Stylish Serving Trays

Strong, light, and graceful, they deliver breakfast beautifully

BY HEIDE MARTIN

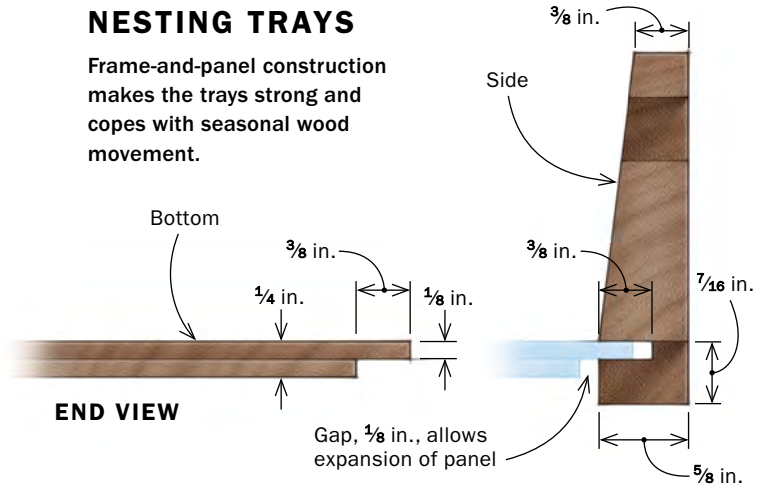
As is often the case with clean, simple designs, there is more to this set of serving trays than meets the eye. Relying on solid-wood construction, these trays pack a surprising number of techniques into a small package: breadboard construction, exposed joinery, tapered stock, pinned joints, and cord lashing. I designed the trays with batch production in mind, and arranged things so that although the two trays nest inside each other, once the components are cut to length and width, the joinery for both sizes can be cut with the same machine settings.

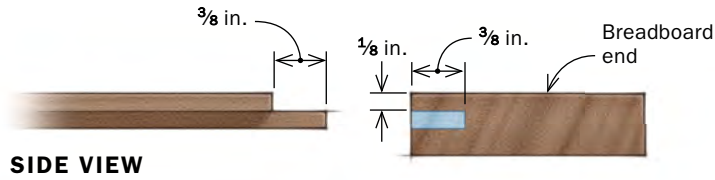
Trays make excellent gifts and have the potential to be used daily. In my home, the small tray gets constant use carrying condiments to the dinner table or placed on the sofa as an extension of the end table. The large tray is handy for carrying a meal to the

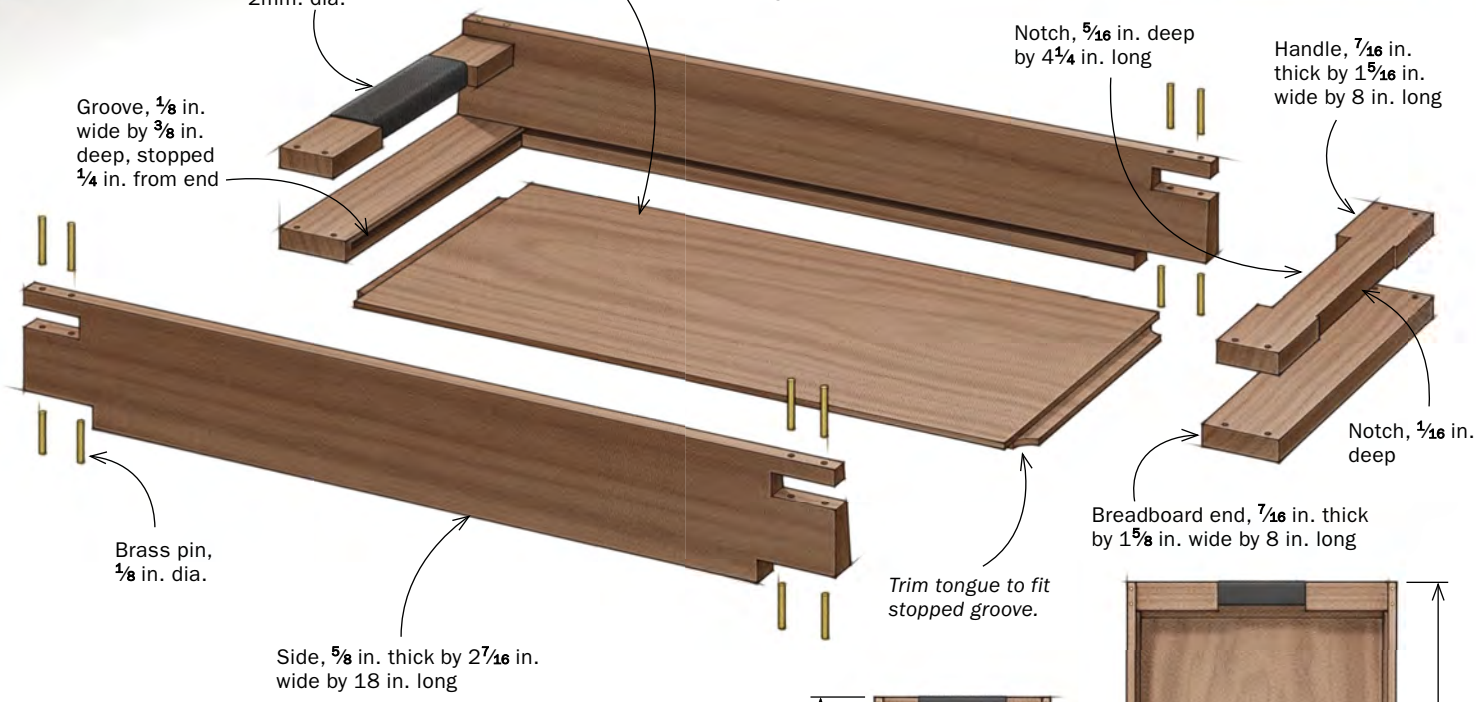
Photos, this page: John Tetreault; drawings: Christopher Mills

NESTING TRAYS

Frame-and-panel construction makes the trays strong and copes with seasonal wood movement.







SMALL TRAY

LARGE TRAY

All dimensions of the two trays are identical except length and width.

dining table, or as a document organizer in the home office. Both are handsome enough that we do not stash them away: We leave them on the table during meals, and then store them vertically on the kitchen counter. In this article I'll lay out the steps needed to create a single tray, and you can use the provided dimensions to build either size, or a full set.

Prepping and cutting joinery for handles and breadboards

I begin the tray by milling the handles and breadboard ends. I leave all these parts about 1/16 in. over final width and length—I'll trim them flush after glue-up. Then I cut the lap and bridle joints in the sides that receive the handles and ends. I cut them at the tablesaw with a 7/16-in.-thick dado stack and a tenoning jig with

Prepare the parts

CUT THE JOINERY

Notch the sides. *Using a shopmade jig that rides the tablesaw's fence, Martin first cuts joints in the sides for the handles (left), then for the breadboard ends (right). She uses a dado set for both.*

a tall fence. I use a sacrificial backer behind the workpiece to avoid blowout.

You can use the same dado set with a crosscut sled to cut notches in the handles where the cord will be. On the outside of the handle, cut the notches just deep enough that the wrapped cord will be slightly proud of the rest of the handle.

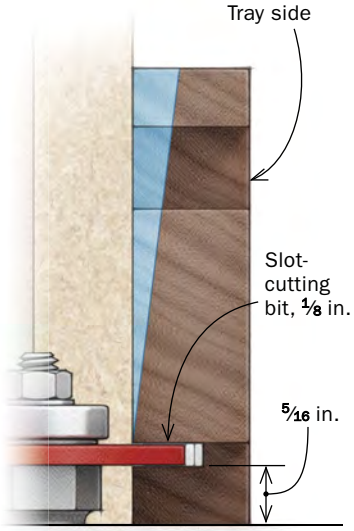
A slot-cutting bit for simple panel joinery

With the major joinery cut, shift your attention to the bottom panel. Begin by planing and sanding it to final thickness. Its thickness should be exactly double the width of the groove made by the ⅛-in. slot-cutting bit.

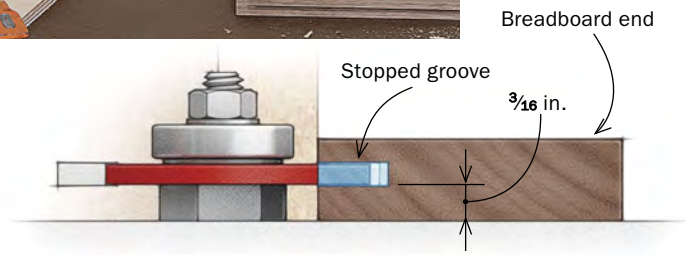
At the router table, cut a through-groove in the tray sides. Set the fence so it exposes just over ⅜ in. of the cutter; this provides added depth to avoid having the tongue bottom out. Set the bit so the top of the groove is in the same plane as the cheek of the notch for the breadboard end.

Then cut stopped grooves in the breadboard ends. This

Grooves for the panel. *With a slot-cutting bit in the router table, cut through-grooves in the tray sides.*



Stopped grooves on the ends. *Make a stopped groove for the bottom along the inside edge of the breadboard ends. The grooves in the breadboard ends are at a different height than those in the sides, so you'll need to reset the bit height.*



Photos, except where noted: Jonathan Binzen

TAPER THE SIDES

A sled for a slant. *To taper the sides, Martin makes a special nesting jig for the planer. She makes an angled ripcut in a piece of solid maple (left), then screws on fences and an end block (right).*

Taper gradually. *Take a number of shallow passes through the planer to achieve the taper, stopping when the taper reaches the groove for the bottom.*

will require resetting the height of the router bit, since these grooves are not in line with the grooves in the sides. Clamp stop blocks to the fence to stop the groove ¼ in. or so from the ends of the workpiece.

One router setting for two joints

When setting up to cut the tongues on the panel, I make a test piece milled to the exact dimensions of the panel; it is invaluable for dialing in my settings. Using a 1-in. straight bit exposed ⅜ in. through the fence, cut the tongues on the ends of the test piece: The distance between the shoulders should exactly match the distance between the shoulders of the joints on the sides.

To cut the tongues on the sides of the panel, flip it and run the top faceup. First, however, cut the test panel to check the fit. To allow for expansion of the panel, leave a ⅛-in. gap between the end of the tongue and the bottom of the groove.

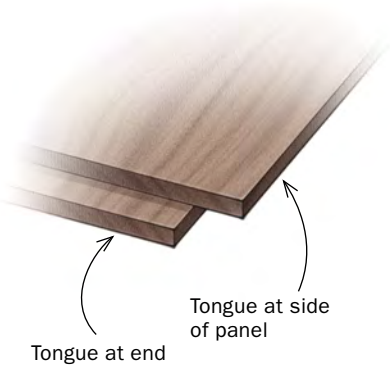
Finally, trim the corners of the

NOTCH THE HANDLES

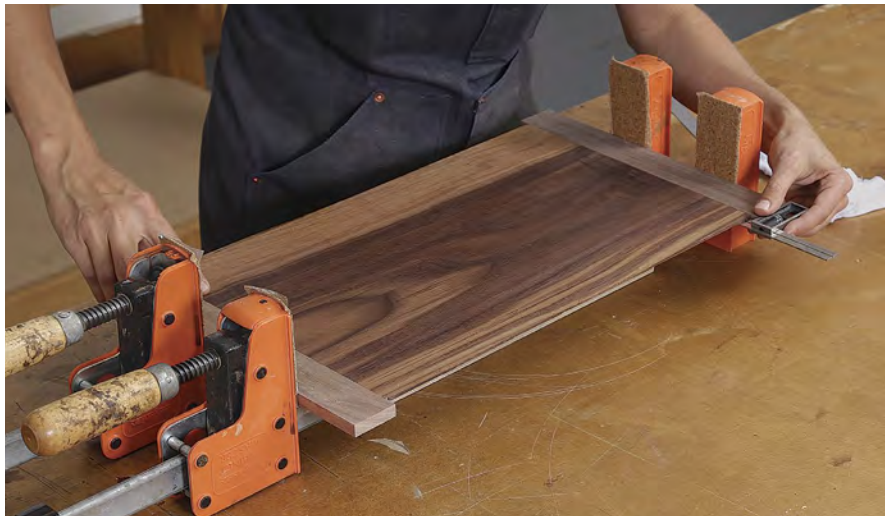
Get ready to wrap. *Martin makes relief cuts on the handles where they will be wrapped with cord. The dado set leaves a slightly rough surface, which is good because it gives the cord extra purchase.*

RABBET THE BOTTOM

Rabbets all around. *At the router table, cut rabbets on all four sides of the panel. When cutting the end rabbets, run the panel facedown; for the sides, run it faceup.*



Assemble the tray



Begin with the bottom. *Martin glues up the tray in two steps, first gluing the bottom panel to the breadboard ends. She pre-finishes the panel and applies glue only to the center inch or two.*

tongue to fit into the stopped groove. Raise the bit to the full thickness of the panel, and clamp a stop on the table to clip off the end of the tongue.

Planer sled tapers the sides perfectly

To angle the sides I use a sled for the thickness planer. To build it, rip a piece of hardwood to 83.8°, then plane it smooth. Attach a stop to one end and both sides. Wax the bed and sides of the sled.

Cut the taper using a series of light passes through the planer, stopping when the side is about ⅜ in. thick at the top edge and the taper reaches the top of the groove or a bit beyond. If you have any snipe in your thickness planer, take the sides to just over final thickness, then clean the snipe with a few passes of a bench plane.

Second assembly. *Martin pulls the corner joints together with clamps along and across the glue-up. A brace built to fit inside the tray keeps the sides aligned correctly. The sides of the bottom panel are left unglued.*

Now squeeze. *With the joints pulled home, Martin removes one set of bar clamps and locks the joint with vertical pressure.*

Post-cure cleanup. *Having cut the ends and handles slightly overlength, Martin carefully planes them flush to the sides once the glue has cured.*

A two-stage glue-up

Gluing up this tray in one fell swoop can be tricky; a two-stage glue-up gives me more control. Dry-fit the full tray before the first glue-up, taking care that the panel pulls tight to the breadboard ends and the lap joint between the ends and sides closes up.

Add pins

A strong detail. *To dress up the tray and cinch the joinery, Martin adds brass pins at the corners. She drills two stopped holes from the top and two from the bottom.*

Quick chamfer. *To make the pins easier to drive, Martin chamfers the leading end, chucking the pin in a drill and spinning it against a file.*

Rough it up. *Epoxy needs purchase, so Martin files notches in the pins.*

The top should be clean. *Martin smooths the top end of the pins with sandpaper before gluing them in; this avoids problems with getting brass dust in the grain of the wood.*

Before the initial glue-up, I pre-finish the bottom panel, taping off 1 in. at the center of the tongue where I'll apply glue. Then I tack-glue the panel to the breadboard ends. To help with alignment, I pencil a very fine mark at the center of the panel and the breadboard. I also set my combination square to ⅜ in. as a physical reference during the glue-up.

For the second glue-up, a spacer jig set into the tray helps to hold the sides at the proper distance. Remember that after assembly, the ends of the handles and breadboards will sit 1⁄32 in. or so proud of the sides, depending on how overlong you cut them.

Finishing touches

I use pins to reinforce the joinery. I prefer ⅛-in. metal pins, and I set them with epoxy; alternately, you could use shop-made wooden pins. I cut rough notches into the sides of the metal pins to allow for glue purchase, and I taper the driving end to ease insertion.

I use two coats of Osmo Polyx Hard Wax Oil to finish the tray. Since I prefinished the

Drive them flush. *After spreading epoxy in the holes with a toothpick, Martin inserts the pins and drives them flush with a mallet and block.*

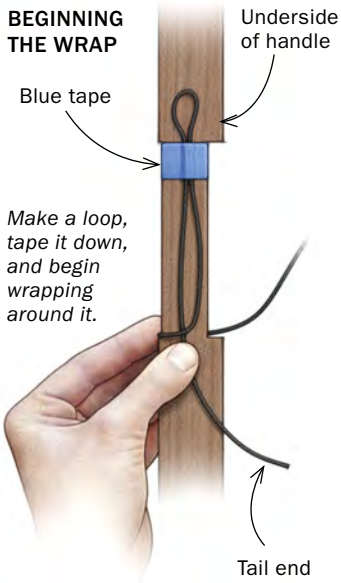
bottom panel, it will get at least three coats total. Once the oil has cured, I apply a coat of Clapham's Beeswax Salad Bowl finish for extra luster and protection.

The final step is lashing the handles. I use a 2mm-dia. waxed cotton cord, and a basic lashing technique that is often used on the handles of knives and axes. Make sure to start and end your lashing under the handle, where it will be hidden. I made a small wooden shuttle to make the lashing easier. I wrap a length of cord around the shuttle, allowing me to keep the cord tight and tidy while working. □

Heide Martin designs and builds home furnishings in Appleton, Maine.

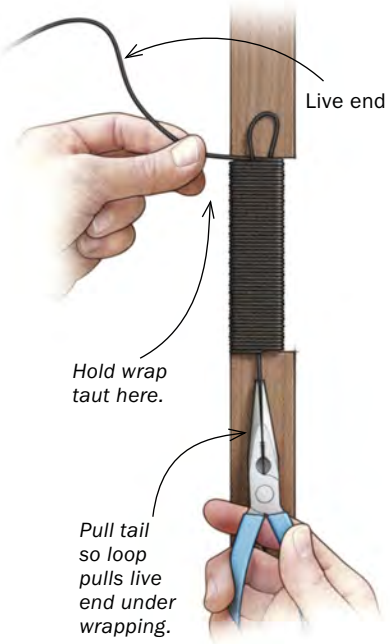
Wrap the handles

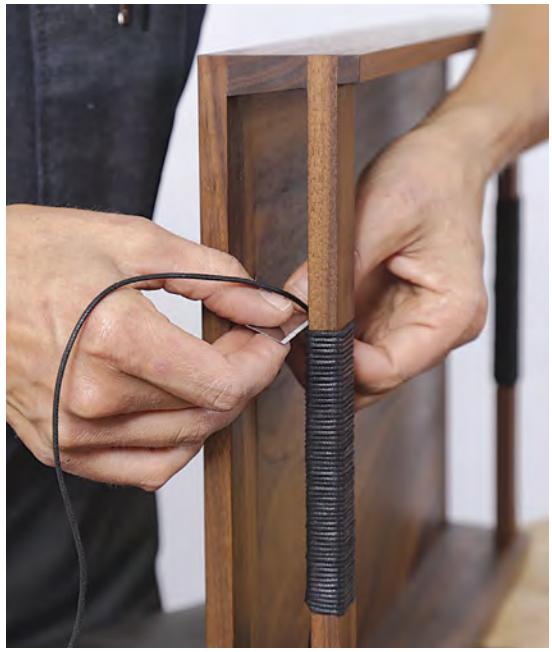
BEGINNING THE WRAP



Lash the handle. *Martin uses blue tape to hold a looped length of cord in place, then begins wrapping at the opposite end of the handle. She winds the excess cord around a small shuttle, which makes it easier to handle while wrapping. Exerting pressure with a metal rule helps keep the wrapped courses of cord tight.*

FINISHING THE WRAP





Needle and knife. *A pair of needlenose pliers helps Martin pull the end of the cord under the wrapping to finish up. Once she has it pulled tight, she cuts the end with a utility-knife blade.*