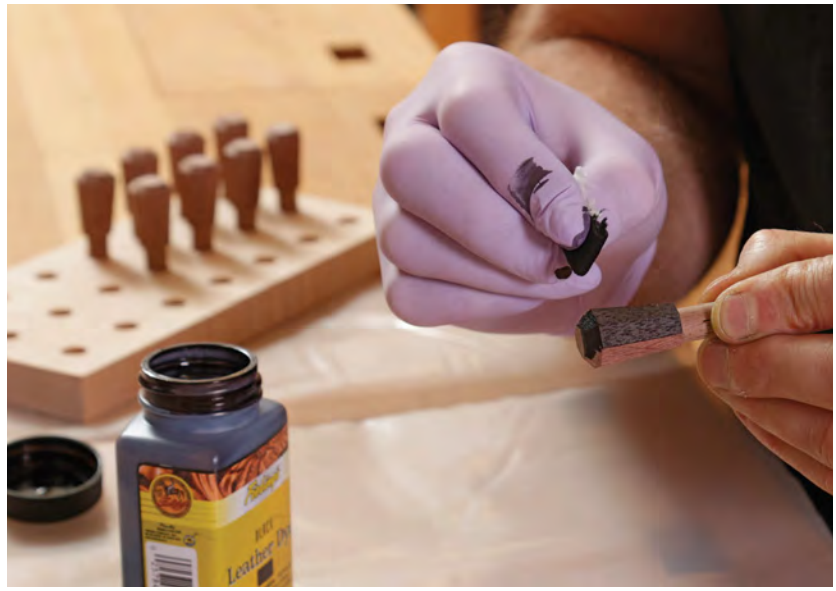
ADD THE POST

Glue, trim, kerf. *After sanding the pull's facets and end grain up to 320-grit, glue in the slip tenon (1). To cut the tenon to length, use a scrap drilled to accept the tenon and dimensioned to match the desired tenon length (2). After cutting the tenon to length, use the same jig to guide your saw (3) as you cut a stopped kerf for the wedge that will secure the pull in its drawer.*

After the pull had been faceted and cut to length, I glued in the slip tenon overlength. Then I used a handsaw and a simple jig to cut the tenon to ⅛ in. longer than the thickness of the drawer front it would go through. Using the same jig, I kerfed the end of the tenon to accept the wedge that would lock the pull in place in its drawer.

After sanding the long facets and the end grain with fine paper, I ebonized the pull with leather dye and applied an oil finish. □

Mike Korsak builds custom furniture in Pittsburgh, Pa.



Boot black. *Korsak uses black leather dye to ebonize these walnut pulls, then applies two coats of Osmo Polyx-oil.*