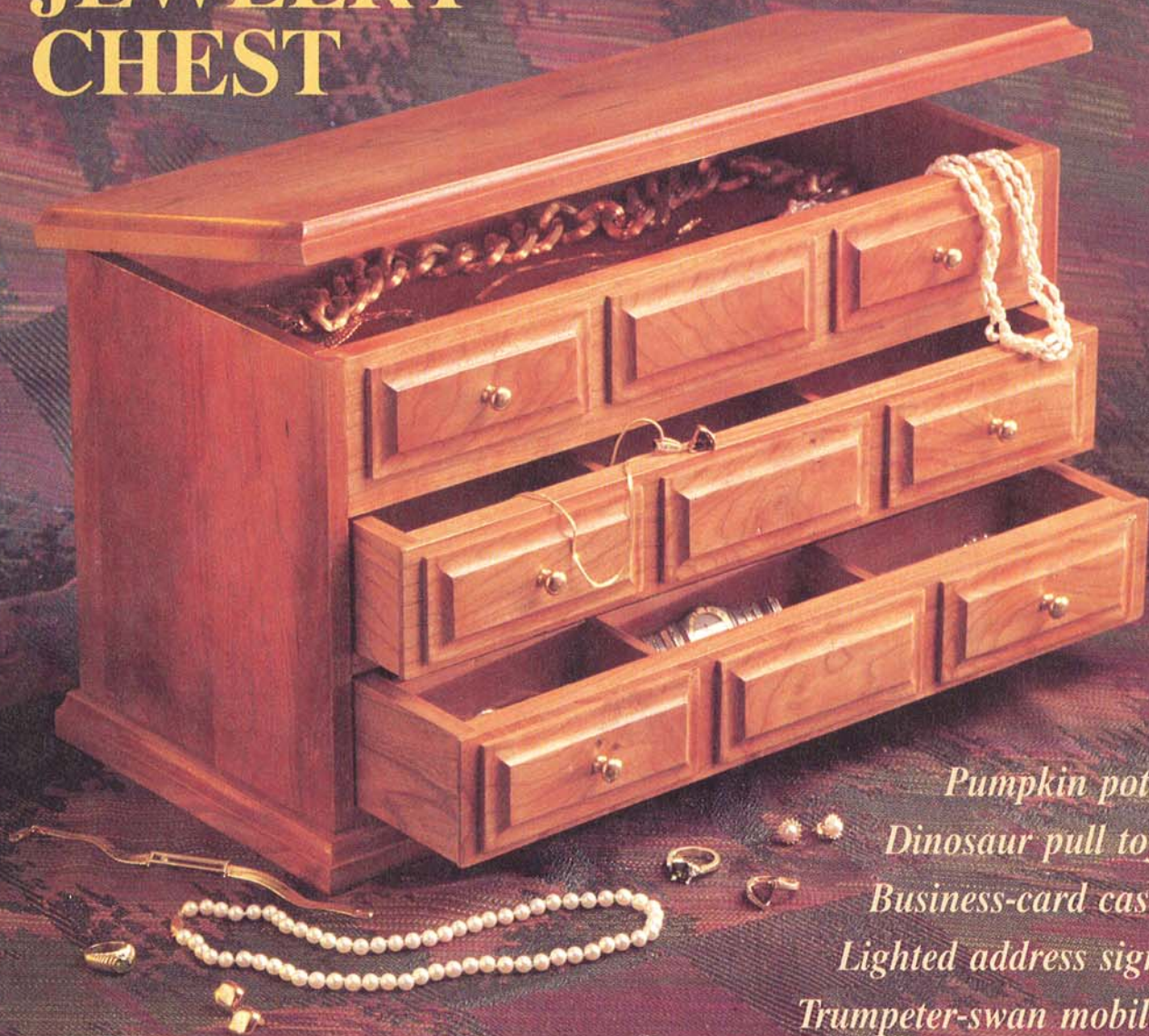


WEEKEND WOODWORKING PROJECTS[®]

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Pumpkin pots
Dinosaur pull toy
Business-card case
Lighted address sign
Trumpeter-swan mobile
Mission-oak coffee table

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FROM OUR SHOP

Dear Reader, For several months now, I've looked forward to publishing this issue. The business-card case, which begins on page 28, excites me because we've based the design on my grandfather's case.

I never met Joseph B. Scannell (he died in 1928 when my mother was just 10 years old), but my grandmother told me he religiously carried the same case in his suitcoat pocket.

For years I've cherished this pocket case, but only recently connected with a new friend who volunteered to redesign the project. Frank Finocchio of The Guitarmakers Connection, a division of The Martin Guitar Company, reworked the case and developed a simple construction method. Although my grandfather's case has ornate parquetry on both sides, the streamlined design in this issue relies on the same thin, yet basic components. Frank added his personal touch by including a couple of pearl dots to decorate the case. And now the project has snowballed—we show additional alternatives on page 30, and we're looking for more ideas from you. Here's your chance to get involved!

Another Project in this issue, the jewelry box beginning on page 24, also has an interesting story behind it. Although we penciled in a jewelry box months ago for this issue's contents, we really hadn't settled on a design. Just when we started getting serious about developing a rough sketch, Jim Downing, our design editor, opened a big envelope from Robert Colpetzer of Clinton, Tennessee. In the envelope, Bob sent along just the project Jim had in mind. Come to find out, Bob retired recently after teaching industrial arts for 20 years at a suburban Chicago high school. "My goal with this project," Bob explained, "was that a first-year student could finish this jewelry box before Christmas. It's hard not to succeed with this design. And I think just about any woodworker would enjoy building it."

"My students built so many of these over the years," he added, "that I could actually predict where they would have difficulty if they weren't paying attention." Certainly, his detailed notes about the project streamlined our editing. Thanks, Bob, for sharing a classic, practical design with *Weekend Woodworking Projects* readers.

Cam Down

Managing Editor

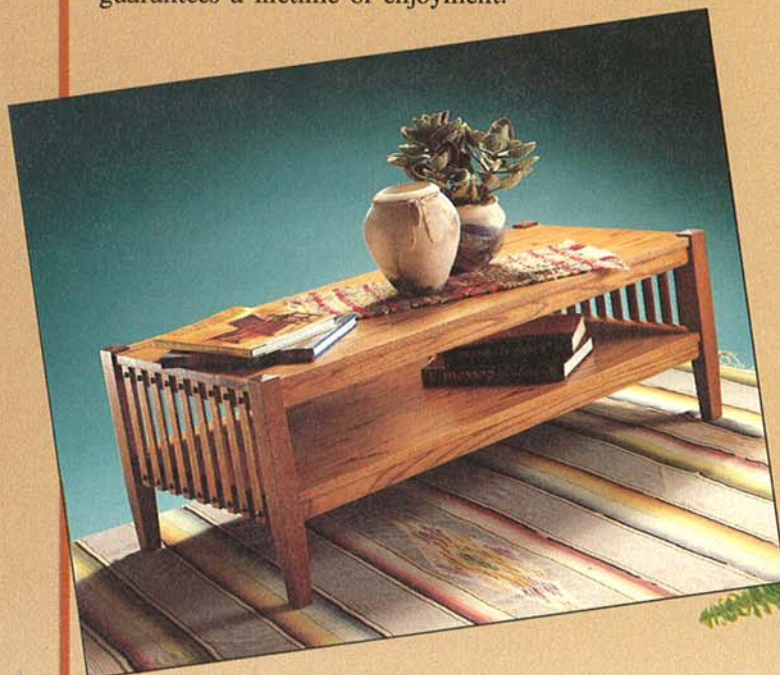
CHECK OUT THESE TIPS AND JIGS

- Supporting painted parts while drying—page 14.
- Bevel scrollsawing letters for inlay effect—page 20.
- Adding a raised-panel look easily—page 27.
- Using tape to prevent saw splintering—page 28.

Note: To find these tips, turn to the pages and look for the tinted numbers.

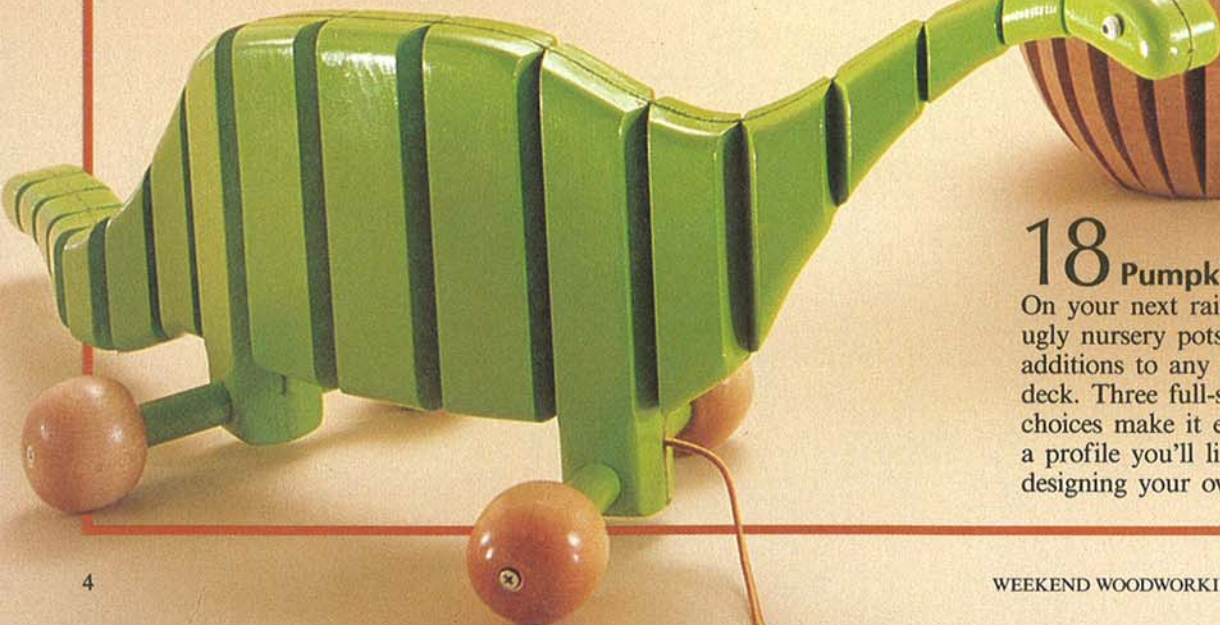
6 Mission-oak masterpiece

Just like the mission-oak pieces we featured previously, you won't want to overlook this project. Once again, a strong, yet simple design guarantees a lifetime of enjoyment.



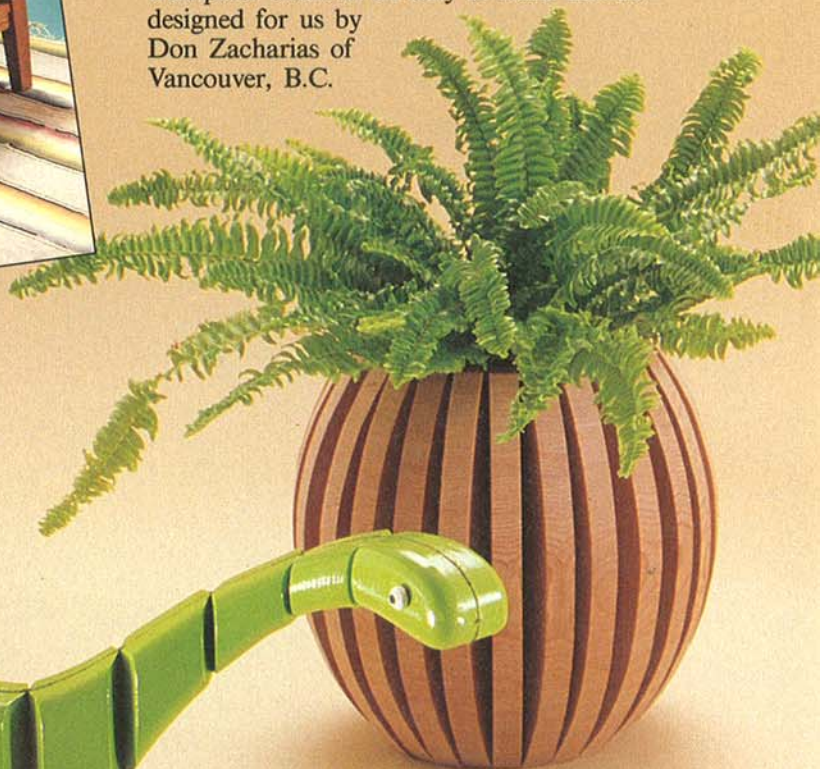
10 Patty Apatosaurus

Watch this friendly dinosaur follow your child's every move. Through the magic of canvas and wood, its wiggling body catches everyone's eye.



14 Trumpeter-swan mobile

Capture the rare beauty of the graceful trumpeter swan in an easy-to-build mobile designed for us by Don Zacharias of Vancouver, B.C.



18 Pumpkin pot

On your next rainy afternoon, turn ugly nursery pots into attractive additions to any patio, terrace, or deck. Three full-sized pattern choices make it easy to find a profile you'll like—or try designing your own.



20 Neighborly numbers

After you install this project, no one should have trouble finding your house. By day, the sign offers a cheery welcome. At night, backlighting numerals won't leave any guessing where you call home.

24 Gem of a jewelry case

Bob Colpetzer had countless students build this jewelry case in his woodshop classes. Now, we're eager to share his top-notch design with you.



28 Make a case for quality

For a stylish statement, find an afternoon to assemble a business-card box that will create a lifetime of splendid first impressions. The rosewood materials? They're just a phone call away.



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WE CARE!

Weekend Woodworking Projects

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OUR PLEDGE TO YOU

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

The Weekend Woodworking Projects Staff

NPA



A coffee table with
storage galore

MISSION-OAK MASTERPIECE

History does repeat itself. Mission-style furniture, all the rage in the early 1900s, enjoys a parallel popularity today. We predict that readers will find as much enjoyment in this coffee table as they did with the bookshelf in Issue 7 and the telephone table in Issue 19. And like all mission-style pieces, strong, yet simple design guarantees a lifetime of enjoyment.

Let's start from the top and work down

1 Prepare the stock for the top and shelf by ripping and cross-cutting eight pieces of $\frac{3}{4}$ " oak to $5\frac{1}{2} \times 48$ ". See the Cutting diagram *opposite*. (We allowed extra length to square and cut panels to final length after assembly.) Lay out four pieces for each panel, being sure to select the most attractive stock for the top. Alternate pieces bark side up and bark side down for greater stability where shown *opposite*.

2 Mark the mating edges on the boards in each set. Next, using a piloted $\frac{1}{4}$ " slot cutter, rout a slot centered along the *mating edges* of each board. See the Top and Shelf drawing and the Groove detail *far right*. For a slot-cutter source, see the Buying Guide on page 9. Start and stop the slot $1\frac{1}{2}$ " from the end of each piece. Slot outside boards on inside edges only.

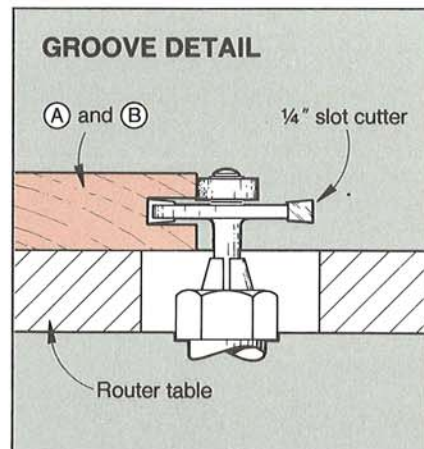
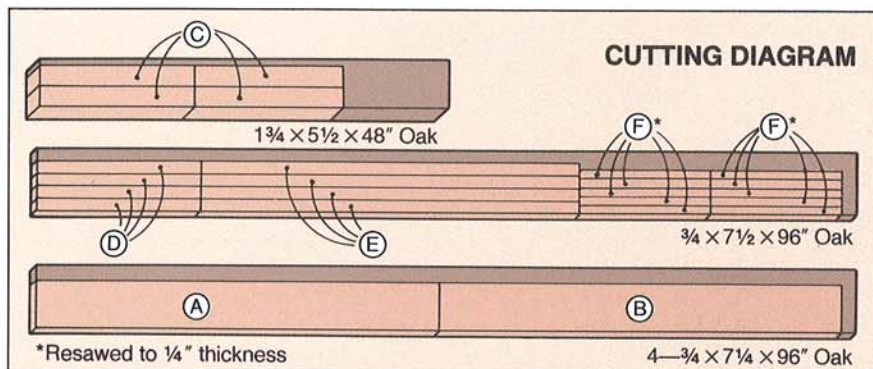
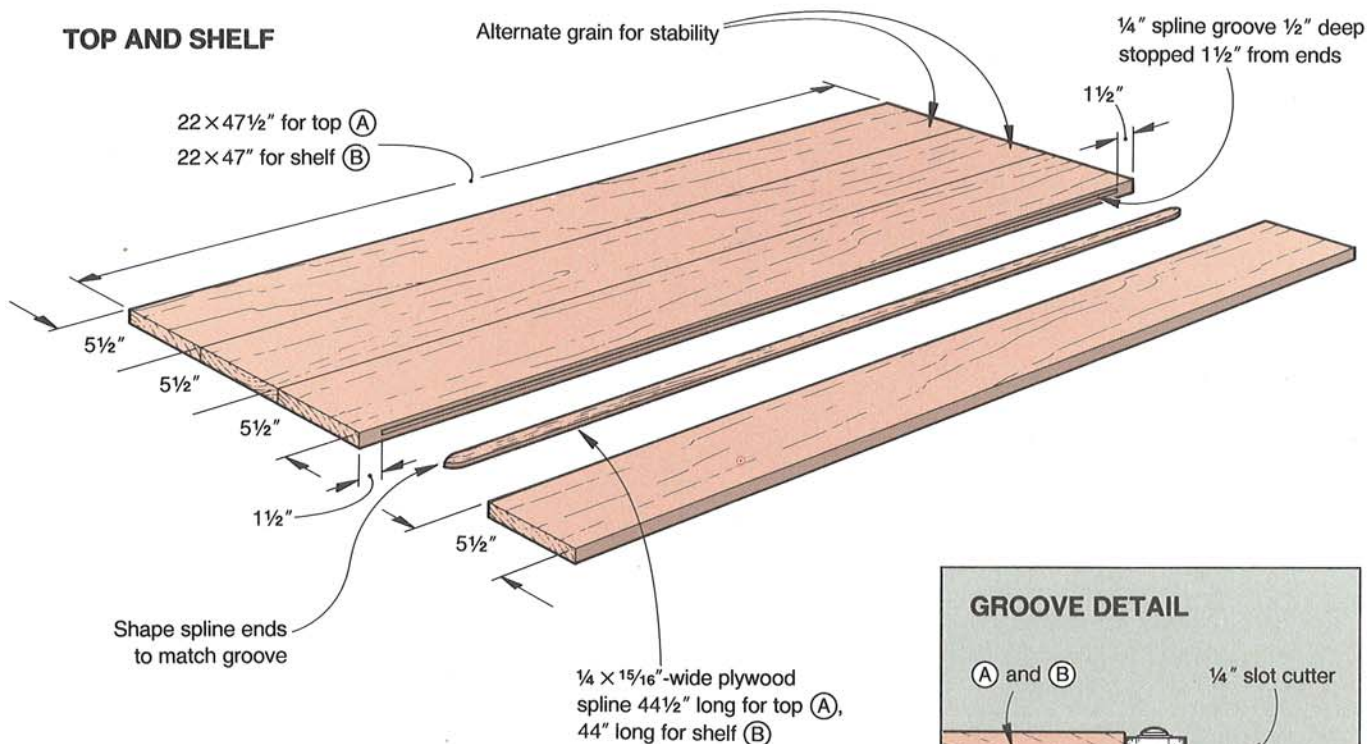
3 Rip six $\frac{1}{4}$ " plywood strips for splines as detailed on the Top and Shelf drawing. Sand or band-saw the ends to fit the curvature of the slot ends. (We sanded them on our stationary disc sander.)

4 Edge-join the top (A) and shelf (B). (First, we glued a spline in one slot of three boards in each set. Then, we applied glue to the remaining slots and clamped the four boards in each set. To equalize pressure and minimize warping, we used eight pipe clamps on each panel, placing four on the top side and four underneath.) Let both panels set overnight.

5 Remove the clamps. Now, square and cut off the top to $22 \times 47\frac{1}{2}$ " and the shelf to 22×47 ".

6 Mark the corner notches in the top and shelf panels as dimensioned on the Exploded View drawing on page 8. We suggest you undercut these notches to ensure a good fit. The following fence dimensions reflect that. Also, since the top is $\frac{1}{2}$ " longer than the shelf, location

TOP AND SHELF



Bill of Materials

Part	Finished Size			Mtl.	Qty.
	T	W	L		
A* top	3/4"	22"	47 1/2"	O	1
B* shelf	3/4"	22"	47"	O	1
C leg	1 3/4"	1 3/4"	17 1/4"	O	4
D end rail	3/4"	1 1/2"	19"	O	4
E side rail	3/4"	1 1/2"	44 1/2"	O	4
F slat	1/4"	1"	10"	O	18

* Parts marked with an * are assembled from smaller pieces. Please read instructions before starting construction.

Material key: O-oak

Supplies: #6 x 1/2" flathead wood screws, #8 x 1 3/4" flathead wood screws, 1/4 x 1 1/2" dowel pins, 3/8" mushroom-shaped screw-hole buttons, stain, finish.

of the crosswise cuts will differ. (We trimmed and filed the notches to final size when we dry-assembled the table.) We found cutting these notches the most critical and difficult part of the project.

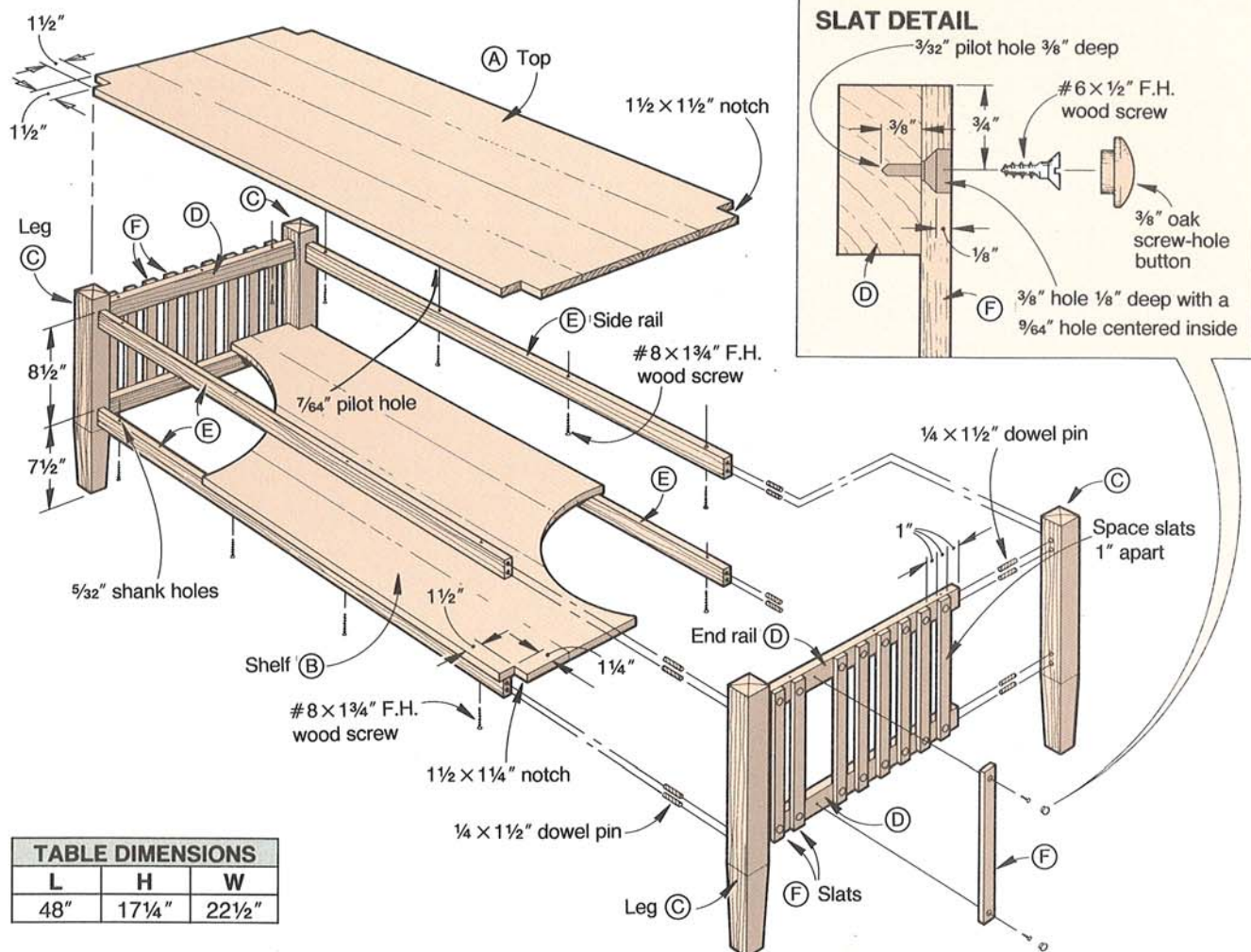
7 To make the *lengthwise* cuts in the top on your tablesaw, set the fence 1 1/2" from the *outside* blade edge. Saw in 1 1/2". Turn the top *end for end* and *top to bottom* to make the four cuts 1 1/2" into each corner. Use the same fence setting and make these cuts on the shelf, but cut only 1 1/4" into the panel.

8 To make the *crosswise* notch cuts on the top panel, leave the fence 1 1/2" from the blade, and saw to the lengthwise kerf. To make the crosswise cuts in the shelf, move your fence to 1 1/4" from the *outside* of the blade, and then saw to the lengthwise kerf and stop. Now, finish the cuts with a handsaw.

9 Scrape off glue squeeze-out, and then finish-sand both panels. (We used our portable belt sander with 150-grit sandpaper. To cut uneven surfaces fast, we held our belt sander at a 30° angle to the piece.

Continued

Table



After leveling the surface, we held the sander parallel to the workpiece, and moved it back and forth the full length of the piece without bearing down. We then switched to a palm sander with 220-grit sandpaper, and sanded with the grain to finish smoothing the surface and remove sanding marks.)

Next, make the legs and rails

1 From 1 3/4"-thick oak (also called eight-quarter), rip and crosscut four pieces to 1 3/4 x 17 1/4" for the table legs (C).

Note: If you can't buy 1 3/4"-thick stock, you may glue up several layers of thinner stock, and then plane or resaw to the final dimension. For best appearance, we suggest that you ori-

ent the laminated legs so the glue joints are visible on the ends of the table rather than the sides.

2 Cut the four-sided bevel tops on each leg as shown on the Leg drawing and Bevel detail *opposite*. Tilt the tablesaw blade to 15° from perpendicular, and set blade height to one-half the thickness of a leg (7/8"). Next, attach a spacer block to the saw's rip fence and position it 1/4" from the inside of the blade. Use your miter gauge to guide the legs. Rotate the leg one-quarter turn each time to cut the bevels.

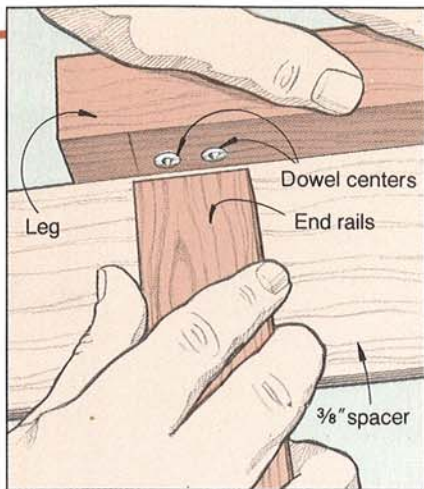
3 Lay out the tapers on the four sides of each leg, using the dimensions on the Taper detail. Band-

saw or sand the tapers from the bottom toward the middle. (We sanded them on our stationary belt sander.) Finally, bevel-sand the edges on the bottom of each leg.

4 Mark the centerpoints for the 1/4" dowel holes in the four legs, using dimensions on the Leg drawing. Drill the 1 3/16"-deep holes.

5 From 3/4" oak, rip and crosscut four end rails (D) and four side rails (E) to the dimensions listed on the Bill of Materials.

6 Lay out the legs and rails, and number the mating corners so you can match them when you work through the following assembly steps. Next, place 1/4" dowel



centers in the leg holes. Press the rail ends against the dowel centers to mark the centerpoints for the mating holes in the rail ends. (To locate the rails on the legs, we cut a 16" scrap strip to space the upper rails, and a 7½"-long strip to space the bottom rails. To position the rails on the legs for marking, we laid them out as shown above.)

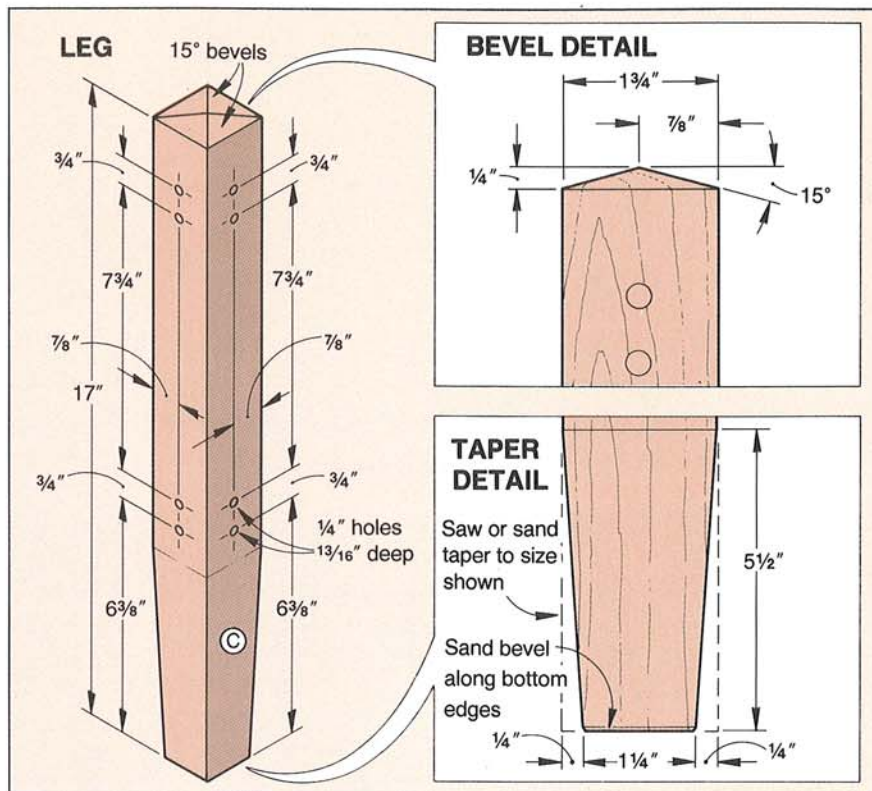
7 Drill the ¼" holes 13/16" deep into the ends of the rails, using a doweling jig. Glue a ¼ × 1½" dowel pin in each hole (we used yellow woodworker's glue). Next, drill and countersink the 5/32" shank holes from the bottom edge through each rail where shown on the Exploded View drawing.

8 To make the slats (F), rip and crosscut five pieces of ¾" oak to 1 × 21". Next, turn the pieces on edge and carefully rip two ¼"-thick strips from each. Crosscut two 10"-long slats from each strip.

9 Drill and counterbore holes in both ends of the slats as shown in the Slat detail opposite. (We used a fence and stop block on our drill press to position the slats.) Finish-sand the legs, rails, and slats.

Now you're ready to begin assembling the table

1 To assemble an end, lay out two legs and their paired end rails. Apply glue in the holes in the legs, and to the ends of the dowels in the end rails. Now, join these parts, tapping lightly if needed, to set the dowels. Clamp the assembly and check for square. Glue the other end the same way.



2 Dry-assemble the table. Test-fit the top and shelf. Adjust the size of the corner notches if necessary. When satisfied with the fit, glue and clamp the top to the top side rails, and the shelf to the lower side rails.

3 Using the shank holes you drilled through the rails earlier, drill 7/64" pilot holes ½" into the top and shelf. Drive #8 × 1¾" flathead wood screws through these holes and into the top and shelf.

4 Assemble the table, gluing the side-rail dowels into the ¼" leg holes. Clamp the assembly, and check all corners for square. (We used four pipe clamps per side stretched from end to end.)

5 Using a portable electric drill, drill 7/64" pilot holes, and then drive the screws through the end rails and into the top and shelf.

6 Remove all clamps, place the table on its feet on a level surface, and check for wobble. If it wobbles, identify the long leg, and then sand or file the bottom of it.

7 Attach the slats to both ends. (We used a slat to space them 1" from each leg and 1" apart.) Again

using a portable electric drill, drill through the existing slat holes and 3/8" into the top and bottom end rails. See the Slat detail. Apply a bead of glue to the inside face at both ends of each slat, place it in position, and then drive a #6 × ½" screw into each hole.

8 Glue a 3/8" oak mushroom-type screw-hole button in each slat hole. Now, using 220-grit sandpaper, touch up any wood parts requiring resanding.

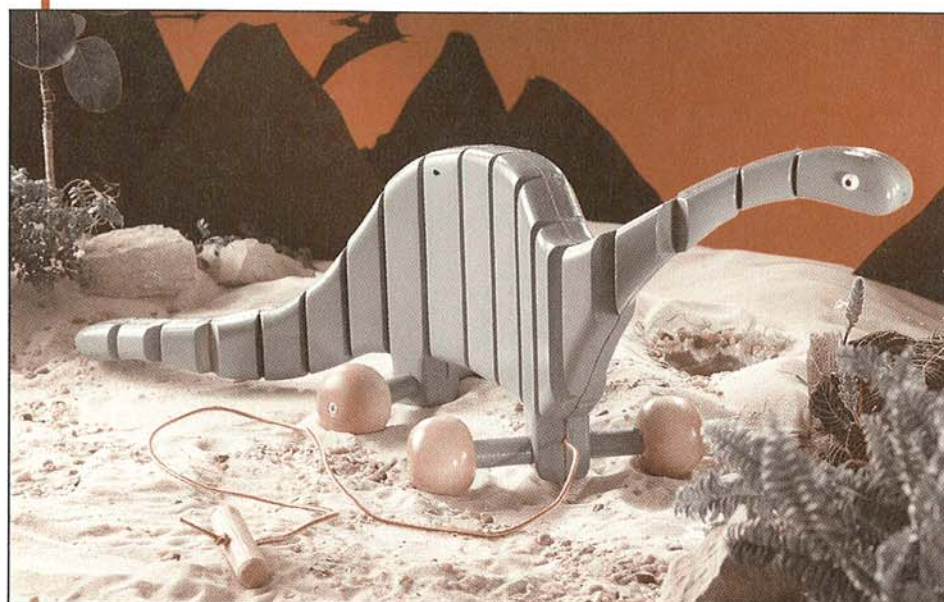
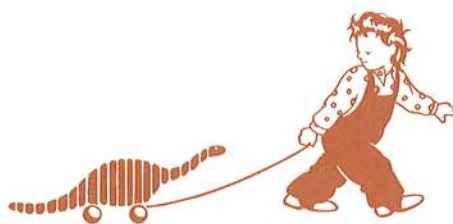
9 Apply the finish of your choice. (We applied a medium oak stain, then two light coats of lacquer sealer followed with two coats of satin lacquer. After each coat thoroughly dried, we sanded with 220- and 320-grit sandpapers.)

Buying Guide

● ¼" Slot cutter. Catalog no. 24D67 \$14.50. Requires ¼" shank arbor with bearing, catalog no. 24D68 \$7.95. Add \$4 per order for postage and handling. From: Woodcraft, P.O. Box 1686, Parkersburg, WV 26102-1686. Credit-card orders: Call 800-225-1153. ■

PATTY APATOSAURUS

She'll follow your every move



We fell in love with this pull toy the first time we peeked at entries in *WOOD* magazine's Build-A-Toy™ contest. Through the magic of canvas sandwiched between pine, our favorite rolling creature will wiggle into your heart, too. (You may recognize this shape as a *brontosaurus*, but dinosaur experts now prefer *Apatosaurus*. That's scientific progress!)

Cut the wood parts first

Note: We cut the 36 parts listed on the Bill of Materials from one $\frac{3}{4} \times 9\frac{1}{4} \times 96$ " piece of clear pine. See the Cutting diagram at right for how we laid out the parts.

1 Crosscut the stock at 41" to separate the section for parts A, B, and C from the remaining stock. Set the longer piece aside.

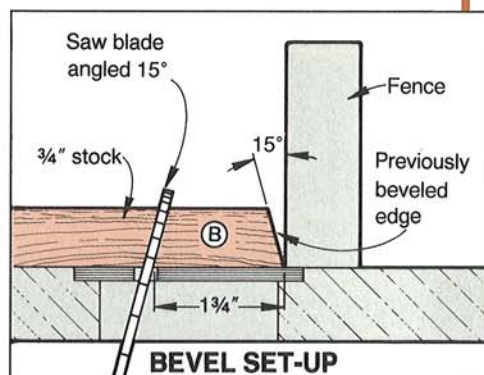
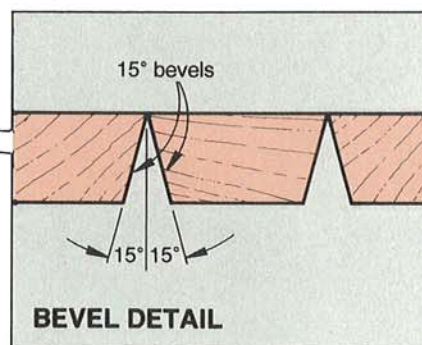
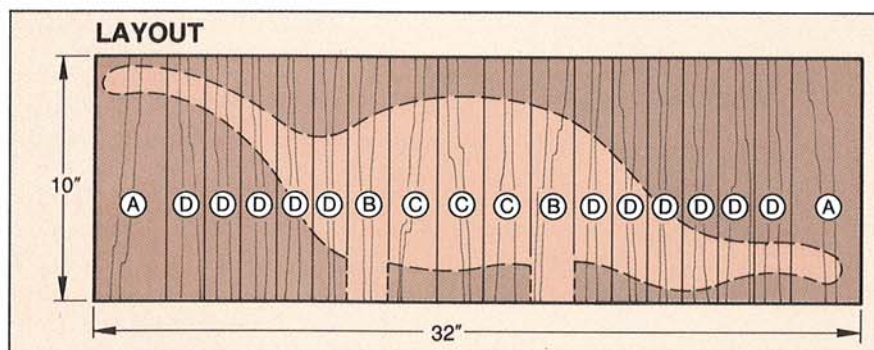
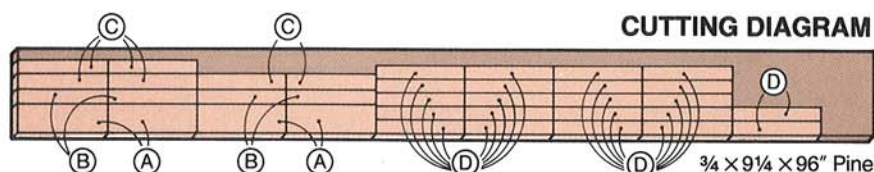
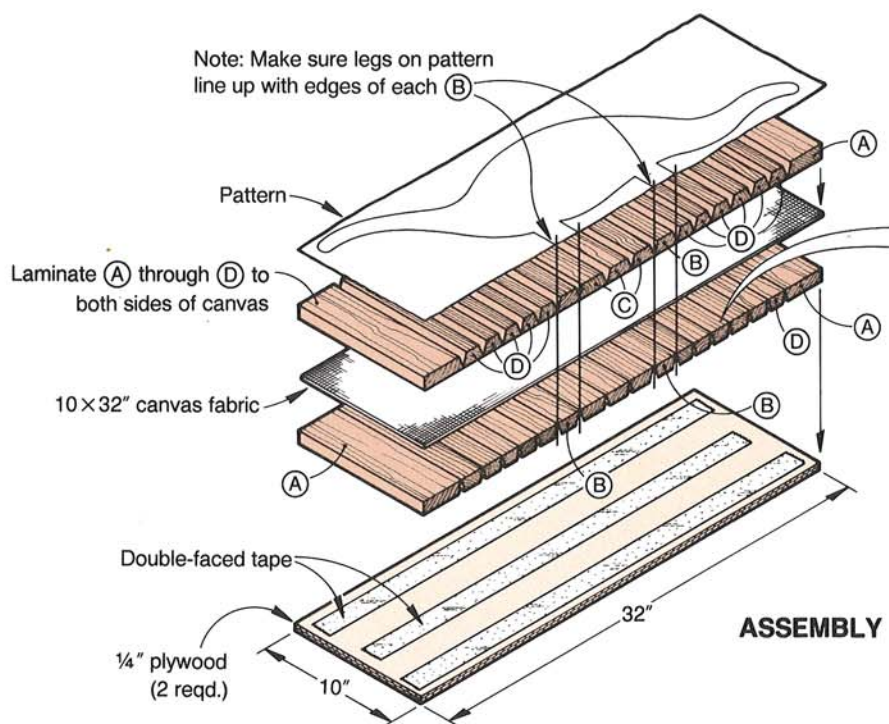
2 Tilt your tablesaw blade 15° from vertical, and rip a 3"-wide piece from the 41"-long stock. (Part A requires a bevel on only one edge.) Now, set this 3"-wide piece aside temporarily; you'll do the crosscutting later.

3 Without changing the blade setting, move the fence 1 $\frac{3}{4}$ " from the inside of the blade (measured at the table surface). Turn the beveled edge of the remaining 41"-long piece against the fence as shown at *far right* on the Bevel Set-up drawing, and bevel-rip one strip. (When crosscut later, this piece will yield four B parts.) Next, position the fence 2" from the blade, and bevel-rip two strips. (You'll cut six C parts from these two strips.)

4 Using the same procedures, bevel-rip the remaining 55"-long piece of stock into 1 $\frac{1}{2}$ "-wide strips for the D parts. (To bevel the first edge, we initially set the fence $\frac{3}{4}$ " from the blade.)

5 Reset your saw blade perpendicular to the saw table. Clamp a clearance block to your rip fence, and set it to crosscut 10" lengths. Next, crosscut the 3"-wide strip into four A parts, and the 1 $\frac{3}{4}$ "-wide strip into four B parts. Crosscut six C parts from the two 2"-wide strips, and finally, crosscut 22 D parts from the 1 $\frac{1}{2}$ "-wide strips. (We penciled the appropriate letter on each piece as we cut them to aid in laying out the dinosaur later.)

6 Cut two pieces of $\frac{1}{4}$ " plywood to 10×32". Apply double-faced tape to the face of one piece as shown on the Assembly drawing.



Bill of Materials

Part	Finished Size*			Matl.	Qty.
	T	W	L		
A	3/4"	3"	10"	P	4
B	3/4"	1 3/4"	10"	P	4
C	3/4"	2"	10"	P	6
D	3/4"	1 1/2"	10"	P	22

* All parts cut to final size during construction.

Material key: P-pine

Supplies: Spray adhesive, 3/4" dowel, shoe string, #6 × 1 1/4" flathead wood screws, 1 1/4" × 17 brads, canvas fabric, paint.

Next, cut a 10×32" piece of lightweight canvas fabric. (We purchased our canvas material at a local fabric store.)

7 Starting at the head, place the first layer of parts face down on the board in the order shown by our Assembly and Layout drawings above. Position the parts firmly against each other, and then square

them with the bottom of the plywood carrier board.

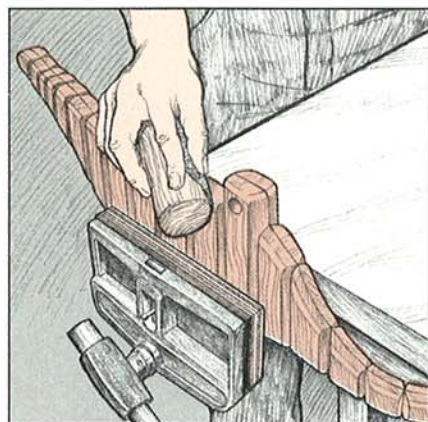
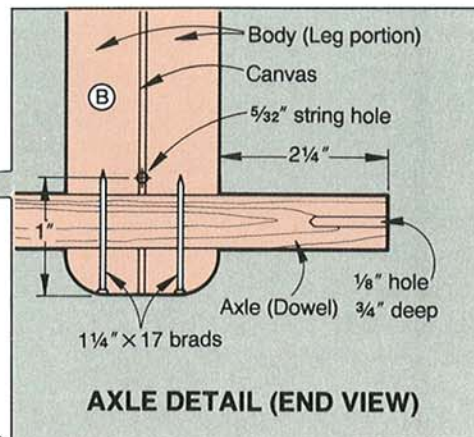
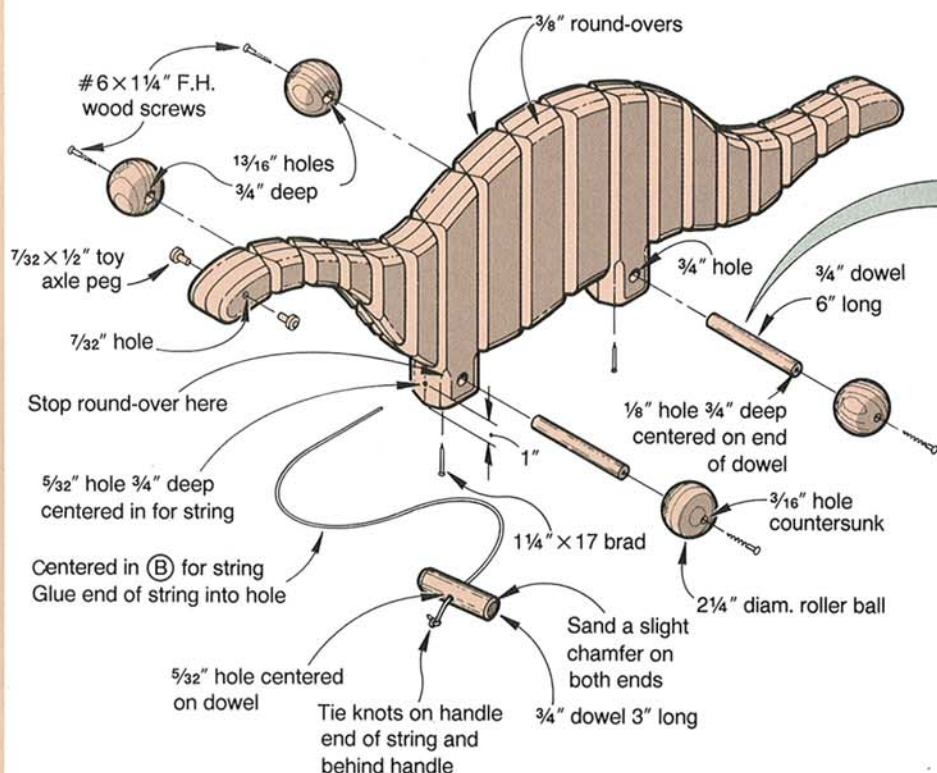
8 Apply an even coat of glue to the back sides of the pine pieces. (We rolled on yellow woodworker's glue with a short-nap 3" paint roller.) Next, lay the canvas fabric on the glued surface, and then smooth out the material with your hands. Now, apply a coat of glue to

the canvas surface using the paint roller as described earlier.

9 Place the remaining wood dinosaur pieces on top of the canvas in order. Make sure each piece matches a comparable piece on the opposite side of the canvas, and that the joints line up. Place the second plywood piece over the lamination, clamp, and let set overnight.

Continued

Dinosaur



Cut the pattern and watch a dinosaur take shape

1 While the lamination dries, make a gridded dinosaur pattern. First, tape sheets of paper end to end to form one length measuring 10" wide by 32" long. Starting at one corner, draw 1" squares across the entire surface.

Note: Because of space limitations, we can't provide a full-sized pattern in the magazine. However, if you'd like to work with a full-sized pattern, see the top of page 13 for details.

2 Using the Gridded Dinosaur pattern on page 13 as your guide, draw the dinosaur outline on your gridded sheet. (When working with gridded patterns, we first plot the points where the pattern lines cross the grid lines. Then, we draw the lines to connect the points. We find French curves helpful in drawing smooth, curving lines.) Don't forget to mark the eye and axle-hole centerpoints on your pattern.

3 With scissors, cut out the paper pattern, leaving a 1/2" margin around the edges.

4 After the glue dries, remove the clamps from the lamination. Apply spray adhesive to the backside of the pattern, and adhere it to the face of the lamination. (We aligned the pattern and lamination by matching the B parts.) Mark the eye and axle centerpoints with an awl or nail.

5 With both carrier boards still attached to the lamination, cut the dinosaur body to shape. (We used a portable electric sabersaw and carefully sawed just outside the line.) Now, remove the carrier boards, clamp the dinosaur in your vise, and sand the sawed edges as shown above. (We used 100-grit sandpaper for this.)

6 Mount a 7/32" bit in your drill press and drill a hole in scrap. Test-fit your toy axle pegs in this hole; we've found that the diameter

of these parts vary. See the Buying Guide for our source of wheels and toy axle pegs. When you're satisfied with the fit, drill the eyehole all the way through the head. Next, bore the two 3/4" axle holes through the body where marked.

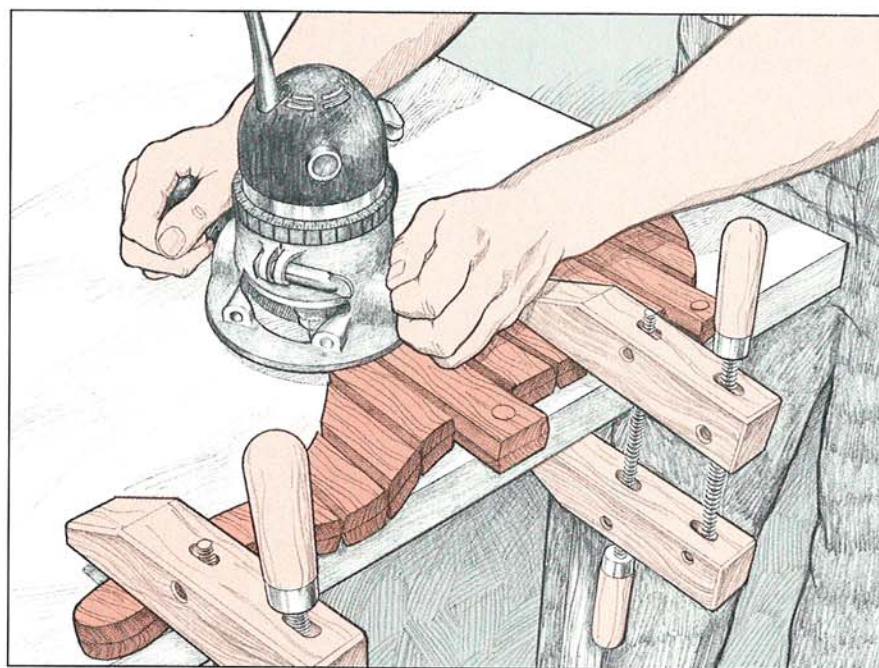
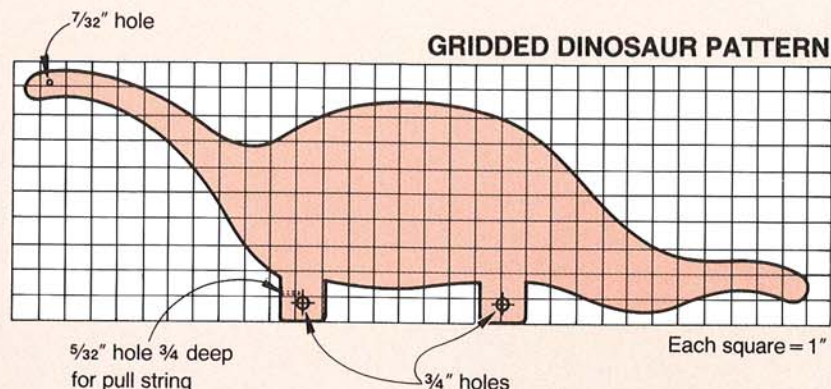
7 Rout a 3/8" round-over along all edges of the dinosaur as shown opposite. Next, cut two 6"-long axles from a 3/4" dowel.

8 Apply a bead of yellow woodworker's glue around the center of each axle, and insert them in the axle holes. Center the axles. Next, snip off the head of a 1 1/4" x 17 brad and with it drill pilot holes where shown in the Axle detail above. Drive a brad in each hole, set them, and fill the holes. (We used Durham's Rock Hard Putty.) When dry, sand the putty smooth.

A full-size pattern will make it easier

Not a life-sized pattern, but we can supply a full-sized *pull toy* pattern. Send \$1 for handling and a self-addressed, stamped, business-sized envelope to:

Patty Apatosaurus
Weekend Woodworking Projects
P.O. Box 11022
Des Moines, IA 50336-1022



Apply paint and take your friend on a test drive

1 Prime all surfaces. (We applied a coat of all-purpose primer.) When dry, sand the primer lightly with 220-grit sandpaper. (Before spraying, we fished a coat hanger through the eye holes, then flexed and bent the body and tail as we painted. This enabled us to get paint onto all sides and surfaces of the body segments.) Next, apply the top coat. (We spray-applied a lime-green enamel paint.)

2 Shorten the shafts on two toy axle pegs to $\frac{1}{2}$ ". Paint the peg heads white. After they dry, paint

the center circle of the pegs black to represent the pupil. Now, glue and insert the axle-peg eyes in the holes drilled into the head.

3 To prepare the wheels, clamp one of the $2\frac{1}{4}$ "-diameter roller balls in a handscrew clamp with the predrilled hole facing up. (We found the toy was less likely to tip with these wider wheels. Also, we taped strips of sandpaper to the inside faces of the clamp to hold the balls.) Next, center the hole in the ball under a $1\frac{3}{16}$ " spade bit in your drill press, and enlarge the hole to a depth of $\frac{3}{4}$ ". (We ground about $\frac{1}{16}$ " off the tip on each corner on

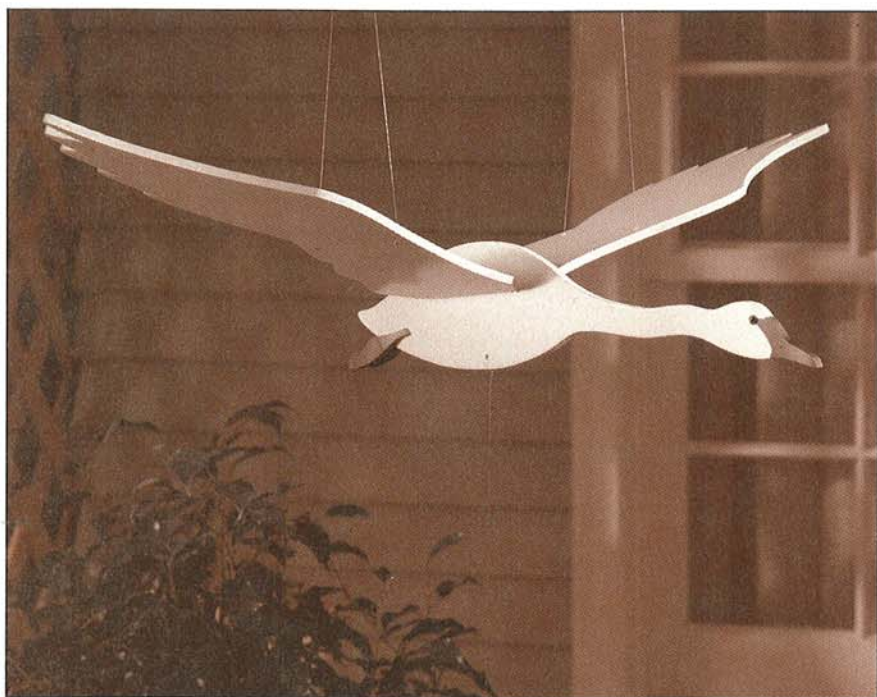
the bit to round the bottom of the hole.) Bore the axle holes in the other three roller balls the same way. Switch to a $\frac{3}{16}$ " bit, center it in the hole, and drill the rest of the way through each ball. Finally, turn over each ball, and countersink the screw holes in the outside face.

4 Slide the wheels onto the axles, insert a $\frac{1}{8}$ " drill bit through the holes in the wheels and drill $\frac{3}{4}$ " into the axle ends. Rub paraffin wax onto the ends of the axles, place the wheels over the axles again, and drive a $\#6 \times 1\frac{1}{4}$ " screw through each wheel and into the axle. Tighten all screws just enough to keep the wheels from wobbling.

5 Crosscut a 3" length of $\frac{3}{4}$ " dowel, chamfer the ends, and drill a $\frac{5}{32}$ " hole through the center. Drill the same-size hole in the center of the front leg (B) where shown on the Exploded View. Apply finish to the dowel. Next, knot one end of your pull string (we used a 24" leather-like shoe lace), thread it through the dowel hole, and tie another knot. Now, glue (we used cyanoacrylate glue) the free end of the string in the hole you just drilled into the shoulder.

Buying Guide

● **Dinosaur kit.** Four $2\frac{1}{4}$ " roller balls, and two $\frac{7}{32}$ " toy axle pegs. Kit no. 9835, \$3.50 per kit plus \$2.50 per order for shipping. Meisel Hardware Specialties, P.O. Box 70-WEW, Mound, MN 55364-0070. ■



Flight of Fancy

TRUMPETER SWAN

The graceful trumpeter swan, one of the world's seven swan species, has made an amazing comeback from near extinction. Although it's rarely sighted beyond Wyoming, Montana, and Canada, you can capture the beauty of this rare bird in an easy-to-build mobile designed for us by Don Zacharias of Vancouver, B.C.

First, let's make the patterns, and lay them out on plywood

1 Make a copy of the swan's body, wing, and foot patterns on pages 16–17. Include the locations of the eye and hole centerpoints, and the beak paint line on your copy. (We traced ours onto stiff folder paper using carbon paper.)

2 Carefully cut each paper pattern to shape. Next, cut a piece of $\frac{1}{4}$ " plywood to 20×20". (We suggest using lauan if you plan to display the mobile indoors; exterior plywood if it will fly outdoors.)

3 Position the patterns on your plywood as shown on the Cutting Diagram on page 16. Trace the body, two wings, and two feet. With an awl, mark the centerpoints for the $\frac{1}{16}$ " holes and the eye.

4 Cut the body (A), wings (B), and feet (C) to shape using a scrollsaw, bandsaw, or sabersaw. (We used a #5 double-tooth fretsaw blade on our scrollsaw.) Sand a bevel on the wing edges that butt against the body. (See the Knot detail for specifics.) Next, sand a slight round-over on all other edges of each piece. Drill the $\frac{1}{16}$ " eye and string holes where marked.

Painting will be easy

1 Paint all pieces with two coats of primer. Use an exterior primer if you intend to display the mobile outdoors. Allow the paint to dry thoroughly between coats. (To paint both sides of each piece, we first drove 1" roofing nails through scrap cardboard in a shape that would support each piece. We rested the swan parts on the nail tips, painted the exposed sides, and later turned them over and painted the other sides.)

2 Apply a coat of white enamel paint to the body and wings. (We used aerosol paint.)

3 After the white paint has dried, transfer the paint line from the body pattern to mask the

head from the beak. Paint the beak and the feet black. (We spray-painted these parts too, feathering the paint out from black to gray.) Be careful not to overapply the black paint.

Now, assemble your swan

1 Sand to taper the narrow ends of the feet to $\frac{1}{8}$ " thick. Glue them to the body where indicated on the Exploded View at right. Next, glue the eyes in place. (We used cyanoacrylate glue.)

2 Tie the wings to the body as shown on the Knot detail. Snip off the excess fishing line with a fingernail clipper. (We put a drop of cyanoacrylate glue on all knots. This prevents the knots from opening and the fishing line from slipping through the split shot.)

3 Cut a $\frac{1}{4}$ " dowel to 9" long. Drill $\frac{1}{16}$ " holes through the dowel $\frac{1}{4}$ " from each end.

4 Follow steps 1 through 6 on the String detail below right to rig the mobile.

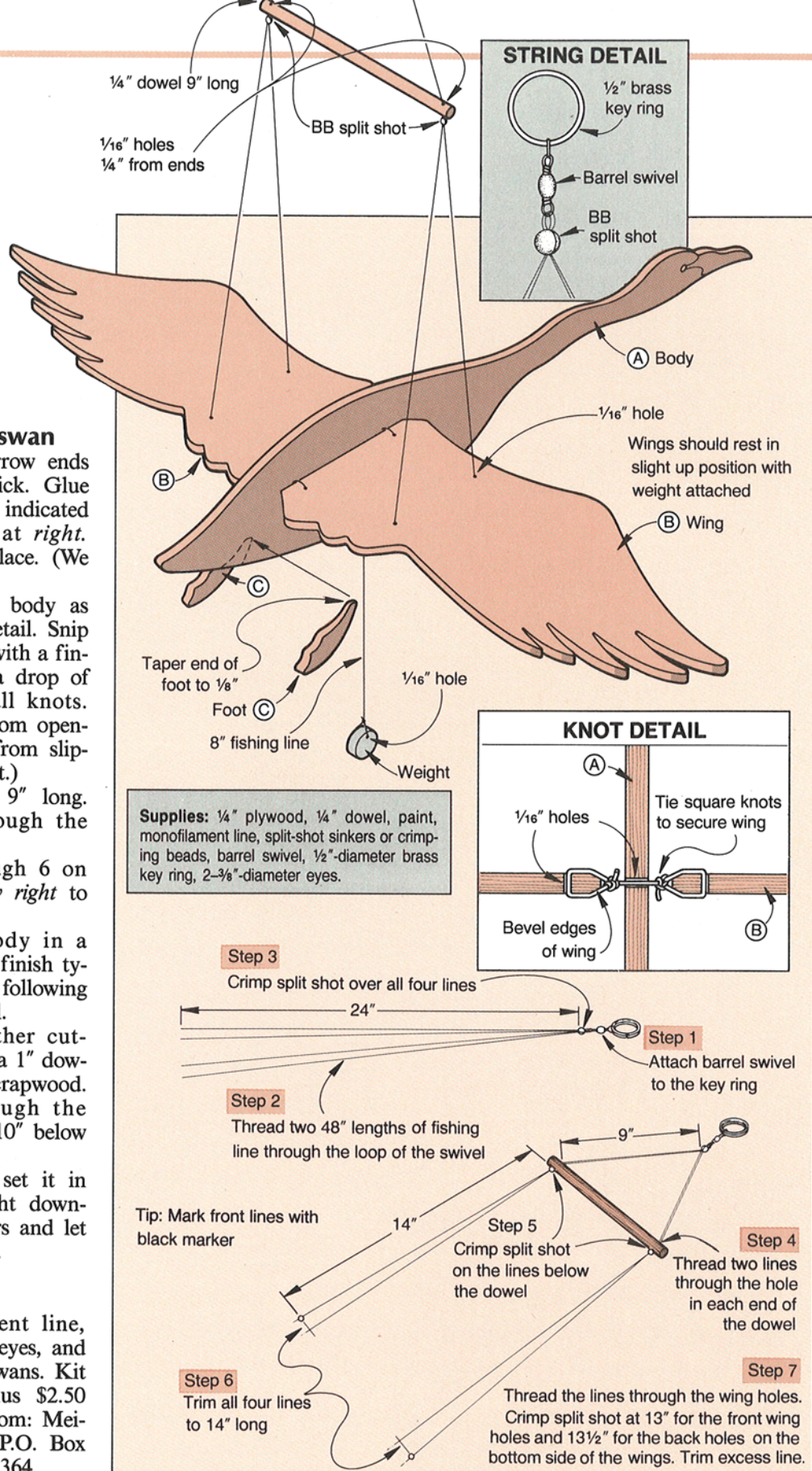
5 Place the swan's body in a handscrew clamp, and finish tying off the wing strings, following Step 7 on the String detail.

6 Make the weight, either cutting $\frac{3}{8}$ " off the end of a 1" dowel, or forming one from scrapwood. Drill a $\frac{1}{16}$ " hole through the weight, and suspend it 8-10" below the body on fishing line.

7 Hang your swan. To set it in motion, pull the weight downward. Or, hang it outdoors and let the swan fly in the breeze.

Buying Guide

● **Swan kit.** Monofilament line, split-shot sinkers, swivels, eyes, and key rings to make three swans. Kit no. 9756, \$4.95 each, plus \$2.50 shipping and handling. From: Meisel Hardware Specialties, P.O. Box 70-WEW, Mound, MN 55364.

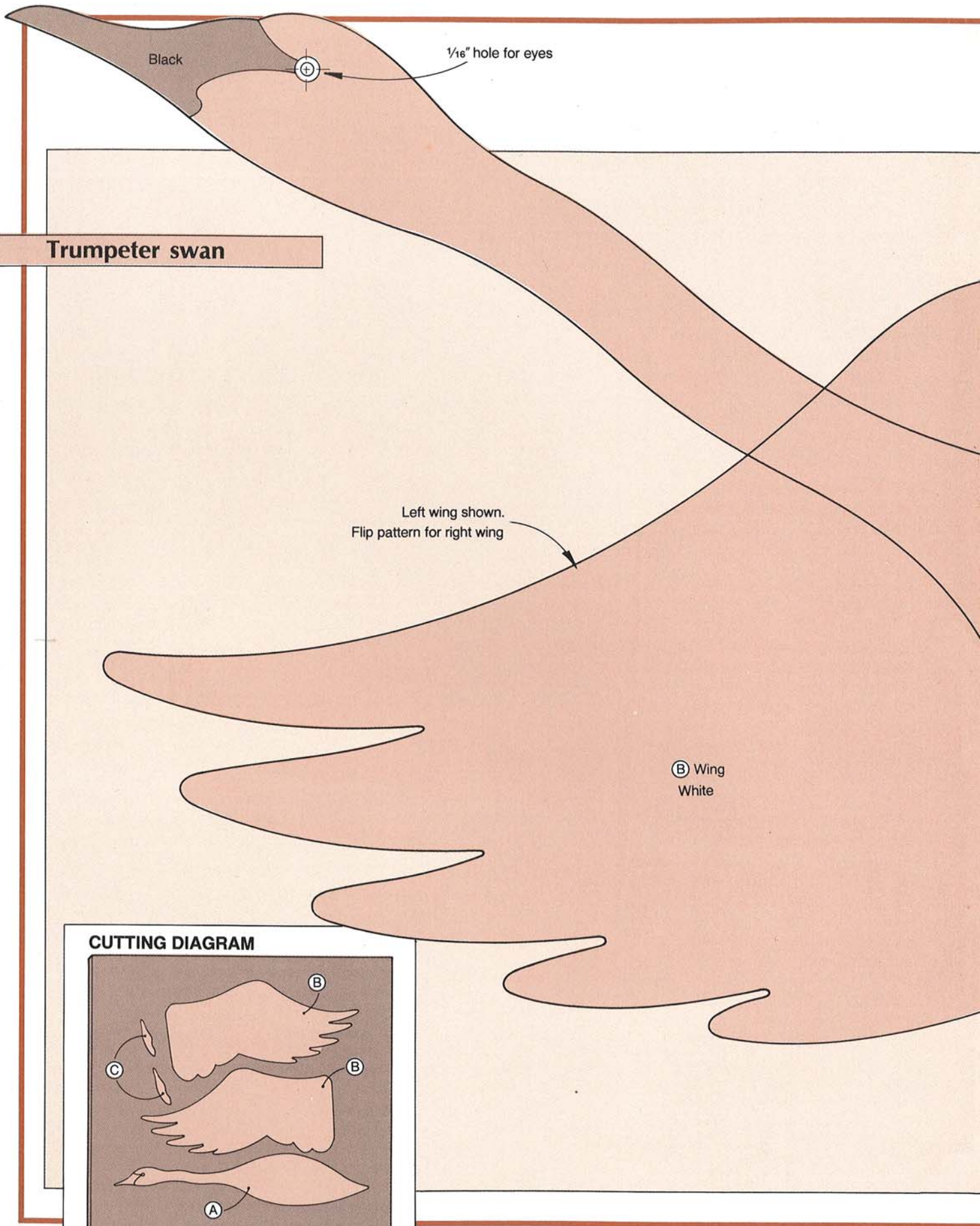


Continued

Project design: Don Zacharias, Vancouver, B.C.

Illustrations: Kim Downing

Photograph: Wm. Hopkins

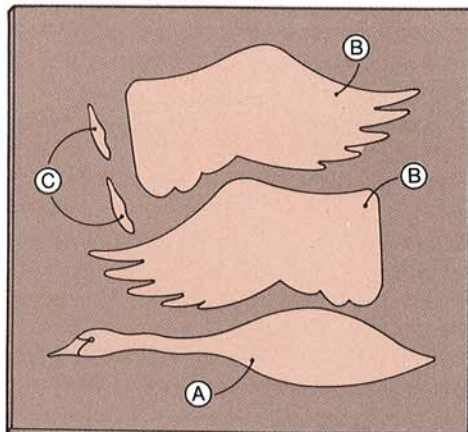


Trumpeter swan

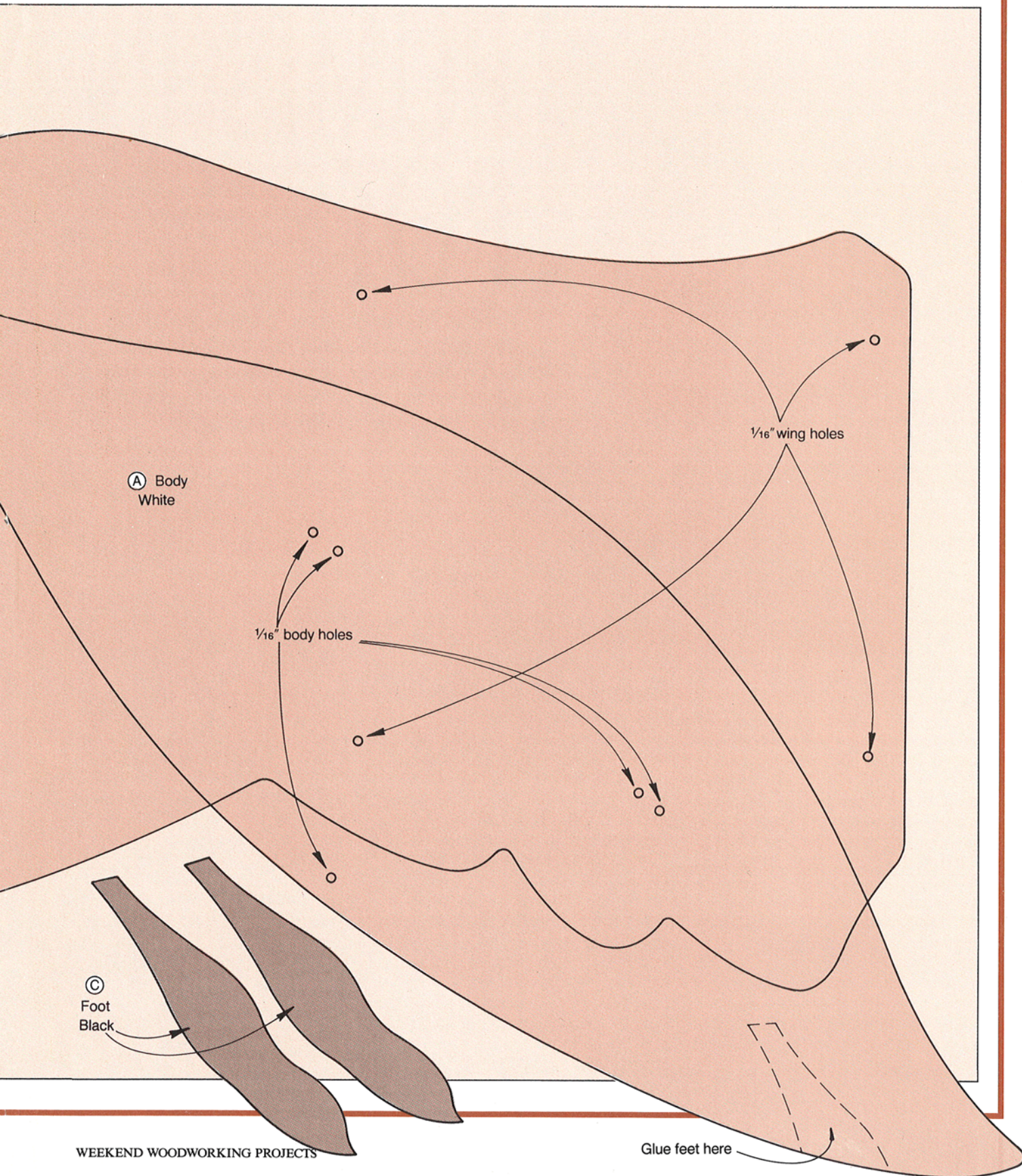
Left wing shown.
Flip pattern for right wing

(B) Wing
White

CUTTING DIAGRAM



1/4" plywood



Ⓐ Body
White

$\frac{1}{16}$ " body holes

$\frac{1}{16}$ " wing holes

Ⓒ
Foot
Black

Glue feet here



PUMPKIN POT

On your next rainy afternoon, transform ugly nursery pots into attractive additions for any patio, terrace, or deck. We offer full-sized patterns for three distinct styles, so you can pick the one you like best, mix and match them, or even design your own profile. They're so easy to make, you'll ask, "why didn't I think of that?"

Note: We chose 5/8"-thick select redwood, used for fencing, to make this project. If you have difficulty locating this stock, plane or resaw 3/4"-thick material to size.

Make a stack of ribs quickly with your bandsaw

1 Make a cardboard template of the Rib pattern of your choice. (To make our template, we glued a photocopy of the half-moon pattern to posterboard and cut it to shape.)

2 Rip and crosscut your 5/8" stock into six 2 1/4 x 48" pieces. Now, lay out and trace the template outline of five ribs on two of the boards, leaving about 1/2" space between each rib. You'll have four extra ribs to use, should some be damaged while assembling.

3 Make two stacks of two boards, and place a pattern board on top of each. Align the edges and ends, and then secure the stacks with 4d nails as shown *top right*. Now, bandsaw the pieces to shape.

4 Place 26 ribs—flat edge down—on your workbench and align the ends. Clamp the ribs together. If you don't have two clamps that open at least 16 1/2" wide, tape the stack together with duct tape. Now, turn over the assembly.

Staple the ribs together, and pot some flowers

1 Scribe two pencil lines across the face of the ribs 1" in from each edge. Cut two 18"-long strips of 1"-wide elastic tape. (We bought our elastic at a fabric store.)

2 Place a strip of elastic tape along one of the pencil lines, and staple one end of it to the first rib. See the Assembling Ribs drawing at *right*. Next, stretch the elastic tape to 28" long and then staple through it and into the last rib at the opposite end. *Do not cut off the excess tape*. Now, staple the elastic tape to each of the ribs between the first and last ones. (We used an electric stapler, and drove two 3/8" staples

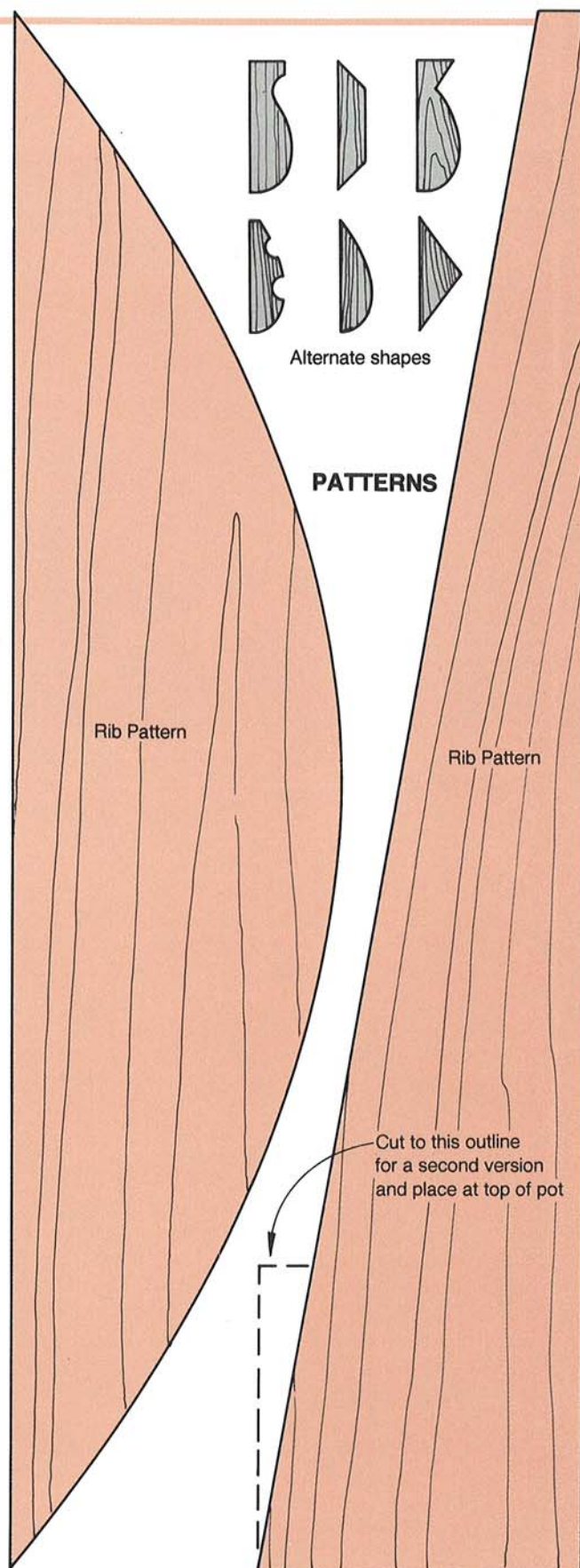
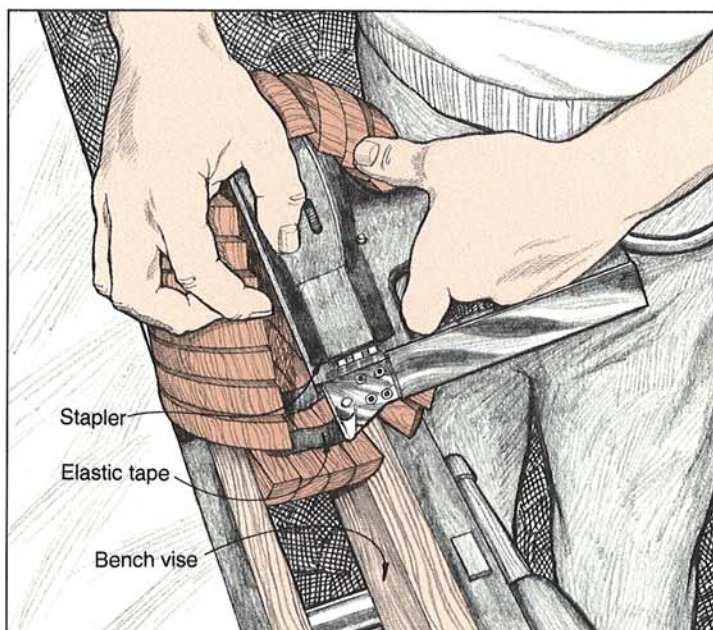
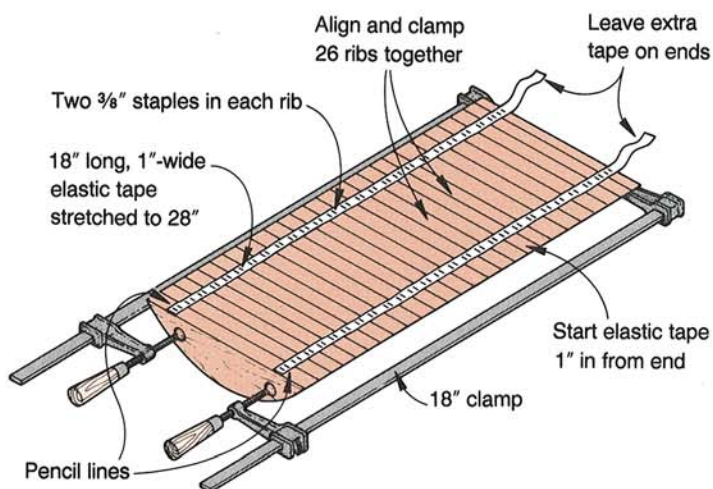
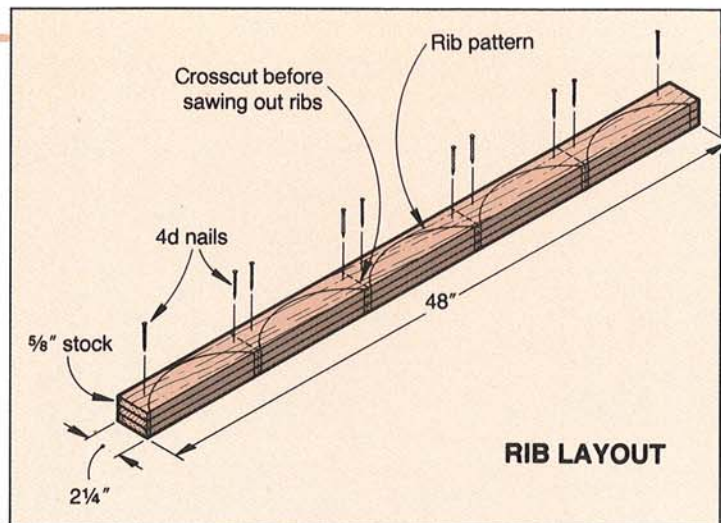
parallel into each rib.) Attach the second elastic strip the same way, and remove the clamps or tape.

3 Bring the end ribs together to form a circle, and clamp them with two other ribs in a bench vise. Overlap the loose elastic tape on the next three adjacent ribs, and secure it with two staples in each rib, as shown at *right*. Cut off the excess.

4 Stretch the assembly open and slide a 1-gallon plastic container into it, bottom first. (Our pots measured 6 3/4" tall, 6 3/8" in diameter at the top, and 5 1/4" in diameter at the bottom. We found identical containers, made by three different manufacturers, at garden-supply stores.)

5 Redwood weathers naturally, so we chose not to apply any stain or finish to our pot covers. If you wish to finish your pot covers, do so before clamping the pieces. ■

Supplies: 1 yard 1"-wide elastic tape, stapler and 3/8"-long staples, 1-gallon plastic pot.





A welcome sight

NEIGHBORLY NUMBERS

With this project, no one—not even the pizza deliveryman—will have trouble finding your house by day or night. By day, this sign offers a cheery welcome. At night, 4" backlighted numerals won't leave any question as to where you call home.

Cut the parts from cedar

1 From a 24" length of $1\frac{1}{16} \times 6$ " cedar decking stock, rip $\frac{1}{2}$ " off one edge, then reset the fence and rip a $3\frac{1}{2}$ "-wide strip to square the edges. From this strip, crosscut one 16" length for the sign board (A), two $2\frac{1}{4}$ " lengths for the sides (B), and two $1 \times 1 \times 3\frac{1}{2}$ " for the cleats (C). If your house has lap siding, crosscut one end of each side at an angle to offset the siding's slope.

Note: As pictured, the 16" sign board (A) holds four numerals. If you have more numerals in your street address, buy extra stock and add 4" to the length for each additional numeral (3" if numeral 1). Center WELCOME on the sign board.

2 Using carbon paper or a photocopier, make a copy of the Welcome patterns, and the numbers on pages 22-23 that you'll use. Join the two Welcome patterns to complete the word and then cut around the outside, leaving a $\frac{1}{4}$ " margin.

3 Scribe a faint line $\frac{7}{8}$ " from the bottom on the face of the sign board, and $1\frac{3}{4}$ " in from each end. Next, apply a light misting of spray adhesive to the back of the pattern.

Place the pattern on the board, aligning the bottom of the letters on the horizontal line, and centering between the two vertical lines.

4 To recess the Welcome letters in the sign board, first angle the scrollsaw table to $2\frac{1}{2}^\circ$ from perpendicular to make a bevel cut. (Cutting on a bevel closes the saw kerf space when you push in the cutout.) Test by cutting a circle on a piece of $1\frac{1}{16}$ " scrap, and then push the cutout into the piece to make certain it does not fall out. If it does fall out, tilt the table one more degree, and test again. (We used #5 blades with $12\frac{1}{2}$ teeth per inch.)

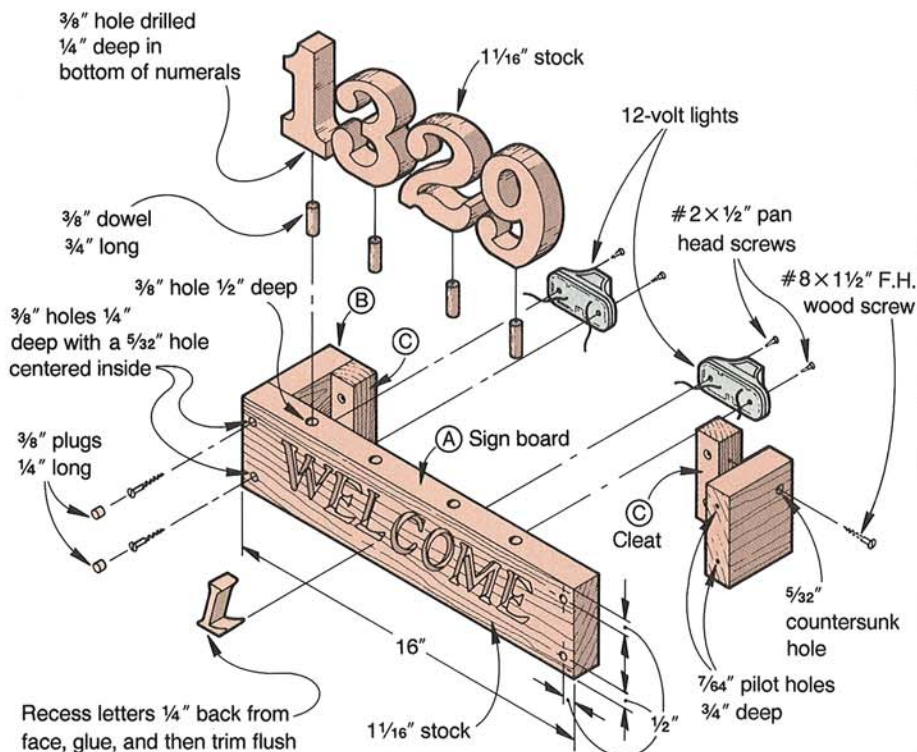
5 You need to drill the start holes in the sign board at the same angle you'll be sawing the letters. To do this, place the board face up on your drill-press table. Next, put a $\frac{1}{8}$ "-thick scrap under the piece, near the top edge, to tilt WELCOME at an angle to the drill bit. Now, drill $\frac{1}{16}$ " start holes where shown on each letter. Before drilling the start hole for the inside line of the O letter, move the scrap to the bottom edge so it tilts WELCOME in the opposite direction.

6 Thread your scrollsaw blade through the first start hole, and then saw around the letter. (We centered the saw blade on the line.) When sawing, keep the letter on the downhill side of the blade to maintain the bevel. Cut around the remaining letters—except inside the O—the same way. When cutting out the inside of letter O, keep the letter on the uphill side of the blade.

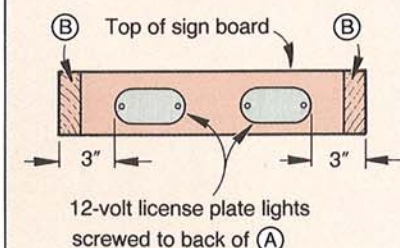
7 Rip and crosscut a 15" length (longer if you need more than four numerals) of the cedar stock to $4\frac{1}{2}$ " wide. Adhere the numeral patterns to the face of the piece. (We ran the grain horizontally through the letters to match grain direction on the sign board.) Set your scrollsaw table perpendicular to the blade, and saw out each numeral. Sand the cut edges of the numerals if necessary to smooth the curves.

Begin assembling your sign

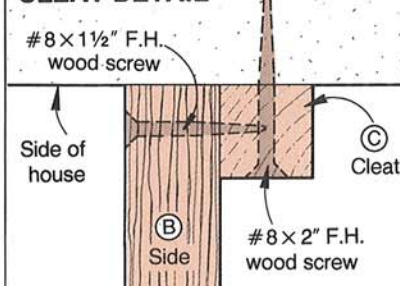
1 Place the sign board face up on a flat surface and position $\frac{1}{4}$ "-thick spacers under it at each end. Glue (we used yellow woodworker's glue) each letter (except the O center) in their holes, pushing them



LIGHT DETAIL



CLEAT DETAIL



through until they touch the surface underneath. After the glue dries, turn the board on its face, and glue the O center in its space, pushing it flush with the front face.

2 After the glue has dried, cut off the excess from the letters on the back side. (We used our tablesaw.) Sand both front and back faces with 100-grit sandpaper. Mark, drill, and countersink the four holes in the front face of the sign board as detailed on the Exploded View drawing above. Drill and countersink the holes in each B part and the mounting cleats as dimensioned.

3 Arrange your numerals on the top edge of the sign board. Mark a vertical line on the back of the sign board to locate each dowel hole. Using these lines as guides, drill $\frac{3}{8}$ " holes in the top edge of the sign board. Now, drill matching holes in the bottoms of the letters as instructed on the Exploded View drawing. (We used a doweling jig.)

4 Glue and screw the sides to the back of the sign board. Using a $\frac{3}{8}$ " plug cutter, make four cedar plugs. Glue them in the counter-bored holes in the sign front.

5 Glue $\frac{3}{4}$ " lengths of $\frac{3}{8}$ " dowels in the holes in the numerals, and then in holes in the top of the sign board. Align. After the glue dries, sand the numerals and plugs flush with the sign board's front.

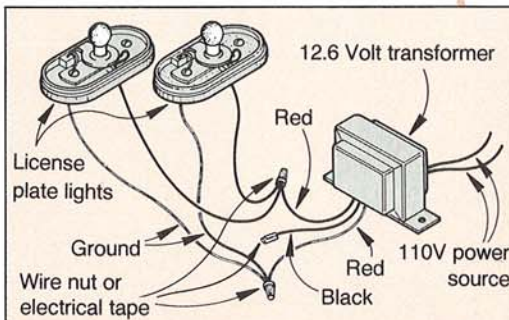
Now, light up the night

1 Mount the lights to the back of the sign board. (We used $\#2 \times \frac{1}{2}$ " panhead screws, and chiseled shallow grooves under the fixture to provide clearance for the wires). Wire the two lights (we used 18-gauge lamp wire on the low voltage side) as shown on the Wiring diagram at right.

Note: To backlight the numerals, we attached two 12-volt license plate lights (NAPA part number 200-5301) upside down to the back of the sign board, and wired them through a 12-volt transformer (Radio Shack catalog number 273-1511A). You can wire a switch between the transformer and power supply, or use an existing light switch to control the sign light.

2 Mount the two cleats to your house as shown on the Cleat detail above right. Finally, complete the permanent wiring.

Continued



WIRING DIAGRAM

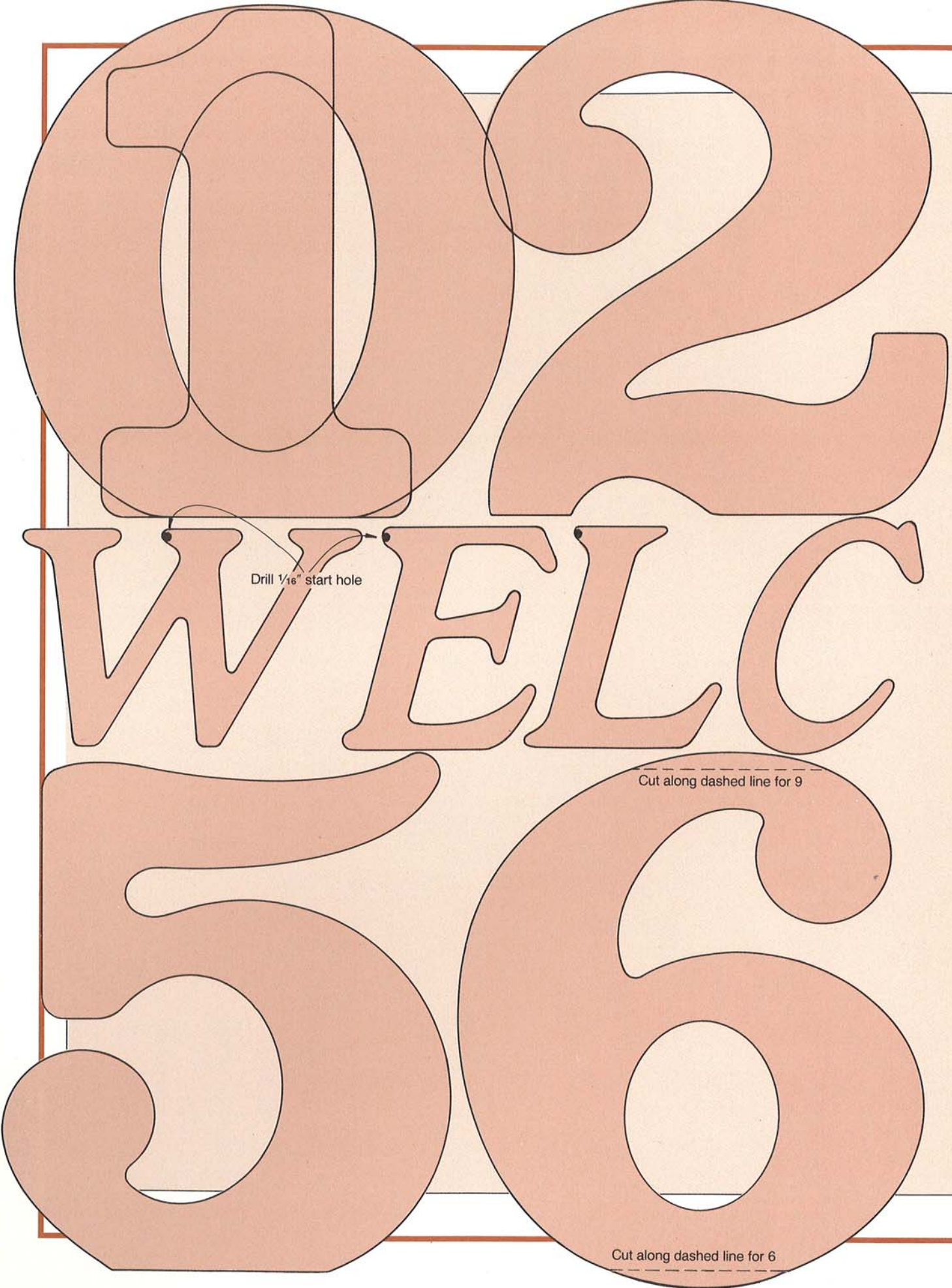
Bill of Materials

Part	Finished Size*			Mtl.	Qty.
	T	W	L		
A sign board	11 $\frac{1}{16}$ "	3 $\frac{1}{2}$ "	16"	C	1
B side	11 $\frac{1}{16}$ "	3 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	C	2
C cleat	1"	1"	3 $\frac{1}{2}$ "	C	2
D numerals	11 $\frac{1}{16}$ "	from pattern as required			

*Length of sign board will vary, depending on the number of numerals required. Read text before cutting any material.

Material key: C-cedar

Supplies: $\#8 \times 1\frac{1}{2}$ " flathead wood screws, $\#8 \times 2$ " flathead wood screws, $\#2 \times \frac{1}{2}$ " panhead screws, 12-volt license plate lights (NAPA #200-5301), 12.6-volt transformer (Radio Shack #273-1511A), 18-gauge lamp wire as needed, wire nuts, electrical tape, $\frac{3}{8}$ " dowel.



Drill 1/16" start hole

Cut along dashed line for 9

Cut along dashed line for 6



Drill $\frac{1}{16}$ " start hole

**FULL-SIZED
PATTERNS**

GEM of a JEWELRY CASE



What a pleasant surprise awaited us in a bulging envelope sent from Clinton, Tennessee. In it, we found Robert Colpetzer's drawings for the jewelry box you see here. Bob, we learned later, perfected the design while teaching industrial arts over a 20-year span at a suburban Chicago high school. We hope you enjoy this project as much as have countless students—and their mothers.

Note: This jewelry box uses stock varying from $\frac{1}{4}$ " to $\frac{3}{4}$ " thick, so you'll need to plane or resaw thicker stock to these dimensions. Also, to economize, we suggest edge-joining narrower pieces to form the lid and back. See the Cutting diagram on page 26 for how we arranged the parts before cutting.

Let's begin with the ends and drawer parts

1 From $\frac{3}{8}$ " stock (we used cherry), rip and crosscut two pieces $7 \times 8\frac{1}{2}$ " for the ends (A). Work carefully—these parts must be exactly the same size and square. Next, from the same stock, rip and crosscut two drawer backs (B), and four drawer ends (C) to dimensions listed on the Bill of Materials.

2 From $\frac{1}{2}$ "-thick stock, rip and crosscut the false drawer front (D), and the two drawer fronts (E), using dimensions listed on the Bill of Materials *opposite*.

3 Using the dimensions on the Exploded View drawing *opposite*, lay out the position of the stopped dadoes, rabbets, and grooves on the *inside* face of the left and right ends. (As shown at *right*, we marked both ends to ensure we cut the dadoes in the correct place.)

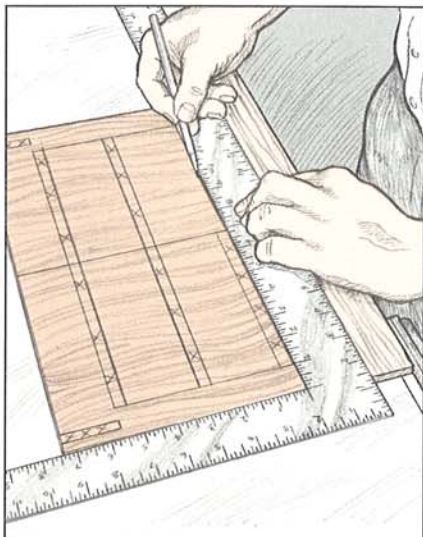
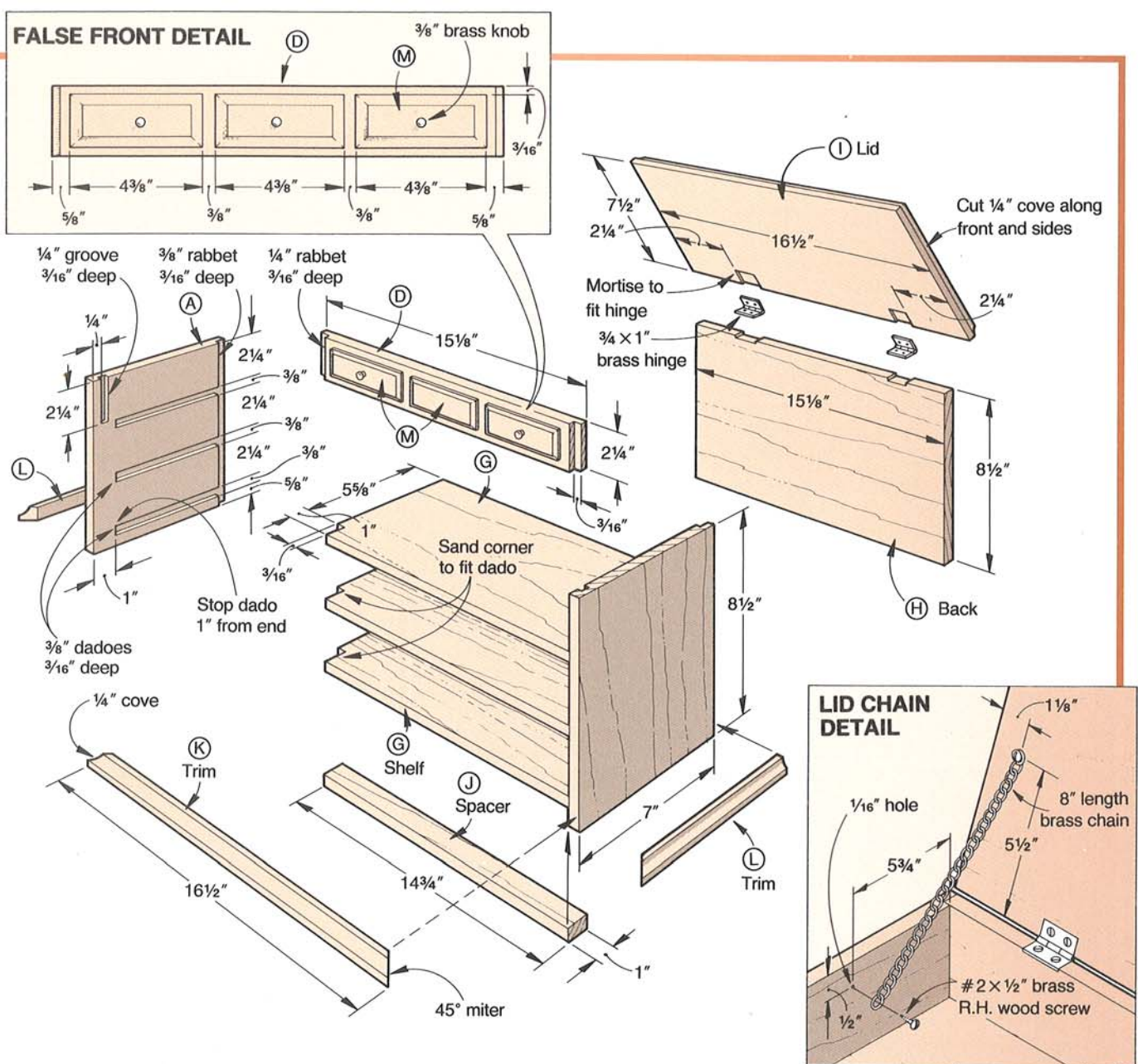
4 Set up a $\frac{3}{8}$ " dado on your table-saw, and cut the $\frac{3}{16}$ "-deep rabbet on the back inside edge of both ends. See the Exploded View drawing for details. Next, cut the three stopped dadoes into the inside face of both ends for the shelves, stopping each dado 1" from the front edge. You can also make these cuts on a table-mounted router.

5 Rabbet the ends of the two drawer fronts as dimensioned on the Drawer Assembly drawing found on page 26. Now, cut the $\frac{3}{8}$ " dadoes in the four drawer ends where dimensioned on the drawing.

6 Switch to a $\frac{1}{4}$ " dado, and set it to cut the $2\frac{1}{4}$ "-long grooves $\frac{3}{16}$ " deep from the top down in

Continued

FALSE FRONT DETAIL



Bill of Materials

Parts	Finished Size			Matl.	Qty.	Parts	Finished Size			Matl.	Qty.
	T	W	L				T	W	L		
A end	3/8"	7"	8 1/2"	C	2	J spacer	5/8"	1"	14 3/4"	C	1
B drawer back	3/8"	2 3/16"	14 1/4"	C	2	K front trim	3/4"	1/2"	16 1/2"	C	1
C drawer end	3/8"	2 3/16"	6 3/8"	C	4	L end trim	3/4"	1/2"	7 1/2"	C	2
D false front	1/2"	2 1/4"	15 1/8"	C	1	M trim blocks	1/4"	1 13/16"	4 3/8"	C	9
E drawer front	1/2"	2 3/16"	14 11/16"	C	2	N divider	1/4"	1"	13 3/4"	C	*
F bottom	1/8"	5 5/16"	14 1/16"	H	2	O divider	1/4"	1"	4 7/8"	C	*
G shelf	3/8"	6 5/8"	15 1/8"	C	3	* Cut drawer divider parts as needed. Material key: C—cherry; H—hardboard Supplies: Stain, finish, cardboard, #2 x 1/2" roundhead brass screws, small-link brass chain, spray adhesive, velvet fabric.					
H back	3/8"	8 1/2"	15 1/8"	C	1						
I lid	5/8"	7 1/2"	16 1/2"	C	1						

Jewelry box

the inside face of both end pieces. Test your saw settings using same-size scrap, and then cut the grooves. With a chisel, square the bottoms of these two grooves. Next, rabbet both ends of the false front.

7 Using a 1/8" carbide blade on your tablesaw, saw kerfs for the bottoms in the drawer fronts, drawer ends, and drawer backs where shown on the Drawer Assembly drawing. Now, from 1/8" hardboard, rip and crosscut two drawer bottoms (F) to the size listed on the Bill of Materials.

Cut the shelves, back, and lid

1 Rip and crosscut three pieces of $\frac{3}{8}$ "-thick stock to $6\frac{5}{8} \times 15\frac{1}{8}$ " for the shelves (G). Using a square, lay out the $\frac{3}{16} \times 1$ " notches on the front corners of each shelf. Cut out the notches. Sand the shelf corners to fit the radius of the stopped dados. Mark each shelf for position.

2 For the back (H), rip and cross-cut a piece of $\frac{3}{8}$ "-thick cherry to $8\frac{1}{2} \times 15\frac{1}{8}$ ". From $\frac{5}{8}$ "-thick cherry, rip and crosscut a $7\frac{1}{2} \times 16\frac{1}{2}$ " piece for the lid (I). From the same stock, cut one $1 \times 14\frac{3}{4}$ " spacer (J).

3 Finish-sand all parts, using 150- and 220-grit sandpaper to uniformly smooth the surface.

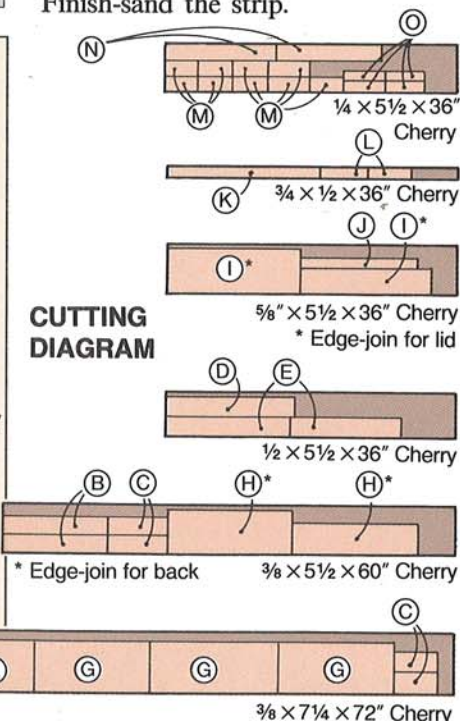
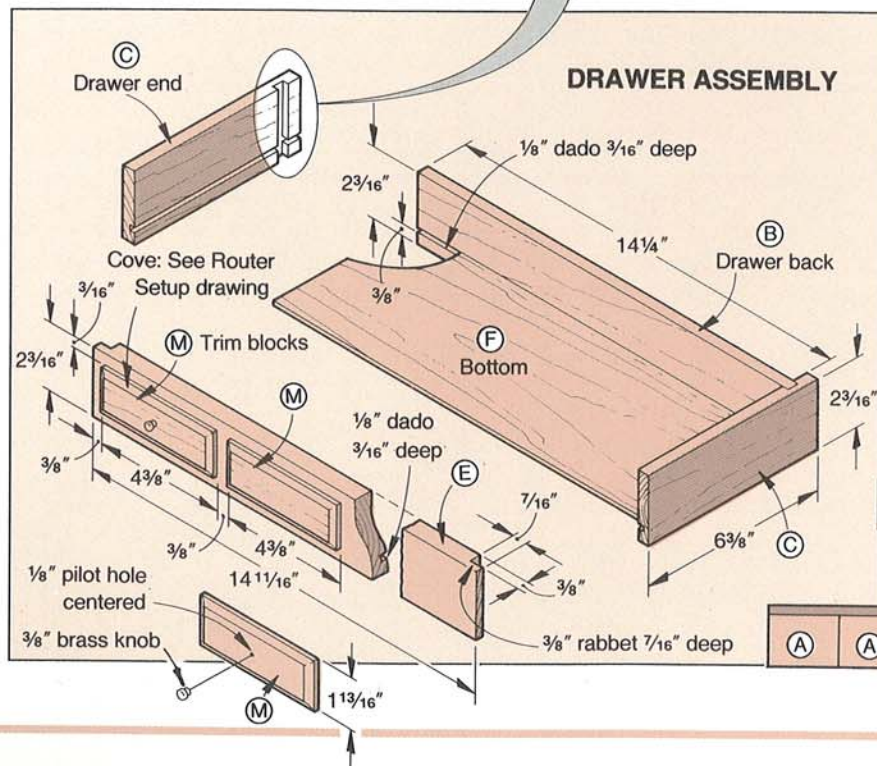
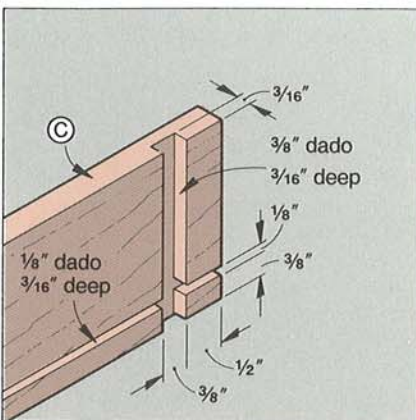
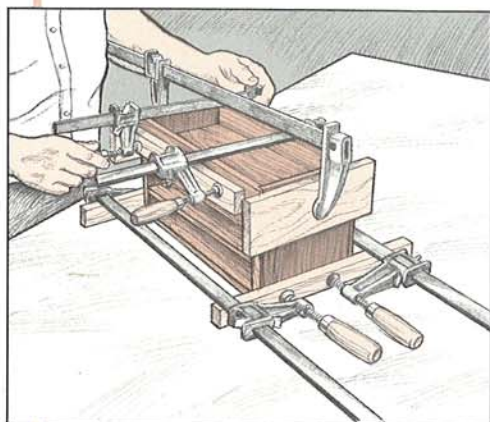
4 Dry-assemble the ends, shelves, back, false front, and spacer. Check parts for fit, and the box for square. Adjust parts if necessary.

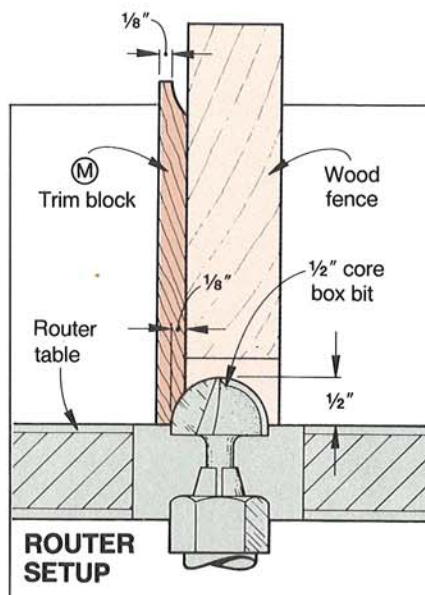
5 Disassemble the box. Now, apply yellow woodworker's glue to the mating edges of these parts and assemble the box again. Clamp as shown *below left*, and check for square. Wipe off any glue squeeze-out with a damp cloth.

6 Dry-assemble the two drawers, and check their fit in the box. (We used quarters to gauge clearance.) Make corrections if needed. Now, glue and assemble both drawers, clamp them, and square.

Move on to the trim and drawer dividers

1 Select a piece of $\frac{3}{4}$ "-thick cherry stock 36" long. True one edge, and then rout a $\frac{1}{4}$ " cove along that edge. (We used a $\frac{1}{2}$ " core-box bit in our table-mounted router.) Now, rip the routed trim strip to $\frac{1}{2}$ " width. Finish-sand the strip.





2 Miter-cut the front trim (K) and the two end pieces (L) from the strip. (We cut and fitted the front piece first, then the two side pieces.) Glue and clamp to the box.

3 Using the same bit, rout the cove along the front edge and the ends of the lid as detailed on the Exploded View drawing.

4 Cut the nine drawer trim blocks (M) as dimensioned on the Bill of Materials. Next, rout their edges, using the setup shown above. Glue and clamp them to the front of the two drawers and the false front where dimensioned on the Drawer Assembly drawing and the Exploded View. Wipe off glue squeeze-out with a damp cloth.

5 For the drawers, make the eggcrate dividers as shown on the Drawer Divider drawing above right, using $\frac{1}{4} \times 1$ " stock, and $\frac{1}{4} \times \frac{1}{2}$ " crosslap joints. (We taped the identical pieces together and cut the slots on our tablesaw, using an extension with our miter gauge to support them.) If you want smaller compartments, add cross pieces.

You're ready for the finishing touches

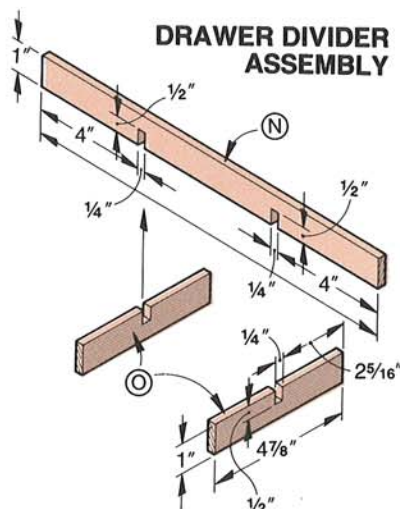
1 Draw diagonals to find the centerpoints on the six outside trim blocks, and drill $\frac{3}{32}$ " pilot holes

$\frac{3}{16}$ " deep for the brass knobs. See our Buying Guide for a source for the knobs and hinges.

2 Mark and then cut the hinge mortises into the underside of the lid. (We cut around the hinge edges with a sharp X-acto knife, and then used a $\frac{1}{2}$ " chisel to form the mortises.) Position the hinges again, drill $\frac{1}{16}$ " pilot holes, and then screw the hinges to the lid. Position the lid on the box, and locate the hinge mortises on the back's top edge. Now, chisel the mortises. Position the hinges, drill pilot holes, and drive the screws.

3 Apply the finish of your choice. (To bring out the reddish-brown cherry color, we wet the entire surface with a mild lye [sodium hydroxide] and water solution. When the solution started to dry, we rinsed with clear water, and then wiped the surface dry with paper towels. After air-drying the wood, we sanded lightly with 320-grit sandpaper, and applied one coat of water-based polyurethane sanding sealer with a nylon rag. We followed this with three coats of water-based polyurethane, sanding with 320-grit sandpaper between coats.)

Note: Lye is a caustic product and requires caution. Read and follow directions on the container before us-



ing. Wear eye protection and protective gloves and clothing. We mixed one teaspoon of lye crystals in one quart of water, and used about two cups of solution to cover all surfaces. Increasing the lye concentration intensifies the stain effect. Lengthening the wet time will not affect the stain's results.

4 Screw in the pull knobs, and attach the hinges. To make the velvet drawer linings, first cut rectangular pieces of $\frac{1}{16}$ " cardboard to fit the top shelf and the two drawers. Next, cut pieces of velvet fabric (purchase at a fabric store) to fit and lap over the edges of the boards. Apply a coat of spray adhesive to the top surface of each cardboard piece, and adhere the velvet to them. Place the velvet-covered boards in the top and drawers, and add the tray dividers.

5 To support the lid, cut an 8" length of small brass chain. (We purchased ours at a hardware store.) Next, drill a $\frac{1}{16}$ " pilot hole $1\frac{1}{8}$ " in from the left side and 2" down from the front edge on the inside face of the lid. Drill another on the inside of the left end, $\frac{3}{4}$ " in from the front and $\frac{1}{2}$ " down from the top edge. Secure the stop chain by driving #2 $\times \frac{1}{2}$ " roundhead brass screws through the end links and into these pilot holes. Now, gift-wrap your creation.

Note: If you wish to cover the chain, make a small-diameter cloth casing from the velvet used on the bottom, slip it over the chain before attaching it, and cut the casing to length. Or, you may buy and install specially designed jewelry-box stop hinges, or a jewelry-box lid support that one mortises into an end.

Buying Guide

● **Hardware kit.** Two brass hinges, and six brass knobs. Kit no. 71102, \$9 ppd. From: Klockit, P.O. Box 636, Lake Geneva, WI 53147. Telephone 800-556-2548. ■

MAKE A CASE FOR QUALITY



A stylish statement in the business world

With an afternoon's investment of time, you can create a sharp-looking project that will make a lifetime of splendid first impressions. Our thanks to Frank Finocchio, a sales coordinator for a division of the Martin Guitar Co., who updated a 1920s business-card case using today's materials and adhesives.

Note: This box requires a small amount of $\frac{1}{16}$ " and $\frac{3}{16}$ " stock. You may purchase a kit from our source listed on page 29. It includes enough precut rosewood and mother-of-pearl dots to make three boxes. Also, our plan accommodates cards up to $2\frac{1}{8} \times 3\frac{1}{2}$ ". If your business cards differ, adjust the box's dimensions accordingly to fit.

Follow these easy steps to cut out your box parts

1 From $\frac{1}{4}$ " plywood or hardboard, make a $2\frac{1}{4} \times 3\frac{3}{4}$ " template. Also, make a paper copy of the inner box pattern on page 29. (We used carbon paper.)

2 Lay out and assemble the outer box following the three steps on the Basic Box drawing *opposite top*. Work carefully, use a fine-cutting saw blade, and make certain all corners are square and joints tight. (We used cyanoacrylate glue, and spring-type clothes pins to clamp the parts for the few minutes it takes the adhesive to cure.)

3 To make the inner box side rails (D), first join two pieces of the $\frac{1}{16} \times 3\frac{1}{2} \times 3$ " rosewood with dou-

ble-faced tape. Next, from this bundle, rip two $\frac{3}{16} \times 3\frac{1}{2}$ " lengths. See the illustration *lower right* for how we safely made this cut. (We dipped the pieces in lacquer thinner to wet the tape and remove it without breaking the fragile wood.)

4 Rip and crosscut the remaining taped pieces to fit inside the framed box you assembled in Step 2. These pieces will become the skins (E) of the inner box.

5 Transfer the Inner Box pattern to the face on one of the two pieces (we used carbon paper). Scrollsaw the ends to shape following the pattern outline (Step 4 on the Exploded View drawing).

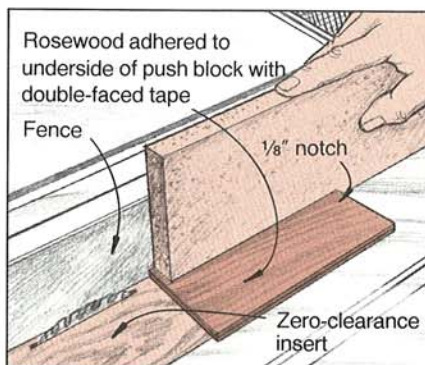
6 Separate the pieces. Assemble and glue the inner box (parts D and E) as instructed by Step 5 on the Exploded View drawing. Set the box aside until the adhesive cures.

7 Glue and clamp the second side or top skin to the outer box as detailed by Step 6 on the Assembly drawing *opposite bottom*. After the adhesive has cured, trim the box to size. (We trimmed close to the box edges with our scrollsaw, and then sanded away the excess.)

Next, shape the box edges

1 Set up your router and table as shown in the Round-over detail on page 29. Round over the edges of the outer box as detailed by Step 7 on the Assembly drawing. If you don't have the $\frac{3}{16}$ " piloted round-over bit called for, you may use a larger bit and set it to make less than a full cut, and set the fence to control cutting depth. Test the setting first on scrap material.

2 Crosscut the box on your table-saw as detailed by Step 8 on the drawing. (Before cutting, we wrapped masking tape around the box over the cutline, and then taped the box to a carrier board.)



INNER BOX PATTERN

3 Add the $\frac{3}{16}$ "-diameter pearl dots to the top of the box as instructed by Step 9 on the Assembly drawing. (We placed a $\frac{1}{4}$ "-thick piece of scrapwood in the box before drilling the holes. Then, we slid a piece of waxed paper on top of the spacer before gluing in the pearl.) Set dots flush with the surface.

Note: For other ideas and suggestions on how to add ornamentation to your box with mother-of-pearl and contrasting woods, see page 30.

4 After the adhesive cures, fit the inner box into the lower half of the outer box. Next, test-fit the lid portion of the outside box over the assembly. Sand and shorten the inner box if necessary, and then glue it in place. Now, finish-sand all surfaces with 320-grit sandpaper.

5 Apply the finish of your choice. (We sprayed our case with two coats of sanding sealer and three coats of satin lacquer, sanding lightly between coats.)

Buying Guide

● **Rosewood kit.** Enough rosewood and mother-of-pearl dots to make three card cases. Catalog no. 37RCWPK. Price: \$19.95 ppd. From: The Martin Guitar Co., Nazareth, PA 18064. Telephone: 800-247-6931 (Penn. residents, 800-633-2060). ■

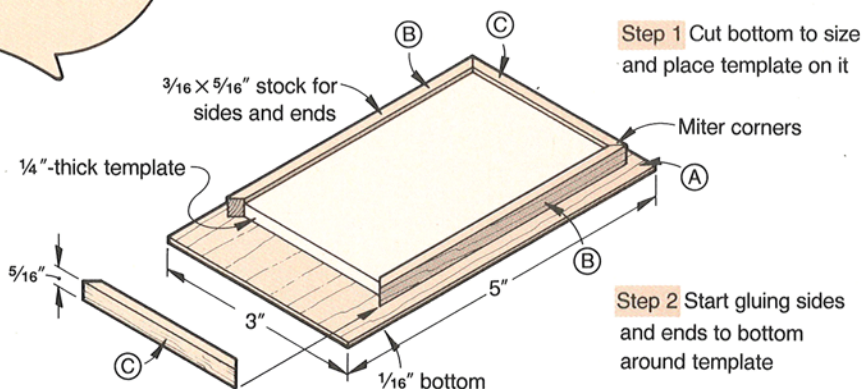
Bill of Materials

Part	Finished Size*			Matl.	Qty.
	T	W	L		
A	$\frac{1}{16}$ "	$2\frac{5}{8}$ "	$3\frac{7}{8}$ "	R	2
B	$\frac{3}{16}$ "	$\frac{5}{16}$ "	$3\frac{7}{8}$ "	R	2
C	$\frac{3}{16}$ "	$\frac{5}{16}$ "	$2\frac{5}{8}$ "	R	2
D	$\frac{1}{16}$ "	$\frac{3}{16}$ "	$3\frac{1}{2}$ "	R	2
E	$\frac{1}{16}$ "	$2\frac{1}{4}$ "	$3\frac{1}{2}$ "	R	2

* All parts are cut to size during construction. Please read the instructions before cutting.

Material key: R-rosewood

Supplies: Cyanoacrylate glue, tape.



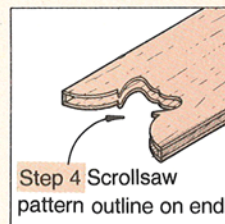
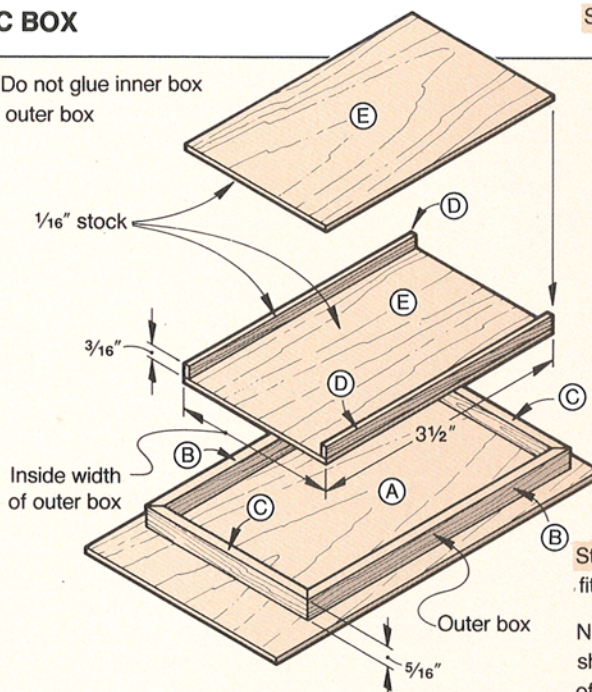
Step 1 Cut bottom to size and place template on it

Step 2 Start gluing sides and ends to bottom around template

Step 3 Remove template

BASIC BOX

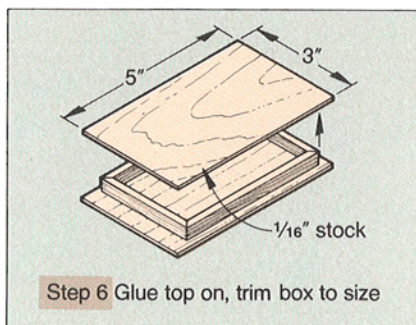
Note: Do not glue inner box inside outer box



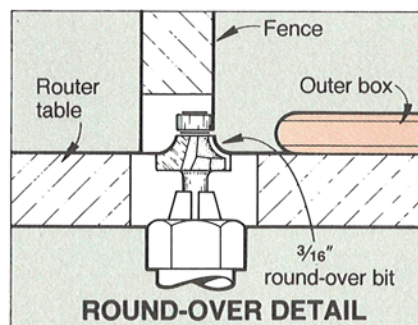
Step 4 Scroll saw pattern outline on end

Step 5 Make inner box to fit inside outer box.

Note: Thickness of inner box should be flush with top of outer box



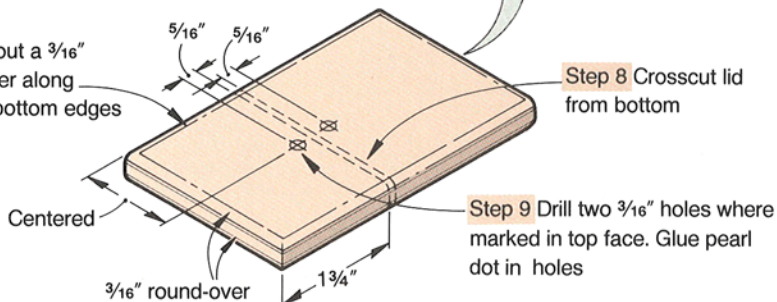
Step 6 Glue top on, trim box to size



ROUND-OVER DETAIL

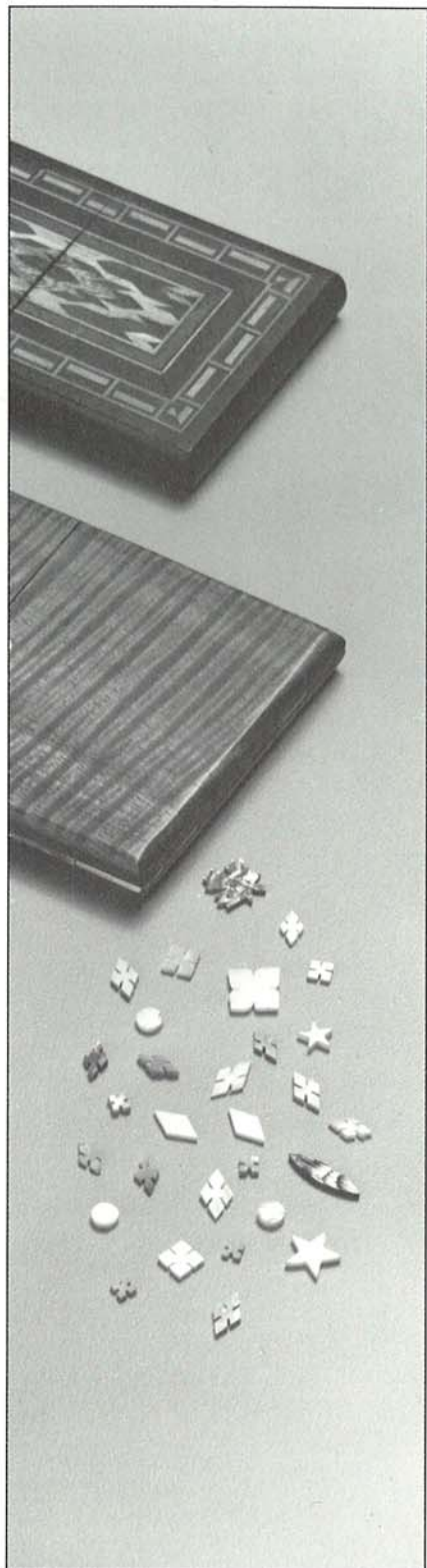
Step 7 Rout a $\frac{3}{16}$ " round-over along top and bottom edges

Step 8 Crosscut lid from bottom



Step 9 Drill two $\frac{3}{16}$ " holes where marked in top face. Glue pearl dot in holes

Take your ideas to the business world



We hope that the instructions for the business-card box on pages 28 and 29 will be a springboard for nifty variations. And, we'd like to see what you can do, or may have already done, to personalize cases from your shop. So let your mind wander, and see how you can enhance your business-card boxes. Here are a few ideas we came up with:

● **Contrasting accent woods.** Consider adding a different species—perhaps maple—for the box edges. Or, accentuate the top with a veneer band.

● **Parquetry/Marquetry.** Here's an excellent place to show off your talent for detailed work with a decorative inlay. See an example at *left*.

● **Mother-of-pearl and abalone.** Custom Pearl Inlay, a supplier for the Martin Guitar Company and others, stocks an excellent assortment of pre-cut ornamental items. We talked to David Nichols, owner of the firm, and he offered these tempting ideas:

● **Stars, snowflakes, diamonds, and leaves.** An experienced scrollsawer can inlay these shapes into the stock before gluing the top to the case. (Custom Pearl Inlay's pieces start at about \$1.)

David suggests you scribe around the piece with a sharp needle and then highlight your mark with chalk. You'll want to use a 2/0 or 3/0 scrollsaw blade. (To saw your own pearl or abalone, which David supplies, dial down the scrollsaw speed to 1,000 strokes per minute or less. Or, hand-cut the pieces with a jeweler's saw frame as sourced *below*.)

If you're less confident about your scrollsawing abilities, drop a pre-cut shape into a drilled hole, and then fill the void with a mixture of five-minute epoxy and a powdered color. (We mixed Behlen's Fresco black powder with epoxy—it looked sharp surrounding a mother-of-pearl star.)

To ensure that the ornamentation remains level with the stock face, lay the outside face on waxed paper and fill from the back side. Complete this step before gluing the top to the frame (Step 3 on page 29).

● **Edge strips.** Inlay strips of mother-of-pearl or abalone on the box edge. After you've assembled the box and trimmed off excess stock, rout a $\frac{1}{16} \times \frac{1}{16}$ " groove with a slot cutter centered on the edge. Then, use tweezers and cyanoacrylate glue to place the strips in the slots as shown in the koa box at *left*. Abalone for a $\frac{1}{16}$ "-wide band costs about \$2.

Buying Guide

Pearl and abalone
Custom Pearl Inlay
Route 1, Box 240
Malone, NY 12953
Phone 518/483-7685

Jeweler's saw, blades
Rio Grande
Jeweler's Supply
6901 Washington NE
Albuquerque, NM 87109
800-545-6566

Powdered colors, epoxy
Stewart-MacDonald's
Guitar Shop Supply
21 N. Shafer St.
Athens, OH 45701
800-848-2273

We value your ideas

So where have your mind and woodworking talents taken you? If you'd like to share your design with other readers, send us a picture of your completed business-card box and a short how-to explanation. If we publish your idea, we'll send you a \$25 check. Send your ideas to:

I Mean Business
Weekend Woodworking Projects
P.O. Box 11022
Des Moines, IA 50336-1022