VOL. 5 NO. 6 • ISSUE 30

WEEKEND WOODWORKING DOWNORKING WOODWORKING WOODWORKING WOODWORKING WOODWORKING WOODWORKING

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FROM THE EDITORS OF WOOD, MAGAZINE

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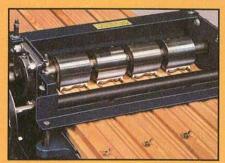
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Editor, Workbench Magazine

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E. D. Holtz, North Carolina





DEAR READER,

Over the last couple of years, we've featured a scrollsaw project in just about every issue of *Weekend Woodworking Projects*®. And the reason for this is simple. You and many other woodworking readers have told us that you really enjoy completing this type of project.

Because of your interest and because we couldn't possibly publish all of the top-notch scrollsaw designs we've found in this publication, we've come up with a new idea we think you're really going to like. It's called *Super Scrollsaw Patterns*™, a six-times-a-year publication loaded with terrific full-sized patterns for your scrollsawing enjoyment. Sound interesting? If so, use the coupon on *page 31* to order a **free copy** of our premiere issue—I'm certain you'll find many patterns to your liking.

In the first issue, we feature 18 projects, including three clocks with 23/8"-diameter quartz mini-movements, a comical elf, six Christmas ornaments, a Nativity scene, two Christmas plaques, three

Thanksgiving decorations, an educational two-layer puzzle for toddlers, and a scrollsawed pen set. Whew! We even had an alphabet and numbers set designed especially for the first issue—you'll reuse these patterns year after year. And as with every project in *Weekend Woodworking Projects*, we build each *Super Scrollsaw Patterns* design before the press rolls—it's our guarantee of quality designs.

We also have lots of helpful information, including tips on selecting scrollsaw blades, choosing woods, transferring patterns, and cutting techniques—everything you need to get started.

CAM Von

Cover photograph: Wm. Hopkins

OUR PLEDGE TO YOU

Prior to publication, we build every project featured in *Weekend Woodworking Projects* step-by-step in our shop. Then, a seasoned team of editors reviews the how-to directions, technical drawings, illustrations, and Bill of Materials of each project to make sure the instructions we provide to you are clear, concise, and complete.

The Weekend Woodworking Projects Staff

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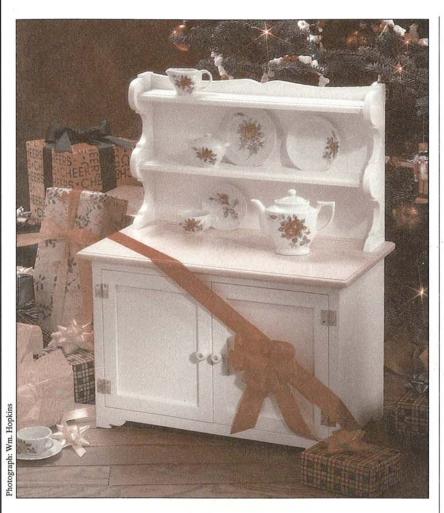
WEEKEND DO THE WOODWORKING NOV. 1992 • VOL. 5 No.6 • ISSUE 30





The perfect gift for a special grandchild

Tea-for-Two Hutch



Home-hobbyist and woodworker Albert
McCaffrey designed his first doll hutch for a
granddaughter's Christmas gift a couple of years
back. And with a little encouragement, he entered a
second hutch in WOOD

magazine's Build-A-Toy

contest. Not surprising, his project became an
instant hit with the judges.

OUR TOY HUTCH BEGINS WITH BASIC CABINETRY

1 Select a ½×11¼×84" pine board and belt-sand both surfaces with 100-grit sandpaper. Using the Cutting diagram *opposite* for reference, lay out the ½"-thick parts on the board. Now, rip and crosscut two sides (A), one bottom (B), one countertop (C), two ends (D), two shelves (E), and one crown (F) to dimensions listed on the Bill of Materials *opposite*. You may edge-glue narrower stock for the wide parts such as the countertop, sides, and bottom.

Mount a ½" dado on your tablesaw, and cut a ½"-deep rabbet along one long edge on both sides (A). With the same saw setting, rabbet one edge of both end pieces (D), stopping the cut ½" from the top on each end as shown on the Upper Cabinet Side View drawing on page 9. Square the ends of these rabbets with a chisel. Now, using double-faced tape, stack the two end pieces face-to-face with the rabbeted edges together.

3 Make full-sized copies of all patterns on page 10. To make a full-sized End pattern from the gridded pattern, first join sheets of paper to form a rectangle about 1" larger than the part. Starting at one corner, scribe 1" squares across the paper. Next, using the gridded patterns as your guide, plot the points where the pattern outline crosses the grid lines. Now, draw a line connecting these points. (We used french curves to draw the curves of the pattern.) If you prefer to enlarge the gridded patterns on an enlarging copier, set the enlargement at the percentage stated on the pattern.

4 Adhere your full-sized End pattern to an end blank, aligning the back edges of the pattern and piece. Scrollsaw the parts to shape, cutting just outside the line. Next, sand the cut edges to the line, remove the pattern, and separate the pieces. (We used a 2"-diameter sanding drum to sand the curved edges, and hand-sanded the remaining edges.)

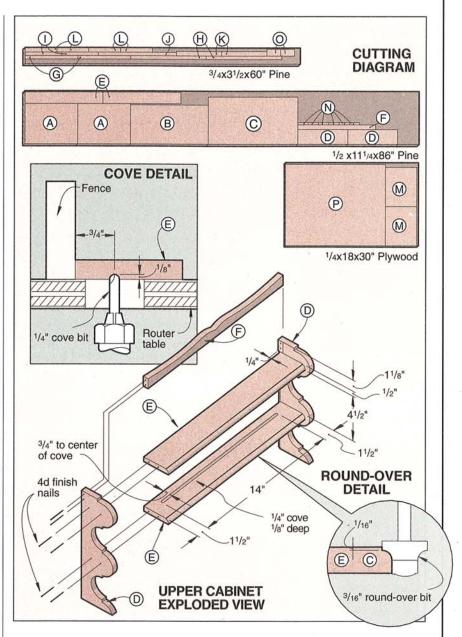
	BILL O	A PROPERTY OF	ALC: NO PERSONS IN	G140.15.10004		
Part		Finished Size*			=:	
		Т	W	L	Matl	ğ
Α	side	1/2"	83/4"	111/2"	Р	2
В	bottom	1/2"	81/2"	17"	Р	1
С	countertop	1/2"	101/4"	191/2"	Р	1
D	end	1/2"	31/4"	107/8"	Р	2
Е	shelf	1/2"	21/2"	17"	Р	2
F	crown	1/2"	1"	17"	Р	1
G	stile	3/4"	3/4"	111/2"	Р	2
Н	rail	3/4"	. 3/4"	161/2"	Р	2
1	cleat	3/4"	3/4"	8"	Р	2
J	spanner	3/4"	1/2"	17"	Р	1
K	door stile	3/4"	1"	97/8"	Р	4
L	door rail	3/4"	1"	615/16"	Р	4
М	panel	1/4"	67/8"	81/2"	PW	2
N	feet	1/2"	3/4"	21/4"	Р	6
0	stop	11/2"	1"	3"	Р	1
P*	back	1/4"	175/8"	213⁄4"	PW	1
	t part marked with se read the instru				truction	on.

Material key: P-pine; PW-plywood

Supplies: 4d finish nails, $34"\times16$ brads, $\#6\times1"$ flathead wood screws, $4-1\times1"$ brass hinges (Stanley 80-3200), 2-34" door pulls, finish.

5 Tape your two copies of the full-sized Crown half-pattern together where instructed to join, and then adhere it to the crown blank. Now, saw the crown (F) trim piece to shape, and then sand the sawed edges.

Chuck a piloted 3/16" round-over bit into your table-mounted router, and set it to cut as shown on the Round-Over detail at *far right*. With it, rout one edge on both shelves, and along the top front and side edges on the countertop. Switch to a 1/4" cove bit, and set it up as shown on the Cove detail *above right*. With it, rout a blind groove in the countertop and one shelf where dimensioned on the Upper Cabinet Exploded View drawing at *right*, and the Exploded View drawing on *page 8*. (We clamped a fence

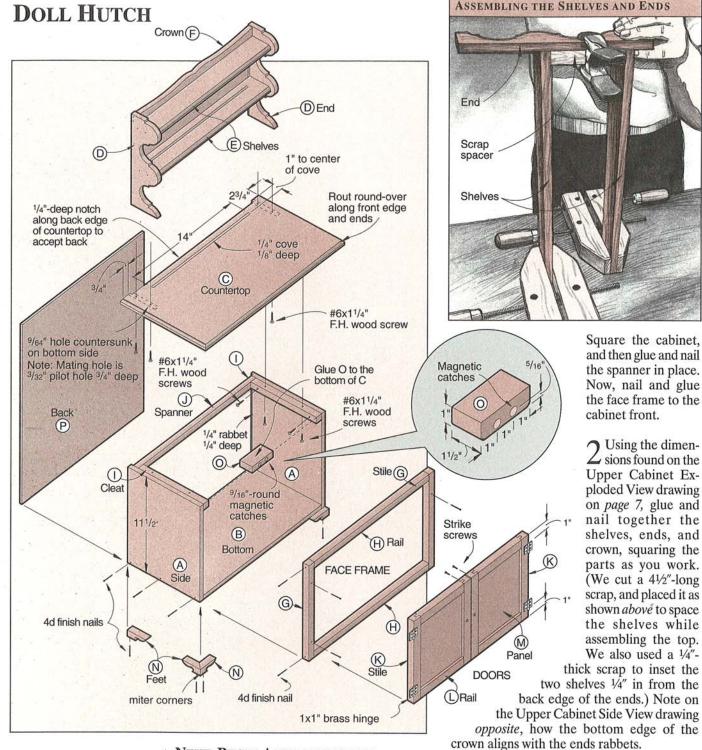


and stopblocks to the router table to control groove position and length.)

7 From 3/4"-thick pine, cut two 3/4×111/2" stiles (G) and two 3/4×161/2" rails (H) for the cabinet face frame. Cut two 3/4×8" cleats (I), and one 1/2×17" spanner (J) from the same stock. Next, drill 9/64" shank holes through the cleats where shown on the Exploded View drawing. Now, glue and screw the cleats to the cabinet sides, aligning them along the top and front edges of the sides where shown.

Continued

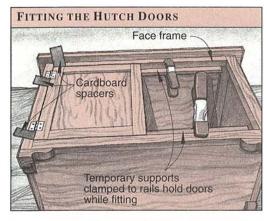
If you wish to add a shelf inside the cabinet, cut it to the same length as the bottom, and as wide as you want it to be.
Then, nail through the sides to hold it in place.

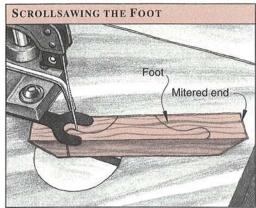


NEXT, BEGIN ASSEMBLING THE CABINET AND DOORS

1 Dry-assemble the face frame, cabinet sides, bottom, and spanner. (We used bar clamps to hold the parts together temporarily.) Place the face frame on the cabinet front to check fit. Adjust the part dimensions if necessary. Glue, nail, and square the face frame. Next, glue and nail the cabinet sides to the cabinet bottom.

3 For the doors, cut four stiles (K) and rails (L) to dimension. Using a ½" dado set, cut a ½"-wide groove centered along one edge of each rail and stile as shown on the Groove detail on page 10. Next, lay the rails on their sides, and form the tenons on each end as shown on the Tenon detail on page 10. (We tested our saw setting by first cutting scrap and test-fitting the trial

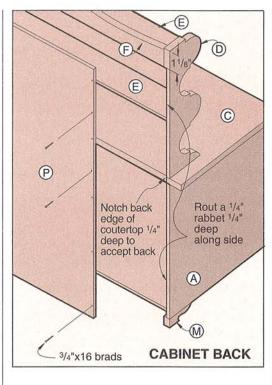


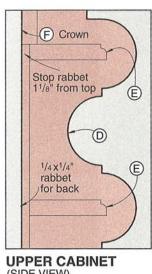


tenons in the grooves. We then adjusted the saw, verified the new setting, and cut the tenons on the rails ends.) Dry-assemble one door frame, measure the opening, and cut two door panels (M) to that size. Finish-sand all door parts. Now, glue, assemble, clamp, and square both doors. Do not glue the plywood panels in the grooves.

Trim the doors, and then fit them into the 4 face-frame opening. (As shown above top, we clamped scrap bars inside the cabinet to hold the doors within the face frame. When trimming, we removed equal amounts of material from each side on both doors. Also, note that we used thin-cardboard strips to evenly space the doors.) Next, attach the hinges to the frame, mark the centerpoints for the hinge screw holes on the door, drill the pilot holes, and then drive the screws. Remove the hinges. Locate and drill holes for your doorknob screws.

5 Make the cabinet feet (N) by first cutting a piece of ½"-thick pine to ¾×15". Next, using the full-sized Foot pattern, trace the outline of six feet onto the piece. (As shown above, we miter-cut the corners first, then scrollsawed the feet [N] to shape.) Sand the sawed edges. Now, glue and nail the feet to the cabinet bottom where shown on the Exploded View drawing opposite.





(SIDE VIEW)

Place the countertop on the cabinet, align the back edge, and center it from side to side. Next, place the upper cabinet on the countertop, and align the back edges. Temporarily clamp this assembly. Place your try square in the back rabbets. Now, using it as a straightedge, scribe lines across the countertop's back edge marking the limits for the 1/4"-deep back notch. See the Cabinet Back drawing above.

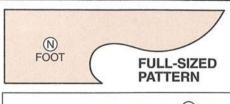
Cut the notch for the back into the countertop, starting and stopping at the lines you just made. (We made this blind-rip cut on our tablesaw by locking the fence 10" from the inside of the blade. We placed the top's front edge against the fence, and carefully lowered it over the saw blade, starting and stopping the cut 11/2" from the marks. We finished the cut with our jigsaw.) Next, locate, mark, and drill the %4" shank holes in the countertop. Now, attach the countertop to the upper cabinet assembly with #6×11/4" flathead wood screws.

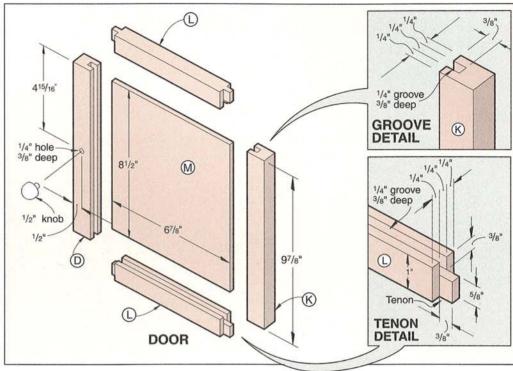
Attach the countertop to the cabinet by driv-O ing the #6×1" screws through the predrilled holes in the cleats and into the top. Make the door stop (O) by gluing two 3/4"-thick pieces faceto-face. Drill the holes as detailed on the Exploded View drawing. Next, insert the round Continued

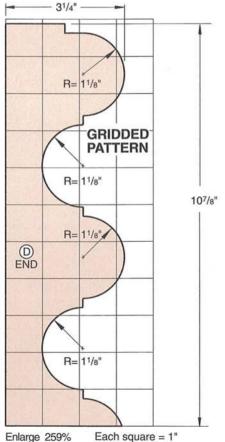
TIP To prevent the nails from splitting the wood when assembling the cabinet, cut the head off a 4d finish nail, and chuck it into your electric drill. Then, use it to pilot the nail holes before you drive the nails.



Project design: Albert McCaffrey, Duluth, Minn. Illustrations: Kim Downing; Project builder: Ron Hawbaker







magnetic catches in the holes, letting them extend 1/16". Center and glue the stop under the countertop and against the face frame.

9 Measure the back opening and cut a ¼" plywood panel (P) to fit. Do not attach it yet.

YOU'RE NEARLY FINISHED: GET OUT THE PLAY DISHES

Set all nails and fill the holes. Finish-sand all parts and joints with 150-grit sandpaper.

Apply the finish of your choice. (We removed L the countertop, and applied two coats of polyurethane to it. We brushed-applied two coats of white enamel paint to the other parts.)

3 Install the countertop, and nail the back in place. Install the door hinges and door pulls. Close the doors and mark the centerpoint on the doors opposite the two magnetic catches. Drill these pilot holes to attach the washers that come with the magnetic door catches.

4 Gift-wrap your handiwork. Then, get ready for a ton of smiles and loads of hugs when your favored recipient rips away the last concealing shreds of wrapping paper.

Enlarge 259%

Carved Intarsia Decoration The Spirit of Christmas

 $T_{wo\ years\ ago,\ Maine\ artist}$ Ellen Herrington sat by her wood stove on Christmas Eve, reflecting on the simplicity and essence of the holiday season. "This design just flowed together," she remembers of that evening. "I'm a Christmas baby myself, so this is my special gift." Ellen's detailing and texturing on each scrollsawed piece imparts a three-dimensional look to her woodcrafts.

WHAT A BREEZE TO PREPARE THE PATTERN

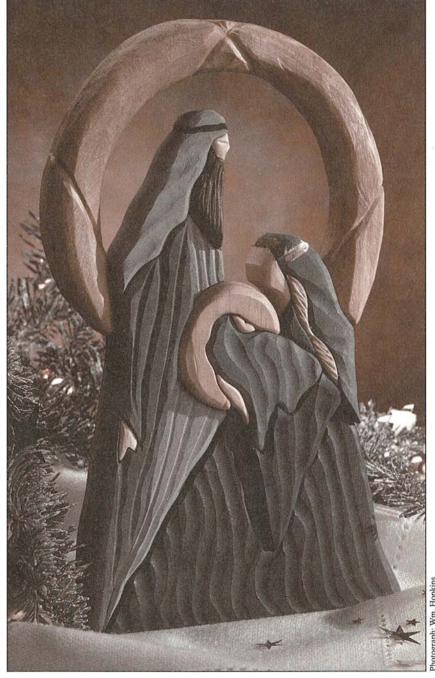
Make two copies of the full-sized pattern on page 13. (We photocopied ours.) Cut out one of the patterns with a scissors, leaving a 1/4" margin around the outside.

2 From 3/4"-thick stock, rip and crosscut a 6×9" rectangle. (We chose heavily grained pine for ease of working and added texture, but basswood or other softwoods will work. We ran the grain vertically.) For the back, cut a same-sized rectangle from 1/4" plywood.

Apply a light coating of adhesive (we used I rubber cement) to the trimmed pattern back, and adhere it to your pine blank, aligning both along the bottom. Tack the second pattern to a piece of plywood to serve as a parts tray.

Temporarily tack the plywood back to the 4 remporarry tack the princes and underside of the pine rectangle. (We drove 1"×17 brads in areas where they wouldn't interfere with the pattern or design.)

Continued



THE SPIRIT OF CHRISTMAS

IT'S TIME TO SCROLLSAW THE NATIVITY PIECES

1 Drill a ¼" start hole inside the pattern where marked. Scrollsaw inside the wreath and around the figures, and remove the interior waste. Next, scrollsaw or bandsaw around the outside of the design. Use a ⅓"-wide blade on your bandsaw or a # 5 blade on your scrollsaw. Separate the plywood back from the ¾" pine.

2 Reduce the back's size by first scribing a line around the periphery, staying about 3/16" inside the plywood's edges. Saw along these lines. Do not saw the bottom edge.

3 If you want guidelines to follow when carving and shaping the parts later, transfer the dashed lines of the pattern. (We used a tracing wheel and pressed hard to mark the wood surface.) Use these lines as guides—you don't have to follow them exactly.

ROUNDING OVER THE PART EDGES

CUTTERS CARVE THE DETAILS QUICKLY

High-speed cutter

4 Cut out the figures, sawing along the solid pattern lines. Place the individual pieces on the second pattern as you cut them out—this will save a lot of time identifying them. Remove the pattern from each piece. Mark the top on each.

Now Comes the Crafty Part

Note: We used a Dremel Moto-Tool equipped with small sanding drums and high-speed cutters to shape and carve the pieces. You may want to experiment on scrap to find the best way to work the tool and cutters. You also can produce similar results with a bench carving knife, a set of gouges or V-tools, and riffler files.

Round over the edges on all parts with a coarse (60-grit) or medium (100-grit) sanding drum as shown at *left*. Return the pieces to the pattern after working on them. As you'll note by studying the illustration on *page 11*, the designer thinned some pieces to add the illusion of depth and dimension. Mary's robe, for example, tapers from 3/4" thick at the hem to 9/16" at the waist. Reduce thickness gradually.

2 To carve the detail in the hair, face, and robes, use a round or pointed high-speed cutter, as shown *below left*. Take light cuts. To deepen, make successive passes. Switch to a fine sanding drum if you wish to widen the cuts further. (For safety and better control, we held the individual pieces on our work surface with double-faced carpet tape.) Sand each piece with 150-grit sandpaper to remove fuzz left by the cutters.

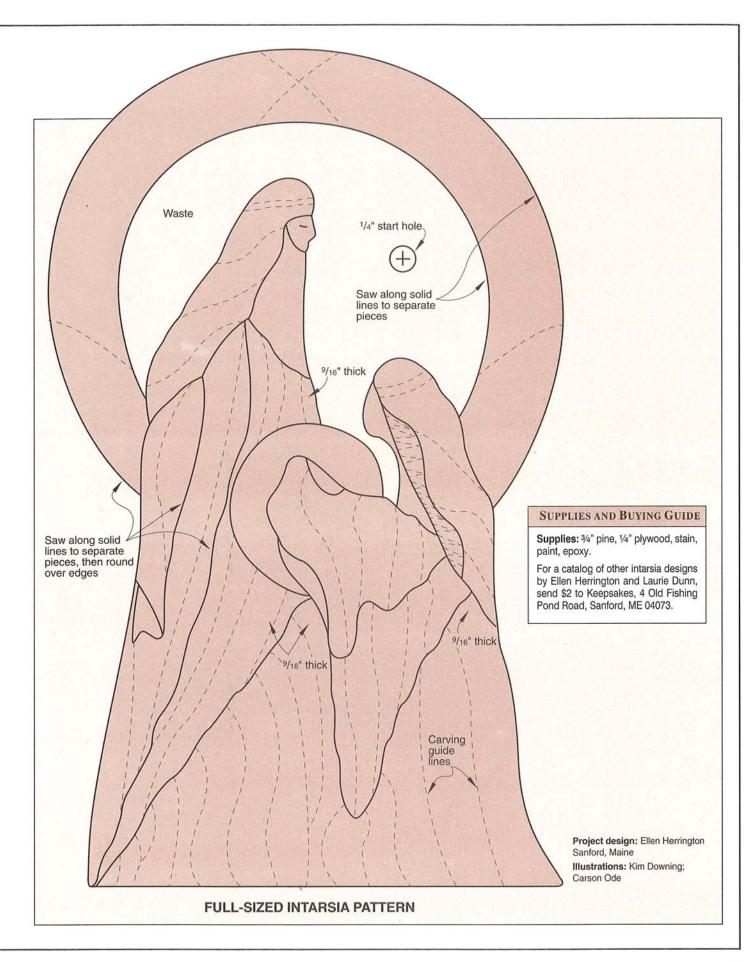
3 Paint or stain the pieces. (We applied light-oak oil stains to the wreath and halo pieces, Minwax natural on the faces and hands; two shades of brown paint for Joseph's beard and Mary's hair; a light gray, charcoal gray, light blue, and colonial blue paint for the robes and headpiece. We prefer easy-to-apply acrylic paints, but oil-based paints also will work. To accent Mary's halo, we used a Sanford Gold Coat slim-tip metallic marker.)

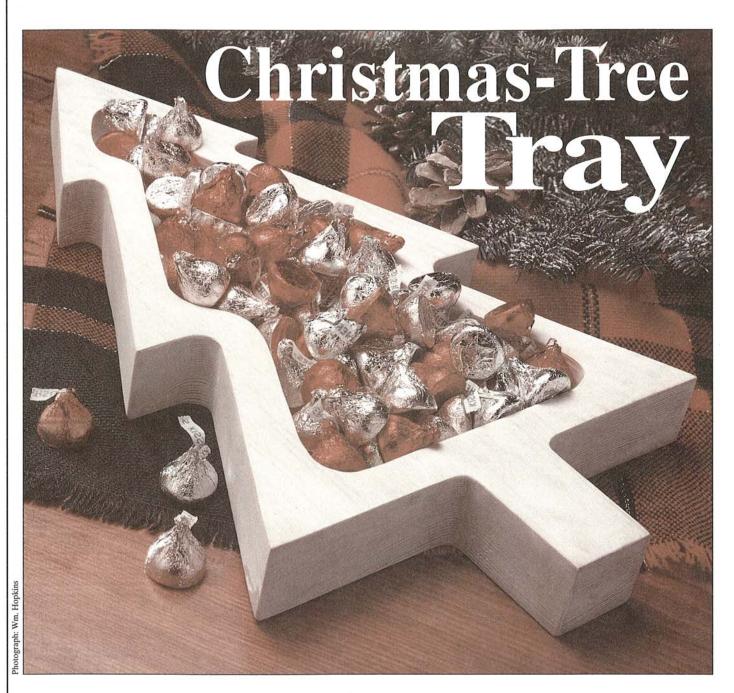
4 Assemble and glue the parts to the plywood back. (We applied 5-minute epoxy sparingly to the back of each piece so it wouldn't squeeze out around the sides.)

5 Seal all surfaces with a coat of shellac, clear Minwax antique oil finish, or satin lacquer. (We used shellac on ours.) ■

To round over the edges on each part, hold the sanding drum at an angle against the edge as shown at right. Start with a coarse drum and medium speed to remove stock fast. To smooth, switch to a fine sanding drum, and finish the edges.

High-speed cutters (like the pointed cutter shown in use at right) allow you to follow the pattern guidelines and carve in details. Simply pull the tool toward you, letting the side of the bit do the work for you. Make shallow cuts, and repeat to deepen the carving. We used a ball-shaped cutter to finish the wide folds in the robes.





Here's a new serving piece you can craft in your shop—and just in time for this season's holiday entertaining. The ³/₄"-deep cavity, easily sculpted with your router, holds plenty of tempting snacks or candy for your guests.

FOR ROUTING EASE, SCROLLSAW TWO TEMPLATES

1 Make three copies of the tree pattern on pages 16-17. (We photocopied ours.) Next, rip and crosscut two 11×18" panels from either ½"-thick plywood or particleboard. Scribe a centerline the long dimension on both panels. Adhere one pattern copy to each panel, aligning the centerlines and the bottom. (We used spray adhesive on the pattern backs.)

2 Select one of the panels for the Bottom template. Drill a ½"-diameter start hole inside the pattern line. Thread a scrollsaw blade through the hole and cut out the interior, sawing just outside the solid, innermost line. Saw just wide of the line, and then sand to the line to make it as smooth as possible. (We sanded the curved areas with a 1"-diameter sanding drum mounted to our drill press.)

3 Make the remaining plywood panel your Side template. Scrollsaw it along the dashed line on the pattern. Sand to the cut line.

Note: We sized the templates to work with the router bits and template guide bushings specified in the Buying Guide on page 16. If you use bits or bushings of different size, you may need to change the opening size of the Side template.

THE EASY WORK LIES AHEAD— JUST ROUT THE TREE

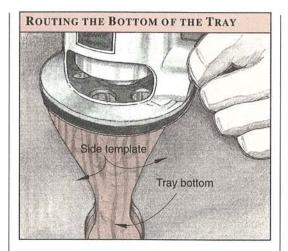
1 Select a clear pine 2×10, and crosscut it to 18" long. Lightly scribe a centerline the length of the best face. Adhere your third pattern to the workpiece, aligning the centerlines and along the bottom.

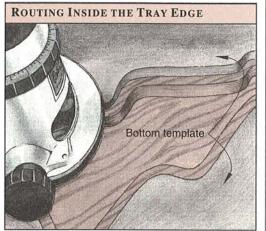
2 Attach a ¾" O.D. guide bushing to your router's baseplate. (The center hole in the baseplate on our router accepts the Porter-Cable 1¾16"-diameter threaded guide bushings. See the Buying Guide on page 16 for a mail-order source for the guide bushings and special router bit. With some routers, you may have to purchase an adapter and modify the base to accept guide bushings.) Next, chuck a "3-cuts-in-1" bit in your router. (See the Buying Guide for a mail-order source for the bit.)

3 Place the Bottom template on top of your workpiece, aligning the centerlines and the bottom. Nail the template to the 2×10. (We drove 4d finish nails at each corner.)

4 Place your router on the template, and set the bit to cut ½" deep. Now, rout the tray cavity as shown at *right top*. When you reach final depth, pass the bit over the bottom several times to make it as uniformly flat as possible.

5 Replace the Bottom template with the Side template. Switch to a 1" O.D. guide bushing and a 3/4" core-box bit on your router. Again,





set the bit to cut 1/8" into your workpiece. Now, keeping the guide bushing against the edge of the template, rout around the edge of the tray as shown *above*. Increase bit cutting depth in small increments until the curvature at the bottom of the side edge meets the tray bottom.

6 Remove the template. Scrape or sand out any unevenness in the routed bottom.

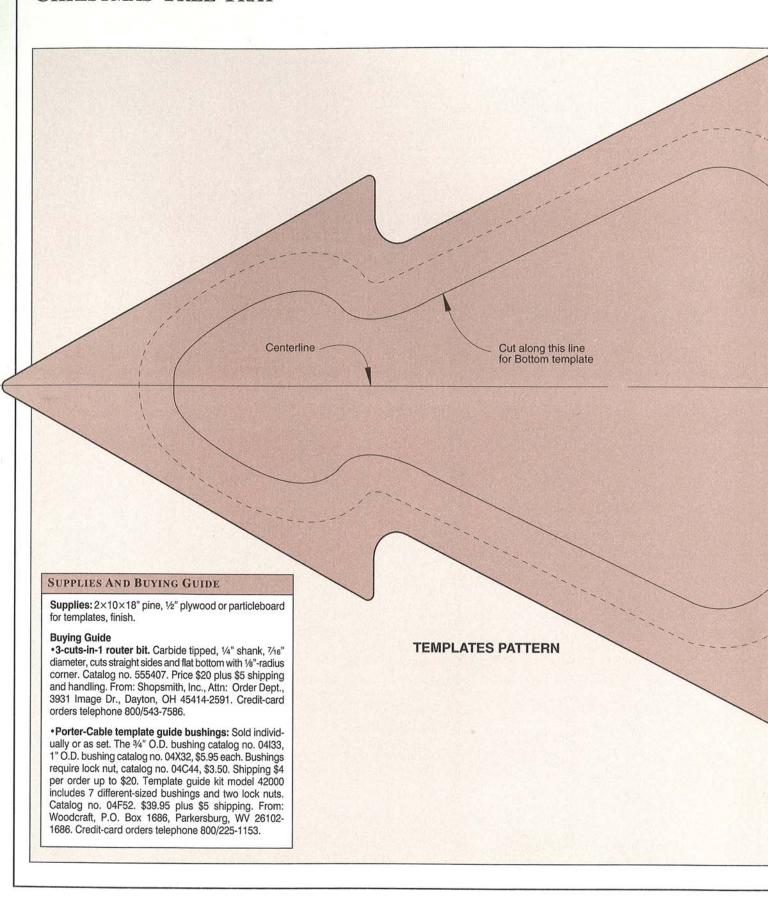
7 Scrollsaw or bandsaw around the outside pattern line to shape the tree. (We used a #9 scrollsaw blade with 11½ teeth per inch, but a 1/8" bandsaw blade with 14 teeth per inch also would work.) Sand the cut edge to the line, and then remove the pattern. Now, finish-sand the entire tree with 150-grit sandpaper.

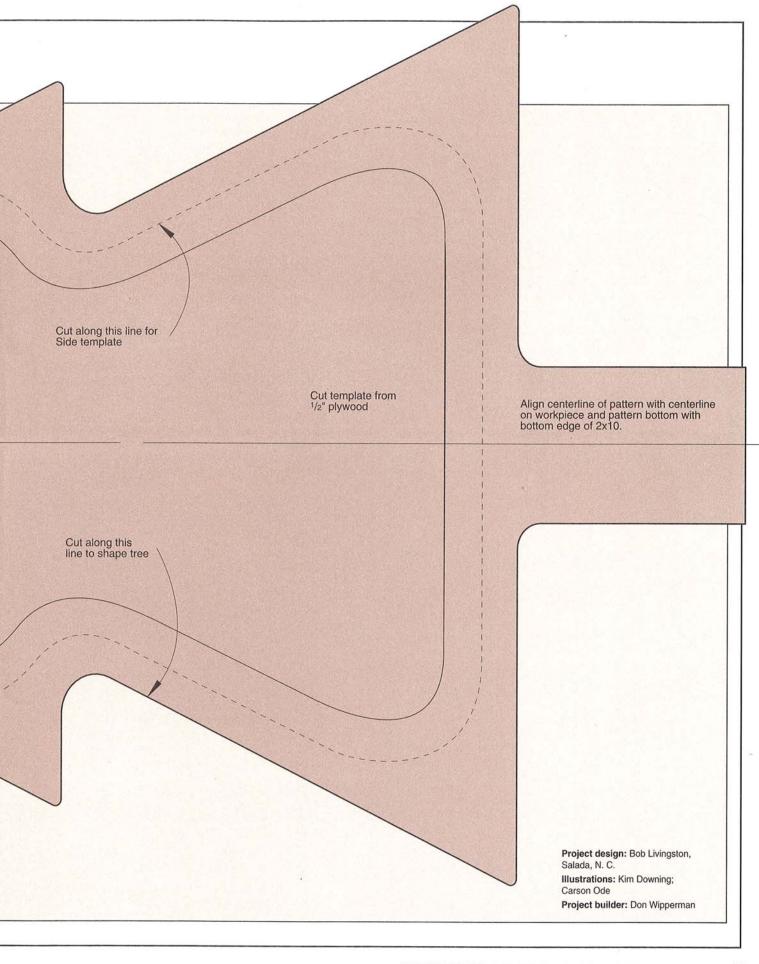
Apply a non-toxic finish of your choice. (We applied three coats of White Lightning brand white stain and sealer to create a white pickle-stain effect. You can buy this product or similar ones at many crafts stores.)

To rout the cavity, make cuts at 1/8" or 1/4" increments with a "3-in-1" router bit until you've cut 3/4" deep. This bit cuts straight sides, and a smooth bottom. Work slowly for best results. You can scrape or sand the bottom to finish smoothing the routed surface.

By switching to the Bottom template, a 1" O.D. bushing on your router base, and a 3/4" corebox bit, you'll remove just enough stock from the side walls to form a gentle curve where the side meets the tray bottom.

CHRISTMAS-TREE TRAY







Three-Dimension Invention

with a twist

Ornaments Usher in the holiday season with three interlocking ornaments you can scrollsaw in your shop. Then, call on an old friend-Rit dye—to introduce a little color to your projects.

PUT YOUR SCROLLSAW TO WORK ON THIN PLYWOOD

Copy the patterns opposite. (We photocopied ours.) Cut out the patterns, leaving a 1/4" margin around the outside. Make two copies of the star pattern and join along the centerline.

2 Saw 4" squares from 1/8"-thick Baltic birch plywood for the heart and star; 41/2" squares for the snowflake. If you enlarge the patterns, cut correspondingly larger squares. (We stackcut six of each ornament at one time.)

> 3 Apply a light coat of adhesive to the back of each pattern copy, and then adhere each one to the face of a square. Make stacks of squares of each size and place a patterned square on top of each stack. Drive 3/4"×17 brads or 4d finish nails through the waste areas to hold the stacks together. To avoid tear out, adhere a backup square or scrap piece to the bottom of each stack. (We used hotmelt glue.)

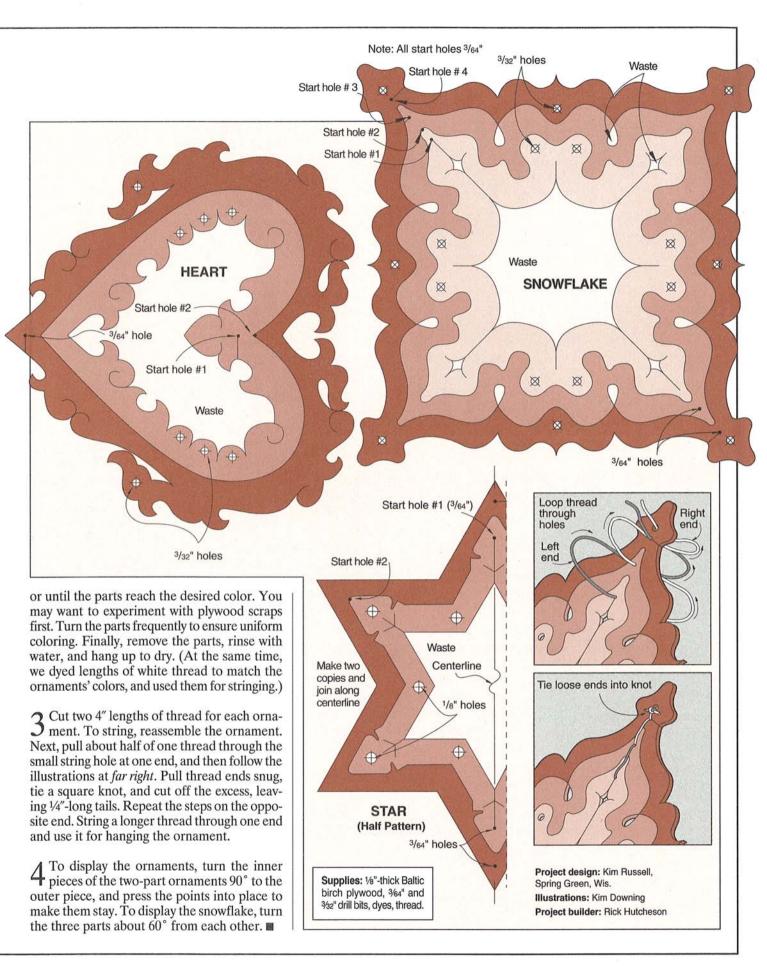
Using your drill press, drill the start holes, 4 string holes, and decorative holes through the stacks where instructed on the patterns.

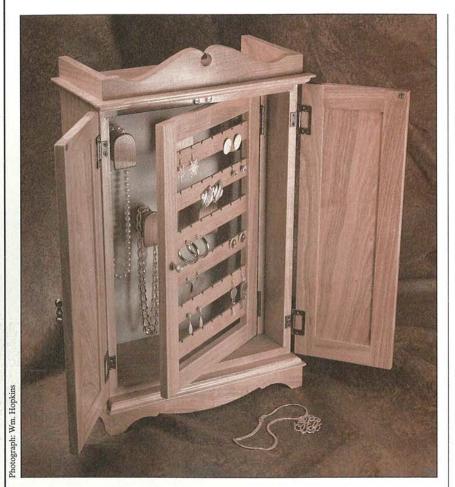
To cut out the star, thread your scrollsaw 5 blade through start hole #1, and saw along the inside line to remove the waste. (We used a #5R reverse-tooth blade with 121/2" teeth per inch.) Cut into and back out of the stop cuts in each point as you saw around the inside. Next, insert the blade through start hole #2, and cut between the two stars. Saw around the outside of the star. Cut the slits leading from the 3/64"string holes to the star edge.

6 Follow the same procedures to cut out the heart and snowflake. Note the additional entry hole on the three-part snowflake.

HAVE FUN DYEING, TYING

- Separate the plywood layers. Remove the paper patterns, and lightly sand all pieces.
- 2 Select and mix your dyes for each ornament. (We mixed 1 cup of liquid Rit dye to two cups of hot water.) Pour the dye mixtures into flatbottom pans. Tie a thread to each piece, place them in the dye baths, and let set for 10 minutes





Showstopping Showcase

If you doubt it, ask any woman. She'll tell you it's no fun having to sort through a disorganized drawer while trying to find the right necklace or pair of earrings, especially if she happens to be running late. You can end the last-minute commotion and come out looking great yourself by presenting this stylish jewelry cabinet to someone special.

THIS JEWEL OF A PROJECT BEGINS WITH A BASIC CASE

1 From ½"-thick stock, rip and crosscut two sides (A) and two plates (B). Use the dimensions listed on the Bill of Materials on page 24. (We selected ½" cherry for the cabinet parts. If you can't buy the wood of your choice in this thickness, plane or resaw thicker stock.) See the Cutting diagram on page 25 for how we laid out and cut the parts from our stock.

2 Saw a ¼" groove ¼" deep and 2¾" from the front edge in both sides where shown on the Exploded View drawing on page 25. Next, cut ½" rabbets ¼" deep on the ends of both side pieces. Now, cut a ¼"-wide rabbet ½" deep along the back inside edges of the side pieces and the top and bottom plates to accommodate the back. Finish-sand all pieces.

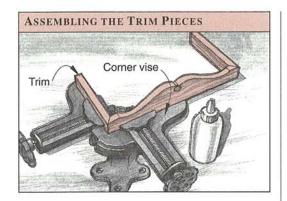
3 To mount the magnetic catches, locate and drill two ²¹/₆₄" holes ⁹/₁₆" deep into the front edge of the top plate. See the Buying Guide on page 24 for a mail-order hardware source.

4 Glue, assemble, clamp, and square the plates in the end rabbets. Wipe off glue squeeze-out with a damp cloth. Later, remove the clamps and sand the joints flush.

5 Rip and crosscut a top and bottom (C) to dimension. Next, rout the front and side edges on both parts with a roman-ogee bit. Finish-sand the pieces.

Note: We sized the top and bottom (C), and routed it with a 5/32" piloted roman-ogee bit (Porter-Cable #43126) to create the reveal dimensioned on the Trim Profile detail opposite top. If you use a different bit, the cuts may not be the same, and the pieces may require resizing to maintain the same reveal. To determine the new size, start with a scrap 1/4" larger than the size indicated on the Bill of Materials. Rout the front and one side. From that, determine the initial size needed to produce the 1/8" reveal with your router bit. If you change the size of the top and bottom much, you also may have to alter the length of the top trim and base parts.

Cut two ½×5/8×15¼″ stops (D). Trim their length to fit inside the cabinet. Next, saw a ½×½″ groove down the center on one 5/8″-wide face of both. Cut two ½×¼″ splines (E) to fit the stop grooves. Finish-sand the pieces. Insert



the splines into the stop grooves, and then into the grooves in the cabinet sides. Now, dry-clamp them in place.

7 Make two copies of each pattern on page 24. Tape the matching halves together to make full patterns. Next, cut a piece of ½" stock to 2¼×12" and another to 1×12" for the top trim. Adhere the Top Front pattern to the 2¼"-wide piece. Drill the ½"-diameter hole where marked, and then scrollsaw the piece to shape. Miter-cut the ends. Miter-cut both ends of the 1×12" piece for the top sides (G), and crosscut a 5¾" length from each end. Finish-sand these parts, and glueioin them as shown above.

8 Turn the top (C) routed-edge down, and center the assembled trim on it. Mark centerpoints for the screw holes on the top, and then drill and countersink 5/16" shank holes into the underside. Glue and screw the trim to the top.

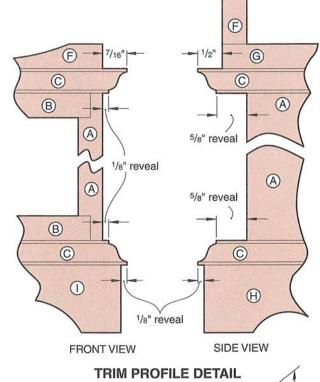
9 Using the Base Front and Base Side patterns, follow the same procedures to cut out, assemble, and attach the base (H, I) to the underside of the bottom (C), routed edge facing up. Set both assemblies aside for now.

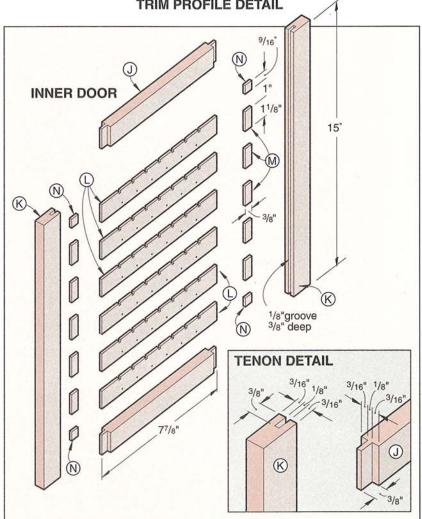
THESE MORTISE-AND-TENON DOORS GO TOGETHER WITH EASE

1 Cut two rails (J) and two stiles (K) from ½"thick stock for the inner cabinet door.

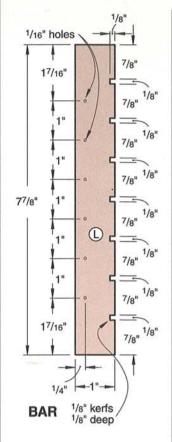
2 Cut a ½"-wide groove ¾" deep centered along one edge of both door stiles as shown on the Inner Door drawings at *right*. Next, cut tenons on the ends of both rails as shown on the Tenon detail. (We mounted a ¾" dado set on our tablesaw and elevated it ¾16" to make the

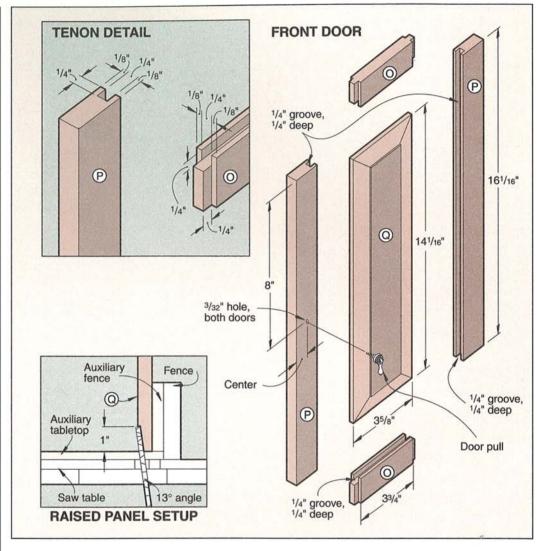
Continued





SHOWCASE





Feel free to modify the earring bars, or design your own. For example, you may want to add more holes. Widening and deepening some of the notches may allow them to hold a wider variety of earrings.

cheek cuts. We tested all of our saw settings on same-sized scrap first, made adjustments if needed, verified the new saw settings on scrap, and then cut the rail tenons.)

3 To make the earring bars (L), rip and crosscut two 3/4"-thick pieces of stock to 1×77/8". Lay out the bars as shown on the Bar drawing above left. Next, tape the two pieces side by side, drill the 1/16" holes where dimensioned, and saw the 1/8"-deep kerfs where marked. Now, separate the pieces, and carefully rip three 1/8"-thick strips from each piece. Finish-sand the strips.

4 From 1/8"-thick stock, cut the bar spacers (M, N) as dimensioned on the Inner Door drawing on page 21. Finish-sand these parts. Test-assemble the door. If you need to, shorten the

%16"-long spacers (N) so that the rails outer edges align with the ends of the stiles. Now, glue, assemble, clamp, and square the door as shown on the Inner Door drawing.

5 Cut four door rails (O) and four stiles (P) from ½"-thick stock. Using dimensions on the Tenon detail *above*, cut the ¼" grooves ¼" deep into one edge of each stile and rail. (We used a ¼"-thick dado set.) Now, lay the rails on their sides, and cut the tenons on the ends to fit the ¼"-wide stile grooves.

6 For the raised panels (Q), select two similar pieces of ½"-thick stock. Rip and crosscut them to size. (To accurately size the raised panels, we first dry-assembled one door frame and measured the opening.)

7 Set up your tablesaw as shown on the Raised Panel Setup drawing *opposite*. Bevel-cut all front edges on both panels. (We adjusted the fence until the resulting panel thickness fit freely in the door stile and rail grooves.) Now, finish-sand the door parts.

8 Glue, assemble, and clamp the two front doors. Let the panels float freely in the grooves—do not apply glue in the grooves. (We assembled two rails and a stile, inserted the panel, and then added the remaining stile. To hold the doors square, we made the simple jig shown at right, and clamped the doors in it. After checking each door for square, we clamped a bar across them to ensure they remained flat.)

9 Measure the inside of your case. Cut a piece of 1/8"-thick hardboard to that size less 1/8" (both dimensions) for the false back (R). Cut the cabinet back (S) from the same material to fit in the rabbet you cut into the back edge of both sides and the top and bottom plates.

NOW, MAKE THE NECKLACE RACK

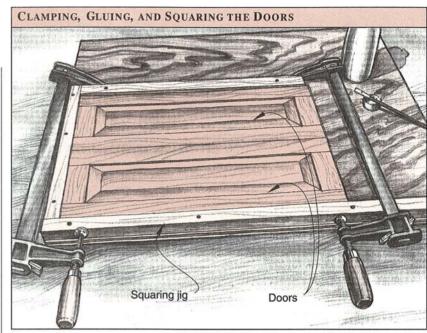
1 From 3/4"-thick cherry scrap, cut a 11/2×12" piece. As shown on the necklace Holder detail at *far right*, rout or sand a 3/8" radius on one edge to round over the piece. Next, finish-sand the piece and cut five holders (T) from it.

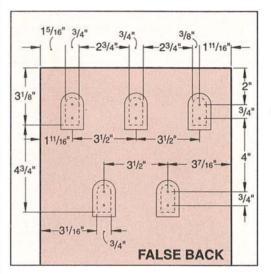
2 Following the same procedures, make five 1/4"-thick cherry flanges (U) to cap the ends of the holders. Now, center, glue, and clamp a flange to one end of each holder.

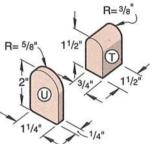
3 Using dimensions on the False Back drawing at right, lay out the positions for the necklace holders on your false back. Mark the screw-hole centerpoints. Next, clamp the holders in place, and then drill the shank and pilot holes into each holder from the back side. Letter each holder so you can remount it in the same place on the false back after finishing.

You're Almost There: Just Finish and Assemble

1 Fit the inner door between the stops (D). Drill pilot holes and attach two non-mortise hinges to the right stop, starting 13/16" from each end. Next, remove the stop from the cabinet and attach the door to it. (We countersunk the holes in all hinges so the screw heads would fit flush







HOLDER DETAIL

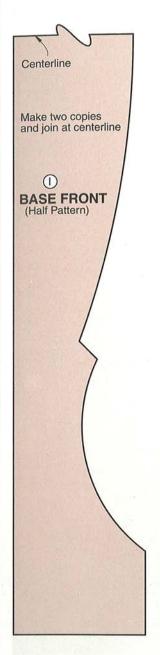
with the hinge plate. We also shortened the screws for all door hinges to 3/8" long.) Position the inner door in the case, and close it so the front aligns with the stop. Now, cut a 1/8×1/2×1" bumper from scrap. Glue it to the underside of the top plate and against the inner door to act as a doorstop.

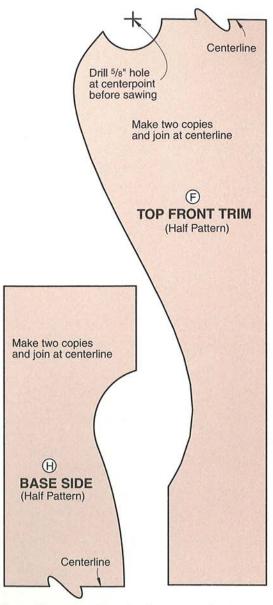
2 Fit the front doors to the case. (We trimmed our doors 1/8" shorter than the cabinet, and trimmed the edges [uniform amounts from each edge] to provide 1/16" clearance between them.) Attach the hinges to the doors starting 11/4" from the top and bottom edges. Next, center the front doors in the cabinet opening, mark the centerpoints for the hinge screws on the inside, and drill the 1/8" pilot holes.

Continued

We found that the door hinges provided by the mail-order supplier were so stiff that no catch was needed to hold the inner door closed. If you used different hinges, and if the door doesn't stay closed, we suggest you make a larger doorstop and install a round magnetic catch in it to hold the door closed.

SHOWCASE





3 Glue the splines in the grooves in the two stops (D), and then into the grooves in the cabinet sides. Clamp the stops, and wipe off any glue squeeze-out with a damp cloth.

4 Glue and screw the top/trim subassembly to the top plate, and the bottom/base subassembly to the bottom plate.

5 Apply the finish of your choice to the case, doors, and necklace holders. (We left the cherry unstained, but applied one coat of sanding sealer and then two coats of clear lacquer. We sanded each coat after it dried thoroughly with 320-grit sandpaper.)

BILL OF MATERIALS									
Part		Finished Size			zi.				
		Т	W	L	Matl	Oty.			
Α	side	1/2"	51/4"	161/8"	С	2			
В	plate	1/2"	51/4"	11"	С	2			
C*	top/bottom	1/2"	61/4"	121/2"	С	2			
D*	stop	1/2"	5/8"	151/16"	С	2			
E*	spline	1/8"	1/4"	151/16"	С	2			
F*	trim	1/2"	2"	111/2"	С	1			
G*	trim	1/2"	1"	53/4"	С	2			
H*	base	1/2"	13/8"	61/8"	С	2			
1	base	1/2"	13/8"	121/4"	С	1			
J	rails	1/2"	11/8"	77/8"	С	2			
К	stile	1/2"	11/8"	15"	С	2			
L	bar	1/8"	1"	77/8"	С	6			
М	spacer	1/8"	3/8"	11/8"	С	10			
N	spacer	1/8"	3/8"	9/16"	С	4			
0	rail	1/2"	11/4"	33/4"	С	4			
P*	stile	1/2"	11/4"	161/16"	С	4			
Q*	panel	1/2"	35/8"	141/16"	С	2			
R*	false back	1/8"	103/8"	15"	НВ	1			
S*	back	1/8"	11"	151/2"	НВ	1			
Т	holder	3/4"	11/2"	11/2"	С	5			
U	flange	1/4"	11/4"	2"	С	5			

*Parts marked with an * are cut to final size during construction. Please read all instructions before cutting.

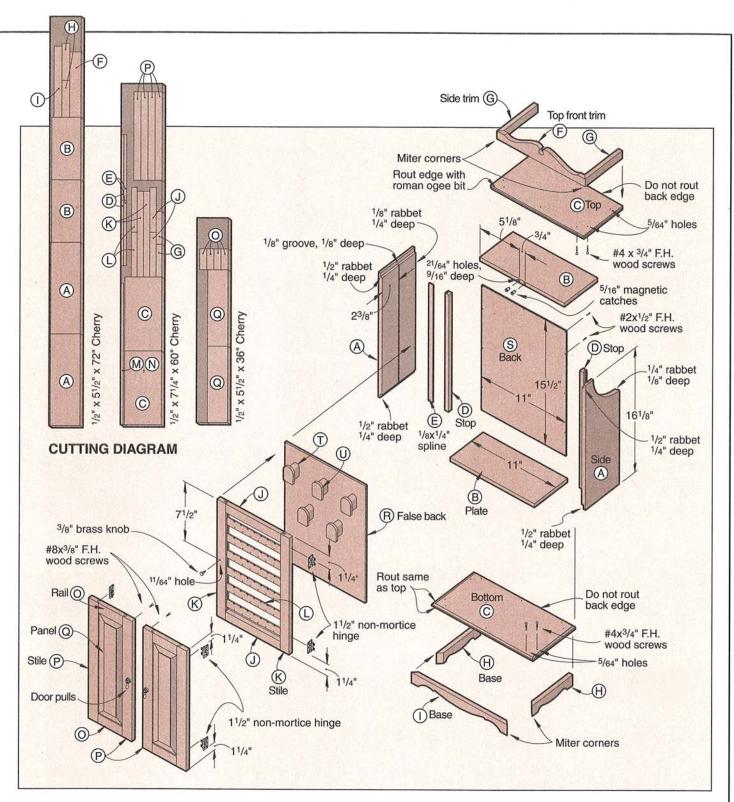
Material key: C-cherry; HB-hardboard

Supplies: $\#2\times1/2"$ -, $\#8\times3/6"$ -, and $\#4\times3/4"$ flathead wood screws, velveteen fabric, finish.

Buying Guide

• Hardware kit: Includes 3 pair non-mortise hinges, 1 round brass knob, 2 door pulls, 2 magnetic catches. Order kit no. 71173. Price: \$18.95 ppd. From Klockit, P.O. Box 636, Lake Geneva, WI 53147. Telephone: 800-556-2548.

Cut a piece of velveteen fabric approximately 2" wider and 2" longer than the false back. (Ours measured 12½×17".) Center it on the front of the hardboard, wrap the excess around the back's edges, and tape or glue the fabric on the back side. If you prefer a soft-cushion look, cut a piece of ½"-thick sponge foam to the same size as the false back, and sandwich it between the fabric and the hardboard.



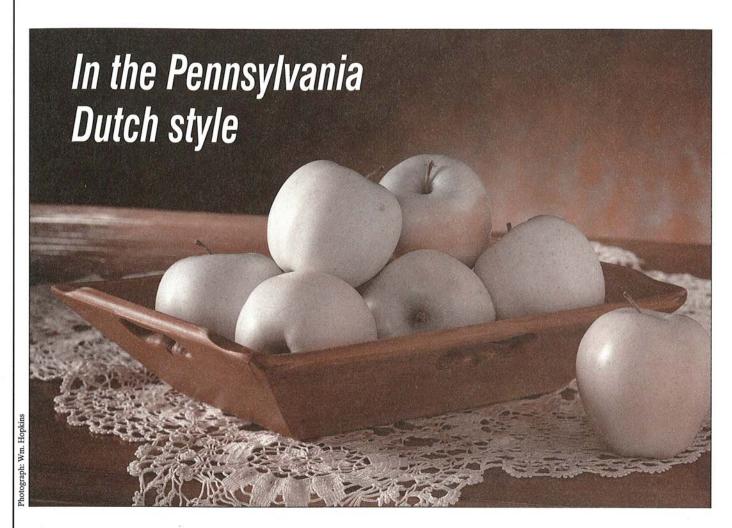
7 Using the holes drilled previously, screw the necklace holders to the front of the false back. Attach this assembly to the cabinet's back panel. (We used several large beads of hotmelt glue to adhere the two backs.) Now, place the back in the rabbet, and then drill 3/32" shank holes in the back and 1/16" pilot holes into the cabinet. Countersink the holes, and then drive #2×1/2" screws to attach the back.

Attach the hinges to the doors, and then screw them to the cabinet. Attach the door pulls. Insert the magnetic catches in the holes in the top plate, letting them extend the thickness of the hinges. Mark the magnet centerpoints on the inside of each door. Drill and countersink the holes. Drive a #8×3/8″ flathead wood screw into each hole. Adjust the screws' depth so the doors fit flush when closed. ■

Project design: Bob Colpetzer, Clinton, Tenn.

Illustrations: Roxanne LaMoine; Carson Ode

Project builder: Ron Hawbaker



Traditional AppleTray

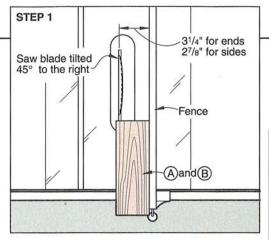
Our thanks go out to Jack Robinson, who scaled down an early 19th-century Pennsylvania Dutch apple tray to these appealing proportions, and agreed to share it with other readers. By relying on our three-step cutting drawings and a handy assembly jig, you can make plenty of these in time for holiday giving.

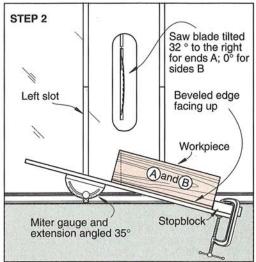
MAKE THE SIDES AND ENDS FIRST

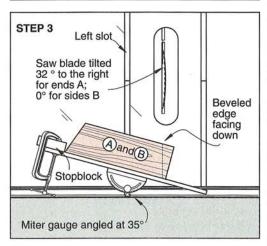
1 Select a piece of 3/8"-thick stock measuring at least 71/4×36". (We planed 1/2"-thick pine to this size, but you can resaw it, too. See the Cutting diagram for how we laid out our stock.) Sand both surfaces with 150-grit sandpaper. Crosscut an 8" length from the piece and set it aside for the bottom. Now, cut two 12" blanks for the end (A) pieces, and two 14" blanks for the side (B) pieces.

Note: If you intend to make more than one tray, we suggest you group parts for each operation.

2 To shape the end (A) and side (B) pieces as shown on the End and Side drawings opposite, set up your saw as shown in the Step 1 drawing of the 3-Step series opposite. Lock the rip fence 3½" from the saw blade, and bevelrip the bottom edge of both 12"-long end

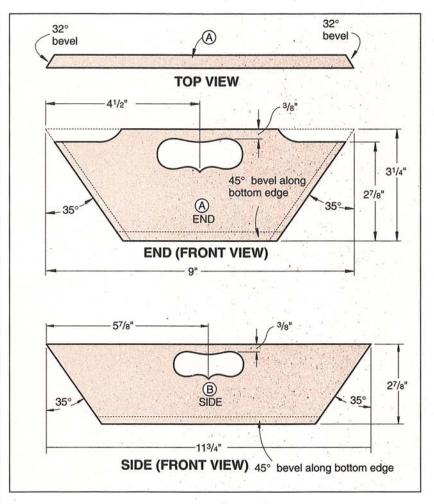






pieces. Reset the fence to 21/8". Bevel-rip the bottom edge of both 14"-long side pieces.

3 Set up your tablesaw as shown in the Step 2 drawing above. (We attached a 30"-long wood extension to our saw's miter gauge. Next, we tilted the saw blade to 32° from vertical, and set the miter gauge to cut at a 35° angle as shown. If your saw blade tilts to the left, place the miter gauge in the slot to the right of the blade, and angle the miter gauge 35° in the opposite direction.)

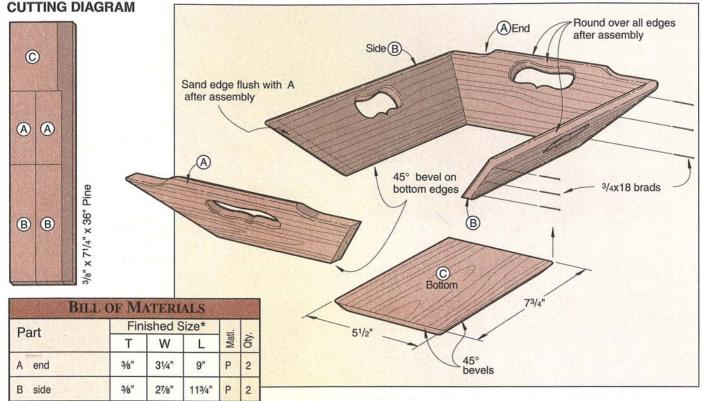


4 Place an end piece on the saw table with its beveled edge against the miter gauge extension and facing up (visible). Bevel-miter the end. (We clamped a stopblock on the extension and against the piece to prevent it from moving while sawing.) Cut the second end on the remaining end piece the same way. (To prevent errors, we marked the bevel angles on the ends of each piece so we could check that the cuts would be correct before sawing.)

5 To bevel-miter the second end of both end pieces, set up the saw and position the work-piece as shown on the Step 3 drawing (beveled edge faces away from the miter-gauge extension and is not visible). Do not change blade angle or miter-gauge setting. Move the stop-block to the opposite end of the miter-gauge extension, and clamp it 9" from the blade. Make the cut. Saw the second end piece the same way.

Continued

APPLE TRAY



Part marked with an * cut to final size during construction. Please read all instructions before cutting.

51/2"

73/4"

Material key: P-pine

C* bottom

Supplies: 3/4" × 18 brads, finish

Buying Guide: Cohasset Colonials oil-based paint. Available in 10 colors. \$20 per quart ppd. Cohasset Colonials, Cohasset, MA 02025. Phone 800/288-2389.

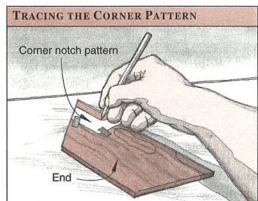
On our first prototype, we cut the corner notches before assembling the tray. But, this looked terrible because the notches weren't parallel to the base. On our second try, we assembled the tray, and then power-sanded the notches with a sander band chucked in a **Dremel Moto-Tool.** Finally, we hand-sanded all tray edges for a handmade appearance.

To miter-cut the side pieces (B), set up your saw as shown on the Step 2 drawing, except return the saw blade to vertical (0° tilt). (Note that we miter—but do not bevel—the ends of the side pieces.) Place the beveled-bottom edge of one side piece against the mitergauge extension and facing

down. Clamp the stopblock to the miter-gauge extension to prevent the piece from creeping. Now, miter-cut the piece. Miter-cut the second side piece to the same length.

7 To miter the second end of each side piece, follow the saw setup shown in the Step 3 drawing but with the saw blade vertical. Move and clamp the stopblock 11¾" from the blade. Next, place the beveled bottom edge away from the miter-gauge extension—its mitered point against the stopblock and the beveled edge facing up. Make the cut. Repeat this step on the second side piece.

8 Copy the full-sized Handle cutout pattern opposite, onto heavy paper. Cut out the pat-



tern. Center your pattern 3%" down from the top inside edge of each end and side piece. Trace around the pattern. Next, drill a 1/4" start hole in each handle opening, and then scrollsaw them to shape. Sand the cut edge if necessary. Now, copy the Corner Notch pattern *opposite*, position it on the top of each end piece as shown *above*, and trace around it.

ASSEMBLY WILL BE A BREEZE WITH OUR SIMPLE JIG

1 Construct the jig shown opposite top. Insert one end piece and one side piece into the jig so the end butts the side as shown on the

ASSEMBLY JIG 3/4" stock Block (A),(B) Base Block 45° bevels 2" Block Exploded View drawing. Next, apply glue to the end piece, and push it against the side piece.

Tape the pieces together until (SECTION VIEW) the glue sets. Remove this assembly and drive 3/4"×18 brads through the sides and into the ends. (We held it with a vise while nailing.) Assemble the second side and end the same way. Finally, glue and nail both corner assemblies together.

2 Turn the tray upside down and measure the bottom opening of the tray. From the 3%thick piece you set aside at the beginning, roughcut a piece for the bottom (C) 1/8" larger than the measured opening. Glue and nail the bottom to the box. Now, sand the bottom edges flush with the box sides and ends. Set all brads and fill the holes.

3 Belt-sand the ends of each side until they align flush with the ends. Next, sand the corner notches until they align flush with the top edge of the sides. Use the Corner Notch lines you scribed on the ends of each end piece as guides. Now, sand a gentle round-over on all edges. If you desire to give your tray a distressed appearance, apply the markings now. (We found that a ring of old keys, length of chain, or nails works well.)

Finish your apple tray. (We brushed on 4 Cohasset Colonials red oil-based paint. Antique white, green, blue, and mustard also were popular colors of the period. To allow the grain to show through, we wiped off excess paint after a few minutes. After the paint dried, we wiped on oil-based walnut stain, let it

> wiped off the excess with a paper towel. When wiping, we left more stain in the inside corners so they would appear darker. Before the stain dried completely, we stippled the surface with a dry brush. After the stain dried, we sanded all surfaces lightly, heavier along the top edges and handles to create a well-worn look. Next, we

set for about 10 minutes, then

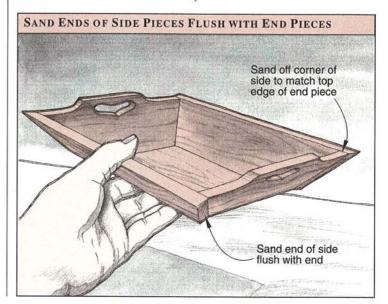
applied two coats of flat urethane, sanding each after it dried. We polished the tray with a light coat of Watco natural satin wax.)

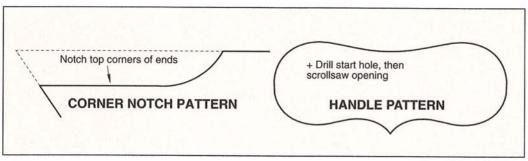
Block

Base

JIG

Project builder Jim Boelling believes in duct tape. In fact, he often substitutes it for clamps on small or delicate glue-joining jobs. He called on this tough tape to help hold the side and ends together while the glue dried. Then, he added the brads to secure the joints.



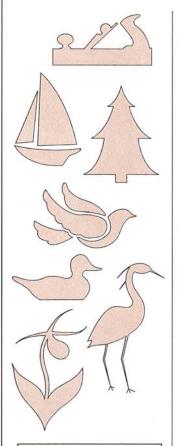


Project design: Jack Robinson, Massillon, Ohio Illustrations: Kim Downing; Carson Ode Project builder: Jim Boelling

Real-Wood **Postcards**

 $R^{ ext{egardless}}$ of the season, your friends and family will remember your message when you send it on a classy wooden postcard. Our wooden holiday cards shown at right, were so well received last year that we want to share the idea with you. And yes, the post office delivers them for a 29-cent stamp.





Supplies: 1/16"-thick stock, finish.

PREPARE YOUR OWN THIN STOCK

Note: Our finished postcards measured 1/16×47/16×61/4". You can start with scrap pieces large enough to yield blanks of similar dimension, or saw them from larger stock. It's also an excellent way to use small quantities of wood with exceptional color or grain.

Select flat stock or plane it flat. (We chose L cherry.) Joint one edge of the stock, and then rip the second edge square on your tablesaw.

2 To resaw your stock, first clamp a rip fence to your bandsaw table, and set it to make 1/8"wide cuts. (We prefer to use a long and tall auxiliary rip fence. It helps keep the stock straight and produce slabs of consistent thickness.) Saw your stock into 1/8"-thick slabs. As an alternative, you can resaw the stock on a tablesaw by sawing one edge, turning the piece (keeping the same face against the fence), and sawing the opposite edge to complete the cut.

3 Sand the resawed slabs to remove saw marks, and reduce overall thickness to about 1/16". Next, rip and crosscut the blanks to final size.

To save time, stack a workable number of blanks together with a strip of double-faced carpet tape between the layers. (We sawed six blanks at one time.)

YOU'LL NEVER LACK FOR A CLEVER OR INTERESTING DESIGN

1 Select the pattern or patterns you like from those shown at *left*, or design your own. Any illustration you can reproduce as a silhouette or outline will work. Simply trace your pattern onto the top blank of the stack. (We placed the base of the evergreen tree 11/2" down and 11/4" in from the left or return-address side, but let your design dictate placement.)

2 Drill a 1/8" start hole through the pattern. Next, thread your scrollsaw blade through the start hole, and then saw along the pattern lines. (We used a #5R [reverse-tooth] blade.) While you have the blanks taped together, sand a slight radius on each corner. (We sanded the corners on our stationary disc sander.)

Separate the blanks. Remove the pattern 3 Separate the blanks. Assume 1 lines and any remaining tape residue.

4 Seal all surfaces on each blank. (We applied one coat of spray lacquer.) Next, write your message on one side and the mailing address on the opposite. We found you can write directly on the cards with either a fresh felt-tipped or ball-point pen. Now, apply a postage stamp, and you're ready to mail your classy greeting. Project design: Alan Bradstreet, North Pownal, Maine