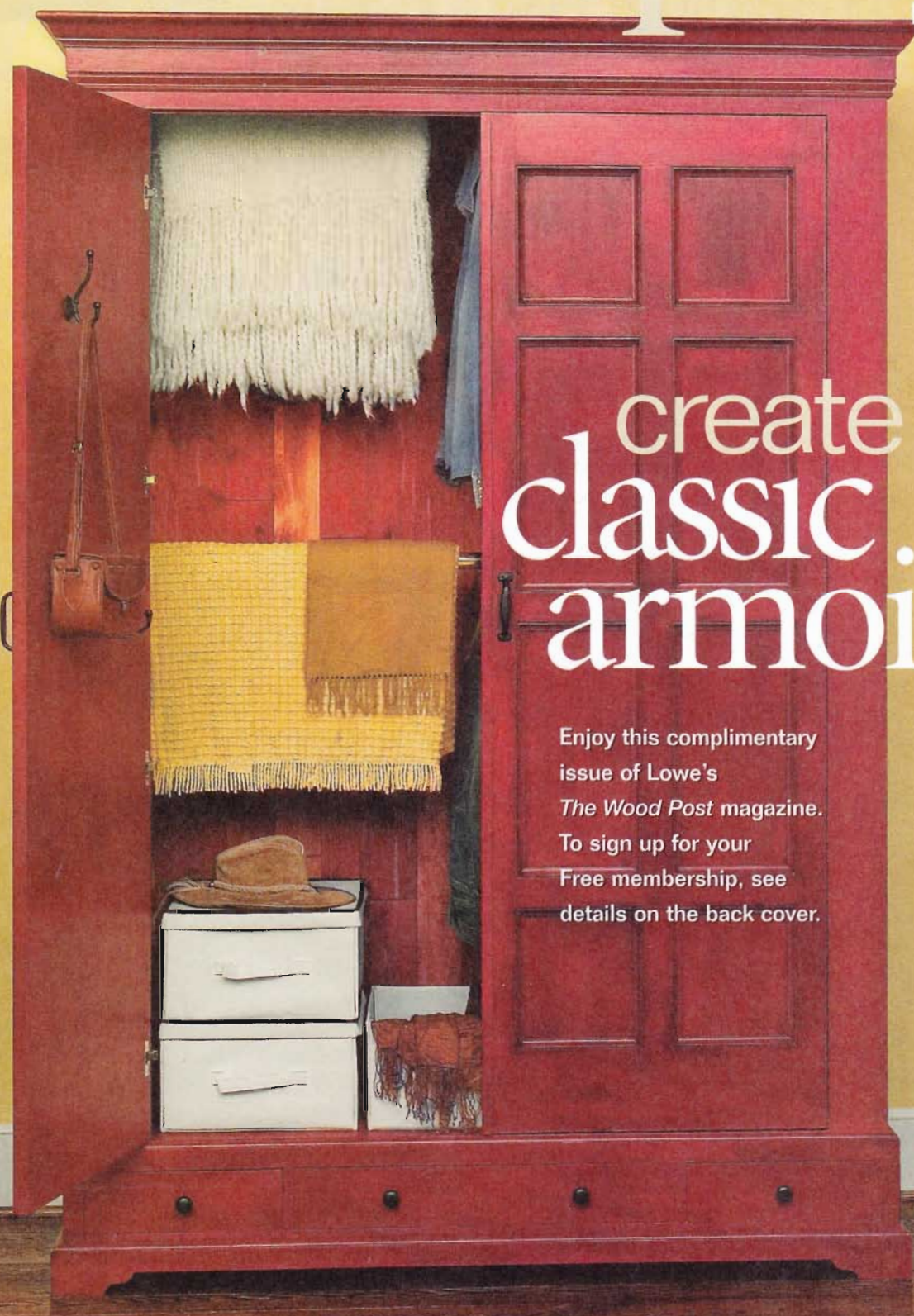


the

An Exclusive Lowe's
Woodworkers Publication

woodpost

Fall 2004



create a classic. armoire

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From Our Shop



Each time we complete an issue of *The Wood Post*, I take great pride in the fine quality of our projects. But the incredible functionality of these pieces is why I can't wait to add one or more of them to my home.

For our feature project, we'll show you how to make a beautiful armoire. It can be used in countless ways, the chief one being storage—something that is needed in every home. Our armoire has been outfitted to serve as a cedar closet, perfect for holding off-season clothing. If you have a spare weekend, make our decorative screen. We've shown it finished three different ways, but the basic design can be customized to suit your style or color preference.

Along with these ideas you'll find plenty of woodworking tips and techniques. And to help make your trips to Lowe's as productive as possible, we've included shopping and tool lists with each project.

Please let me know your thoughts on *The Wood Post* and our Web site, Lowes.com/Woodworkers. Tell us about your projects or how you became interested in woodworking. Send your responses c/o Peggy Rees, P.O. Box 523, Birmingham, AL 35201. And if you have suggestions for future issues, I also encourage you to write to us. We want to improve with each issue.

Bill Sawyer,
Lowe's Woodworkers

Bill

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P.S. If we profile you in an upcoming issue of *The Wood Post*, you'll receive a free Hitachi 14.4-volt 3/8-inch cordless drill/driver kit.

tip

Don't Miss These Tips

Look for tips throughout these pages from The Taunton Press, publishers of the magazines *Fine WoodWorking*, *Fine Homebuilding*, *Fine Cooking*, and *Fine Gardening*, as well as a vast number of related book titles available at your local Lowe's store.



Free to Members!

As a member of
Lowe's Woodworkers,
you're entitled to a
free woodworking
plan with each issue
of *The Wood Post*.

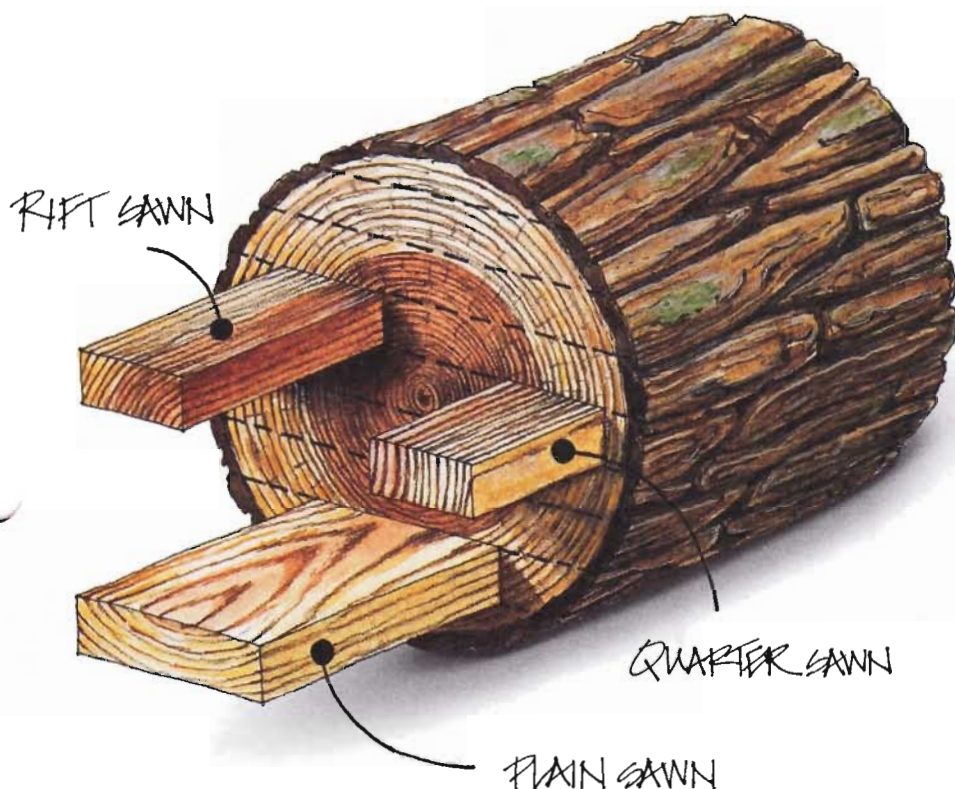
Get your plan for the  simple handmade box featured in the photo above. It's available online until October 10, 2004. Log on to: **Lowes.com/FreePlan.**



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the pros know

Q&A With the Experts at



Q I am confused about some terms I have heard used to describe lumber. Can you tell me the differences between plain-sawn, rift-sawn, and quarter-sawn lumber?

A: These terms, which describe how a log was cut into boards, refer to how the growth rings, or grain, of the log are oriented to the cut.

A plain-sawn board is the most common type of lumber because it produces the best yield from a log. You might recognize the grain on the face of the board, which often swirls in many directions. A drawback is that this type tends to cup or warp with changes in humidity.

Lumber that is rift sawn generally has a clearer, straighter grain than plain-sawn lumber does. Because of this, true rift-sawn lumber will be much more stable than plain-sawn and less likely to warp.

Of all cutting methods, quarter-sawing yields the most stable boards. Quarter-sawn lumber shows the straightest grain, and in some species the cut lumber exhibits decorative ray fleck, a much-sought-after pronounced grain effect commonly seen in white oak, red oak, and cherry. But beauty like this comes at a price. Quarter-sawing is the most wasteful way to cut up a log; it's time-consuming and expensive, and a much larger log is needed to produce reasonably wide boards.

Q How can you tell which method was used to cut a board?

A: Look at the end grain. On a plain-sawn board the rings will be oriented at 30 degrees (or less) to the face of the board. A rift-sawn board will have growth rings that are more than 30 degrees but less than 60 degrees; with quarter-sawn boards, the growth rings will be 60 to 90 degrees to the face of the board.

Q Every time I run a piece of wood through my portable planer it makes a scalloped cut at the beginning and end of the board. Is there a problem with the planer, or am I doing something wrong?

A: The scalloped cut that you have been experiencing is called snipe, which can be caused either by an improperly adjusted machine or by using incorrect technique. Snipe often results from a pressure bar or outfeed roller that's set too high. This causes the workpiece to tilt or spring up into the cutterhead once the trailing edge passes out from under the infeed roller. Check your owner's manual, and make the necessary adjustments.

Another common cause of planer snipe is lack of support for the piece throughout the entire cut. Basically, the workpiece tilts on the table edge, and the end of the board lifts up into the cutterhead. Snipe can occur both at the beginning of the cut as well as at the end. A good set of well-adjusted infeed and outfeed tables will go a long way in preventing this problem. Separate roller stands also can be used to help support the workpiece and reduce the likelihood of snipe. ■

Armoire

This classic storage closet will become a family heirloom.

You'll appreciate this spectacular piece of furniture for being spacious and timeless. It adapts well for most any style of room and storage need, but we see it first and foremost as a great place to keep off-season clothes. Inside, in addition to a sturdy hanging rod, the armoire is lined with cedar and features three drawers in its base.

TOOL LIST

- table saw
- power miter saw
- jigsaw or scroll saw
- power drill and #2 Phillips driver bit
- 1⅜-inch Forstner bit
- Kreg ProPack Pocket Hole System or Kreg Mini Kit
- hammer
- finishing, brad, and narrow crown pneumatic nailers
- power sander and/or sanding block
- nail set
- center punch
- framing square
- 12-inch combination or angle square
- tape measure and pencil
- clamps



Instructions:

General: Set all nails. Fill nail holes and any voids with wood filler. Remove excess glue.

Step 1: Attach the feet, construct the skirt frame, and attach the support blocks. (See Figure 1, parts A through E.)

a. Attach a mitered foot to the bottom edge of each mitered end of the front rail with the miter faces aligned. Attach a foot to the mitered end of each side rail in the same manner. Attach a non-mitered foot to the non-mitered end of each side rail.

b. Align and attach the mitered ends of the side rail/foot assemblies flush with the mitered ends of the front rail/foot assembly. Attach the back rail to the back edge of each side rail/foot assembly with its top edge flush with the top edge of each foot. Square the frame, and lock it square with temporary braces across each corner. Attach a support block in each corner with 1¼-inch finishing nails, making sure that the end of each block is flush with the bottom edge of the feet.





Figure 1

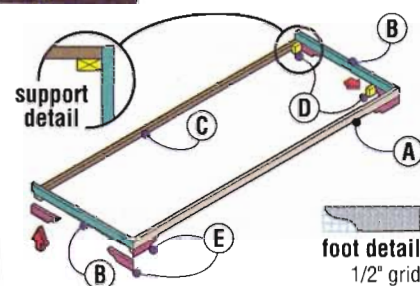


Figure 2

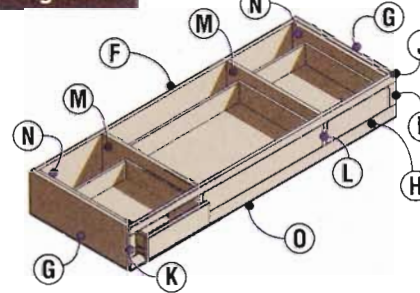
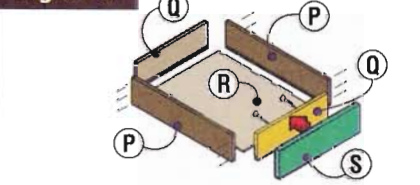


Figure 3



Step 2: Construct the base frame; attach the bottom piece, the drawer supports, and skirt to the base frame. (See Figure 2, parts F through O.)

a. Overlap and attach the end of each side to each end of the back. Attach the bottom rail to each side with the bottom edges flush. Then attach the top rail with the top edges flush. Attach the end stiles to the sides between the top and bottom rails and flush with the outside edges.

b. Dry-fit and square the bottom onto the base frame. Attach with staples.

c. Attach each end drawer support flush with the front edges of the side and bottom using 3d finishing nails. Fit the mid drawer supports flush with the front edge of the bottom and $13\frac{7}{16}$ inches from each end drawer support. Attach by nailing through the back, bottom rail, and top rail, and through the bottom using staples. Check for square. Attach the mid stile to the front end of the mid drawer supports.

d. Dry-fit the base frame into the skirt frame with the base resting on the support blocks. Adjust if necessary, and attach with $1\frac{1}{4}$ -inch finishing nails and glue.

Step 3: Construct drawer boxes, install

CUT LIST, SKIRT:

Part Name	Material	Size (in inches)	Qty.
(A) front rail	(10-foot-long) 1 x 4 poplar	3/4 x 3 x 63*	1
(B) side rail	(10-foot-long) 1 x 4 poplar	3/4 x 3 x 23 3/4**	2
(C) back rail	(8 foot-long) 1 x 8 poplar	3/4 x 3 x 61 1/2	1
(D) support block	(10-foot-long) 1 x 2 poplar	3/4 x 1/2 x 1 1/2	4
(E) foot	(10-foot-long) 1 x 2 poplar	3/4 x 1 1/2 x 6***	6
(EC) skirt shoe moulding (long)	(10-foot-long) 7/16 x 1 1/16 pine	7/16 x 1 1/16 x 63*	1
(EC) skirt shoe moulding (short)	(10-foot-long) 7/16 x 1 1/16 pine	7/16 x 1 1/16 x 23 3/4**	2

*Length, long point to long point; miter at 45° angle on both ends. **Length, square end to long point; miter at 45° angle on one end. ***Use Foot Detail grid in Figure 1 to create scalloped design on all 6-foot pieces. Then miter-cut the opposite ends of four pieces (45°) so that they form pairs at the front corners of the armoire.

BASE:

Part Name	Material	Size (in inches)	Qty.
(F) back	1 x 12 poplar	3/4 x 8 3/8 x 60	1
(G) side	1 x 12 poplar	3/4 x 8 3/8 x 22 1/4	2
(H) bottom rail	(8-foot-long) 1 x 6 poplar	3/4 x 2 3/8 x 61 1/2	1
(J) top rail	(10-foot-long) 1 x 2 poplar	3/4 x 1 1/2 x 61 1/2	1
(K) end stiles	(8-foot-long) 1 x 2 poplar	3/4 x 1 1/2 x 4 1/2	2
(L) mid stiles	(6-foot-long) 1 x 12 poplar	3/4 x 3/4 x 4 1/2	2
(M) mid drawer support	(6-foot-long) 1 x 12 poplar	3/4 x 8 3/16 x 21 1/2	2
(N) end drawer support	(6-foot-long) 1 x 12 poplar	3/4 x 8 3/16 x 21 1/2	2
(O) bottom	1/4-inch plywood	1/4 x 23 x 61 1/2	1
(EC) base shoe moulding	(long) pine	7/16 x 1 1/16 x 61 1/2*	1
(EC) base shoe moulding	(short) pine	7/16 x 1 1/16 x 23**	2

*Length, long point to long point; miter at 45° angle on both ends. **Length, square end to long point; miter at 45° angle on one end.

LARGE BASE DRAWER:

Part Name	Material	Size (in inches)	Qty.
(P) side	1/2-inch plywood	1/2 x 4 x 18*	2
(Q) front/back	1/2-inch plywood	1/2 x 4 x 25 15/16*	2
(R) bottom	1/4-inch plywood	1/4 x 26 5/16 x 17 3/8	1
(S) drawer face	(10-foot-long) 1 x 8 poplar	3/4 x 4 1/4 x 27 3/4	1

2 SMALL BASE DRAWERS:

Part Name	Material	Size (in inches)	Qty.
(P) side	1/2-inch plywood	1/2 x 4 x 18*	4
(Q) front/back	1/2-inch plywood	1/2 x 4 x 12 7/16*	4
(R) bottom	1/4-inch plywood	1/4 x 12 13/16 x 17 3/8	2
(S) drawer face	(10-foot-long) 1 x 8 poplar	3/4 x 4 1/4 x 14 1/4	2

*Dado 1/4- x 3/8-inch deep 1/4-inch above bottom edge.

SIDE ASSEMBLY:

Part Name	Material	Size (in inches)	Qty.
(T) front stile	(8-foot-long) 1 x 2 poplar	3/4 x 1 1/2 x 79	2
(U) back stile	(10-foot-long) 1 x 8 poplar	3/4 x 2 x 79*	2
(V) upper/lower rail	(6-foot-long) 1 x 8 poplar	3/4 x 7 x 18	4
(W) mid rails	(8-foot-long) 1 x 8 poplar	3/4 x 2 1/4 x 18	6
(X) mid stiles short	(8-foot-long) 1 x 8 poplar	3/4 x 2 1/4 x 10 3/8	4
(Y) mid stiles long	(8-foot-long) 1 x 8 poplar	3/4 x 2 1/4 x 18 13/16	4
(Z) panel	1/4-inch plywood	1/4 x 20 3/4 x 78 1/4	2
(CD) cove moulding			
horizontal	1 1/16-inch pine	1 1/16 x 1 1/16 x 77 1/8**	32
vertical (long)	1 1/16-inch pine	1 1/16 x 1 1/16 x 18 13/16**	16
vertical (short)	1 1/16-inch pine	1 1/16 x 1 1/16 x 10 3/8 **	16

*Notch bottom rear of back stile 3/16- x 3/4-inch. Rabbet 3/8- x 3/4-inch on notched side for back assembly.

**Length, long point to long point; miter at 45° angle on both ends. Mark one edge for consistency.

drawer slides, and attach drawer faces. (See Figure 3, parts P through S.)

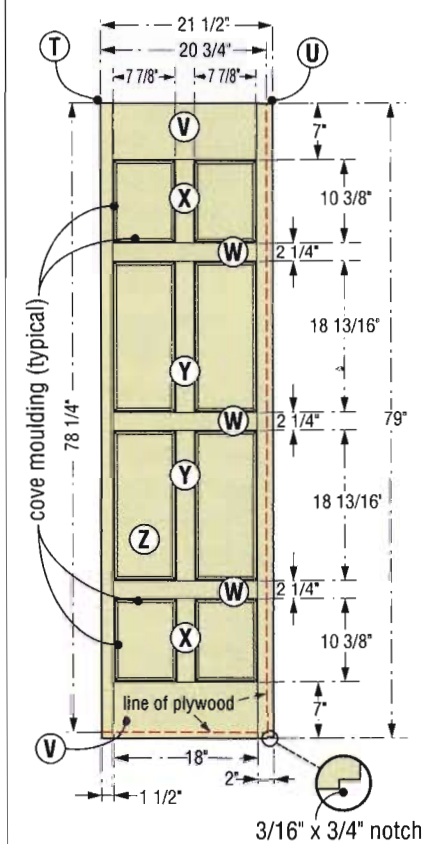
a. Attach one end of each side to the back, overlapping the ends of the back, aligning all dados, and using staples to secure. Insert the bottom into the dados. Fit the front onto the front edge of the drawer bottom; attach to each side with edges flush using staples. Nail through the bottom edge of the back into the bottom using 1-inch brads. Repeat this procedure for the other two drawer boxes.

b. Attach drawer slides to the drawer boxes and drawer supports according to the manufacturer's instructions.

c. Insert each of the drawer boxes into an opening, and adjust, if necessary, for smooth operation. Fit the drawer faces to the boxes by placing 1/8-inch shims between the bottom rail and each face. Check for an equal gap between the drawer face edges and drawer opening. When the fit is correct, drive two 1-inch pocket screws through the drawer box front into the drawer face. Adjust the slides until the drawer face is flush with the drawer opening.

Step 4: Construct each of the side frames; attach the panels and the cove moulding. (See Figure 4, parts T through Z.) Note: The side panels are mirror images

Figure 4



of each other. Attach all components, except for the panels and cove moulding, using 1 1/4-inch pocket hole screws.

a. Attach the upper and lower rails flush with the ends of the front and back stiles as shown, and lock the frame square. Attach the mid rails to the stiles per the dimensions in Figure 4. Attach the mid stiles centered on the rails.

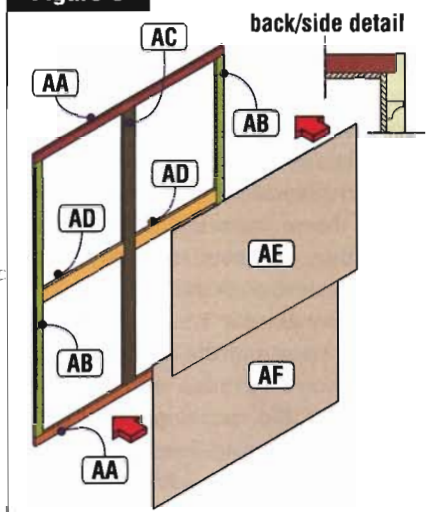
b. Lay the frame assembly flat with the back stile rabbet facing up; dry-fit the panel flush with the front stile. Attach to the frame assembly with staples.

c. Lay one side assembly flat, panel facing up. Lay the other side assembly, panel facing down, on top of the first to make sure that the notched ends line up. The notched ends denote the bottom edge of the side assemblies. Attach the cove moulding to each side per Figure 4 using 1-inch brads.

Step 5: Construct the back; attach panels and side assemblies to back. (See Figure 5, parts AA through AF.) Attach all components using 1 1/4-inch pocket screws unless specified otherwise.

a. Attach the stiles to the rails as shown in Figure 5, and lock square. Attach the mid stile centered on the rails. Attach the mid

Figure 5



rails centered on the stiles and mid stile.

b. Lay the frame assembly flat (pocket holes facing up), center the upper panel, and use staples to attach. Use a similar procedure to position and attach the lower panel.

c. With the panels facing up, dry-fit each side assembly to the back with the ends flush per the back/side detail in Figure 5. Use a framing square and clamps to hold the joint at a 90° angle, and then attach with 4d finishing nails.

tip

To check for square on large case assemblies, measure the interior diagonals. When the two diagonal measurements are equal, then the case is square.

Step 6: Attach the floor, the face frame, the hinge support assembly, the corner braces, and the door-stop assembly to the side/back assembly. (See Figure 6, parts BA through BJ.)

a. Place the side/back assembly on a raised work surface with the back facing down and the bottom end protruding slightly over the edge of the work surface to aid in nailing. Fit the floor to the assembly bottom, and attach with 4d finishing nails.

b. Attach the upper rail to the front edge of each side panel flush with the upper edges. Attach the stiles flush with the front edge of each side panel, the bottom edge of the upper rail, and the front edge of the floor. Attach the lower rail between the stiles and flush with the floor edges.

Figure 6

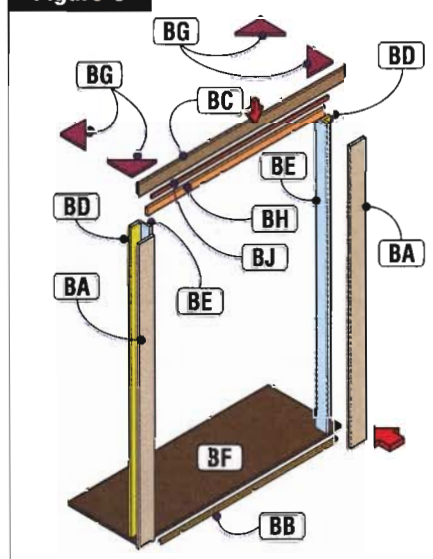
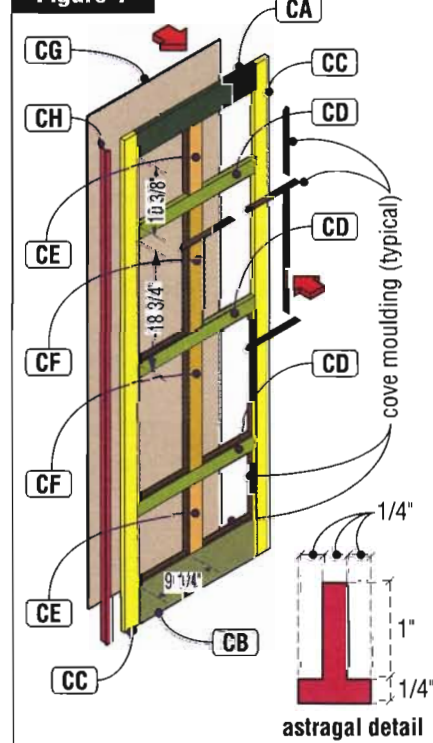


Figure 7



c. Attach a hinge support overlapping one edge of a hinge support brace as shown. Repeat to construct the second hinge support assembly. Then place each hinge support assembly on the floor flush with the stiles and the side panels. Attach with 4d finishing nails through the upper rails and stiles.

d. Place the corner braces flush with each inside corner and the top of the main assembly. Attach the braces using 4d finishing nails, securing through the face frame, side panels, and top rail.

e. Attach the door-stop spacer to the

door stop using $\frac{3}{4}$ -inch brads and glue.
f. Attach the door-stop assembly to the inside face of the upper rail (with the door stop projecting $\frac{3}{4}$ -inch below its bottom edge) using 4d finishing nails and glue.

Step 7: Construct the door frames, attach the panels, construct and attach the astragal, attach the cove moulding, and attach the hinges. (See Figure 7, parts CA through CJ.) Attach all of the components using $\frac{1}{4}$ -inch pocket screws unless specified otherwise.

a. Attach the upper and lower rails flush with the ends of the stiles, and lock the frame square. Attach the mid rails according to Figure 7. Attach the mid stiles centered on the rails.

b. Lay the frame assembly flat (pocket holes facing up), and dry-fit the panel flush with the ends and the edge of one stile, leaving a $1\frac{3}{4}$ -inch reveal on the other stile for hinge attachment. Adjust the fit, if necessary, and attach the panel to the door-frame assembly with staples. Repeat the procedure to construct the other door, checking the panel placement to ensure a mirror image.

c. Double rabbet a 1 x 6 (see astragal detail) to construct the astragal. Attach it to the outside edge and flush with the ends of the non-hinge stile of the right-hand door using 1-inch brads.

d. Attach the cove moulding per Figure 7 using 1-inch brads.

BACK:

Part Name	Material	Size (in inches)	Qty.
(AA) rail	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $2\frac{1}{4}$ x $59\frac{1}{4}$	2
(AB) stiles	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $2\frac{1}{4}$ x $78\frac{13}{16}$	2
(AC) mid stile	(8-foot-long) 1 x 4 poplar	$\frac{3}{4}$ x $3\frac{1}{2}$ x $74\frac{5}{16}$	1
(AD) mid rail	(8-foot-long) 1 x 4 poplar	$\frac{3}{4}$ x $3\frac{1}{2}$ x $25\frac{5}{8}$	2
(AE) upper panel	$\frac{1}{4}$ -inch plywood	$\frac{1}{4}$ x $39\frac{7}{8}$ x 58	1
(AF) lower panel	$\frac{1}{4}$ -inch plywood	$\frac{1}{4}$ x $38\frac{7}{8}$ x 58	1

FACE FRAME AND FLOOR:

Part Name	Material	Size (in inches)	Qty.
(BA) stile	(8-foot-long) 1 x 6 poplar	$\frac{3}{4}$ x $4\frac{1}{2}$ x 76	2
(BB) lower rail	(6-foot-long) 1 x 12 poplar	$\frac{3}{4}$ x $\frac{3}{4}$ x 51	1
(BC) upper rail	(10-foot-long) 1 x 4 poplar	$\frac{3}{4}$ x 3 x 60	1
(BD) hinge support brace	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $2\frac{7}{8}$ x $74\frac{1}{2}$	2
(BE) hinge support	(8-foot-long) 1 x 4 poplar	$\frac{3}{4}$ x $3\frac{1}{4}$ x $74\frac{1}{2}$	2
(BF) floor	$\frac{3}{4}$ -inch plywood	$\frac{3}{4}$ x $20\frac{3}{4}$ x $58\frac{1}{2}$	1
(BG) corner brace	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $7\frac{1}{4}$ x $7\frac{1}{4}$	4
(BH) door stop	(8-foot-long) 1 x 2 poplar	$\frac{3}{4}$ x $1\frac{1}{2}$ x 51	1
(BJ) door stop spacer	$\frac{1}{4}$ -inch plywood	$\frac{1}{4}$ x $\frac{3}{4}$ x 51	1

DOORS:

Part Name	Material	Size (in inches)	Qty.
(CA) upper rail	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $3\frac{7}{8}$ x $20\frac{7}{8}$	2
(CB) lower rail	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $6\frac{1}{4}$ x $20\frac{7}{8}$	2
(CC) stile	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $2\frac{1}{4}$ x 75	4
(CD) mid rail	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $2\frac{1}{4}$ x $20\frac{7}{8}$	6
(CE) mid stile short	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $2\frac{1}{4}$ x $10\frac{3}{8}$	4
(CF) mid stile long	(8-foot-long) 1 x 8 poplar	$\frac{3}{4}$ x $2\frac{1}{4}$ x $18\frac{3}{4}$	4
(CG) plywood panel	$\frac{1}{4}$ -inch plywood	$\frac{1}{4}$ x $23\frac{5}{8}$ x 75	2
(CH) astragal	(8-foot-long) 1 x 6 poplar	$\frac{3}{4}$ x $1\frac{1}{4}$ x 75	1
(CJ) cove moulding			
horizontal	$1\frac{1}{16}$ -inch pine	$1\frac{1}{16}$ x $1\frac{1}{16}$ x $9\frac{1}{4}$ *	32
vertical (long)	$1\frac{1}{16}$ -inch pine	$1\frac{1}{16}$ x $1\frac{1}{16}$ x $18\frac{3}{4}$ *	16
vertical (short)	$1\frac{1}{16}$ -inch pine	$1\frac{1}{16}$ x $1\frac{1}{16}$ x $10\frac{3}{8}$ *	16

*Length, long point to long point; miter at 45° angle on both ends. Mark one edge for consistency.

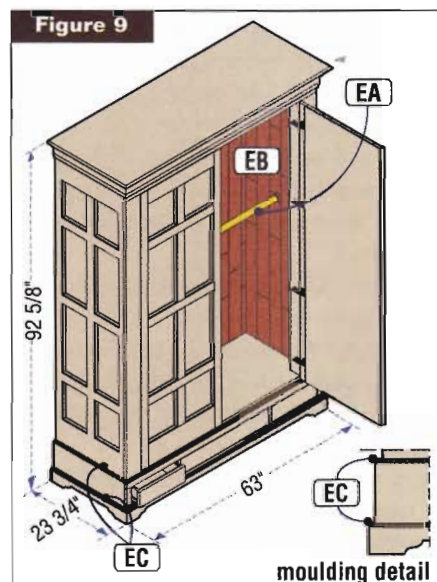
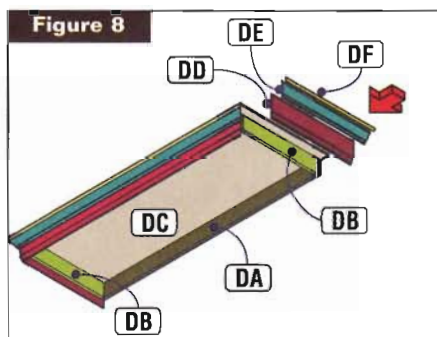
LOWE'S SHOPPING LIST

Lumber

- 3 (8-foot-long) 1 x 2s, poplar
- 1 (10-foot-long) 1 x 2, poplar
- 6 (8-foot-long) 1 x 4s, poplar
- 4 (8-foot-long) 1 x 6s, poplar
- 1 (6-foot-long) 1 x 8, poplar
- 8 (8-foot-long) 1 x 8s, poplar
- 2 (10-foot-long) 1 x 8s, poplar
- 3 (6-foot-long) 1 x 12s, poplar
- 5 (48- x 96-inch) pieces of $\frac{1}{4}$ -inch-thick birch plywood
- 1 (48-inch-square) piece of $\frac{1}{2}$ -inch-thick birch plywood
- 1 (48- x 96-inch) piece of $\frac{3}{4}$ -inch-thick birch plywood
- 2 (10-foot-long) $\frac{7}{16}$ - x $1\frac{1}{16}$ -inch pieces of pine shoe moulding
- 1 (12-foot-long) $\frac{3}{8}$ - x $1\frac{1}{16}$ -inch piece of pine half-round moulding
- 14 (10-foot-long) $1\frac{1}{16}$ - x $1\frac{1}{16}$ -inch pieces of pine cove moulding
- 1 (12-foot-long) piece of $\frac{9}{16}$ - x $2\frac{3}{4}$ -inch crown moulding
- 1 (12-foot-long) $5\frac{1}{4}$ -inch base moulding
- 4 (3 $\frac{1}{2}$ -inch x 15-square-foot) packages of cedar lining

Hardware

- 5 boxes (#18 x $\frac{3}{4}$ -inch) wire brads
- 2 boxes (#17 x 1-inch) wire brads
- 1 box 3d (1 $\frac{1}{4}$ -inch) finishing nails
- 1 box 4d (1 $\frac{1}{2}$ -inch) finishing nails
- 2 boxes (1 $\frac{1}{4}$ -inch) Kreg pocket screws (coarse thread)
- 1 box (1-inch) Kreg pocket screws (coarse thread)
- 1 box ($\frac{7}{8}$ -inch) narrow-crown staples
- 3 pairs of (18-inch) H.D. Precision DRW heavy-duty drawer slides
- 8 (18-inch) concealed flush-mount hinges
- 4 packages of ($\frac{3}{4}$ -inch) nail-on furniture glides
- 2 packages of (1 $\frac{3}{8}$ -inch) pole sockets
- 2 (6-foot) brass closet rods
- wood glue
- wood filler



back rails as shown in Figure 8. Square the frame, then attach temporary braces across each corner. Remove these braces when the glue has set.

b. Attach the base moulding to the front and side faces of the cap assembly with the wide edge of the moulding flush with the top edge of the cap frame.

c. Attach the dust cover to the top of the assembly so that it is flush with the back edge but projects $1\frac{7}{8}$ inches past the front and sides of the assembly to provide a nailer for the crown moulding.

d. Attach the crown moulding to the front and sides of the assembly.

e. Attach the half-round moulding to the front and sides as shown in Figure 8.

Step 9: Attach the cedar lining, pole brackets, shoe moulding, and furniture glides. Hang the doors and closet rods. (See Figure 9.)

tip

When installing the cedar lining, stagger the joints rather than aligning them. Randomly placed joints look best, even if it means being left with some shorts, which can also be put to good use. Cut into squares, and sand smooth. Place them where you store your wool sweaters to keep away moths.

e. Mount the hinges according to the manufacturer's instructions, at 3, 26, 49, and 72 inches on center measured from the top of each door.

Step 8: Construct the cap assembly; attach the base moulding, dust cover, crown moulding, and half-round moulding. (See Figure 8, parts DA through DF.) Attach all components with 1-inch brads unless specified otherwise.

a. Using 4d finishing nails, attach each side rail to the ends of the front and

a. Attach cedar lining to the inside back and sides using $\frac{3}{4}$ -inch brads and glue, being careful to nail only into the rails and stiles of the back and sides.

b. Attach the pole sockets centered inside each side at 42 inches and 78 inches above the floor using the screws provided in the packages.

c. Hang doors, maintaining an equal gap



around each door (about $\frac{1}{8}$ inch). Adjust the hinges as necessary.

d. Attach shoe moulding to the base front and sides as shown in the moulding detail of Figure 9 using 1-inch brads. Nail a furniture glide into the center of the bottom of each support block.

e. Set the base/skirt assembly on a flat, level surface. Carefully place the armoire assembly inside the top front and side edges of the base/skirt assembly (some assistance is recommended). Place the cap assembly on top with front and side edges flush, but do not attach.

f. Measure between the pole sockets and cut rods to this length. Smooth cut edges, and insert poles. Attach hardware of your choice to the doors and drawers. Apply desired finish. **Project #F043 ■**

CAP:

Part Name	Material	Size (in inches)	Qty.
(DA) front/back rail	(8-foot-long) 1 x 4 poplar	$\frac{3}{4}$ x $3\frac{1}{2}$ x $60\frac{1}{16}$	2
(DB) side rail	(8-foot-long) 1 x 4 poplar	$\frac{3}{4}$ x $3\frac{1}{2}$ x $20\frac{3}{4}$	2
(DC) dust cover	$\frac{1}{4}$ -inch plywood	$\frac{1}{4}$ x $24\frac{3}{8}$ x $64\frac{5}{16}$	1
(DD) base moulding (short)	(12-foot-long) $5\frac{1}{4}$ base moulding	$5\frac{1}{4}$ x $22\frac{3}{4}$ *	2
base moulding (long)	(12-foot-long) $5\frac{1}{4}$ base moulding	$5\frac{1}{4}$ x $61\frac{1}{16}$ **	1
(DE) crown moulding (long)	(12-foot-long) $\frac{9}{16}$ x $2\frac{3}{4}$ crown	$\frac{9}{16}$ x $2\frac{3}{4}$ x $63\frac{5}{16}$ **	1
crown moulding (short)	(12-foot-long) $\frac{9}{16}$ x $2\frac{3}{4}$ crown	$\frac{9}{16}$ x $2\frac{3}{4}$ x 24 *	2
(DF) half-round moulding (long)	(12-foot-long) $\frac{3}{8}$ x $1\frac{1}{16}$ half-round	$\frac{3}{8}$ x $1\frac{1}{16}$ x $64\frac{5}{16}$ **	1
half-round moulding (short)	(12-foot-long) $\frac{3}{8}$ x $1\frac{1}{16}$ half-round	$\frac{3}{8}$ x $1\frac{1}{16}$ x 24 *	2

*Length, long point to long point; miter at 45° angle on both ends. **Length, square end to long point; miter at 45° angle on one end.

Decorative Screen

Functional and stylish, this classic folding screen can be adapted to a variety of settings and styles.

A folding floor screen offers a terrific way to finish off a corner, hide a storage area, create a private spot, or divide a large room. Start with our basic design, and finish it in a style that suits you. The two versions we finished with paint and fabric are made from poplar and birch plywood panels. The stained version is made from oak, which accepts stain uniformly. Instructions and materials for finishing these versions can be found at Lowes.com/WoodPost.

TOOL LIST

- table saw or portable circular saw with rip guide
- miter saw
- Kreg ProPack Pocket Hole System or Kreg Mini Kit
- power sander or sanding block and 100- and 220-grit sandpaper
- power drill and bits (#2 Phillips power bit)
- clamps
- hammer
- nail set
- center punch
- framing square
- 12-inch combination or angle square
- tape measure and pencil

Instructions

General: Set all nails, and fill all holes and voids with wood filler. Allow glue squeeze-out to dry to a soft bead, and then scrape clean with a sharp chisel.

Step 1: Cut all lumber (except the moulding) per the cut list.

Step 2: Construct the frames (see Figure 1).

a. Use a power drill and the Kreg jig to drill the ends of the upper and lower rails for pocket screws. Drill on the back faces of the rails. Determine the exact location of the pocket-screw holes by using the Kreg jig according to the manufacturer's instructions.

b. Use glue and pocket screws to attach an upper and lower rail to a pair of stiles as shown, with faces and outside edges aligned flush. Use a framing square to check the alignment at each corner, and measure for equal diagonals to indicate that the assembly is square. Repeat process to build six frames.

Step 3: Install the panels between frames (sandwich construction, see Figure 1).

a. Place a frame (pocket holes facing up) on a flat, clean work surface, and dry-fit a panel on top of the frame. If the fit is not flush along

all edges, check both the panel and the frame for square, and adjust as necessary. Remove the panel, spread glue on the frame surface, and then refit the panel. Clamp in place to ensure a tight bond, and attach it to the frame with 3/4-inch brads.

b. Place a second frame on top of the panel (pocket holes facing down), and align the edges flush. Glue and clamp in place, and attach with 3d nails.

c. Repeat this process to build the remaining two frame-panel assemblies.

Step 4: Attach the moulding (see Figure 1).

a. Measure and cut the moulding, beginning with the longer pieces first. (If you miscut a piece, you can salvage it for a shorter part.)

b. Dry-fit each piece of moulding inside the frame, nesting it against the plywood panel. Attach with glue and 3/4-inch brads.

Step 5: Drill for hinge screws; install hinges (see Figure 2).

a. Place two frame-panel assemblies face to face on the edge of a work surface, with the long sides oriented horizontally. Be certain that the upper rails are at the same end, and then align the ends. Measure and mark lines at 6 inches, 31 1/2 inches, and 57 inches from the top edge of one frame (see Detail A). Using a combination square, transfer the marks to the other frame. These marks note the location of the upper edges of each hinge.

b. Align the upper edge of a hinge (the end where the pinhead is) at each of the three marks you made earlier, with a hinge leaf on each frame and the hinge barrel between the two frame assemblies as shown (see Detail B). Mark the locations of the screw holes, and then use a center punch to dimple each hole location. Drill a 3/32-inch-diameter pilot hole about 3/4 inches deep for each screw. Fit the hinge, and drive a #6 Phillips screw into each hole to precut a thread for the permanent hinge screws you'll drive later.

c. Flip the two connected frame panel assemblies over so the hinged edges are down, and slip 1/4-inch-thick plywood scraps under the assemblies to keep hinges off the work surface and to steady the screens. Align the

CUT LIST

Part Name	Material	Size (in inches)	Qty.
stile	1 x 2 poplar	3/4 x 1 1/2 x 66	12
lower rail	1 x 8 poplar	3/4 x 7 1/4 x 12 3/4	6
upper rail	1 x 4 poplar	3/4 x 3 1/2 x 12 3/4	6
panel	1/4-inch plywood	1/4 x 15 3/4 x 66	3
short moulding	poplar shelf edging	3/4 x 12 3/4*	12
long moulding	poplar shelf edging	3/4 x 55 1/4*	12

*Miter and cut to fit.



LOWE'S SHOPPING LIST

Lumber

- 12 (6-foot-long) 1 x 2s, poplar
- 1 (8-foot-long) 1 x 4, poplar
- 1 (8-foot-long) 1 x 8, poplar
- 1 (48- x 96-inch) sheet of 1/4-inch-thick birch plywood
- 12 (8-foot-long) 3/4-inch poplar shelf edging

Hardware

- 1 box (1 1/4-inch) Kreg pocket screws (coarse thread)
- 2 boxes (3/4-inch) wire brads
- 1 box 3d (1 1/4-inch) finishing nails
- 3 packages (3-inch) broad loose pin hinges (2 per pack)
- 1 package (#6 x 3/4-inch) flat Phillips-head wood screws
- 2 packages (3/4-inch) nail-on furniture glides
- wood glue
- stainable wood filler



Figure 1

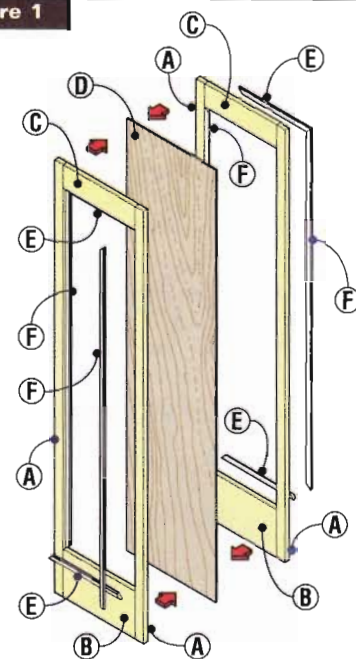
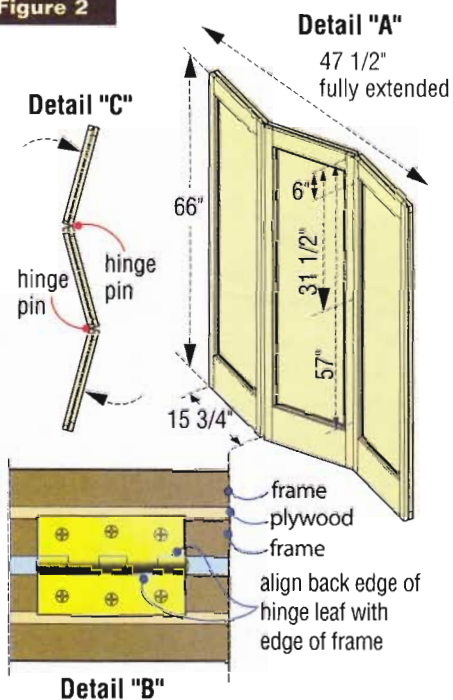


Figure 2



third frame next to the pair (it doesn't matter which side, but keep upper rails at same end) and repeat Steps 5a and 5b to attach hinges to the edges of the center frame and the third frame. Stand the screen up, and unfold to check that it opens and stands properly (see Detail C).

Step 6: Remove hinges, and sand the panels and frames with 100-grit and then 220-grit sandpaper. Finish as desired.

Step 7: Reinstall hinges using the permanent screws included. Nail two furniture glides into the bottom edge of each section, into the end grain of the stiles. Stand screen upright, and check stability before using. **Project #F041 ■**

the right tools

More Tools, More Room

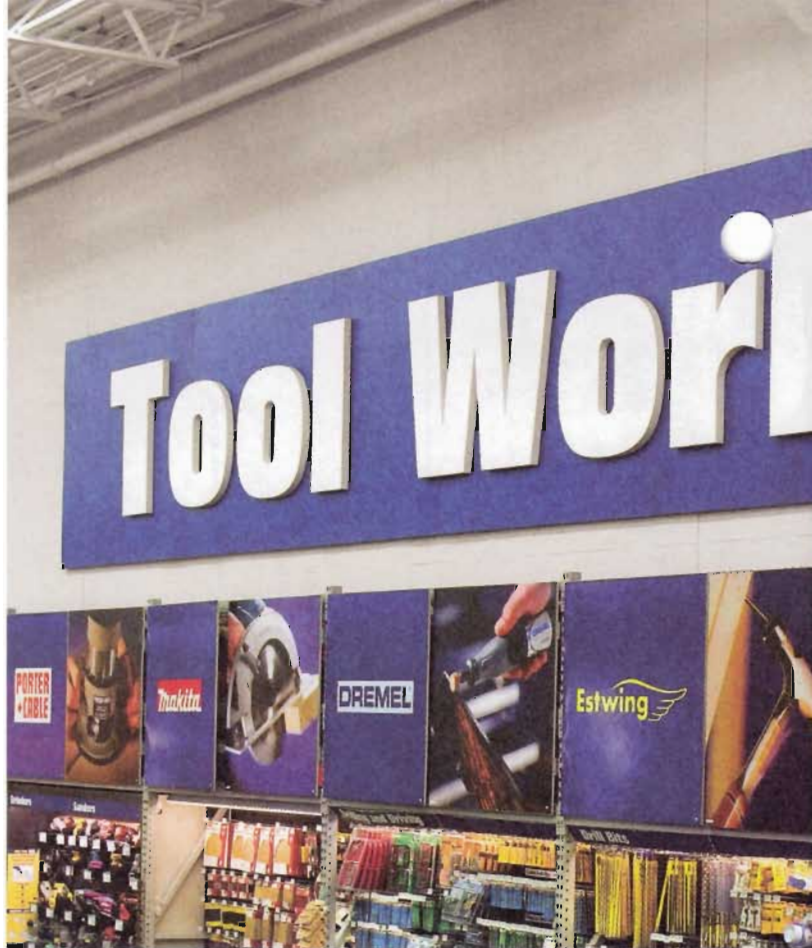
The new Tool World department at Lowe's makes it easier to browse, locate what you need, and pay for items.

Lowe's has been selling tools to do-it-yourselfers and professionals since 1946, but we are still finding new ways to help you quickly get what you need. Just take a walk through the new Tool World department in stores across the country. The aisles are now open-ended and running in the same direction as the rest of the store's aisles. As a result, it is much easier to maneuver through Tool World and locate the equipment you need to help you finish your latest home improvement job. In addition, shelves are lower so that you can spot what you're looking for in the next aisle. So come on in and browse.



Powerful Help

You'll find more of everything in the Tool World aisles these days. However, if you don't see the item you need you can always get it at the Lowe's Special Order Desk. Peruse catalogs to find just the right piece of equipment, or ask the sales staff for assistance.



Serious Selection



Left: Lowe's offers more choices on America's best tool brands. That means we have the DeWalt, Hitachi, Bosch, Skil, and Shop-Vac tools you need—when you need them.



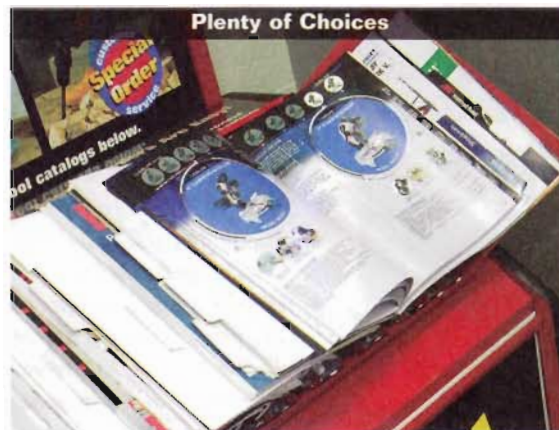
Woodworking Wonders



Sufficient Supplies

You will find enough woodworking tools at Lowe's to fill an entire cabinet, including a large selection of router bits—such as the one pictured above from Bosch, a top name in the business.

This department features a large line of products from numerous brands, including Hitachi. There are more than 30 Hitachi tools on the shelves at Lowe's, along with many accessories, such as their top-of-the-line drill-bit sets.



There are even more tool and equipment choices available to order through product catalogs (above). But we think you will agree that the selection in the store is substantial (left).

For more information about what you can find in the Tool World department, log on to **Lowe's.com** and click on Tools.



You Can Find It

Lowe's gives you wall upon wall of tools to try, and convenient signs point you to the nearby location of the take-home boxed tools as well as their accessories.

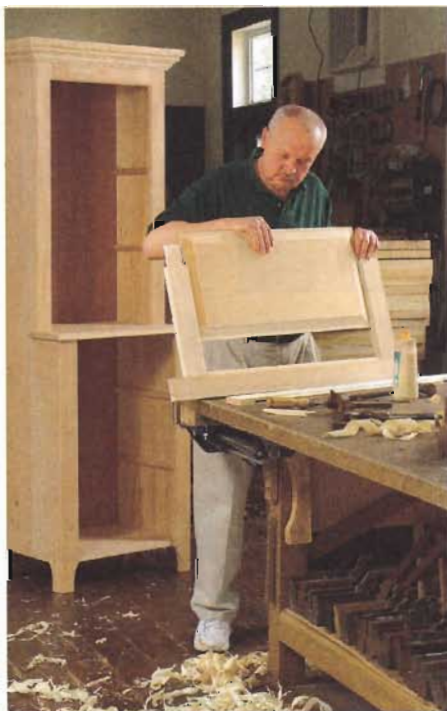
Frame-and-Panel Construction

This method is perfect for large pieces of case-type furniture such as cabinets, bookcases, and armoires, because it keeps the pieces strong and stable.



ABOVE: Solid-wood panels can be used in frame-and-panel construction, but they are more at risk for cupping than plywood.

RIGHT: Raised panels, popular on doors and cabinets, have a practical history. The planed edge was originally used as a lip to fit into a groove in the frame.



The armoire featured on page 4 of this issue uses plywood attached to a frame to construct the side panels and doors, a method that creates strong but lighter weight furniture. When the rails and stiles are faced with cove moulding the piece acquires a traditional frame-and-panel look.

Frame-and-panel joinery was developed to solve the problem of wood movement. A wide panel of solid wood tends to cup across its width over time. So to keep that large panel from warping, traditional woodworkers used a variety of methods, including attaching battens and making "breadboard" ends. For the doors and sides of case pieces such as this armoire, frame-and-panel construction became the preferred method.

Because solid wood has a tendency to move as the humidity changes, panels are floated in grooves on the inside of the frame. If the panels were to be fixed to the frame, the humidity might cause them to split. (An exception to this rule is that in some cases a solid-wood panel will be attached at the top and bottom in the center of the short grain.)

There are variations on this construction strategy that alter the final appearance slightly. The panel can be recessed, as in the armoire project, or flush with the frame. Raised panels, still popular on traditional doors and kitchen cabinets, began as a way to plane down the edges of the panel to create the lip that fits in the groove. In Shaker design, the flat panel was flush to the frame with a slight reveal around the panel.

Plywood is made of layers of veneer glued so that the grain runs in opposite directions, making it much more stable than solid wood. When used in frame-and-panel construction, it actually strengthens the piece. Unlike a solid-wood panel, a plywood one can actually be glued right into the groove during the assembly. A variation is to hold the panel in a rabbet routed into the underside of the frame. The panel can be tacked or stapled straight into the frame, or held in place with a bead.

A plywood panel also can be used to stiffen a case piece from the back. For a bookcase or cabinet, a plywood panel nailed into a rabbeted recess in the back adds strength and rigidity. In a tall bookcase, this is a great way to keep the piece square without compromising shelf depth or adding a lot of weight.

From the editors of *Fine WoodWorking* magazine.

begin with the wood

Smoothing Out Wood Choices

How to choose from precut lumber.

You've pored over the plans and double-checked the list of materials on your latest project. All that is left is to buy wood and start making sawdust. But purchasing lumber can be a real chore for some woodworkers, especially for those who don't have a shop equipped with the tools to create square planks out of rough lumber.

But who says you have to buy rough lumber? Lowe's makes it easy to build your projects by stocking a wide variety of lumber that's already surfaced on all four sides and precut to various widths and lengths. You also will find plywood and other sheet goods cut into handy panels.

Precut boards. Not only will you easily find all of the board dimensions you need in the lumber aisles, but you'll also be impressed by the variety of woods available. Species include pine, Douglas fir, poplar, and red oak. Thicknesses range from 1/4 inch up to 3/4 inch. With widths varying from 2 to 12 inches and lengths running anywhere from 2 to more than 10 feet, you'll be sure to find just the right board for each part of your project. The poplar and red oak planks, which are Weyerhaeuser ChoiceWood, are totally clear and free from defects so that the entire board can be used.

Laminated panels. Another terrific product that can save you a lot of time in the shop is the laminated pine panel. Strips of 3/4- or 1-inch-thick pine are glued up to form panels ranging from 12 to 24 inches in width and varying from 2 to 12 feet in length. Laminated panels are especially handy as tops for tables, benches, and seats—even for workbenches. They are planed absolutely flat, sanded, and ready to use. No gluing, clamping, sanding or planing is required.

Precut sheet goods. Everyone knows how cumbersome a 4- x 8-foot sheet of plywood or particleboard can be, especially in a small shop. That's why Lowe's offers many sheet goods in precut sizes.

Products include AC plywood, hardwood plywood, 1/4-inch hardboard, 1/4-inch pegboard, particleboard, and medium-density fiberboard (MDF). Plywood is available in 1/4-inch, 1/2-inch, and 3/4-inch thicknesses. The panel sizes are 2- x 2-foot, 2- x 4-foot, and 4- x 4-foot. Particleboard is typically 5/8-inch thick and comes in 2- x 2-foot or 2- x 4-foot panels; it's also available in 12-inch-wide shelving.

member profile

Adventures In Scouting

Paula Smith

The members of Girl Scout Troop 1764 began their woodworking adventure the day Paula Smith received an issue of *The Wood Post* that featured a project on building an Adirondack chair. Paula, the troop leader, showed it to her group of sixth-grade girls. They decided to use the proceeds from their cookie sales to buy wood and build the chairs in order to earn their Architecture and Ms. Fix-It badges.

"I really wanted them to do something practical with their hard-earned money," says Paula. "I wanted them to be able to say, 'Look, this is what we did.'"

Raised in a can-do tradition by Scout-enthusiast parents, Paula offered experienced leadership as the troop planned how to build the chairs. "I learned my basic woodworking skills by watching and helping my father. He and I also made lots of neat stuff in Scouts."

The girls spent three meetings making the patterns for the chair parts. After they traced the patterns onto the wood, Paula cut out the parts. Then the girls used power sanders to smooth all the pieces. "They found sanding a bit tedious, but who doesn't," Paula notes.

Meetings were held in Paula's workshop—also known as her garage. The girls gathered there to assemble the chairs; then each picked one to take home.

"Although you might think this would create arguments, the girls cooperated nicely and each ended up with her own handmade chair," Paula says. "When they presented their parents with the chairs at the annual awards ceremony, the parents were amazed and the girls were beaming."

For those who are interested in woodworking with kids, Paula advises, "It's not hard if you're willing to do it with the kids. Patience is key—and have fun while you're building a project."

What's up next for this group? They are planning to build a Colonial-style table and bench for a log cabin in a nearby state park. The project will be part of their community service work toward the Girl Scout Silver Award—the highest award for scouts ages 11 to 14.

"I couldn't have gotten the girls so interested in this project without Lowe's help," Paula continues enthusiastically. "Lowe's and *The Wood Post* were all very much a part of our adventure in woodworking."



Girl Scouts Kirstin Edwards (left) and Courtney Smith pose with their troop leader, Paula Smith.

put it together

Drawer Slides

Get on the ball (bearing) when installing drawers.

One of the more challenging tasks when building a project with drawers is installing them so that they move smoothly. Drawer slides are essential to the installation, and you can select from two basic types: ball bearing and economy. In the case of higher-quality slides, ball bearings between the two halves of the slide create smooth action that lasts a long time. Economy slides, often referred to as Euro slides, utilize polymer rollers between the parts.

Both types can be found with one-way action (drawer opens and closes in just one direction) or two-way (pass-through) slides. The one-way type is used most often, but two-way versions work well for islands, carts, and anything that will be accessed from more than one side.

Slides are typically rated by how much weight they can handle. Most drawers require slides rated to hold either 35 to 70 pounds or 80 to 100 pounds, but if needed, you can purchase heavy-duty slides that can manage up to 500 pounds.

Drawer slides vary on how far they allow a drawer to pull out of the cabinet. A standard-extension version opens the drawer about two-thirds of the way; a full-extension slide extends completely, providing access to all of the drawer's contents.

Most modern drawer slides use a 32mm hole pattern (an internationally-accepted measurement standard for cabinetry) for easy installation in both frame and frameless cabinets. Various coatings and finishes are available, including an epoxy version which resists corrosion in cabinets near water or where humidity levels are high, such as in kitchens and bathrooms.



Drawer slides are usually mounted on the sides of drawers as shown here. But if the drawer is located between other drawers and there is no side cabinet, the slides can be mounted to the bottom instead.

To guarantee a lifetime of bind-free operation select metal drawer slides rated for the proper weight; the ball-bearing type will offer the smoothest long-term operation. To mount them all you'll need is a drill fitted with the recommended bit for making the holes for the mounting screws, a tape measure, a screwdriver, and the installation instructions. ■



We hope you enjoyed your complimentary copy of *The Wood Post*. To receive future issues, absolutely FREE, sign up online at Lowe's.com/Woodworkers, call toll free 1-877-61-LOWES (1-877-615-6937), or send your name and mailing address to Lowe's Woodworkers at the address shown at left.

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Featuring lattice and screens, these doors are a sturdy and attractive complement to the shed itself. (For instructions to build the Garden Shed, see page 8 of the Fall 2005 issue of *The Wood Post*.) Lowe's is happy to bring this information as a [service](#) to you.



Lowe's Shopping List

Lumber*

- 5 (8-foot-long) 1 x 4s
- 1 (10-foot-long) 1 x 4
- 1 (8-foot-long) 1 x 6
- Exterior-grade wood glue
- 1 (48- x 96-inch) sheet privacy lattice
- *Use lumber rated for outdoor use.

Hardware

- 1 (10-foot-long roll) of 36-inch-width, 1/4-inch pattern hardware cloth
- 1 (10-foot-long) roll of 24-inch-width, 1/4-inch pattern hardware cloth
- 1 box (1 1/4-inch) stainless steel painted trim nails
- 1 box (1 1/4-inch) pocket screws (coarse thread)
- 1 box (3/4-inch) wire brads
- 1 box (3/8-inch) stainless steel staples
- 6 (3-inch) broad loose pin galvanized hinges
- 1 (3 1/2-inch) swivel staple safety hasp
- 2 (3-inch) barrel bolts

Tool List

- Table saw
- Miter saw
- Pocket hole jig
- Power drill
- Framing square
- Tape measure
- Hammer
- Nail set

Cut List

Wide Door

Part	Material	Size (in inches)	Quantity
End rail	(8-foot-long) 1 x 6	5 1/2 x 25 1/2	2
Center rail	(10-foot-long) 1 x 4	3 1/2 x 25 1/2	1
Stile	(8-foot-long) 1 x 4	1 1/2 x 73	2
Lattice panel	Lattice	27 x 63 1/2	1
Stile trim	(8-foot-long) 1 x 4	1 1/2 x 65*	2
Rail trim	(8-foot-long) 1 x 4	1 1/2 x 28 1/2*	2
Screen panel	(36-inch-wide) hardware cloth	28 1/8 x 64 1/4	1

*Long point to long point, miter to fit. Rabbeted edge is on the inside of trim.

Narrow Door

Part	Material	Size (in inches)	Quantity
End rail	(8-foot-long) 1 x 6	5 1/2 x 9 3/4	2
Center rail	(8-foot-long) 1 x 4	3 1/2 x 9 3/4	1
Stile	(8-foot-long) 1 x 4	1 1/2 x 73	2
Lattice panel	Lattice	11 1/4 x 63 1/2	1
Stile trim	(8-foot-long) 1 x 4	1 1/2 x 65*	2
Rail trim	(8-foot-long) 1 x 4	1 1/2 x 12 3/4*	2
Screen panel	(24-inch-wide) hardware cloth	12 3/4 x 64 1/4	1

*Long point to long point, miter to fit. Rabbeted edge is on the inside of trim.

How-To Instructions:

General: Set all nails and remove excess glue from exposed wood surfaces. Pre-cut the [rails](#) and [stiles](#).

Step 1: Construct the door frames ([See Figure 1](#)). Use 1 1/4-inch pocket screws and glue to attach the rails flush with the [end](#) of each stile and with the center rail centered on each stile. Check for square.

Step 2: Attach the lattice panels. Center them on the inside opening of each door frame and attach with 3/4-inch wire brads.

Step 3: Cut and attach the lattice trim. Use a table saw to cut 1/4-inch deep by 3/4-inch wide [rabbet](#) along the back [face](#) of the trim stock; this will be the inside [edge](#) of the piece. Place the stile and rail trim over the edges of the lattice panel (with the rabbeted side down); cover the lattice edges. Miter the corners and attach with 1 1/4-inch trim nails and glue.

Step 4: Attach the screen panels. Center the screen panel on the inside opening of the back side of each door and frame and attach with 3/8-inch staples.

Step 5: Attach the doors to the shed and attach the swivel hasp and barrel bolts to the door.

a. Mount the hinges on each door. Place one hinge 6 inches down from the top and

another one 6 inches up from the bottom. Center the third hinge on the door frame. Attach the doors to the shed assembly with the bottom edges flush.

b. Mount the swivel hasp across the inside stiles at the height of the center rail as shown.

c. Mount the barrel bolts across the inside stiles at the top and bottom of the doors.

Shed Door accompaniment to the fall 2005 Wood Post Magazine.
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Was this information helpful? Please [let us know](#) your do-it-yourself experiences. We'd love to hear from you!

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