



Mobile Outfeed Table

When I sold my cabinet business in Washington State and moved to a small town outside Nashville, my personal woodworking setup downsized from a 10,000-sq.-ft. industrial shop to a single bay in a garage. So I put all of my equipment on wheels, which lets me move the cars out of the rest of the garage and expand my woodshop as needed.

One thing I missed from my industrial shop was the large outfeed table that wrapped around the cabinet saw, supporting ripcuts and crosscuts on material of any size. I realized that my best equivalent in the new space would be a mobile version of that table, with storage underneath it.

While alternatives exist that are more compact than a big table or cabinet for outfeed support, they tend to fall short for me. Roller stands can be awkward to set up and use. And folding extensions that attach to the back of the saw are limited in length by the height of the saw table.



Easy-to-build cabinet has a multifunction top and versatile spaces below



BY CARL SPENCER

Packs In Storage

This compact mobile outfeed table is just the right size for the job, but no bigger. Assembled with dados, rabbets, glue, and screws, it is easy to build yet very strong and functional.

The cabinet is set on smooth-rolling casters, so the 32-in.-wide top can be placed behind the saw to support both sides of a large panel cut, or placed beside the saw for long crosscuts. And its 48-in. length will support the longest boards I rip. That said, feel free to adapt these dimensions to suit your circumstances.

I decided to paint the cabinet black to match my SawStop cabinet saw, completing the look with black laminate on top. The laminate is not optional on this project, but the paint is. Whether sprayed or rolled, it makes the project a little more complicated.

Construction strategies

I chose ¾-in. MDF for the cabinet material because it is flatter than plywood, tougher than particleboard, has a very consistent thickness that produces tight dado joints, and is easier to adhere to plastic laminate. Because MDF panels are usually 49 in. wide, you'll be able to get the 48-in.-long parts out of it efficiently, while cutting off the factory edges. You'll need roughly two and a half sheets of MDF to build the project.

Slick, multifunction top—When it's not supporting table-saw cuts or benchtop tools, I'll be using the top of this cabinet for project assembly. So I applied counter-top laminate to the top to resist glue. The 3-in.-dia. casters create a 4-in.-high toe space under the cabinet, making it easy



Cut out the parts

The MDF parts can be cut with a tracksaw or table saw. A large table-saw sled will come in handy, but if you can find a square factory corner, you can use it to cut out the parts with rip cuts only.

Break down the big sheets. Use a handheld power tool—like a jigsaw or circular saw—to cut the 4x8 MDF sheets into smaller panels, making them easier to handle on the table saw. A clamped-on straightedge helps guide the power tool.



Table-saw tips. To get clean-edged parts, first run a factory edge against the fence and cut the part slightly oversize. Then run the clean edge against the fence and trim the part to final width. If you have a square corner created by two factory edges, you can produce square pieces without a crosscut sled.



Cut the joinery

The fastest and easiest way to cut the joinery is with a dado set on the table saw, but a router and straight fence will also work. Make test cuts on scrap to dial in the width of the dado set.

Stopped dados. The bottom and top panels have one long dado running lengthwise, plus a shorter dado that stops at the first one. After cutting the first dado, mark the rip fence to show where to stop the panel for the second one, and turn off the saw when you reach that point.

Cleanup. The round dado blades leave a small raised area at the end of the stopped dado, but a sharp chisel—used bevel-down—quickly levels it.



Rabbet at the same setting. To cut the rabbets at the same width and depth as the dados, Spencer leaves the blade height as is, clamps a sacrificial MDF fence onto the rip fence, and adjusts it so it just kisses the edge of the dado set.

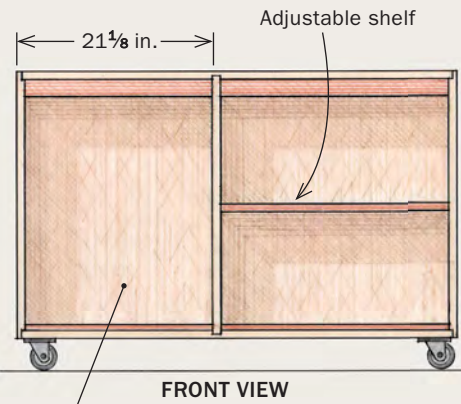
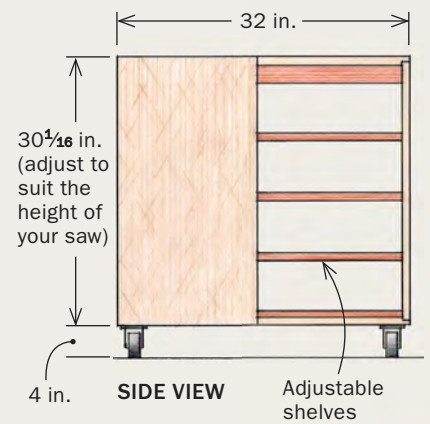


Notch work. The top and bottom panels are notched to accept the end panels. To cut the notch, raise the sawblade to full height, and make the long cut first. Then make the short cut as shown, so the waste piece falls away freely (vs. being trapped against the fence).



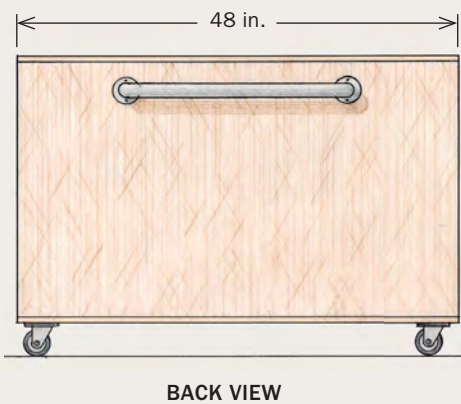
ANATOMY OF A STIFF, STRONG CABINET

Dadoes and rabbets, held together with glue and screws, make the cabinet easy to build. Its strength comes from the way the vertical panels join the top and bottom panels to create an I-beam of sorts, keeping the cabinet from sagging when loaded, and the top stiff and flat.



Top and bottom rabbets are $\frac{13}{16}$ in. wide, with $28\frac{9}{16}$ in. between the rabbet shoulders. This leaves the end panels overhanging at top and bottom, to be trimmed flush later.

Shelf-pin holes, 5mm dia. by $\frac{3}{8}$ in. deep, spaced $1\frac{1}{2}$ in. apart, $2\frac{1}{4}$ in. from edges

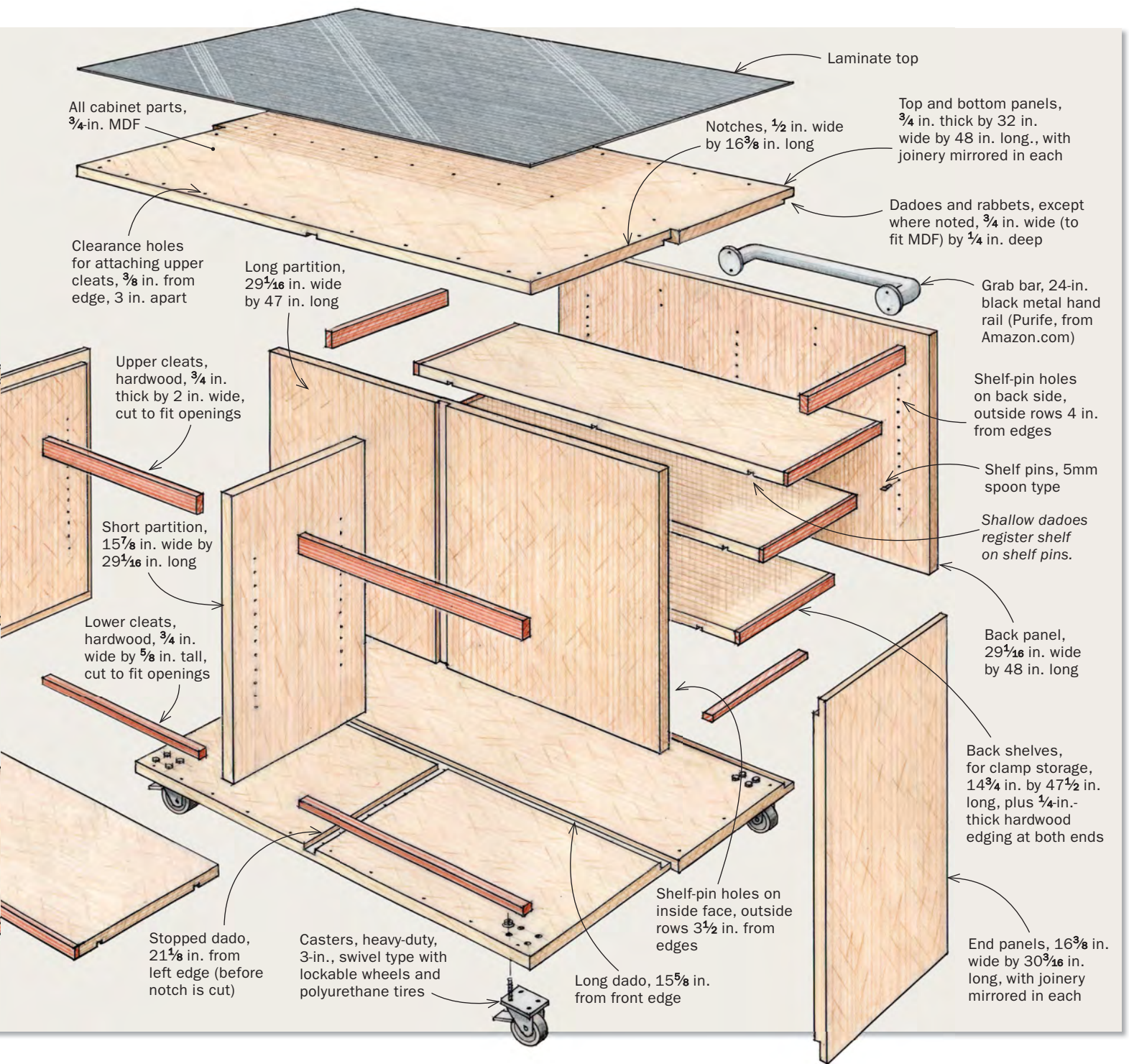


Front right shelf, $15\frac{3}{8}$ in. wide by $25\frac{1}{4}$ in. long, plus $\frac{1}{4}$ in.-thick hardwood edging at front

for me to stand on all sides of it. And there are brakes on all four wheels to lock it in place.

Just as importantly, the laminate also covers the assembly screws exposed on the top of the cabinet box. And last but not least, it helps the table to do its main job even better, by eliminating friction under sliding workpieces.

Versatile I-beam construction—The cabinet and its contents are very heavy, so I designed the structure to support



hundreds of pounds without sagging. The vertical members carry loads directly to the casters, and they combine with the top and bottom to create an I-beam of sorts, which is not only very rigid but leaves open compartments on three sides.

For additional reinforcement, I added hardwood cleats to the top and bottom panels. The upper ones also serve as handholds when I have to move the table, and the lower ones keep contents from falling out. On the closed side of the cabinet,

which lacks any handholds, I mounted a hefty 24-in. grab bar.

Built-in storage—The open compartments accept any arrangement of adjustable shelves. They also make it easy to clamp things on top of the cabinet, and they make nice kneeholes for seated work.

Feel free to adapt the layout to suit your own storage needs. I arranged mine with open ends to hold my clamp collection, and open compartments up front for storing jigs and benchtop machines.

Adjust the height for your saw—The top of the table should be $\frac{1}{8}$ in. lower than the surface of your table saw. This offset will allow for minor floor irregularities and prevent sagging workpieces from getting caught on its leading edge. I planned mine for my SawStop cabinet saw, fitted with SawStop's industrial rolling base. If your saw is different, measure its working height, as well as the height of the casters you purchase, and adjust the height of the cabinet parts accordingly.

Get ready for assembly

The joints are held together with glue and screws. Start by drilling clearance holes through the rabbets and dados, and edging the shelves with solid wood.

Drill clearance holes. Size the holes to allow the screws to pass through cleanly, and countersink them so the screws will be inset a tiny bit.



Edge the shelves. Spencer glued slightly oversize solid-wood edging to the shelves, stretching blue tape across to clamp it.

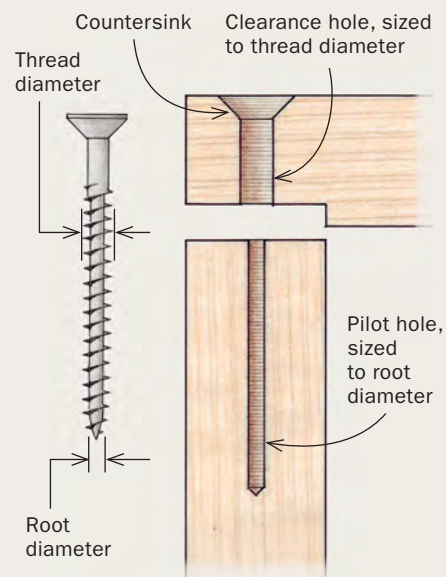


Quick way to flush-trim the edging. Spencer added an MDF fence to his router fence, aligning it with a flush-trimming bit below. The add-on fence keeps the shelf vertical while you trim the edging flush on both sides. A block plane will also work. Follow with light sanding.



ANATOMY OF A STRONG SCREW JOINT

Drill clearance holes in the top piece so the head of the screw can apply pressure but the threads don't grab. The lower piece gets a smaller (pilot) hole so the threads can grab tightly without splitting the wood.



Because my saw's mobile base sticks out $6\frac{1}{2}$ in. from the saw cabinet, it keeps the outfeed cabinet at least that far away. That means I didn't need to cut clearance slots in the tabletop for my miter gauge or the sliding runners under my crosscut sled. But different saws, miter gauges, and crosscut sleds might require shallow clearance dados in the tabletop.

You won't see them in the photos, but I'll be adding bolt holes to the top of my table to lock down jigs and machines for safe operation using bolts, washers, and wing nuts.

Cut the parts and joints

To cut the large parts for this outfeed cabinet—without having an outfeed table yet—I bought a roller stand for outfeed support. It got me through the project, and I'll use it later with my drum sander and bandsaw.

After the parts are cut to size, lay out and machine the dados. Make test cuts in scrap MDF to dial in their precise width. Start with the long dados in the top and bottom, and then cut the short dados

If you choose to paint the cabinet ...

Spencer painted the cabinet black to match his table saw, but a simple oil finish will also work. It's easier to paint the parts before assembly, while you can lay them flat.



Mask the joinery. If you roll the paint carefully, you might be able to keep it out of the dados and rabbets, but you'll need to mask off the flat areas where the cleats attach.

that end at the long ones. To stop myself from extending those too far, I measured the length of the cut and marked my rip fence with tape at the panel's stopping point. These cuts leave shallow radii in the bottoms of the dados, but those can be leveled quickly with a sharp chisel.

Because there are no doors or face frames to keep the adjustable shelves in place on their shelf pins, I also ran shallow dados along the bottoms of the shelves to register them on the shelf pins.

Rabbets are next—Cut a $\frac{3}{4}$ -in.-wide rabbet on the back edge of the top and bottom panels. Note that the end panels are $\frac{1}{8}$ in. extralong, with $\frac{13}{16}$ -in.-wide rabbets rather than $\frac{3}{4}$ in. This will leave them overhanging the top and bottom of the cabinet by $\frac{1}{16}$ in. After assembly I flush-trim these small overhangs to ensure that the top of the cabinet is dead flat for good laminate adhesion.

Taking this approach is much easier than attempting to make the edges perfectly flush during construction.

Drill shelf-pin holes after painting—If you decide to paint the cabinet, do so before drilling the shelf-pin holes so that you avoid getting paint into them. Whether you use a shopmade drilling guide or a commercial one, you'll need to change the lengthwise position of the jig on various



Work from the center out. To avoid rolling paint into the dados and rabbets, unload the roller in the middle of the area you are painting, then feather it out toward the edges. Work in one small area at a time, and move on before the paint starts to get sticky. This will give the wet paint a chance to level itself out and erase roller marks.

parts to account for the way they fit into their dados and rabbets and make sure all of the holes line up.

Assemble and enjoy

Before you start spreading glue and driving screws, dry-fit the parts to make sure they go together well. Then drill clearance holes through all of the dados and rabbets to accept the screws that hold the project together. Once assembly is under-



Best paint, best roller. Spencer used a tough acrylic paint with primer mixed in, and applied it with a flat foam roller for a smooth final surface.



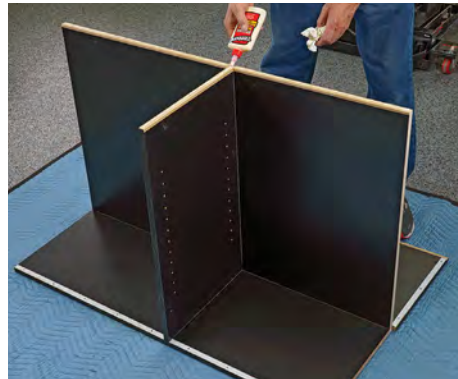
Drill shelf-pin holes after painting. Spencer makes his shelf-pin drilling jigs extra thick, adding a small spacer to control drilling depth. There's also a fence on one end. That will need an extra spacer for some panels, depending on how the joinery interacts, to make sure the shelf-pin holes all line up.

Smart approach to assembly

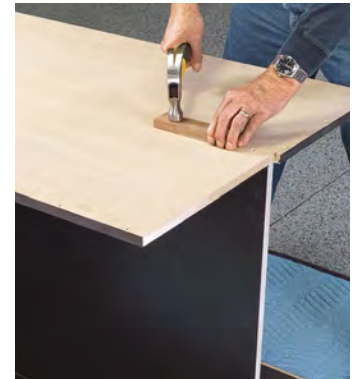
The dado and rabbet joints are held together with glue and screws. Follow the steps shown here for an easy assembly job.



Start with the partitions. To join the two internal partitions, spread glue in the bottom of the dado, make sure the shorter panel is fully seated in it, stand the parts on a flat surface, and drive the screws.



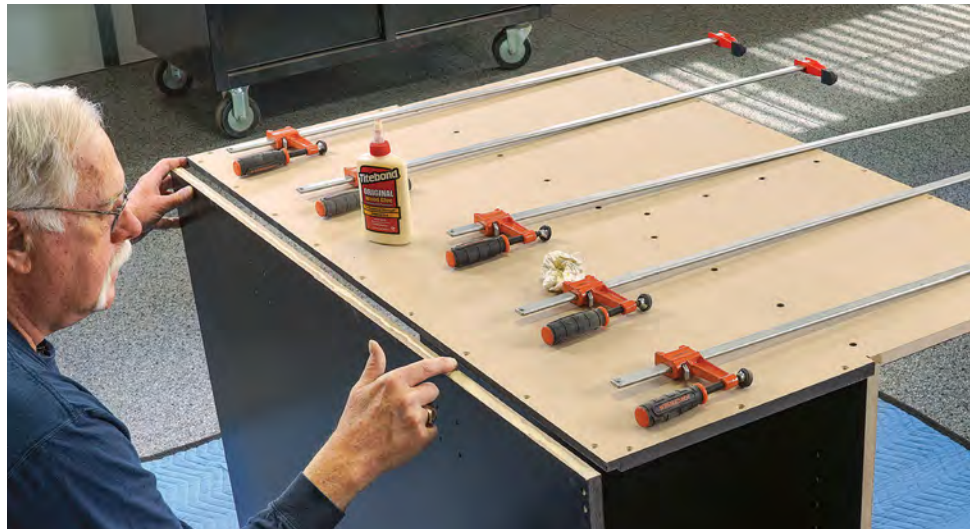
Position the parts for the next step. Put the top panel on the ground, and fit the partitions into it without glue, just to hold them in position. Then spread glue on their top edges.



Position the bottom panel. Use a hammer and block to make sure the dado joints in the bottom panel are fully seated.



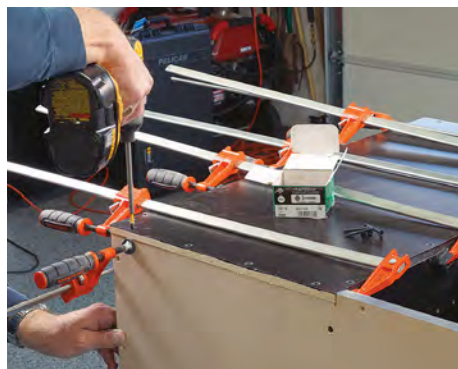
Drive screws. This locks the bottom panel onto the internal partitions. To make the top panel permanent as well, flip over the whole assembly and repeat the process, spreading glue on the top edges of the partitions, tapping the dados home, and then driving the screws.



Glue in the back panel. Seat the back panel in its lower rabbet, tip it outward slightly to spread glue along its upper edge, and then tuck it back into place.



Drive screws. Clamp the panel tightly into its rabbet, and drill pilot holes before driving screws. Then flip over the assembly, and glue and screw the opposite edge the same way.



Add the end panels. These are a bit extralong, with extrawide rabbets, so they overhang the top and bottom a little. Clamp the parts in place and drill pilot holes before driving screws.



Trim the overhanging edges. Using a flush-trimming bit, rout the overhanging edges flush. This process ensures a flat cabinet top so the laminate will adhere fully at the edges.

way, you'll need to reach through the clearance holes in the rabbets to drill pilot holes in the receiving parts. Otherwise, the MDF will tend to split and bulge where the screw goes in. However, the MDF's tendency to split will work to your advantage in the dado joints, with the bulge applying additional pressure on the dado walls, making the assembly even more rigid. So you don't need to drill pilot holes in the parts that fit into dados.

After you've applied the laminate on top, push your beautiful new outfeed table into position, or tuck it away in the corner of your rolling shop like I do. □

Carl Spencer is a retired cabinetmaker in Nolensville, Tenn.



Add the casters. Use casters with 3-in.-dia. polyurethane wheels. The baseplates attach with bolts, washers, and lock nuts.



Finishing touches

With the cabinet assembled, the casters, pull bar, and reinforcing cleats go on quickly.

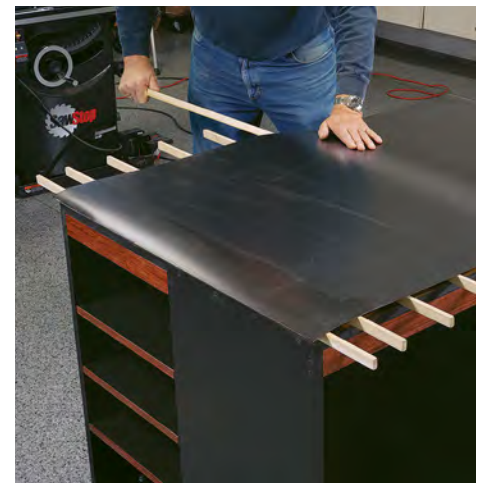
Glue and screw the cleats. The wider cleats at the top of the cabinet are attached with screws driven through the top and sides of the cabinet (shown here), and pocket screws at their inside ends.

Attach the laminate

Before attaching the countertop laminate, rub a block over the top of the cabinet to find any screw heads that are proud of the surface, and set those screws slightly deeper. Cut the laminate roughly 1 in. oversize on the table saw.



Roll on the contact cement. Use a smooth or short-nap roller to apply a layer of cement to the back of the laminate and the cabinet top. Let it dry until it's barely tacky to the touch, roll another smooth coat on each surface, and let it dry to the same level again.



The stick trick. Use a series of thin sticks to hold the laminate off the surface. Even out the overhang and then pull out one stick at a time, pressing down the laminate as you go.



Hammer it home. Use a hammer and a block to get a proper bond across the entire surface. Start with blows at the edges, which are most important. Be careful not to tip the block at the edges and break off overhanging laminate. Alternatively, use a J-roller to apply pressure.

Trim and round over the edges. Use a flush-trim bit to trim the overhanging laminate, and then a 3/4-in. roundover bit to round the edges. Round over the vertical cabinet corners as well, and then touch up the paint job.

