

GREENE & GREENE DRESSER

By Chris Marshall



Additional Details and Drawings

The Greene and Greene Dresser project that I made for our February 2016 issue was the concluding piece to a Greene and Greene bedroom set – and it has LOTS of construction details! So many, in fact, that we needed extra space to share them all with you. You'll find much of the construction process described in the pages of the February 2016 issue. Here, I have the chance to go into even more detail on specific aspects of the Dresser's construction, while supplying the additional drawings you'll need to build it.

First, let's start with selecting the lumber.

Stock Selection

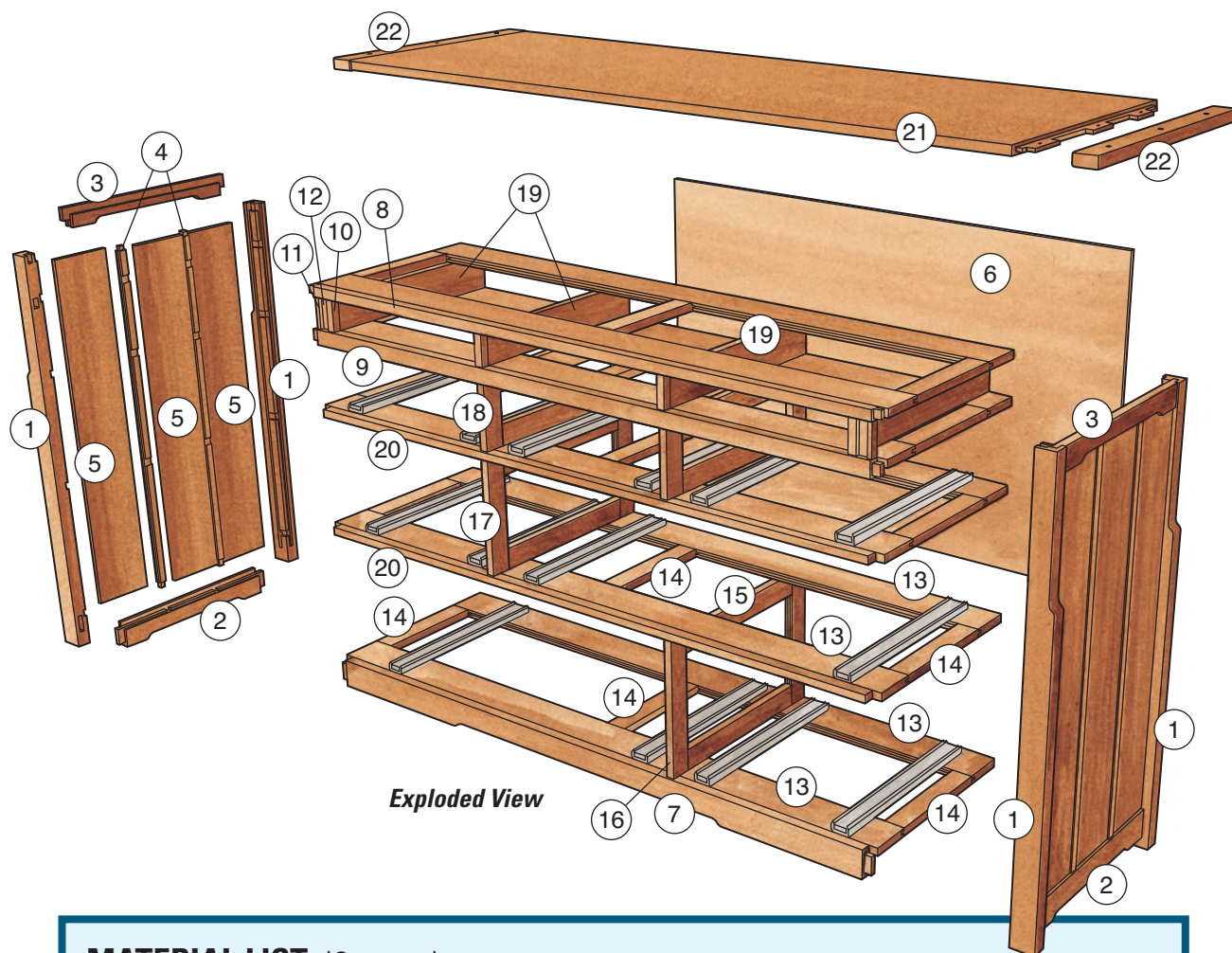
A truism about any dresser is that you're building a giant box with lots of flat faces that confront the viewer with every glance. So, there are stakes at risk here: either you harvest

the parts that make up these flat faces carefully, so the end result is pleasing to the eye, or you don't. A top panel that's clearly made up of two boards with wildly different grain patterns will be obvious to everyone, and the effect can sour the whole project and diminish the time and effort you'll put into building the piece. So, on this dresser, choose your stock carefully.

Here's what I did. My very first step in building was to skip-plane all of my mahogany stock to see the grain pattern underneath the rough surfaces, and plan for those big box surfaces: the top panel, the side panels and the drawer faces. I spent several hours just selecting which stock would eventually become which components. All the rest of my inventory for this project was secondary to the boards that would become the "show" faces of the dresser.

I also decided to buy 8/4 material over 4/4 stock. It enabled me to resaw and book-match my panels from material I knew would blend together perfectly. The side panels, for instance, are actually three slices from the same 8/4 boards. The secret drawer faces, and the faces of the top drawers, all came from the same 8/4 board, too. The middle and bottom drawer faces really drive home the long, flowing lines of this mahogany's ribbon-stripe grain because of their book-matched construction.

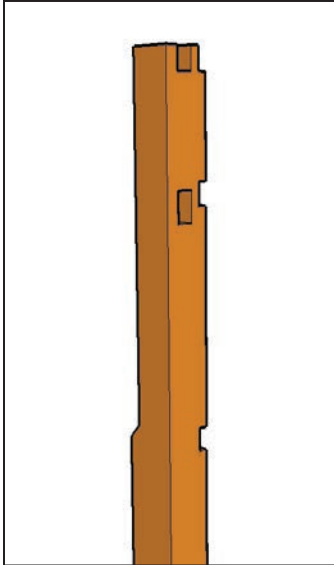
At worst, the upside to all of this fuss is that a casual viewer of your dresser won't notice the nicely blended wood panels at all. They'll just be a pleasant part of the whole piece. But at best, your dedication to selecting wood grain carefully will make your design downright dazzling! And, isn't that what every woodworking project worth its salt should be? So, take the time to harvest your parts carefully. You won't be disappointed in the end, and it will show your true commitment to both the craft and to this Greene and Greene Dresser.



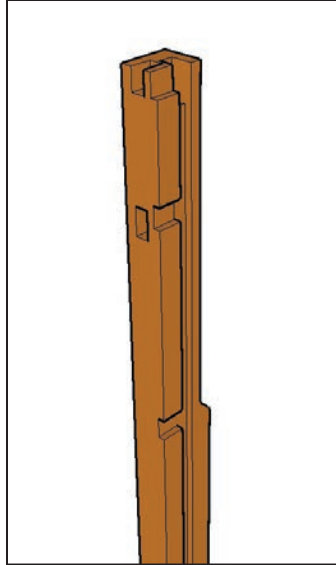
MATERIAL LIST (Carcass)

	T x W x L		T x W x L
1 Legs (4)	1 3/8" x 2 1/4" x 41 1/4"	12 Filler Pieces (2)	3/8" x 3/4" x 3"
2 Bottom Side Rails (2)	1" x 2 3/4" x 19 3/4"	13 Web Frame Fronts and Backs (10)	3/4" x 4" x 62 1/4"
3 Top Side Rails (2)	1" x 2" x 19 3/4"	14 Web Frame Rails (15)	3/4" x 2" x 11 5/8"
4 Side Slats (4)	3/4" x 3/4" x 37 1/4"	15 Drawer Divider Rails (8)	3/4" x 2" x 16 5/8"
5 Side Panels (6)	1/2" x 5 7/8" x 36 3/4"	16 Bottom Divider Ends (2)	3/4" x 2" x 13 1/2"
6 Back (1)	1/2" x 39 1/2" x 61"	17 Middle Divider Ends (2)	3/4" x 2" x 11 1/4"
7 Bottom Front Rail (1)	1" x 2 3/4" x 62"	18 Top Divider Ends (4)	3/4" x 2" x 7 1/4"
8 Top Front Rail (1)	1" x 1" x 62"	19 Upper Drawer Supports (4)	3/4" x 3 1/2" x 19"
9 Center Front Rail (1)	1" x 1 1/2" x 62"	20 Faux Rails (2)	3/4" x 1" x 60 1/2"
10 Short Slats (4)	3/4" x 3/4" x 3 1/2"	21 Top (1)	3/4" x 22" x 66 3/4"
11 Half Slats (2)	3/8" x 3/4" x 3"	22 Breadboard Ends (2)	1" x 2" x 22 1/2"

Front Leg (Top Inside Edge)



Front Leg (Top Back Face)



Leg Joinery Details

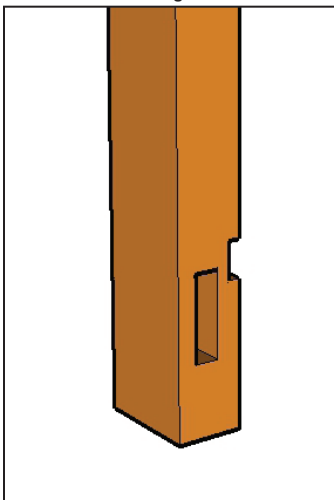
Making the legs is a logical starting point for building this project, because they're integral to the side assemblies. They also set the positions of the front and side rails, side slats and side panels, back panel and the internal web frames. Whew!

As you can see in the Drawings on these two pages, the legs are literally riddled with dado and groove cuts on their inside faces and edges. Before you even begin laying out these cuts, mark the ends of the legs in order to identify them as front, back, left and right. I also found it helpful to draw a profile line for the outer cloudlift shape and how the cloudlifted area reduces the width of the legs at the top. This will help you keep clear which of the edges face outward and receive none of these joinery cuts. But, don't cut the cloudlifts until all the rest of the joinery you see here is finished. Make those curves your last step.

The print article overviews the order of how I milled the joinery in the legs. I found it most helpful to mill the long grooves for the various panels before cutting the short web frame dadoes. These grooves provide convenient termination points for those dadoes. They also locate, automatically, the

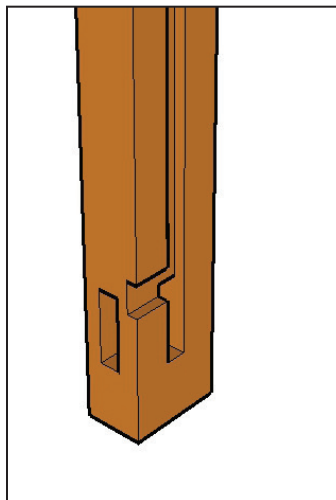
Front Leg

(Bottom Inside Edge)



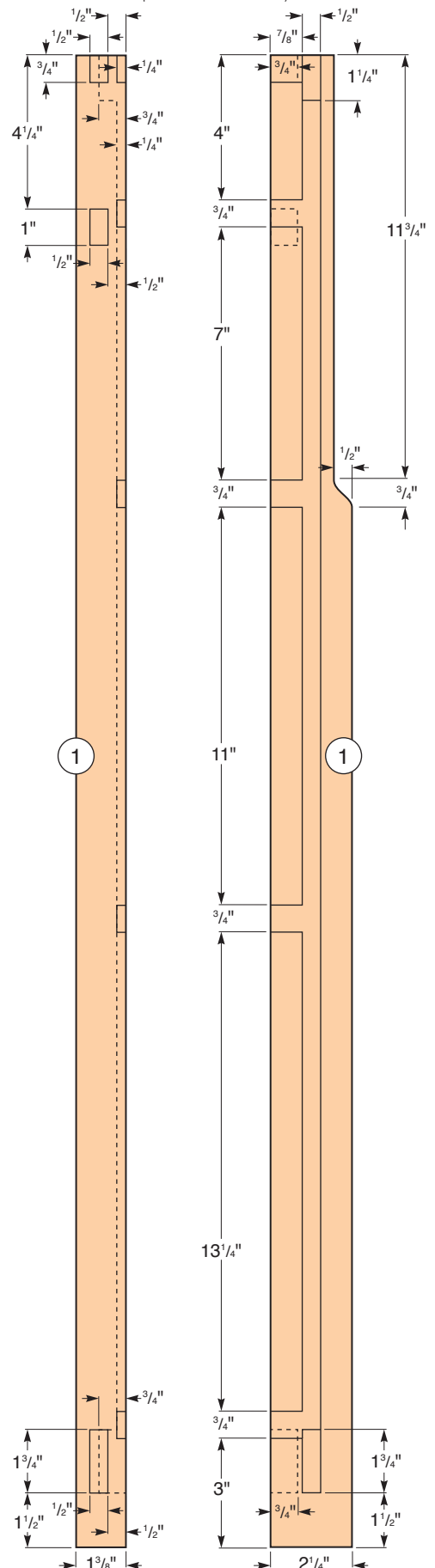
Front Leg

(Bottom Back Face)

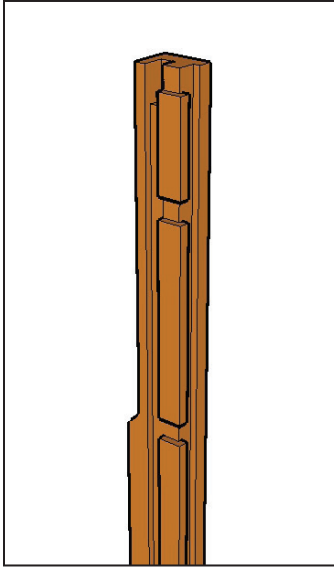


Front Leg

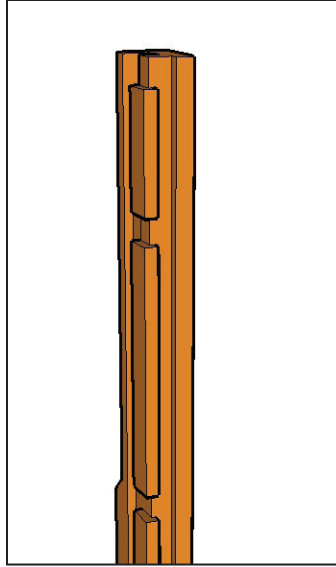
(Side and Back Views)



Back Leg (Top Front Face)



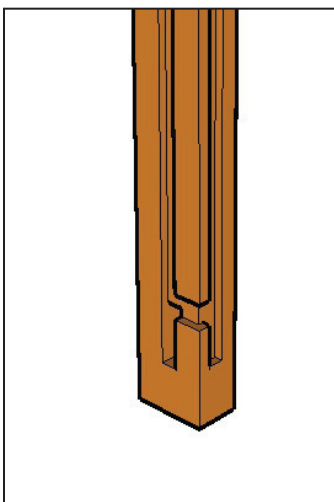
Back Leg (Top Inside Edge)



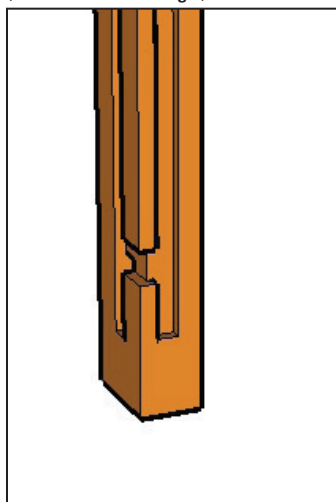
positions of the deeper mortises required for the side rail tenons. If you use a router table for cutting the long grooves, machining the deeper rail mortises will be a simple matter of raising the bit further and making additional passes until you reach the correct mortise depth.

As the print article describes and shows in photos, I used a clamp-on, slotted routing jig for making the web frame dados quickly and easily. I could simply reclamp the jig at each of the dado locations, because the width of the slot on my jig is 3/4"—the same width as these dados. A piloted 1/2" mortising bit followed the groove in the jig to cut them. One point of note here: On the back legs (this page), you'll see that the web frame dados actually wrap around from the inside face to the inside edge. The same dados on the front legs, however, don't wrap around to the inside edges this way. To rout the "wraparound" web frame dados on the back legs, I first clamped the jig to cut the inside face portion, then reoriented the jig on the edge of the leg instead of its face to cut the edge portion of the dado. Rout these dados until they terminate at the side and back panel grooves.

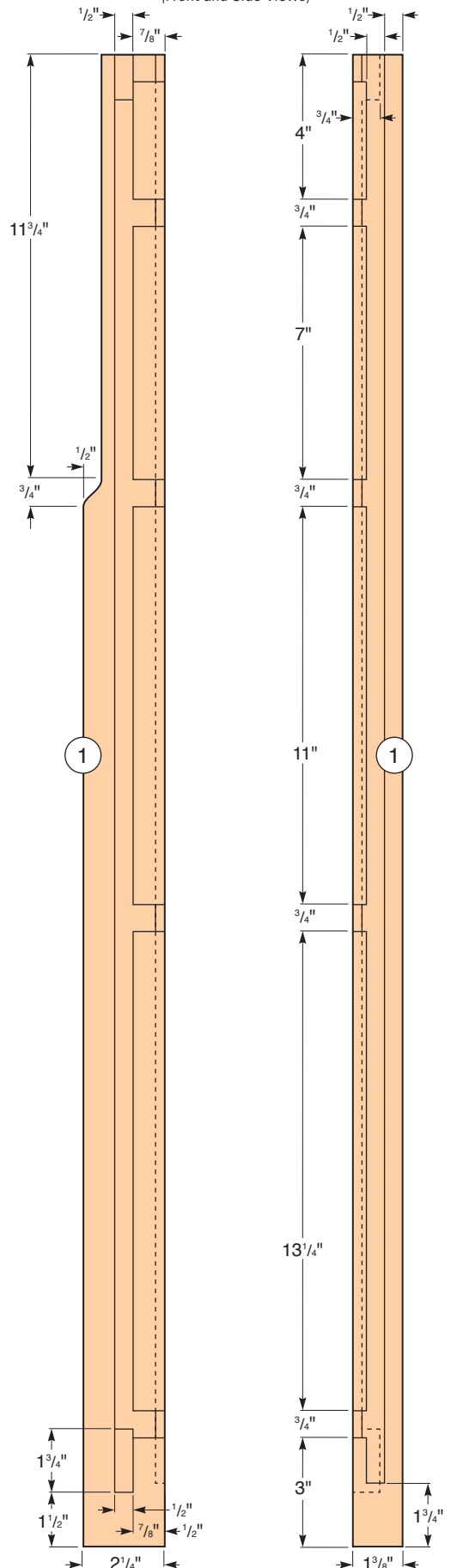
Back Leg (Bottom Front Face)



Back Leg (Bottom Inside Edge)

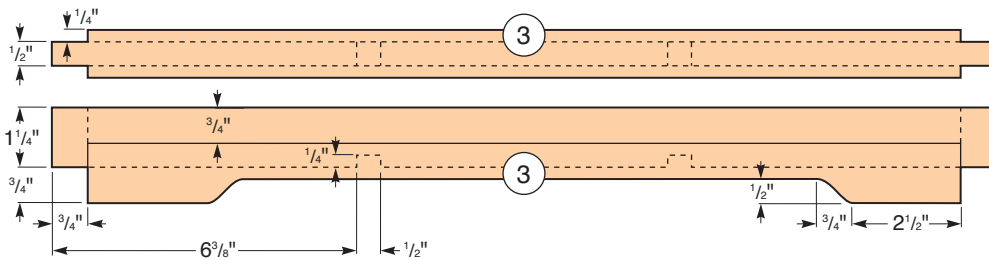


Back Leg (Front and Side Views)



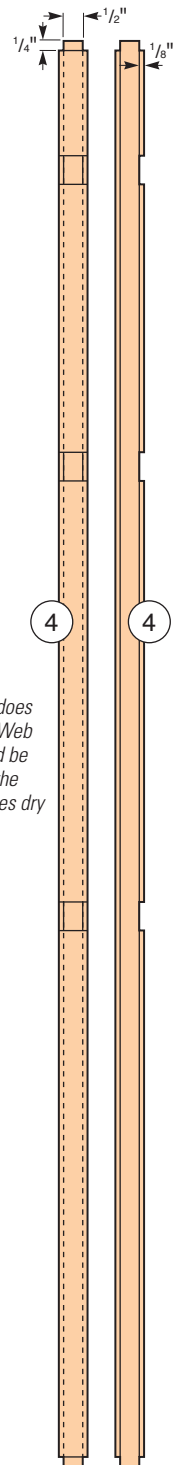
Top Side Rail

(Top and Inside Views)



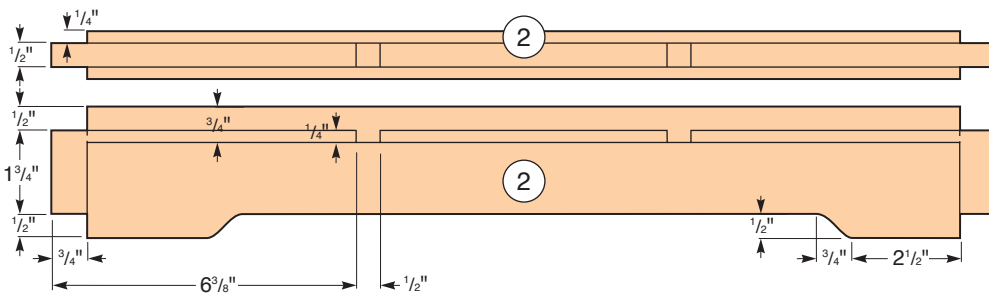
Side Slat

(Inside and Front Views)



Bottom Side Rail

(Top and Inside Views)



Side Rail Details

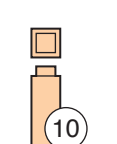
The top and bottom side rails of this dresser work harder than is often the case with dresser projects, and here's why.

A really attractive feature of this dresser, in my opinion, is the frame-and-panel look of its side assemblies. To pull off that effect, the upper and lower side rails must house the solid wood side panels and provide mortises for the thin side slats. They also require a top rabbet along the inside edge so the top and bottom web frames have a place to rest. If that isn't enough millwork already, the side rails mortise into the legs with tenons, and either their top or bottom edges are cloudlifted to harmonize with the cloudlifts on the legs and bottom front rail. So, as you can see from the *Drawings* on this page, you've got a lot of machining to do to complete them. But, working systematically, they aren't tough to make. Leave the cloudlift cuts for last, just as you did for the legs.

Note: The dados that hold the Web Frames should be located with the side assemblies dry fit together.

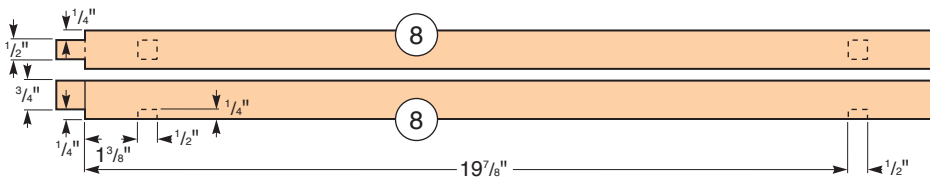
Short Slat

(Top and Front Views)



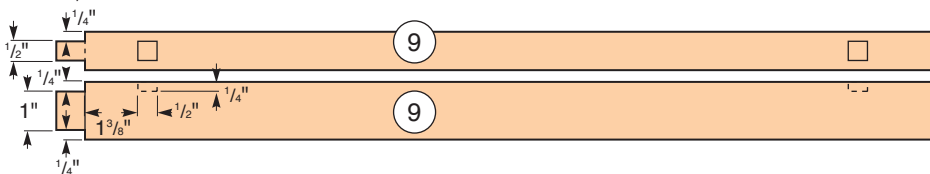
Top Front Rail

(Top and Front Views)



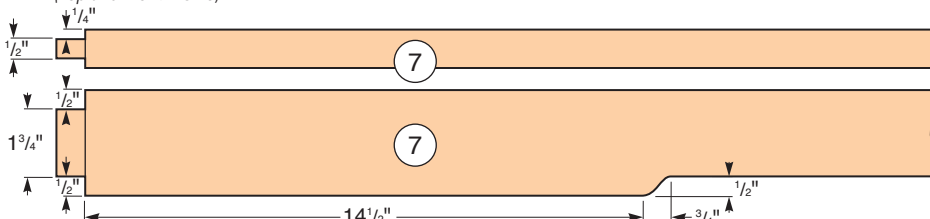
Center Front Rail

(Top and Front Views)

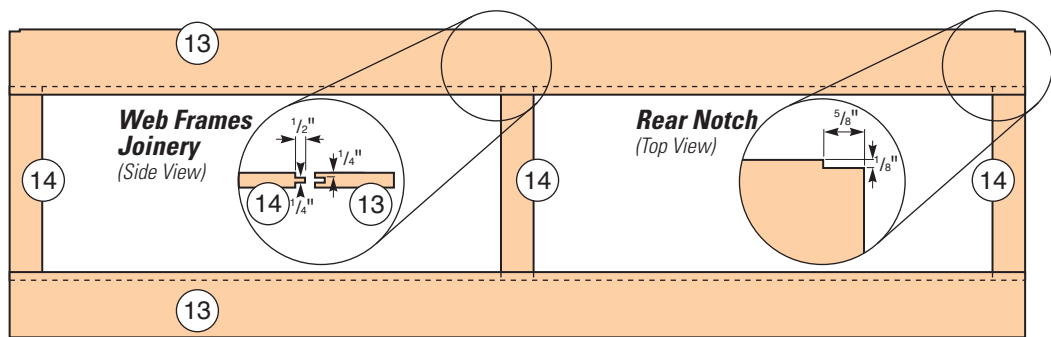


Bottom Front Rail

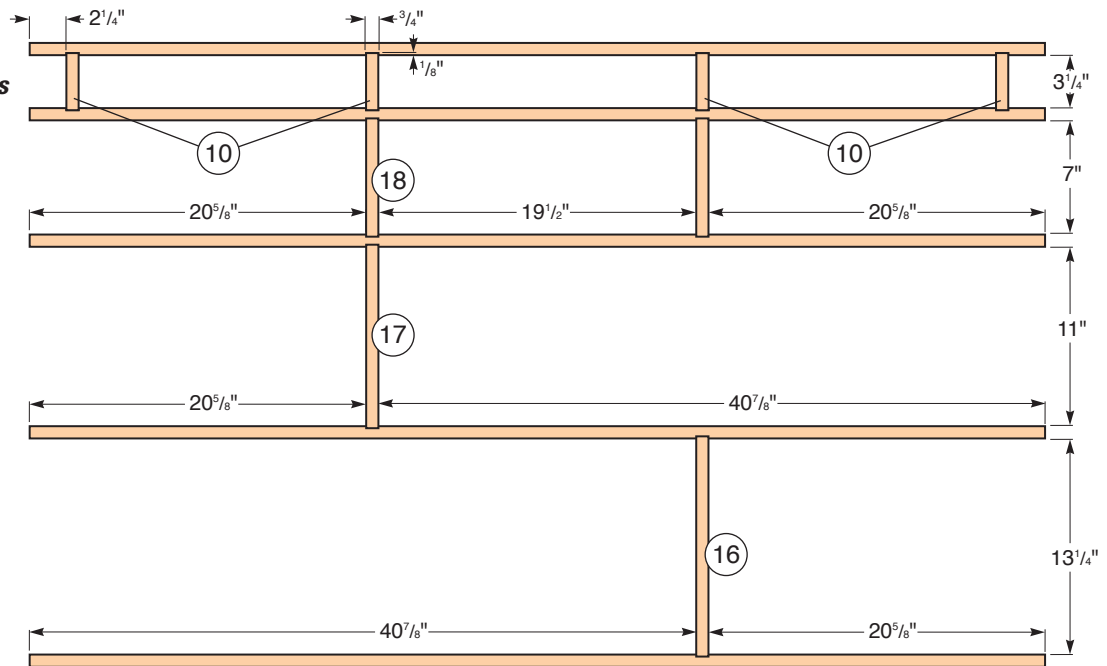
(Top and Front Views)



Web Frames
(Top View)



Web Frame Dado Locations
(Front View)



Web Frame Construction

After you've built the dresser's side assemblies – you'll want to do this all the way through glue-up and final finish – as described in the "Forming the Side Subassemblies" section in the print article – you'll want to make your web frames. Here's a few more details about building them.

One of the crucial aspects of the web frames, given how long they are, is to start with your flattest stock. They must remain flat in order to keep from rubbing against the drawers when those are opened and closed. Give your stock time to settle and distort when you prepare it, so you can eliminate any minor bowing or twisting ahead of time. I cannot overstate how much this diligence will pay off for you in the end!

Once you've ripped and crosscut workpieces for all 10 web frame fronts and backs, cut a 1/4"-wide groove along their inside edges with your dado blade set 1/2" deep. Make these grooves in two passes, flipping the parts end-for-end to center the grooves.

Temporarily install a pair of web frame fronts and backs into the leg dadoes of one of the side subassemblies, and carefully measure between the bottoms of the grooves to determine the final length of the web frame rails. The back ends of the web frames must remain clear of the back panel grooves. Cut the rails to length, and raise tongues on their ends to fit the grooves. You're now ready to glue and clamp the fronts, backs

and rails together to form five web frames. Make sure they are as close to square as possible by measuring the diagonals and adjusting your clamps, if needed. Out-of-square web frames are as troublesome to your dresser's carcass as web frames that aren't flat, lengthwise. Once the clamps come off, the back corners of all five web frames need to be notched to fit flush against the back legs. Cut these notches 5/8" wide and 1/8" deep.

There's still more joinery left to do on the web frames, so on we go. Notice in the *Web Frame Dado Locations* drawing (above) that both the vertical drawer dividers and the upper drawer supports fit into 3/4"-wide, 1/8"-deep dadoes running across the web frame fronts and backs. It registers these vertical parts automatically and helps square the overall framework, too. The dadoes also provide some degree of racking resistance, when the dividers are installed and screwed tight, so they're definitely worth the trouble to make.

Locate and mark these dadoes on the web frames now. Measuring from the left end, and labeling the web frames 1 to 5 from top to bottom, the divider dadoes are located at: 40 7/8" on web frame 5 (top face) and web frame 4 (bottom face); 20 5/8" on web frame 4 (top face) and web frame 3 (bottom face); 20 5/8" from each end on web frame 3 (top face) and web frame 2 (bottom face). Measuring again from the left end, the upper drawer supports are located at: 2 1/4" and 20 5/8" from each end of

web frame 2 (top face) and web frame 1 (bottom face).

Plow these dados across the web frame fronts and backs using a plunge router and a long fence or slotted jig. I made an overly long jig with a 3/4"-wide slot to reach across the width of the web frames, and it ensured perfect dado alignment, front to back. A piloted 1/2" mortising bit run along both sides of the jig's slot cut my dados to exact width.

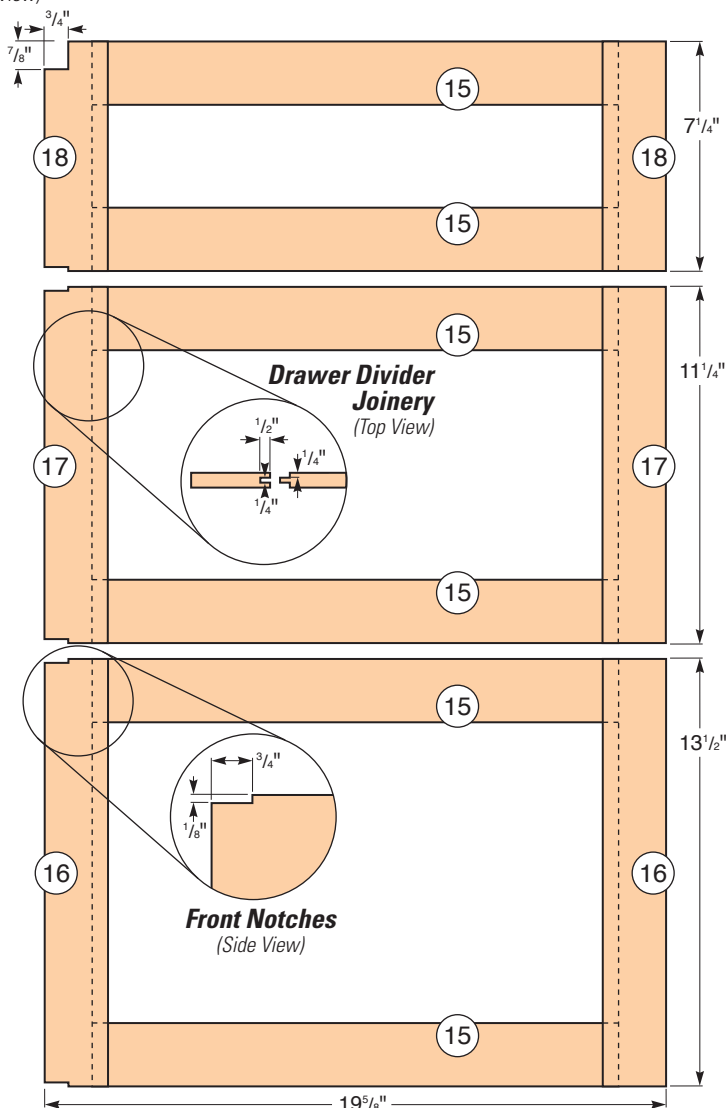
Vertical Drawer Divider Construction

Once the web frames are done, you'll make the drawer dividers. They're very similar in construction to the web frames.

Start by ripping and crosscutting overly long blanks for all the drawer divider ends and rails. Then mill centered 1/4"-wide, 1/2"-deep grooves along one edge of the divider end pieces. Now set a drawer divider front and back in position on one of the web frames, with the front drawer divider end overhanging the front of the web frame by 3/4". Set the back drawer divider end flush with the back edge of the web frame. Carefully measure between the bottoms of the grooves on these parts to determine the final length of the divider rails. Cut the rails to length, and raise tongues on their ends to fit the front and back grooves.

Drawer Dividers

(Side View)



With the divider rails done, dry-fit the web frames between the side assemblies, and clamp the dresser carcass together. This way, you can check the various lengths of drawer divider fronts and backs accurately by measuring between the web frame dados. When making your calculations for part lengths, be sure the fronts and backs won't push the web frames out of flat. Crosscut these pairs of bottom, middle and top divider ends carefully to length, and glue up the drawer divider frames. With the carcass still dry-assembled, you can measure and cut the upper drawer supports to final size, and check their fit, too. Again, the upper drawer supports should slide in between the web frames easily and without distorting them.

Modifying the Interior Framework for Carcass Assembly and Attaching the Top

If you've read the print article already, you'll notice that, in the "Assembling the Carcass" section, I said I'd provide more details about how I used pocket screw joinery to attach the drawer dividers and web frames in our *More on the Web* coverage. Here is where all is revealed ...

Rout or drill 1/2"-long screw slots in the top web frame's end rails and back piece: two slots on the end pieces and five along the back. Arrange all of these slots perpendicular to the front of the dresser. These will allow the dresser's top to expand and contract across its width, which will be front-to-back on the dresser.

Drill five countersunk screw holes along the front of the top web frame, with the countersinks facing the bottom of the web frame and spaced evenly. This way, the dresser top's overhang can be fixed along the front of the dresser but expand backward. After making all of these attachment holes in the top frame, I drilled 1/2"-dia. holes through the second web frame to align with all of the top web frame screw locations for attaching the dresser's top — these will provide important access points for slipping a driver bit through. Otherwise, the tight confines of the secret drawer compartments would make access nearly impossible.

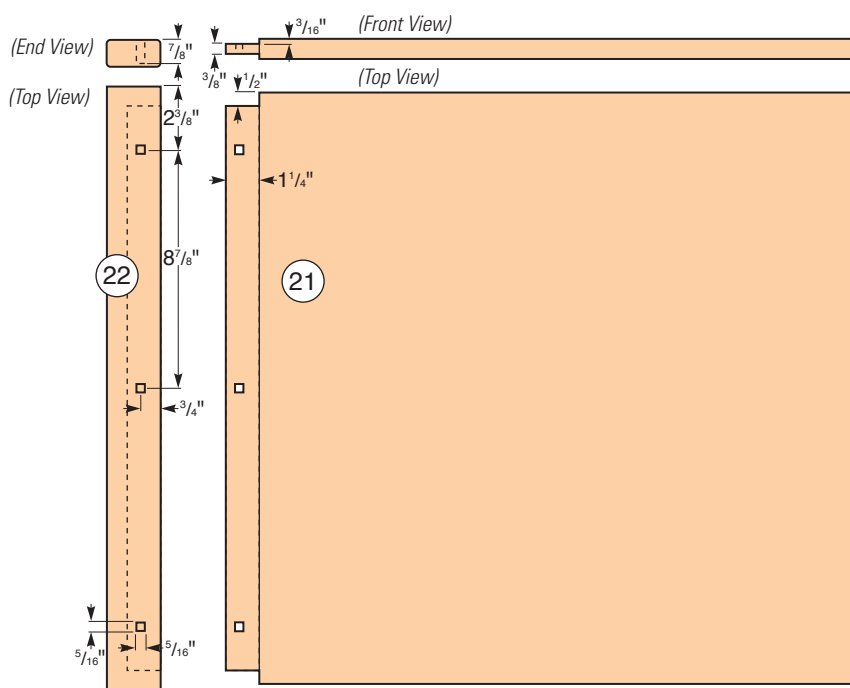
Aside from bolstering the carcass, the web frames also provide an attachment opportunity for stiffening and flattening the top, center and bottom front rails of the carcass. So, I drilled a series of pocket holes into the top faces of the top and bottom web frames, facing front, and into the bottom front of the second web frame (the one that will be behind the center front rail). The top web frame can also be attached to the carcass's side assemblies with pocket screws, so I bored three pocket screws in the ends of this web frame for that purpose.

The fact that the upper drawer supports align vertically with the top drawer dividers, and the left top drawer divider lines up with the middle drawer divider, makes attaching these pieces to

the web frames more difficult. And, access will be limited once the carcass is assembled. So, pocket screws can provide a sensible but hidden solution here. I drilled pocket screw holes into these vertical parts where I could, along the top and bottom edges, for attaching them to the web frames. If you do this, too, be sure to stagger the pocket hole locations so the screws won't collide with one another when installed.

You can attach the bottom of the middle drawer divider, and the top of bottom drawer divider, to their web frames by just driving countersunk screws here. But, all in all, fastening these vertical dividers to the web frames, by any means, adds a tremendous amount of rigidity to the carcass framework. The web frames will be anchored flat, and racking resistance is much improved.

Top and Breadboard Ends



Building (and Fitting) the Lower Drawers

You've got the carcass assembled. You've built the dresser top (See "Building the Dresser Top" section of the print article). Now, it's time to build the lower drawers. As promised, here are my complete details for not only building them, but also fitting them into your dresser.

Glue up stock for faces, backs and sides of the top, middle and bottom drawers. I started with 8/4 stock and resawed it in order to book-match the drawer faces for the most uniform grain pattern I could get. I also used boards long enough to fabricate faces for the full length of each row of drawers. As you can see in the opening photo of the article and on our magazine cover, doing that allowed the ribbon-stripe grain pattern of my quartersawn mahogany to flow horizontally along the entire front of the dresser. It's one of the best decisions you can make to guarantee that this dresser will be a real showstopper in the end! Make the drawer face blanks oversized at first. Plane the drawer back blanks down to 5/8" thick.

Next, measure and cut the drawer faces to fit their actual carcass openings, allowing for a 1/16" gap all around. This clearance may need to change slightly, but it's a good place to start for professional-looking drawers. Rip the drawer sides to final width, to match the drawer faces, and crosscut them to length.

You've surely noticed that the size and layout of the box joints on these drawers changes, so a conventional box joint jig won't work for this project. Instead, I made up pairs of plywood templates for top, middle and bottom drawer joint sizes. I made the drawer face templates first at the table saw with a dado set, then knifed the layout for the drawer sides using the drawer face template as a guide. But, for the drawer side templates, I marked their patterns .008" smaller than the face layouts at every cut, using an automotive feeler gauge. This

clearance allowed for an easy slip fit of the joints but without them looking "loose." You can certainly choose a tighter tolerance between the pins and slots if you like, but .008" was satisfactory for me.

In order to use the templates for cutting the corner joints, and since several drawer faces are very long and unwieldy, I made up a tall plywood fence and attached it to a pair of miter gauges. (You can see the jig from both the front and back in the print article.) The fence has a long slot through which I could pass a pair of bolts and knobs to hold some adjustable stops in place anywhere along the fence they were needed. Using a wide dado set and one or two stops on the jig, I could align the blade exactly with each cutout on my drawer joint templates, then proceed to cut the drawer faces and sides so they'd match the template layouts exactly. (The second stop worked more as a clamp to register the workpieces vertically and hold them in place.) When you cut the box joint pins and sockets, be careful: the socket cuts in the drawer faces are 3/4" deep, but they're 7/8" deep in the drawer sides so the pins can project 1/8" proud of the drawer faces.

I was pleased about how well this template and fence system worked! Since the box joints are symmetrical around the center pin or socket, each stop setting on the jig enables two cuts in the workpiece, flipping it from one face to the other. So, in effect, you're cutting each pattern in double time with half the fence settings. Working carefully, you'll find that your drawer joints will fit together well, regardless of their orientation with the mating workpiece. Joint-cutting was admittedly a slow process for me here, but it was a very accurate method to ensure good results.

Once the box joints are cut, trim the drawer backs to final length — it should be the distance between the bottoms of the socket cutouts plus 5/8". Next, cut the rabbit-and-dado joinery for the back corners of the drawer boxes. They're a

MATERIAL LIST (Main Drawers)

Top Drawers (3)	T x W x L
23 Fronts (3)	3/4" x 6 1/4" x 19 5/8"
24 Sides (6)	3/4" x 6 1/4" x 19 1/2"
25 Backs (3)	5/8" x 5 1/2" x 19"
26 Bottoms (3)	1/2" x 18 7/8" x 18 5/8"
Middle Drawers (2)	
27 Short Drawer Front (1)	3/4" x 10 7/8" x 19 5/8"
28 Short Drawer Sides (2)	3/4" x 10 7/8" x 19 1/2"
29 Short Drawer Back (1)	5/8" x 10 7/8" x 19"
30 Short Drawer Bottom (1)	1/2" x 18 7/8" x 18 5/8"
31 Long Drawer Front (1)	3/4" x 10 7/8" x 39 7/8"
32 Long Drawer Sides (2)	3/4" x 10 7/8" x 19 1/2"
33 Long Drawer Back (1)	5/8" x 10 7/8" x 39"
34 Long Drawer Bottom (1)	1/2" x 18 7/8" x 38 7/8"
Bottom Drawers (2)	
35 Short Drawer Front (1)	3/4" x 13 3/8" x 19 5/8"
36 Short Drawer Sides (2)	3/4" x 13 3/8" x 19 1/2"
37 Short Drawer Back (1)	5/8" x 12 3/8" x 19"
38 Short Drawer Bottom (1)	1/2" x 18 7/8" x 18 5/8"
39 Long Drawer Front (1)	3/4" x 13 3/8" x 39 7/8"
40 Long Drawer Sides (2)	3/4" x 13 3/8" x 19 1/2"
41 Long Drawer Back (1)	5/8" x 12 3/8" x 39"
42 Long Drawer Bottom (1)	1/2" x 18 7/8" x 38 7/8"
Drawer Pulls (7)	
43 Small Drawer Pulls (5)	1" x 1" x 10 1/4"
44 Long Drawer Pulls (2)	1 1/2" x 1 1/2" x 16"
Additional Items	
45 Square Plugs (92)	5/16" x 5/16" x varies
46 Drawer Slides (3 pr.)	King Slides
47 Drawer Slides (7 pr.)	Accuride 1029

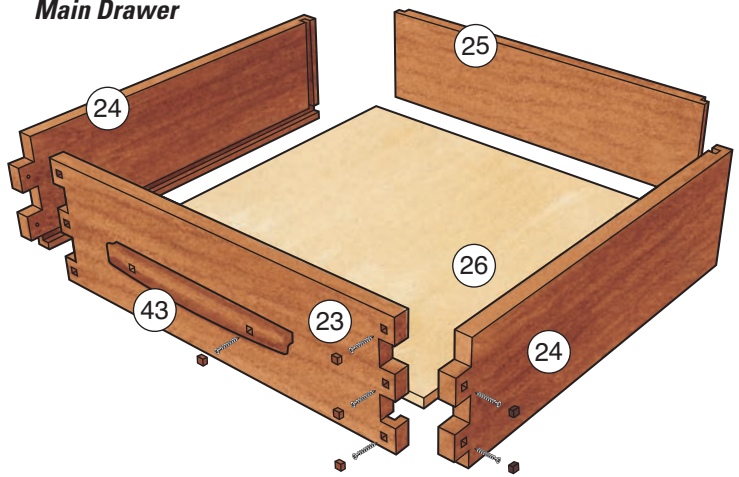
simple 5/16" x 5/16" layout, with the tongues of the rabbets in the drawer backs fitting into dadoes in the drawer sides (see the *Main Drawers Rear Corner* drawing, next page).

Dry-assemble the drawers to make sure their front-to-back widths match, and that the drawer sides are parallel. Then rout the drawer bottom grooves 1/4" up from the bottom edges at the router table with a 1/2" straight or spiral bit. Make these grooves 1/4" deep, and be careful: if the groove is located on a pin instead of a socket in the front corner joinery, it must stop short of the end of the pin or it will show when the drawers are assembled. Drawer bottom grooves that are aligned with sockets, however, can pass all the way from end to end on the workpiece without showing. Once the grooves are finished, cut the drawer bottoms to size, and test-fit them.

Each pin of the corner joinery will be screwed into its socket with 1 1/2" panhead screws hidden in recessed screwholes and covered by 5/16"-square plugs. Bore the square mortises for the plugs 3/8" deep, then use the spur centerpoints of the mortise chisel to center a 7/64" drill bit for boring through holes for the screws.

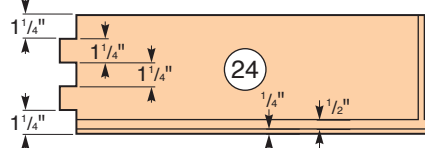
Once the drawer parts are cut and ready, it's important to

Main Drawer



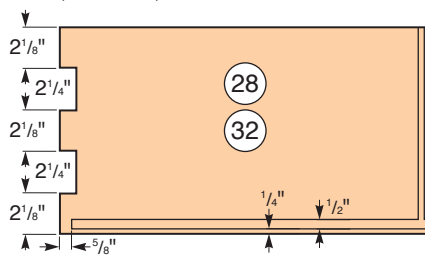
Top Drawer Side

(Inside View)



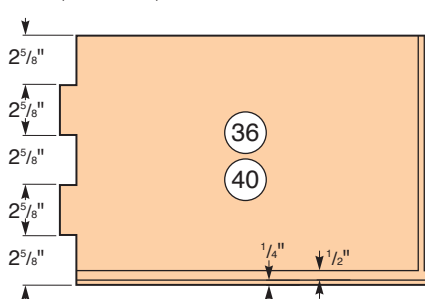
Middle Drawer Side

(Inside View)



Bottom Drawer Side

(Inside View)



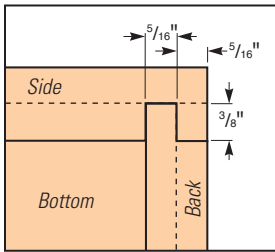
check the drawer sizing, relative to the undermount slides that will support them. Here's what you can do. Temporarily assemble the drawers and drawer bottoms, holding the front joints together with a few screws and taping the back corner joints closed. Then set a pair of drawer slides into each opening in the carcass, and test how the drawers fit with the slides underneath. If necessary, you may need to shave the top edges of the drawers with a block plane or at the table saw to create a clear space. If the drawers rub along their sides, sand or plane them to improve the fit.

Following Accuride's instructions for the 1029 undermount slides we recommend, the directions call for the drawer

Main Drawers

Rear Corner

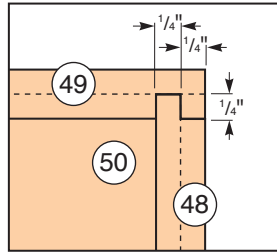
(Top View)



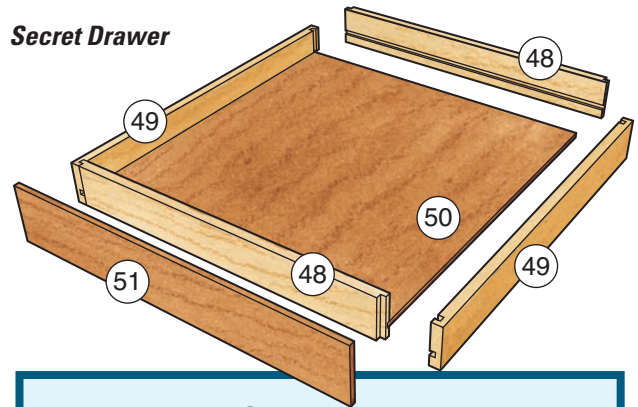
Secret Drawers

Rear Corner

(Top View)



Secret Drawer



bottoms to be located 1/4" up from the bottoms of the drawer sides. I followed those directives, but the spacing below the drawers widened beyond my 1/16" allocation due to the thickness of the slide hardware, and it swallowed up my gap on top. So, I trimmed slightly more than 1/16" of additional material off the top edges of the drawers to reestablish clearance here. I'll suggest you consider deviating from the Accuride instructions if you want an even tighter gap below the drawers. Instead of positioning the drawer bottom grooves at 1/4" up, go with 5/16" instead. If I build this project again, that's what I'll do, too.

When the drawers fit their openings well, final-sand the drawer parts. I also sanded the protruding ends of all the drawer side pins into gentle curves so the baselines of the curves would meet flush with the drawer faces. It's a subtle but attractive detail that creates nice, repeating shadow lines that draw your eye. They're also a pleasant tactile detail to complement the raised, pillowed plugs.

I suggest staining the drawer parts now, while the pieces are still flat. Then go ahead and assemble the drawers, driving screws into every hole in the front corner joinery. Glue the drawer bottoms into the groove of the drawer faces, and glue and nail the rear joints to secure the drawer backs to the drawer sides. Brad-nail the drawer bottoms to the bottom edges of the drawer backs. Check to be sure the boxes are perfectly square before nailing the bottom panel to the drawer back — it's your last opportunity to correct for racking.

Now you can make square plugs to fill the screw holes. Size their lengths so they'll be flush on the drawer sides when tapped in but pillowed and standing proud of the drawer faces by about 1/16" on the drawer faces. Install the plugs with a dab of CA glue. Topcoat the drawers.

When the finish cures, mount the drawers on their slides. The Accuride 1029 drawer slides that we specify should fit the carcass's front-to-back dimensions perfectly. Position the "cabinet-side" portion of the slides flush with the back edges of the web frames before driving the attachment screws. This placement should recess the drawer faces 1/4" back from the front edges of the dresser rails if you mount the "drawer side" piece of the slides flush against the back of the drawer faces. In terms of where you locate the slides, right to left in each opening, you can choose. A couple of inches in from the ends of the drawers will be fine. And, if by chance your top drawers aren't exactly the same width in the end, here's a suggestion: make the slide spacing different for each drawer. That way, there's no way to mistake which drawer fits in which compartment — the slide positions will determine that automatically.

MATERIAL LIST (Secret Drawers)

Outer Drawers (2)	T x W x L
48 Drawer Fronts and Backs (4)	1/2" x 2 1/4" x 16 1/2"
49 Drawer Sides (6)	1/2" x 2 1/4" x 17 7/8"
50 Drawer Bottoms (2)	1/4" x 16 7/16" x 17 7/16"
51 Drawer Faces (3)	1/2" x 2 5/16" x 17 5/8"
Inner Drawer (1)	
52 Drawer Fronts and Backs (2)	1/2" x 2 1/4" x 18 3/8"
53 Drawer Sides (2)	1/2" x 2 1/4" x 17 7/8"
54 Drawer Bottom (1)	1/4" x 18 5/16" x 17 7/16"
55 Drawer Face (1)	1/2" x 2 5/16" x 19 1/16"

Making the Drawer Pulls

It's oftentimes those final details – the little added touches – that give a project that extra zing. The handmade drawer pulls I made for this dresser not only showcase its Greene and Greene style, but they're also great evidence that this isn't some mass-produced item. Here's how I made them.

Follow the *Material List* in the print article to prepare blanks for the two sizes of drawer pulls on the dresser. The pulls on the larger two drawers are heftier than those on the five smaller drawers, yet the end effect is still a pleasant and interesting visual "balance" once they're installed. And, if you look closely, you'll also notice that the front faces of all the pulls aren't flat – they're gently curved to continue the curved theme suggested by the rounded ends on the box joint pins and the pillow-topped plugs. Our version of these arched pulls is an easier adaptation of some the Greene brothers actually employed in their furniture, so the styling is on point for this dresser.

Fashioning these pulls is straightforward and relatively simple. I started by making a plywood template for each pull size to use for tracing the arched faces onto the blanks. Achieving the curves was a matter of flexing an aluminum rule in a clamp and tracing the shape onto my template material. I gave the larger pulls a curve that rises 3/8" from the ends to the center; for the smaller pulls, the curve's height is 1/4" instead.

Trace the curves onto your pull blanks, and band saw them to shape, cutting just outside the layout lines. Sand up to your lines with a spindle sander or sanding drums in a drill press, and be sure the curvature is smooth from end to end.

There are finger recesses that wrap around the perimeter

of the pulls. I made these using a 3/4"-diameter core box bit, buried partially in a sacrificial fence facing on my router table fence. For the larger pulls, the final proportion of recesses is 1/2" high (measuring from the base of the pull up), and 5/16" deep. On the smaller pulls, there's a subtler recess: 1/2" high by 1/4" deep.

To mill the recesses, I made a pass on each end, routing away the end grain first, then followed with two long-grain passes to form the top and bottom handle profiles. Make the cross-grain cuts with the pulls backed up against a scrap that you feed along your router table fence, or with your miter gauge and a sacrificial fence, to stabilize these narrow cuts and to minimize tearout. Also, don't mill the full recess in single passes. I raised the bit to 1/2" from the start, then I gradually deepened the cuts in several passes by resetting the fence further back each time. The approach will help to minimize tearout and burning. In the end, the recesses on my pulls required very little sanding to be ready for stain and finish.

You'll see on the completed dresser that the large pulls are accented with three 5/16"-square ebony plugs, and the smaller pulls have two plugs instead. Like the box joints on the drawers, these plugs conceal the attachment screws I used to install the pulls. I positioned the mortises for these plugs 2" from the ends of the pulls and, on the larger pulls, one in the center. I cut the mortises 3/8" deep for all. Doing so allowed me to fasten the smaller pulls with 1" panhead wood screws; on the larger pulls, I used 1 1/4" panhead screws for the outer mortises and a 1 1/2" screw for the center location.

Before installing the pulls, I rounded their corners on a disc

sander to about 3/16" radii, then I softened the arched edges with a 1/8" roundover bit in a trim router. Lots of hand-sanding followed, in order to shape the pulls even more, so their curves flow from front to back smoothly and to blend in the routed roundovers. Since mahogany is so soft, it actually doesn't take a lot of time to refine the aspects of each pull this way, and the results make them pleasant to grip.

One last point of note: only the top set of drawers have pulls that are centered vertically on the drawer fronts. Placement on the middle and bottom drawers is slightly north of center. On my dresser, the middle drawer pulls are located 4 1/2" down from the top edges; on the bottom drawers, I positioned them 5 1/4" down. Offsetting the pulls vertically was not uncommon in Greene brother designs, and I think it complements the staggered ordering of these drawers quite well.

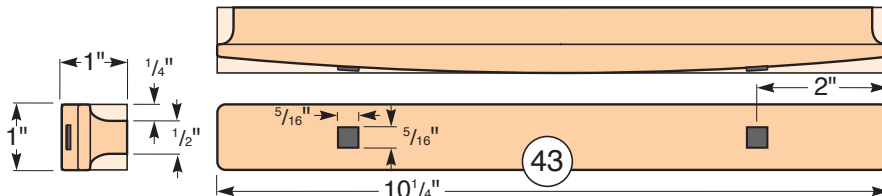
In Conclusion ...

This dresser was, as you might have guessed, a ton of work. But I'm pleased with how it came out. It fits in well with the previous pieces in this bedroom set: the Greene and Greene Bed and Nightstand from our February and August 2015 issues. Its design follows quite well the inspiration from Charles and Henry Greene and the pieces they made during the Arts and Crafts era in the early 1900s. And, the clients for whom I made the piece like it. I think I deserve a well-earned rest. But my wife also really likes how the dresser came out ... So, I might just be walking through these same construction steps all over again sometime in the near future.

Chris Marshall is senior editor of Woodworker's Journal.

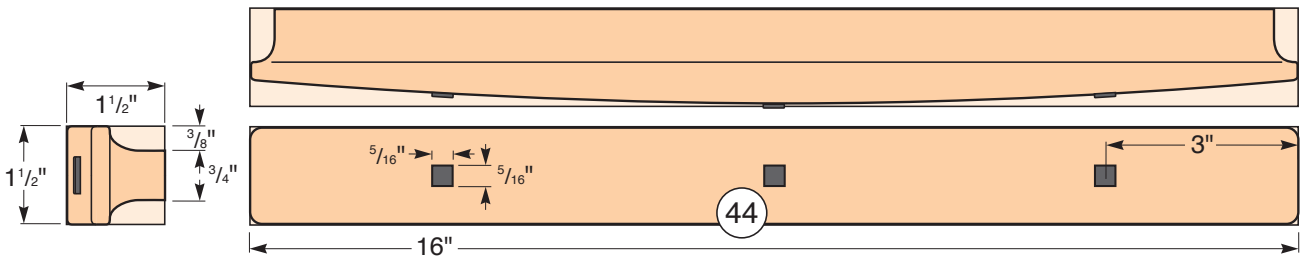
Small Drawer Pull

(Top End and Front Views)



Long Drawer Pull

(Top End and Front Views)



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