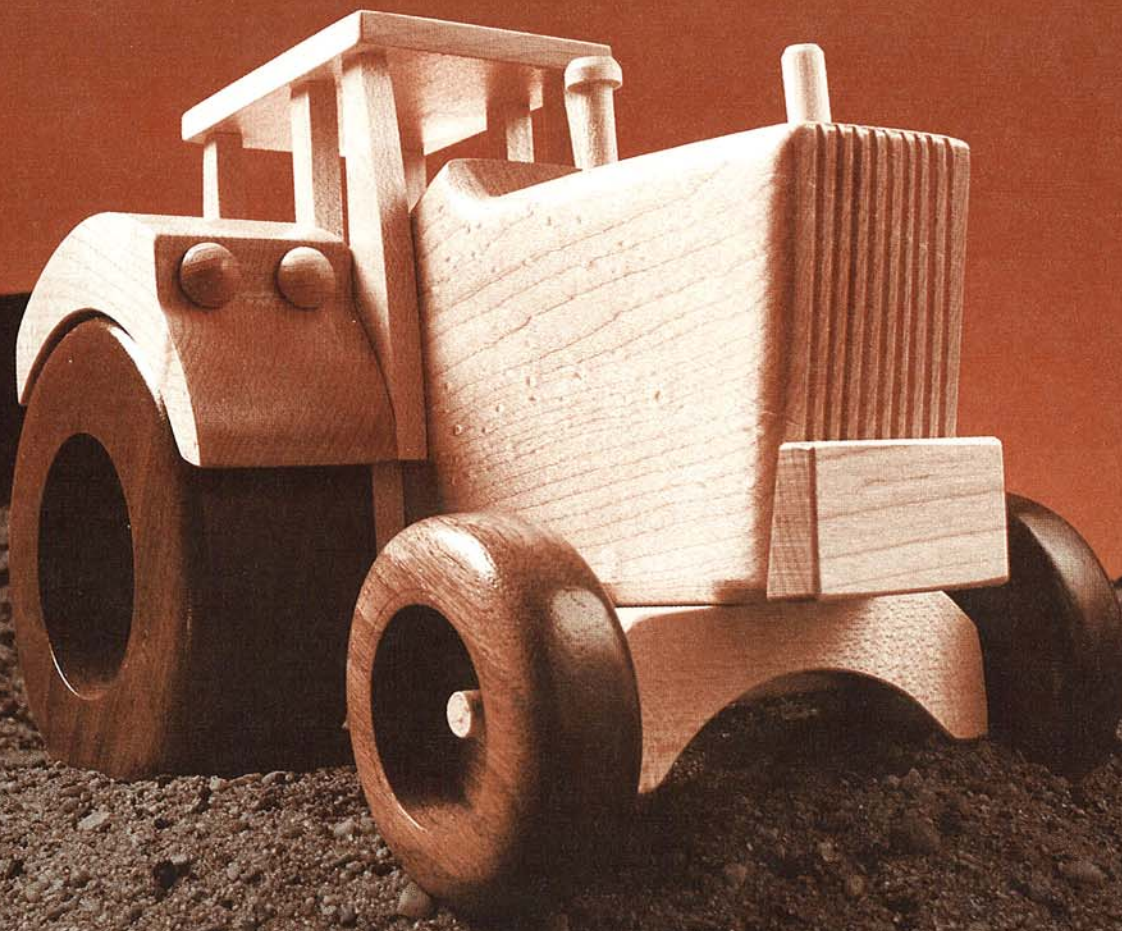


WEEKEND WOODWORKING PROJECTS™

NEAT THINGS YOU CAN BUILD IN A HURRY



LIL' SODBUSTER TRACTOR

Desktop nameplate

Giddyap rocking horse

Domed bowl

Sportsman's coatrack

Teddy bear bookshelf

FROM THE EDITORS OF WOOD® MAGAZINE



4 SPORTSMAN'S COATRACK

Those of you who travel Nature's trails know what it's like to rouse a wild duck from cover. Our coatrack captures this thrilling moment in dramatic fashion, featuring a handsome bird crafted from three native American hardwoods—cherry, walnut, and maple.

8 LPL SODBUSTER TRACTOR

Do you have a row to hoe or a shelf for show? How about a child with an approaching birthday? Whatever your need, this trusty four-wheeler will fill the bill, featuring sturdy construction and authentic looks.



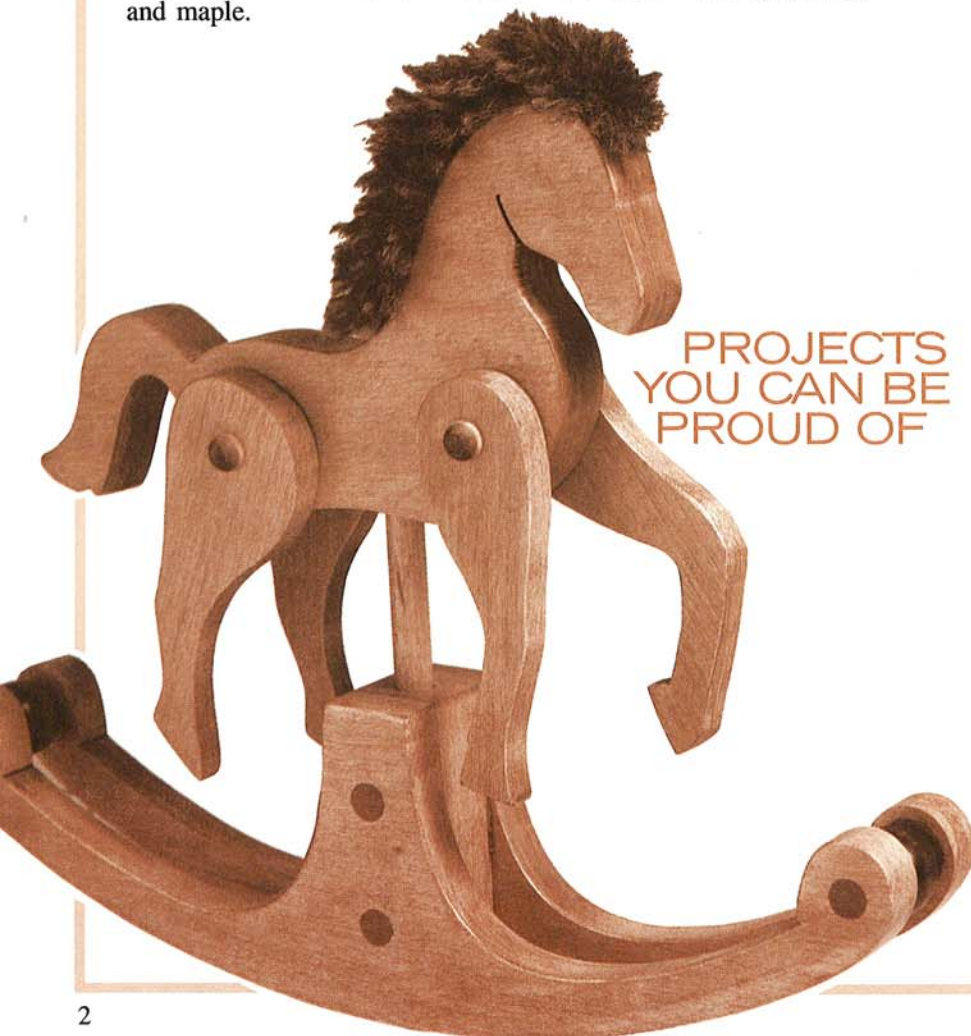
12 EXECUTIVE NAMEPLATE

In your quest for the perfect gift, check out our desktop nameplate. It's quick to make, inexpensive, and cherished by lucky recipients.

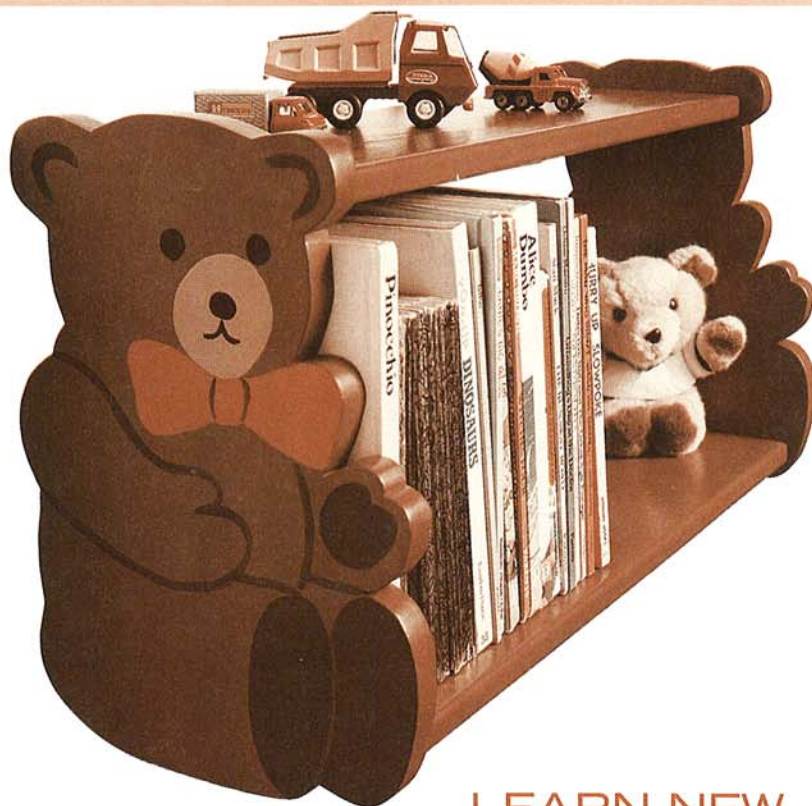


14 GIDDYAP ROCKING HORSE

You'll delight at the sights and sounds of this proud pony. Tip the rockers and listen as the free-swinging feet beat a merry gallop on the center support. Full-sized patterns let you build a toy or country version.



PROJECTS
YOU CAN BE
PROUD OF

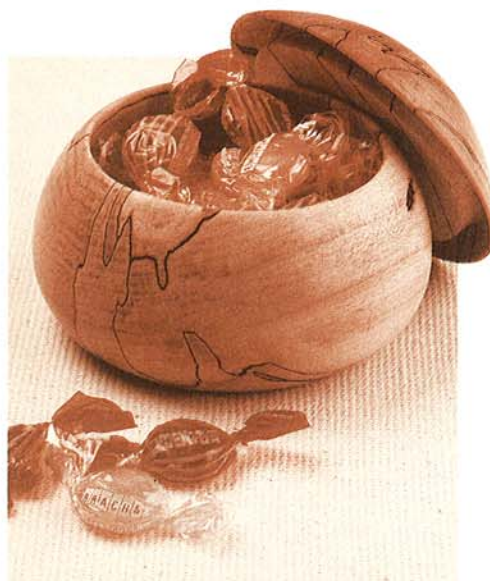


18 TEDDY BEAR'S LIBRARY

Projects requiring a special paint job scare many woodworkers away. But this needn't happen. The full-sized tracing pattern for our Teddy Bear bookshelf shows exactly where to apply your choice of colors.

22 AN OPEN-AND-SHUT CASE IN THE ROUND

"One good turn deserves another." This saying holds true in life and in turning lidded bowls. Cut a blank according to our directions, and find yourself with two turning tasks that add up to one terrific project.



LEARN NEW TECHNIQUES!

EDITORIAL/ART STAFF

Editor

Larry Clayton

Managing Editor

Jim Harrold

Art Director

C.L. Gatzke

Projects Editor

Charles E. Sommers

Design Editor

James R. Downing

Project Builders

James E. Boelling, Terry Fenimore

Editorial Director

Doris M. Eby

Publisher

Jerry Kaplan

National Advertising Manager

Mark S. Hart

Director, Circulation Marketing

Clem Sevede

Circulation Manager

Bill Reed

Production Services Manager

Steven Johnson

Editorial Research Director

C. Ray Deaton

WEEKEND WOODWORKING PROJECTS is published bimonthly in January, March, May, July, September, and November by Meredith Corporation, 1716 Locust Street, Des Moines, IA 50336. Application to mail at second-class postage rates is pending at Des Moines, IA. SUBSCRIPTION PRICES: One year \$24.97 in the United States and its possessions. Canada and other countries add \$6 per year. POSTMASTER: Send address changes to WEEKEND WOODWORKING PROJECTS, P.O. Box 10815, Des Moines, IA 50336.

© COPYRIGHT MEREDITH CORPORATION, 1988. ALL RIGHTS RESERVED. PRINTED IN U.S.A.

OUR PLEDGE TO YOU

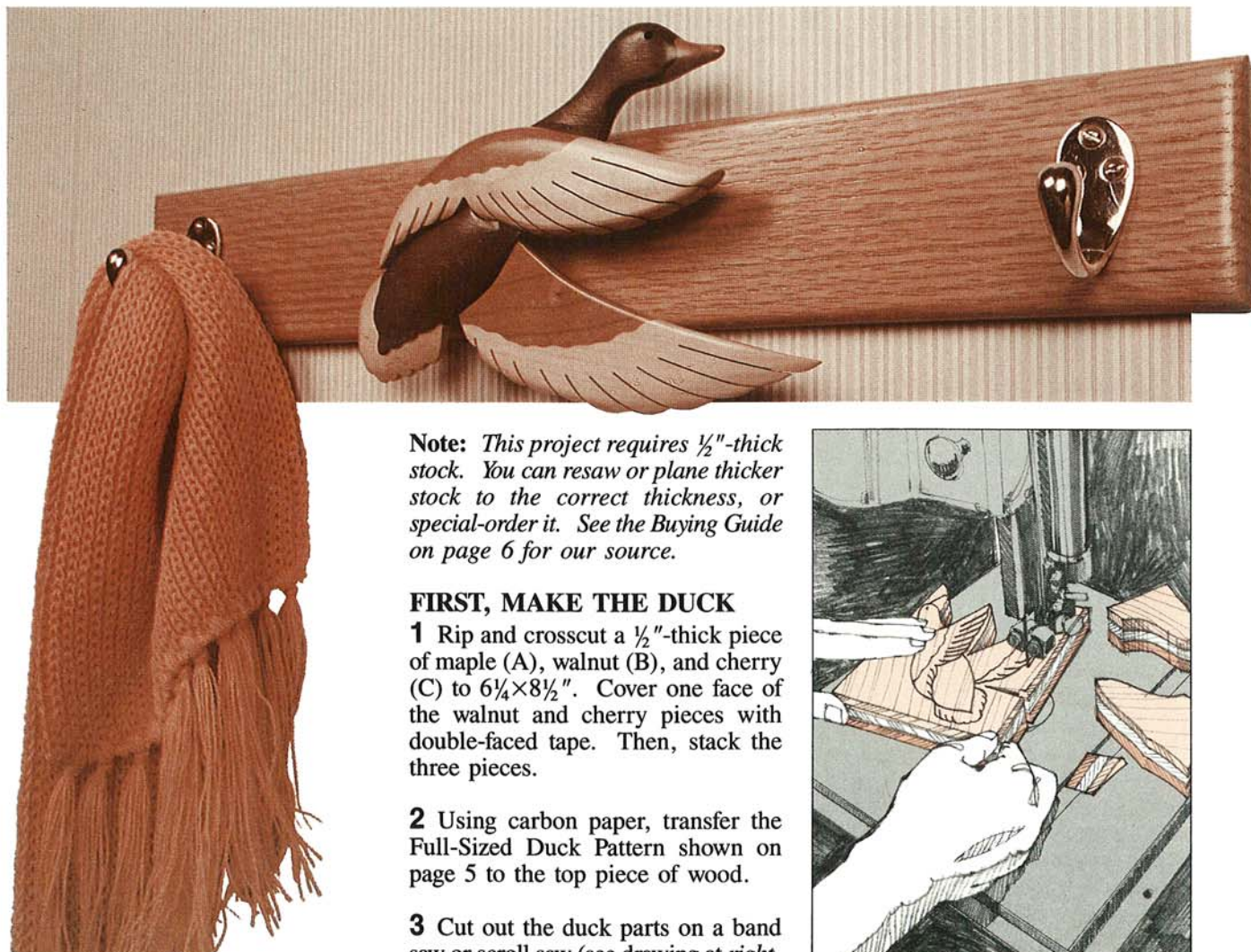
Prior to publication, we build every project presented in WEEKEND WOODWORKING PROJECTS step-by-step in our shop. Then, a team of editors reviews each element of each project—directions, illustrations, and bill of materials—to make sure the instructions we provide you are clear, concise, and complete. In short, we do everything possible to "de-bug" each project while it's being built in our shop so you'll have smooth sailing (and good results) in yours. Thanks for your support!

Jim Harrold

for the staff of Weekend Woodworking Projects

A NIFTY PLACE TO HANG YOUR HAT SPORTSMAN'S COATRACK

Looking for the ideal gift for the sportsman in your family? It just flew in. Our two-hook coatrack captures the drama of a wild duck in flight. To craft the duck, we used three woods of contrasting colors, stack-cut them on the scroll saw, then mixed and matched the parts to create the combination we liked best. Using this technique you can actually make three ducks at once.



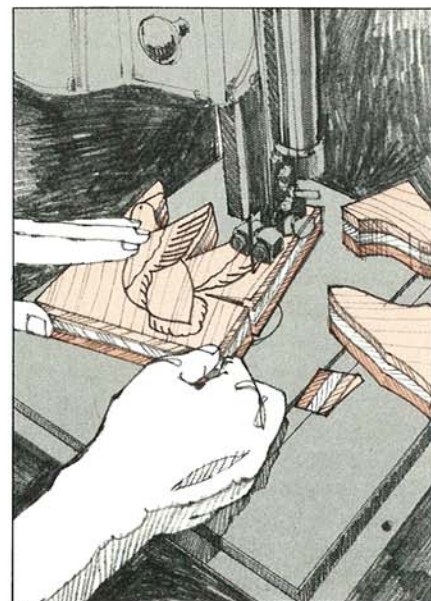
Note: This project requires $\frac{1}{2}$ "-thick stock. You can resaw or plane thicker stock to the correct thickness, or special-order it. See the Buying Guide on page 6 for our source.

FIRST, MAKE THE DUCK

1 Rip and crosscut a $\frac{1}{2}$ "-thick piece of maple (A), walnut (B), and cherry (C) to $6\frac{1}{4} \times 8\frac{1}{2}$ ". Cover one face of the walnut and cherry pieces with double-faced tape. Then, stack the three pieces.

2 Using carbon paper, transfer the Full-Sized Duck Pattern shown on page 5 to the top piece of wood.

3 Cut out the duck parts on a band saw or scroll saw (see drawing at right,



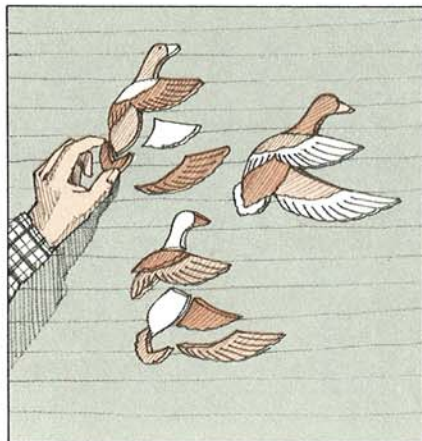
FULL-SIZED DUCK PATTERN

$\frac{1}{8}$ " hole
 $\frac{1}{16}$ " deep

Location of (F) on back

Sand shaded areas to round-over
after subassembling parts.

Continued



using a $\frac{1}{8}$ " blade. (We first sawed around the pattern, cutting $\frac{1}{4}$ " outside the feather edges.) Then, following the black lines, we cut all eight duck parts. We finished by trimming around the feather edges and cutting the black lines leading into the wings.)

4 Separate the combined woods in each part and remove the tape. Now, test-assemble three ducks by mixing and matching the different colored parts as shown *above*. Choose a combination and store the unwanted parts. (We selected the pieces so adjacent parts would not be of the same wood.)

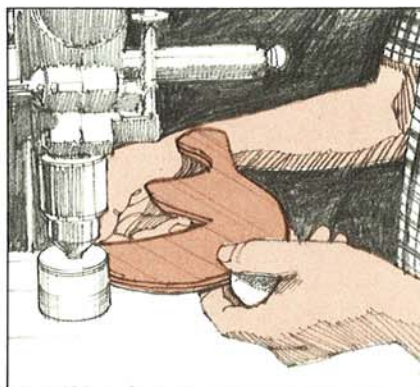
5 Now, subassemble the duck by gluing the head and beak together. (We used epoxy glue and placed the glued-together parts on waxed paper.) Next, assemble the two parts making up the upper wing; then, the body and tail; and finally, the parts of the lower wing.

Note: To give the duck a sculpted, three-dimensional look, we sanded the body parts to different thicknesses.

6 Using a stationary belt sander, sand the head/beak, and the body/tail subassemblies to an overall thickness of $\frac{3}{8}$ "; sand the lower wing parts to $\frac{1}{4}$ " thickness. (Leave the upper wing parts $\frac{1}{2}$ " thick.) Now, round-over the edges of the duck by sanding the areas shaded on the Full-Sized Duck Pattern.

7 To make the rigid plywood backing for the duck (D), rip and crosscut a piece of $\frac{1}{4}$ " plywood to $6\frac{1}{4} \times 8\frac{1}{2}$ ". Test-assemble the duck on the plywood backing, and glue the parts to each other and to the backing.

8 After the glue has dried, carefully cut around the duck with a scroll saw. Bevel the plywood backing using a 1" sanding drum as shown *below*. (We held the workpiece while sanding the bevel.)



NOW, MAKE THE WALL PLATE AND SPACER BLOCK

1 Rip and crosscut a $\frac{1}{2}$ "-thick piece of oak to $3 \times 19\frac{1}{2}$ " for the wall plate (E). (Make the plate longer if you wish to include more hooks.) Rout the front edges of the plate with a $\frac{1}{4}$ " round-over bit. Referring to the exploded-view drawing, *opposite*, mark, drill, and countersink the screw holes for mounting the wall plate. (We spaced the mounting holes 16" on center so we could fasten the rack to wall studs. We also concealed the mounting screws by locating the coat hooks over them.) Next, position the coat hooks, mark the screw holes, and drill the pilot holes. Sand the wall plate smooth.

2 Shape the spacer block (F) by taking a piece of $\frac{1}{2}$ " oak that's long enough to rip or plane safely (about 12"), and plane (or sand) it to $\frac{3}{8}$ " thick. Rip it 1" wide, and from this strip, crosscut a 1"-long block.

THE FINAL ASSEMBLY AND FINISHING

1 Finish-sand all parts. Drill a $\frac{1}{8}$ " hole $\frac{1}{16}$ " deep to form the duck's eye. (We darkened the inside of the hole with a black felt-tipped marker.)

2 Glue the spacer block to the wall plate (see the exploded-view drawing for position). Now, glue the duck to the spacer block and clamp the duck assembly to the wall plate with a hand-screw clamp.

Note: You have enough duck parts remaining to make two additional flying ducks. Use the same technique to select the wood combinations, and to complete their construction.

3 Apply the finish of your choice. (Because three different kinds of wood are used, we decided to use a transparent finish and applied two coats of Deft semigloss clear wood finish.) Sand or steel wool after each coat.

4 Wall-mount the coatrack in a prominent place and attach the brass hooks. Hang your hat, step back, and admire your handiwork.

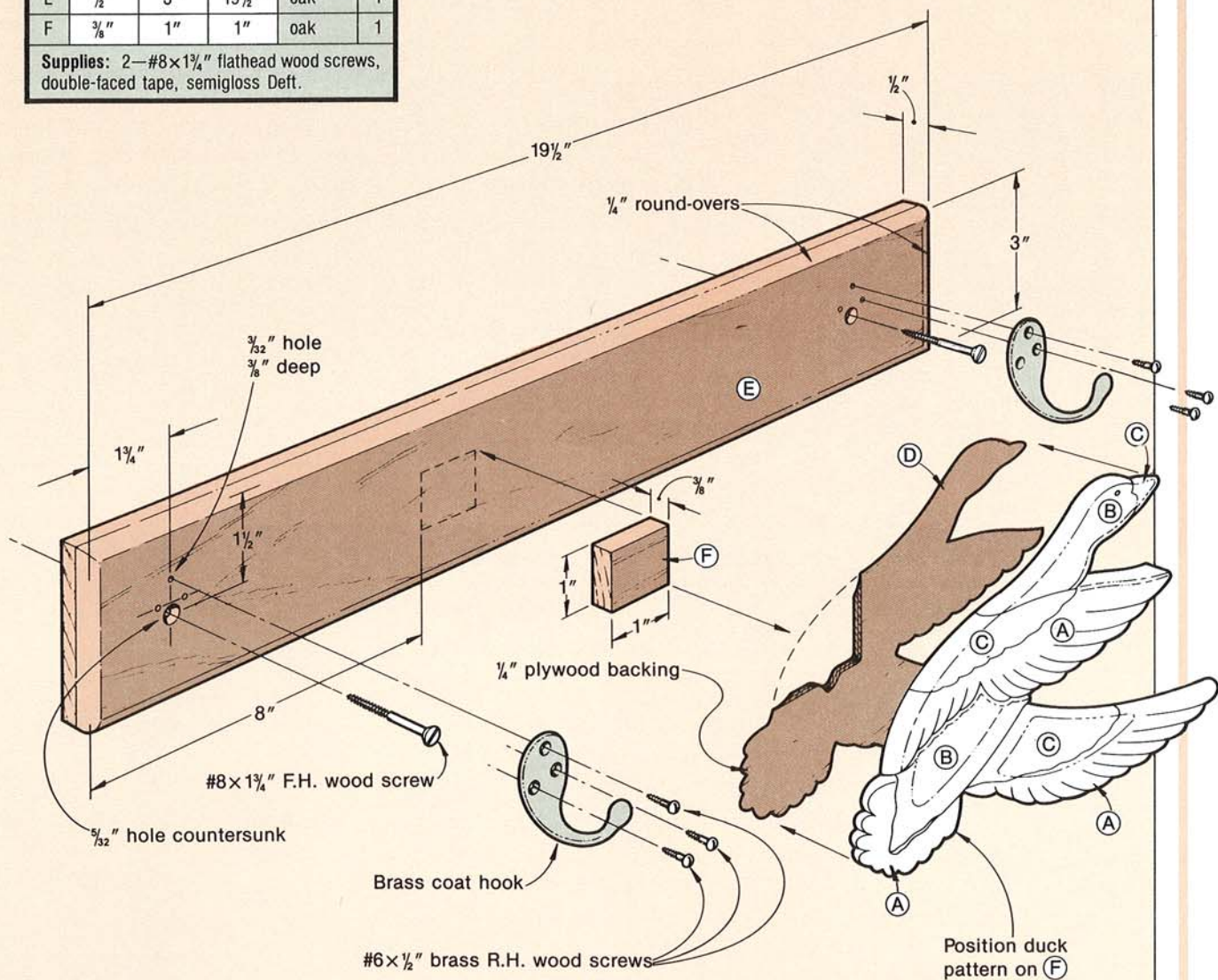
BUYING GUIDE

- **Thin stock.** $\frac{1}{2}$ "-thick cherry, catalog no. 2LU273, one $7\frac{1}{4} \times 24$ " piece, \$8.30. $\frac{1}{2}$ "-thick maple, catalog no. 4LU273, one $7\frac{1}{4} \times 24$ " piece, \$6.20. $\frac{1}{2}$ "-thick walnut, catalog no. SW12, one 12×12 " piece, \$6.90. $\frac{1}{2}$ "-thick oak, catalog no. 5LU273, one $7\frac{1}{4} \times 24$ " piece, \$8.50. For orders up to \$29.99, include \$4.20 for shipping and handling; orders from \$30 to \$50, add \$5.30 for shipping. Constantine, 2050 Eastchester Rd., Bronx, NY 10461, or call 1-800/223-8087.
- **Brass coat hooks.** Forged 2" single wardrobe hook, two needed, catalog no. A97.02, \$3.80 each, plus \$2.60 postage. A 2 $\frac{1}{2}$ " double hook version of the wardrobe hook, catalog no. A98.01, \$3.80 each, plus \$2.60 postage. Cut brass screws, catalog size no. 5 ($\frac{5}{8}$ "), box of 100, catalog no. 91Z05.04, \$3.10. Garrett Wade Company, Inc., 161 Avenue of the Americas, New York, NY 10013. Or call 1-800/221-2942.

Bill of Materials

Part	Initial Size			Material	Qty.
	T	W	L		
A	$\frac{1}{2}$ "	$6\frac{1}{4}$ "	$8\frac{1}{2}$ "	maple	1
B	$\frac{1}{2}$ "	$6\frac{1}{4}$ "	$8\frac{1}{2}$ "	walnut	1
C	$\frac{1}{2}$ "	$6\frac{1}{4}$ "	$8\frac{1}{2}$ "	cherry	1
D	$\frac{1}{4}$ "	$6\frac{1}{4}$ "	$8\frac{1}{2}$ "	plywood	1
E	$\frac{1}{2}$ "	3"	$19\frac{1}{2}$ "	oak	1
F	$\frac{3}{8}$ "	1"	1"	oak	1

Supplies: 2—#8× $1\frac{1}{4}$ " flathead wood screws, double-faced tape, semigloss Deft.



LI'L SOD BUSTER TOY TRACTOR



Spring has arrived and it's time to get the crops in the field. Our heavy-duty tractor stands at the ready, waiting for a child's hand to guide it over the sandbox landscapes and rugged terrains of America's backyards. We used walnut wheels to contrast with the maple body, cab, and fenders, and added numerous realistic details. With our full-sized patterns you can create an exact replica of what you see pictured in the farm scene above.

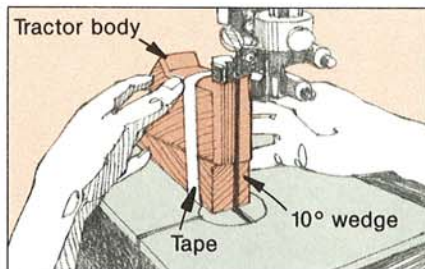
START WITH THE TRACTOR BODY AND FENDERS

1 Rip and crosscut a piece of $1\frac{1}{2}$ "-thick hardwood to $3\frac{1}{2} \times 9$ ". (We used maple for all tractor parts except the wheels.) Using carbon paper, transfer the full-sized body pattern (A) on page 11, including the dotted lines, to the wood block.

2 Cut the tractor body to shape on a band saw or scroll saw. (We cut outside the line; then sanded to the line.)

3 Using the exploded-view drawing and Tractor Hitch Detail on page 9, mark the center points for the hitch, exhaust pipe, and air cleaner holes. Drill the holes.

4 Draw a vertical line in the center of the front of the tractor body for the grille. Then, mark four additional lines on both sides, spacing each $\frac{1}{8}$ " apart. Now, make a 10° wedge-shaped block from scrap the same thickness and length as the body piece. Fit it under the tractor body and tape the two together as shown below. (We set the wedge $\frac{1}{16}$ " back from the front of the body to serve as a cutting depth gauge.) Adjust the band saw guide to clear the workpiece and align the saw blade with a vertical grille line. Pull the work into the blade and cut a $\frac{1}{16}$ "-deep saw kerf. Saw all nine grille kerfs this way. Remove the wedge.



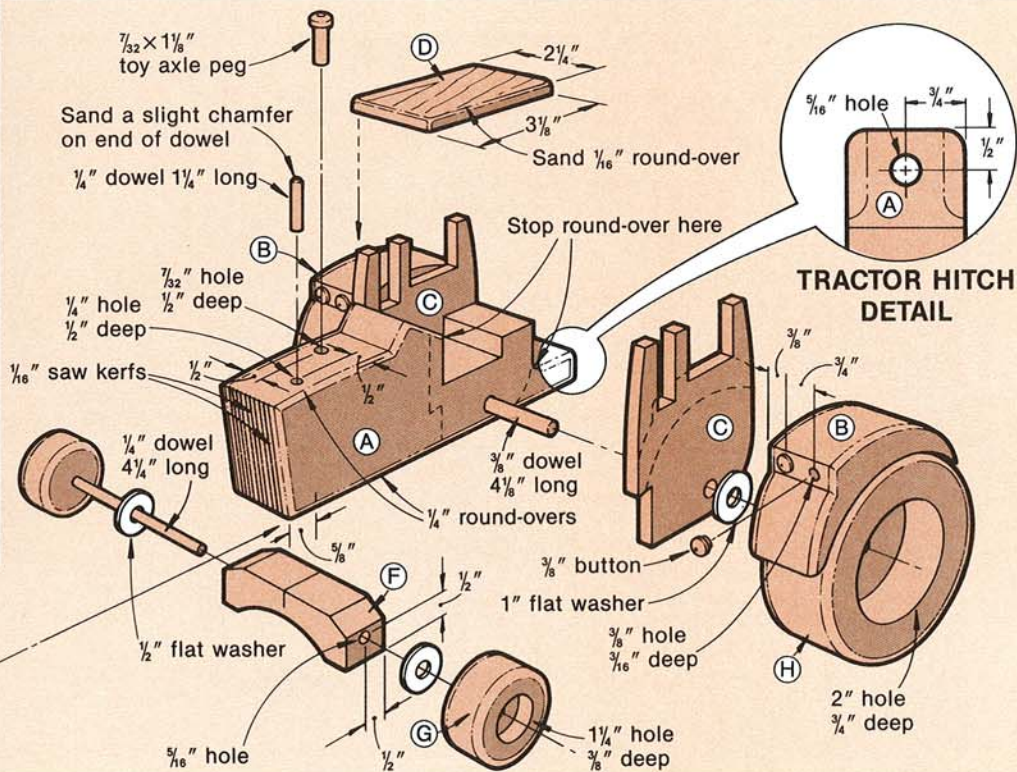
5 Turn the tractor body upside down and mark a centerline running $1\frac{1}{2}$ " from the front. Mark a crosswise reference line $\frac{5}{8}$ " back from the front. (You'll use them to align the axle.)

Bill of Materials

Part	Finished Size*			Material	Qty.
	T	W	L		
A*	1½"	3¼"	8½"	maple	1
B*	1½"	2½"	3½"	maple	2
C*	¼"	3½"	4½"	maple	2
D	¼"	2¼"	3½"	maple	1
E*	7⁄8"	7⁄8"	1½"	maple	1
F	1"	1"	3"	maple	1
G*	¾"	2¼" dia.		walnut	2
H*	1½"	3¼" dia.		walnut	2

*Parts marked with an * are cut larger initially, and then trimmed to finished size. Please read the instructions before cutting.

Supplies: 4—¾" maple buttons, 1—7⁄32×1½" toy axle peg, ¼" dowel, ⅝" dowel, 2—1" flat washers, 2—½" flat washers, 1—¾×4" machine bolt with washers and nut, 1—¼×3" machine bolt with washers and nut, polyurethane.



6 Round-over the edges of the tractor body where shown on the exploded-view drawing, above. (We used a table-mounted router fitted with a ¼" round-over bit for this.)

7 To form the fenders (B), rip and crosscut two 1½"-thick maple blocks to 2¼×3¼". Using carbon paper, transfer the full-sized fender pattern to each block. Now cut the fenders to shape and sand smooth.

8 Mark the location of the headlights where shown on the exploded-view drawing. Then, drill the two holes in

each fender. (See the drawing, *lower left*, for how we clamped the fenders and used a tape depth gauge on the drill bit for drilling the holes for the headlights.) Glue a ⅜" button in each headlight hole.

NEXT, MAKE THE CAB

Note: You will need some ¼"-thick stock for the tractor cab sides and roof. You can resaw or plane thicker stock to the correct thickness or special order it. See the *Buying Guide* on page 10 for our source.

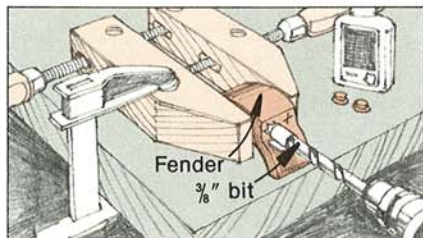
1 To make the cab walls (C), rip and crosscut two pieces of ¼"-thick maple to 3¼×4½". Using carbon paper, transfer the full-sized cab wall pattern to both pieces and mark the center point for the rear axle hole on one. Cut both cab wall pieces to shape on a band saw or scroll saw. Sand them smooth and sand a slight round-over on all outside edges.

2 Glue and clamp the cab walls to the tractor body. (We aligned the walls with the dotted cab outlines we had drawn on the body and made certain they were even on top to accept the roof.) After the glue dries, remove the clamps and drill the 7⁄16" axle hole through the body and cab assembly on a drill press.

3 Again, using ¼"-thick maple stock, cut the cab roof (D) to the size listed in the Bill of Materials. Sand a round-over along the top edges. Center and glue it to the top of the cab walls.

MAKE THE TRACTOR WEIGHT AND AXLE SUPPORT

1 To shape the front weight (E), start with a piece of maple about 1½×1½×12". (For safety, we chose to work with a 12"-long piece.) Set the table saw fence 7⁄16" from the blade and the blade 1" above the table. Tilt the blade 10° from vertical toward the



fence and make the first rip pass. (Follow these cutting instructions closely because you'll cut another part from this 12"-long piece in step 2.) Stop the saw, set the saw blade to 0°, lower it to 1/2", and set the fence 7/8" from the blade. Turn the piece a quarter-turn clockwise so you can rip the narrow end of the wedge. Rip the piece; then, crosscut a section of the cutaway strip to 1 1/2". Sand a round-over on all edges of the weight and glue it to the front of the tractor body.

2 To shape the front axle support (F), start with the 12" maple piece used in step 1. Rip the piece to 1" square; then, crosscut it to 3". Transfer the full-sized pattern shown on page 11 to the piece. Using the dimensions on the exploded-view drawing on page 9, mark the center point for the 5/16" axle hole. Clamp the piece vertically with a handscrew clamp on the drill press and bore a hole through the block. Next, make a crosswise reference mark at the center along the top and one side of the axle support. Then, cut the part to final shape on the band saw. Align the line on the axle support with the line scribed on the underside of the body. Glue and clamp it to the body.

SHAPING THE WHEELS

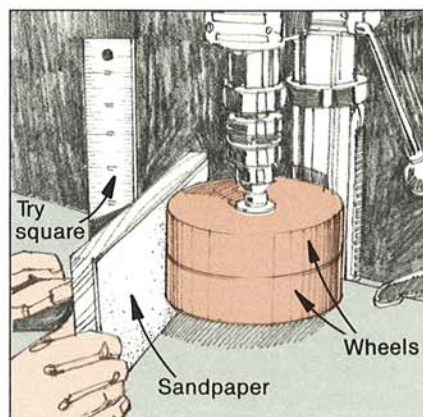
1 Rip and crosscut two pieces of 3/4" stock to 2 1/2" square for the front wheels. (We used walnut for all four wheels.) Draw diagonals to find the center of each blank. Next, chuck a 1 1/4" Forstner or spade bit in the drill press. Back the blank with scrap, center the marked center point under the bit, and clamp the blank to the table. Bore a hole 3/8" deep. Now chuck a 2 1/4" circle cutter to the drill press and cut out the wheel. (Our circle cutter automatically drilled the 1/4" axle hole.) Repeat the process to make the other front wheel.

Note: If you don't have a circle cutter, you can cut the wheels to shape on a

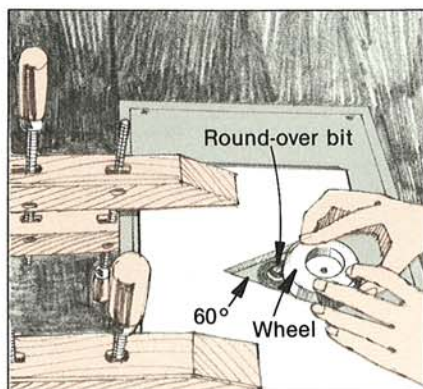
band saw. To do so, first draw a 2 1/4"-diameter circle (1 1/8" radius). Then make your cut slightly outside the line. Carefully sand to the line, using the technique described in step 3.

2 To form the rear wheels (H), rip and crosscut two pieces of 1 1/2"-thick walnut to 4" square. Follow the procedures outlined in step 1, using a 2" Forstner bit, a circle cutter, and a 3/8" drill bit (to enlarge the center holes).

3 To true up the rear wheels, thread them to a 3/8"x4" machine bolt. Chuck this assembly into your drill press and sand as shown below. (We adhered half-sheets of 80- and 150-grit sand-



paper to particleboard with spray adhesive. To sand, we held it 90° to the table with a try square.) Assemble the front wheels the same way with a 1/4"x3" machine bolt and sand true.



4 Make the V-shaped jig shown below, left to safely round-over the edges of the rear wheels. (We first cut a 60° V in a 1-foot-square scrap of particleboard. Next, we positioned the jig so the wheel contacted the router bit; then, we clamped the jig to the router table.) Rout both edges of each wheel. Reposition the jig and rout the smaller front tractor wheels.

FINAL ASSEMBLY

1 Cut a 3/8" dowel to 4 1/4" for the rear axle. Insert the rear axle through the tractor body and glue on the rear wheels. (We inserted 1" washers between the cab walls and wheels for smoother wheel movement and let the axles extend into wheel openings 1/4".)

2 Cut a 1/4"-diameter dowel to 4 1/4" for the front axle. Glue the front wheels, this time using 1/2" washers.

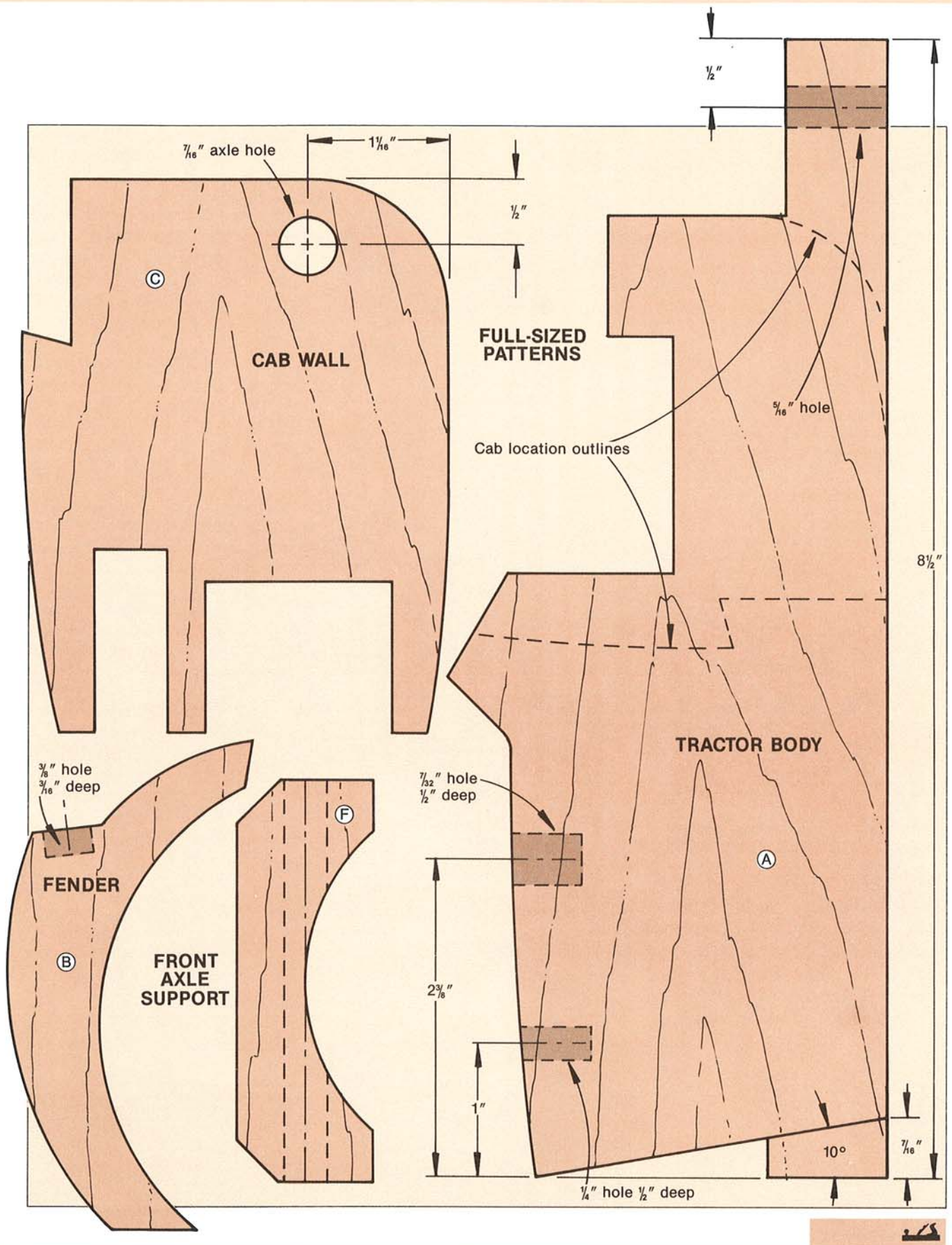
3 Glue and clamp the fenders in place. (We first aligned the front edge of each fender with the front edge of the cab wall; then, we adjusted the back of each fender to have equal spacing between the wheels and fenders.)

4 Cut the stem on a toy axle peg to 3/4". (We used a 7/32"x1 1/8" peg available at wood supply and crafts stores, and mail order suppliers.) Glue it in the 7/32" hole in the top of the body for the air cleaner. Cut a 1 1/4" piece of 1/4" dowel. Now, sand a slight chamfer on one end and glue the opposite end in the exhaust pipe hole.

5 Finish-sand all parts and apply the finish of your choice. (We sprayed on two coats of clear polyurethane.)

BUYING GUIDE

• **Maple stock.** 1/4"x7 1/4"x24", catalog no. 4LU173, \$5.35; 1 1/4"x7 1/4"x24", catalog no. 4LU573, \$12.15, shipping and handling, \$3.15 for orders up to \$15, \$4.20 for orders from \$15.01 to \$29.99, from Constantine, 2050 Eastchester Rd., Bronx, NY 10461, 1-800/223-8087, in New York call 1-800/822-1202.





SIGN OF THE TIMES EXECUTIVE NAMEPLATE

First impressions mean a lot, particularly in the business world. At your workplace, you want to project yourself as a well-established professional. The way you dress, speak, and behave go a long way toward this end. But so do the things around you—including the nameplate on your desk. Our oak and walnut rendition lets you introduce yourself with dignity, and a touch of class. Best of all, you can knock it out in a few hours.

LET'S START WITH THE OAK PLATE

1 Determine the length of oak plate (A) you'll need by arranging the letters of the name on the sticky side of a strip of masking tape as shown *below*. Measure the length of the name. Then allow for a $1\frac{1}{8}$ " margin at each end.



(We used $\frac{3}{4}$ "-high laser-cut walnut letters and spaced them between $\frac{1}{16}$ " and $\frac{1}{8}$ " apart. See the Buying Guide.)

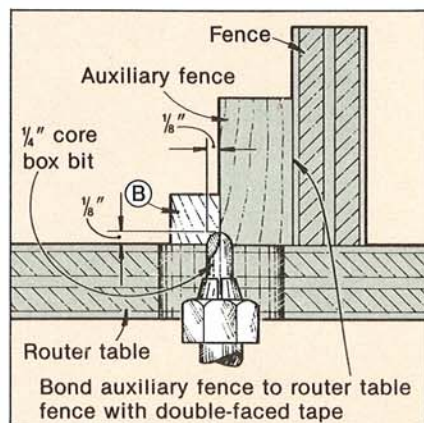
2 To make the oak plate (A), plane or resaw a thicker piece to $\frac{1}{4}$ " thick, or use $\frac{1}{4}$ " oak plywood. Rip the piece to $1\frac{1}{2}$ " wide and crosscut it to the length you determined in step 1.

FORM THE WALNUT TRIM

1 To shape the walnut trim pieces (B, C), rip a strip of walnut to $\frac{1}{2}$ " square. You'll need a length equal to twice the nameplate's length and twice the nameplate's width, with a few extra inches to cover mitering waste.

2 Mount a $\frac{1}{4}$ " core box bit in a table-mounted router, and extend the bit $\frac{1}{8}$ " above the table surface. Make an auxiliary fence from scrap, position it against the fence so the front edge centers on the bit as shown on the drawing *below*. Clamp the fence in place. Now, holding the auxiliary fence against the table fence and above the bit, turn on the router and slowly lower the auxiliary fence onto the bit. Move it slightly to enlarge the routed area around the bit. Turn off the router. Place double-faced tape on the back of the auxiliary fence and stick it to the table fence. Rout a cove along one edge of the $\frac{1}{2}$ "-square strip.

3 To bevel the strip, set the rip fence on your table saw $\frac{5}{16}$ " from the blade.

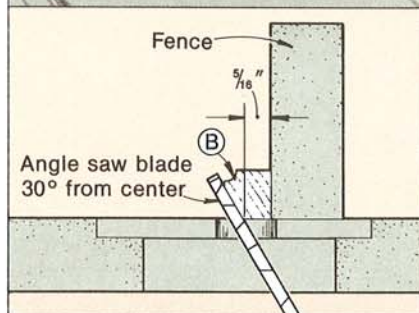
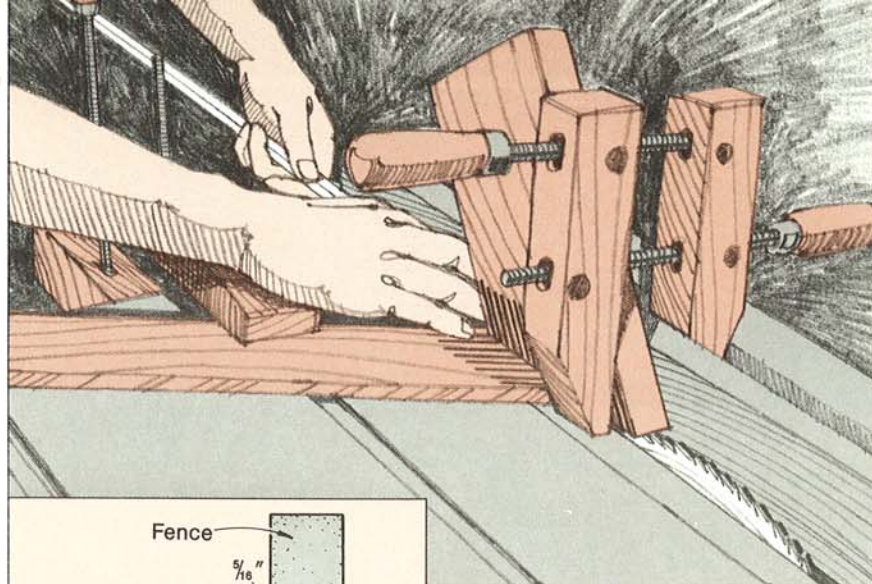
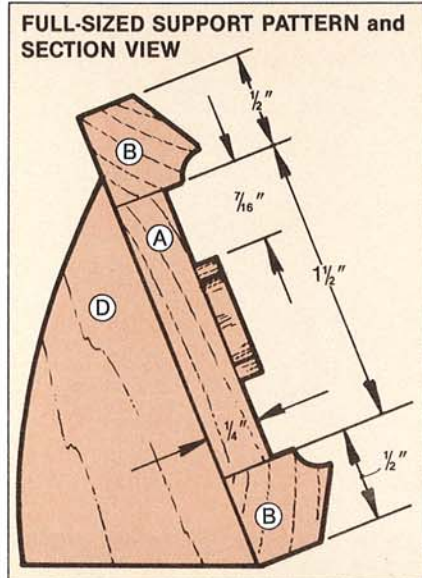


Angle the blade to 30° from center as shown at *right*. Rip the bevel. (Note in the drawing that we clamped feather boards at the side and top to hold the strip firmly against the fence. We used a long stick of the same size as the strip for a push rod.) Sand the molding smooth.

4 Lay the oak plate along the coved edge of the molded walnut strip and mark the length of each side on the strip's edge. (Leave enough space between each set of marks to allow for mitering waste.) Extend 45° cutoff lines outward from these marks on the flat back surface of the strip. Miter-cut all four trim pieces (B, C) to length. Test-fit the pieces.

THE FINAL ASSEMBLY

1 To apply the letters, clamp a straightedge onto the oak plate, $\frac{7}{16}$ " from the top edge. Pencil faint vertical lines $1\frac{1}{8}$ " in from the edges to mark the margins for the first and last letters. Arrange the letters on the plate until you are satisfied with the spacing. Make a faint pencil mark on the plate along the left side of each letter. Apply glue to the back of each letter. Position the top of the letter against the straightedge and the left edge on the pencil line.



BUYING GUIDE

• **Walnut letters.** $\frac{3}{4}$ " tall, 60 cents each. Shipping: \$2 for up to 15 letters; \$3.50 for 16-50 letters. Paddle Tramps Mfg. Co., 1317 University Ave., Lubbock, TX 79401. Telephone 806/765-9901.

2 Place the oak plate on a sheet of waxed paper. Apply a bead of glue to all edges of the oak plate, assemble the molding strips around it, and clamp. Remove glue squeeze-out. After the glue dries, remove clamps and sand excess glue.

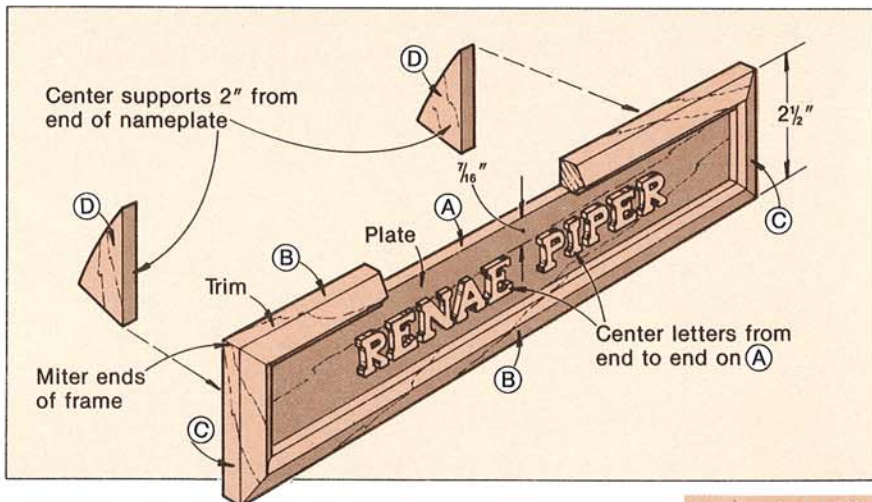
3 To make the nameplate supports, trace the pattern found on the Full-

Bill of Materials					
Part	Finished Size*			Material	Qty.
	T	W	L		
A	$\frac{1}{4}$ "	$1\frac{1}{2}$ "	variable	oak	1
B*	$\frac{1}{2}$ "	$\frac{1}{2}$ "	variable	walnut	2
C*	$\frac{1}{2}$ "	$\frac{1}{2}$ "	$2\frac{1}{2}$ "	walnut	2
D*	$\frac{3}{8}$ "	$1\frac{1}{4}$ "	$2\frac{1}{4}$ "	walnut	2

*Parts marked with an * are cut larger initially, and then trimmed to finished size. Please read the instructions before cutting.
Supplies: waxed paper, finish.

Sized Nameplate Support Pattern and Section View onto a piece of $\frac{3}{8}$ "-thick walnut. Cut the parts to shape. Sand the supports smooth and glue them to the back of the nameplate two inches in from the ends where shown on the exploded view drawing *below*.

4 Now, finish the nameplate. (We sprayed on two coats of clear lacquer.)



OUT OF THE WORKSHOP DUST COMES GIDDYAP ROCKING HORSE



Clippity-clop, clippity-clop—that's the sound our galloping horse makes every time you set it a-rocking. Place the maned toy rocker shown *above* on your child's dresser, or build our classy rustic version at *left* and give it to a country-loving friend. Either way, you'll ride high in the saddle with the joy you bring. Our instructions tell how to build both.

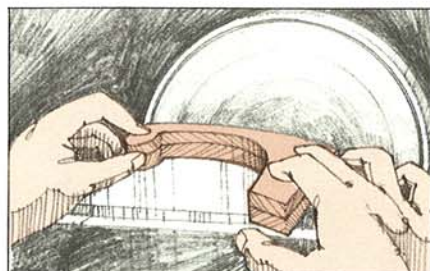
Note: This project requires $\frac{3}{8}$ "-, $\frac{1}{2}$ "-, and $\frac{3}{4}$ "-thick stock. You can resaw or plane thicker stock to the correct thickness, or special order it. See the Buying Guide on page 17 for our source.

MAKE THE ROCKERS FIRST

1 To make a full-sized rocker pattern, trace the half-pattern on page 16 onto a sheet of tracing paper. Using carbon paper, transfer the half pattern onto a sheet of paper; then, flip the pattern, align the center hole marks, and trace the other half of the pattern to complete the rocker. Mark the center points for all holes and the dash line for the spacer block. Cut out the pattern leaving about a $\frac{1}{2}$ " paper margin outside the line.

2 To form the rockers (A), rip and crosscut two pieces of $\frac{1}{2}$ "-thick wood to 4x12". (We used maple but found it difficult to sand and stain uniformly.) Stick the two pieces together with double-faced tape. Now, spray adhesive to the back side of your paper rocker pattern and adhere it to the top piece. With an awl, mark the center points for the four holes to be drilled.

3 Using a band saw, cut the rockers to shape. (We cut just outside the line and sanded to the line.) Remove the paper pattern and sand the bottom of the rockers on a disk sander (as shown *below*) by slowly rotating the pieces. Sand carefully to maintain a smooth arc on the rockers. Mount a 1"-diameter drum sander on the drill press and sand along the top edges of the rockers. Hand-sand the sides and places a drum sander can't reach.

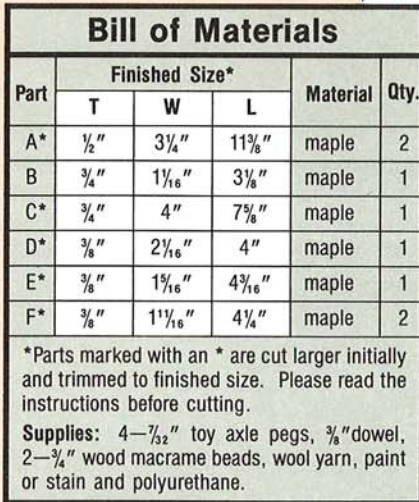


5 To make the rocker spacer (B), rip a $\frac{3}{4}$ "-thick piece of maple to $1\frac{1}{16}$ " wide; then, crosscut it to $3\frac{3}{8}$ " long. Draw diagonals across one end, mark the center point and drill a $\frac{3}{8}$ " hole, $\frac{3}{4}$ " deep.

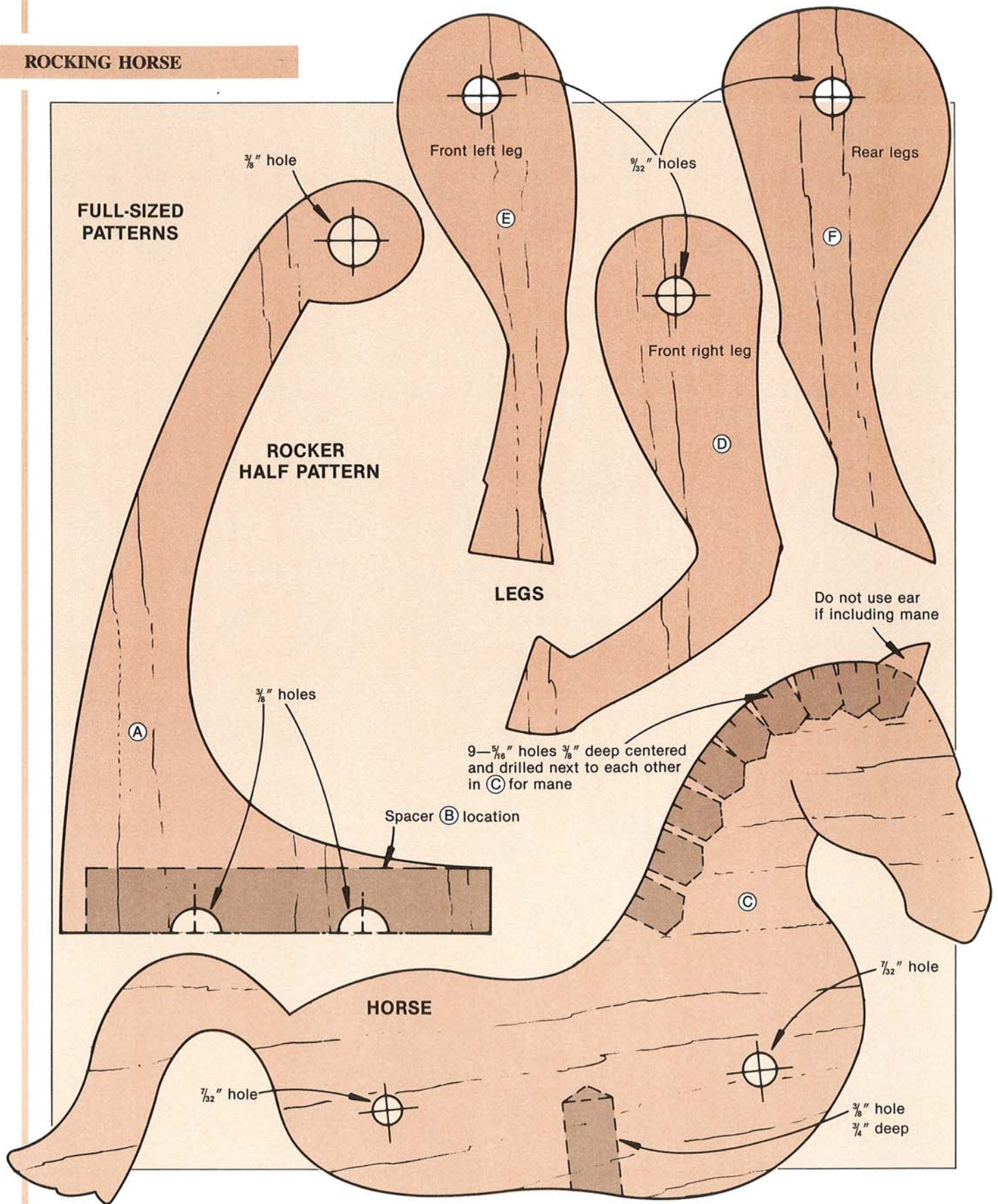
and apply glue to the inside surface of the two holes. Apply glue to one end of each dowel and insert them into the two holes, flush with the back side. Place a $\frac{3}{4}$ " round wooden bead (the type used for macrame and available at crafts supply stores) over the dowels.

holes in the other rocker. Place the second rocker over the dowels and press it down until it's snug against the spacer block and beads. Test the alignment by rocking it a few times. Adjust and clamp the assembly.

8 Remove the clamps after the glue dries. Then, drill the two previously marked $\frac{3}{8}$ " holes through the rockers and spacer block. Slightly bevel one end of each of the two remaining $\frac{3}{8}$ " dowels. Apply glue to the dowels and holes, and tap the dowels through the rockers and the spacer block. Now, sand all dowel ends flush.



ROCKING HORSE



LET'S MAKE THE HORSE

1 Using carbon paper, transfer the Full-Sized Horse Pattern to a $\frac{3}{4}$ ×5×8" piece of maple. (Again, we first transferred the pattern to paper, applied spray adhesive, and stuck the pattern onto the maple piece.) Mark the center points for all drilling locations. If you intend to finish your horse with the yarn mane, mark the location for those holes at this time too.

Note: Eliminate the horse's ears if you intend to put a mane on it.

2 Using a band saw or scroll saw, cut the horse body (C) to shape. (Again, we cut just outside the marked line, and later finish-sanded to the line.)

3 Transfer the three full-sized patterns for the legs (D, E, and F) to $\frac{3}{8}$ "-thick maple. (You may have to sand or plane thicker stock to this thickness.) Now cut the legs to shape. (To save time on the rear legs, we stacked two pieces of maple together using double-faced tape, glued the pattern to the top, and cut both out at the same time.)

4 Place the horse's body in a wood-screw clamp as shown *below*, and drill the $\frac{3}{8}$ " hole in the underside for the support dowel. (We first aligned the center point of the hole with the drill bit, tightened the clamp, and clamped the entire setup to the drill press table to keep it from moving. We then

bored the hole.) Remove the body from the clamp, change bits, and drill the two $\frac{7}{32}$ " holes in the body for the toy axle pegs, backing the piece with scrap to prevent chip-out. Change bits again and drill the $\frac{5}{32}$ " holes in the leg pieces, backing each piece.

5 Sand the body and leg parts smooth. (We used a $\frac{1}{2}$ " drum sander on a drill press to sand the cut surfaces.) Then, sand a slight round-over on all sharp edges.

6 To drill the holes for the mane, chuck a $\frac{5}{16}$ " bit in a drill press. Place the horse body in a handscrew clamp as shown *below*, adjust the body to align each hole with the drill bit, and drill each $\frac{3}{8}$ " deep.



FINISHING THE HORSE

1 Cut a $\frac{3}{8}$ " dowel $3\frac{3}{8}$ " long. Apply glue to the hole in the underside of the horse body and insert the dowel. Apply glue to the hole in the spacer block on the rocker and insert the other end of the dowel in it.

2 Finish-sand the horse and rockers. Apply the finish of your choice. (For the toy version, we applied a medium brown stain to all parts except the spacer beads—they were stained with a dark walnut for contrast. Then we applied two coats of polyurethane. The

dowels and axle pegs appear darker in color because of the end grain. See step 5 for directions on completing the country version.

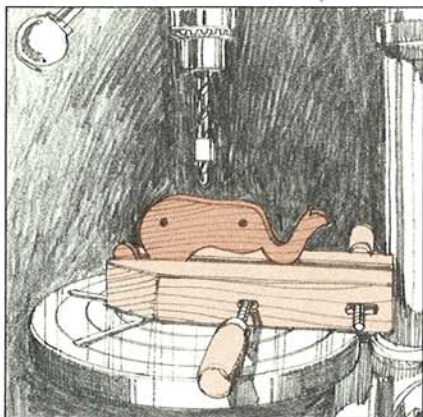
3 Cut the shafts of four $\frac{7}{32}$ × $1\frac{1}{8}$ " toy axle pegs (sometimes sold as $\frac{1}{8}$ " pegs) to $\frac{3}{4}$ " long. Use them to mount the legs to the body after you've finished it. Insert the axle pegs through the leg holes, apply glue to the ends of the pegs, and insert the ends into the holes in the horse's body. Allow some play so the legs swing easily.

4 To make the mane for the toy version, wrap wool yarn around a 3×5" card 12 times. Slide the yarn off the card and tie it in a bundle near the middle with a short piece of yarn. Then, tie another short length of yarn around the bundle about $\frac{1}{4}$ " away from the first tie. With scissors, cut the yarn between the two ties to make two plugs. (You'll need a plug for each hole.) Now, cut through the loops so you have 24 pieces of yarn tied on one end. Apply a small amount of glue into each $\frac{5}{16}$ " hole. Using a $\frac{1}{4}$ " dowel, push the knotted end of a yarn into each hole. After the glue dries, clip the mane to the desired shape.

5 To create the country version of the horse, paint all parts. (We applied two coats of rusty-red flat latex.) After the paint dries, sand the horse lightly to remove some of the paint and give it a worn or used look. (After sanding, the exposed wood on our horse looked too light, so we rubbed a light brown stain over those areas. This gave the wood a desirable aged look.)

BUYING GUIDE

● **Maple stock.** One piece $\frac{1}{2}$ × $7\frac{1}{4}$ ×24", catalog no. 4LU273, \$6.20; one piece $\frac{3}{4}$ × $7\frac{1}{4}$ ×24", catalog no. 4LU573, \$12.15. Shipping and handling, \$3.15 for orders up to \$15, \$4.20 for orders from \$15.01 to \$29.99, from Constantine, 2050 Eastchester Rd., Bronx, NY 10461, 1-800/223-8087, in New York call 1-800/822-1202.



FOR TALL TALES AND SMALL TOYS TEDDY BEAR'S LIBRARY



Storybooks hold a special place in a young child's life, opening his or her eyes to imaginative worlds and such lovable characters as Pinocchio, The Three Bears, and Snow White. Now, you can provide a special place for your child's fairytale classics with our amiable Teddy Bear bookshelf. If you have a hand saw or scroll saw, some paint, and a free evening, you have what it takes to please a child dear to your heart. But watch out—you may get a bear hug in return.

FIRST, LET'S MAKE THE BEARS

1 Using carbon paper, transfer the full-sized bear pattern from pages 20 and 21 to a large sheet of paper. (We used a 14×20" sheet of tracing paper.) You'll need to flip the pattern later, so darken all lines until they show through on the reverse side.

2 Rip and crosscut four pieces of $\frac{3}{4}$ " pine stock to 5×14" for the two end panels (A). Plane or joint the edges of each piece; then, glue and clamp two of the pieces together to form each 10×14" panel. Remove glue squeeze-out. After the glue has set, remove the clamps and square the back and bottom edges of both panels by jointing one edge, then sawing the second edge perpendicularly on a table saw or radial arm saw.

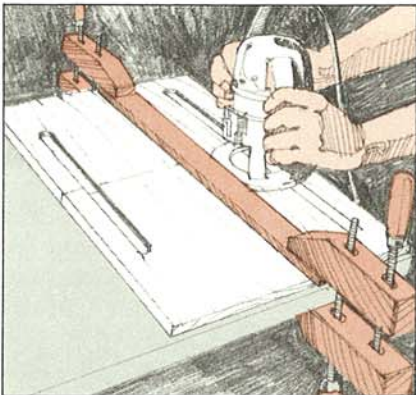
3 Align the full-sized bear pattern with the back and bottom edges of one of the panels. Then, using carbon paper, transfer the outline of the full-sized bear pattern to the end panel.

4 Clamp the end panels to a flat surface, inside faces up, with the back and bottom edges flush. Now, lay carbon paper and the pattern on one panel, and align the back and bottom of the bear pattern with the panel's back and

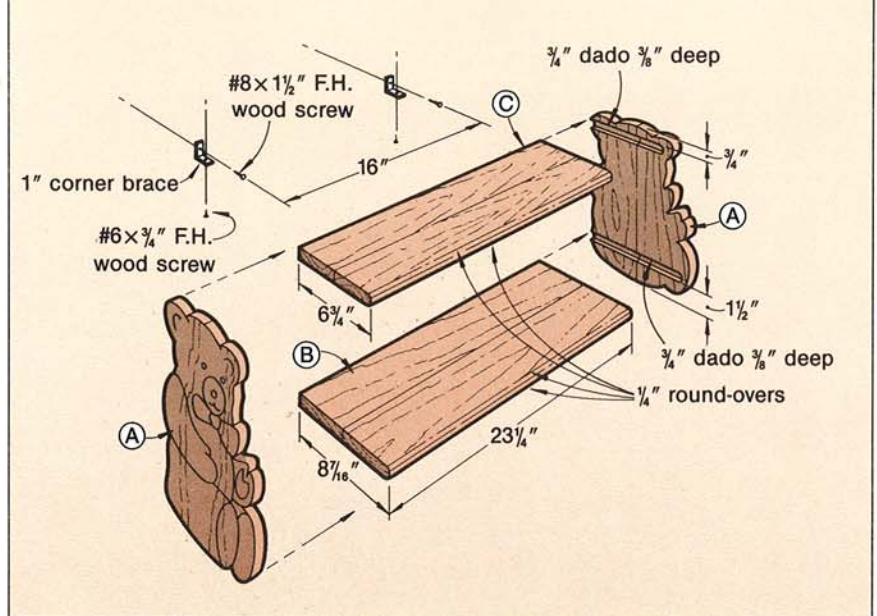


bottom edges. Trace the location of the shelf dados, following the dash lines on the pattern. Remove the carbon paper and pattern and continue the dado lines onto the neighboring panel using a straightedge as shown above. Transfer the dado length measurement with a compass or dividers.

5 Clamp a straightedge in position on the end panels to guide the router. Then, chuck a $\frac{1}{2}$ " straight bit in the router and cut the $\frac{3}{8}$ "-deep blind dados for the top shelves as shown below. You need to make two passes to



form each $\frac{3}{4}$ "-wide dado. (We made the bottom pass to cut the bottom part of the dado first. Then we reset the straightedge and made the second pass to cut the top part.) Repeat these procedures to cut the bottom shelf dado. Remove all of the clamps.



6 Bond the two end panels together (bear outline on top) using double-faced tape. Again, make certain they align along the bottom and back edges. Using a band saw, cut both panels to the bear shape. Then, separate the panels and remove the tape.

Note: If you must cut out each panel separately, transfer the pattern to one panel, cut the panel to shape, and use it as a template to mark the second.

NOW, ASSEMBLE THE SHELVES

1 To form the bottom shelf (B), rip and crosscut two pieces of $\frac{3}{4}$ " pine stock to $4\frac{3}{8} \times 24$ ". Plane or joint one edge of each. Now, glue and clamp the pieces together. For the top shelf (C), rip and crosscut two pieces of $\frac{3}{4}$ " pine to $3\frac{1}{2} \times 24$ ". Again, joint the edges and glue and clamp the pieces together. Remove glue squeeze-out.

2 After the glue has set, remove the clamps. Now, chuck a $\frac{1}{4}$ " round-over bit in your router and round-over the front edge (top and bottom) of both shelves. Finally, sand all surfaces of the shelves smooth.

3 Cut both shelves to the length and width listed in the Bill of Materials. Now, test-fit them in the blind dados. Trim the shelves if necessary.

4 Glue, assemble, and clamp the shelves and end panels together. (See

the exploded-view drawing above.) Remove any glue squeeze-out before it dries.

YOU'RE READY TO PAINT THE BEAR SHELF

1 Sand all surfaces smooth and apply a primer coat of paint to the project. Let it dry. Now, apply a finish coat of paint. (We used semigloss latex for the overall coat and acrylic latex paints for the bear features.)

2 After the finish coat dries, set the shelf on end and place carbon paper and the bear pattern on the outside face of the end panel. Align the pattern. Now, transfer the bear features to be painted. Turn the shelf end-for-end, flip over the pattern, and transfer the bear features to the outside face of that panel also.

3 Paint the bear features by the numbers, following the color scheme as shown on the Full-Sized Bear Pattern, or use your own color scheme.

IT'S TIME TO HANG THE SHELF

Attach two 1" corner braces to adjacent wall studs with #8 x $1\frac{1}{2}$ " flathead screws. Check them for level during installation. Next, place the top shelf on the corner braces. Drive #6 x $\frac{3}{4}$ " screws through the holes in the support arms of the braces and into the shelf. Paint the exposed parts of the braces the same color as the shelf.

Continued

Bill of Materials

Part	Finished Size*			Material	Qty.
	T	W	L		
A*	$\frac{3}{4}$ "	$9\frac{1}{16}$ "	13"	pine	2
B*	$\frac{3}{4}$ "	$8\frac{7}{16}$ "	$23\frac{1}{4}$ "	pine	1
C*	$\frac{3}{4}$ "	$6\frac{3}{4}$ "	$23\frac{1}{4}$ "	pine	1

*Parts marked with an * are cut larger initially, and then trimmed to finished size. Please read the instructions before cutting.

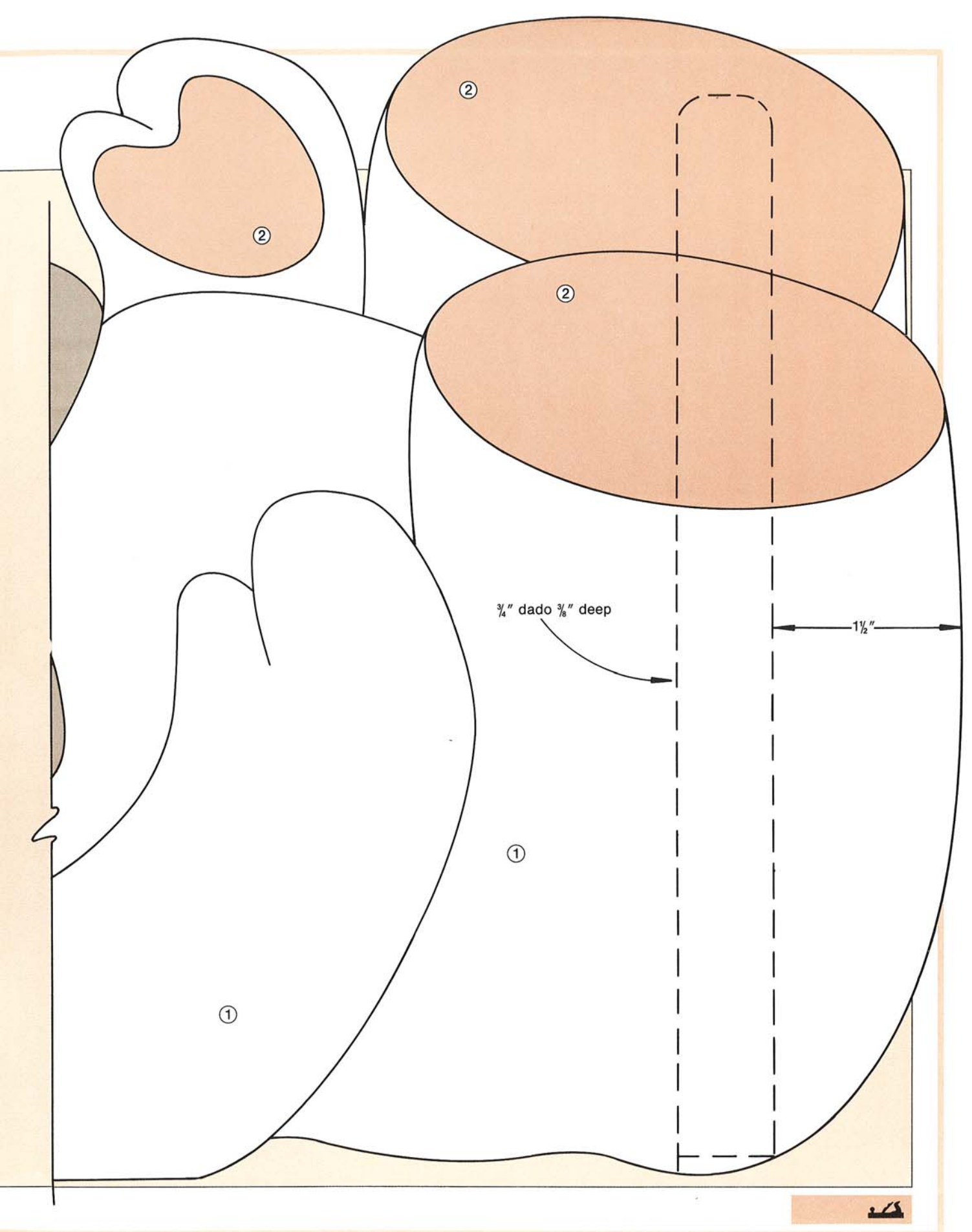
Supplies: Semigloss latex paint, acrylic latex paints, 2—1" corner braces, 2— $\#6 \times \frac{3}{4}$ " flat-head wood screws, 2— $\#8 \times 1\frac{1}{2}$ " flathead wood screws, carbon paper, tracing paper.

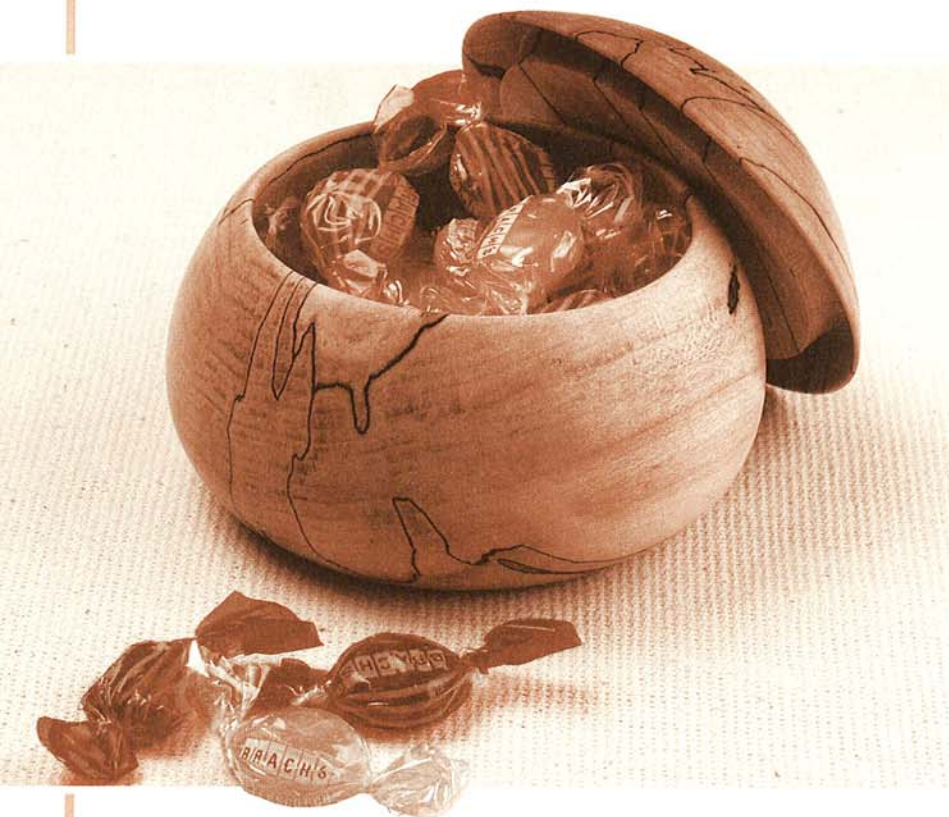
$\frac{3}{4}$ " dado $\frac{3}{8}$ " deep

$\frac{3}{4}$ "

Color Key	
No.	Color
1	Chocolate brown
2	Dark brown
3	Red
4	Black
5	Beige

FULL-SIZED BEAR PATTERN





AN OPEN-AND-SHUT CASE IN THE ROUND

Candy looks dandy when surrounded by the thin walls of this striking turning project. The low-profile bowl with its custom lid holds over two cupfuls of treats, though it just as easily could store necklaces or other precious items. We chose lacy spalted maple for our bowl project, but you also can produce some dazzling effects with burls or striped laminations you glue up in your shop.

HERE'S HOW TO PREPARE THE STOCK

1 Start with a block of wood or a bowl blank approximately 6×6" by 4" thick. (See the Buying Guide on page 24 for our source of bowl blanks. Because suppliers seldom carry spalted wood, you may have to hunt your own in a local forest. That's what we did.) If you don't have turning stock available locally, and if you don't want to mail-order any, consider making a block by laminating thinner stock.

2 Using a band saw and fence, slice a 1 $\frac{3}{8}$ "-thick piece off the top of the blank for the lid. You'll use the remaining 2 $\frac{1}{2}$ "-thick piece for the bowl. Center and mark a 5 $\frac{1}{2}$ " circle (2 $\frac{3}{4}$ " radius) on the top faces of the bowl and lid blanks. Cut both pieces round on a band saw.

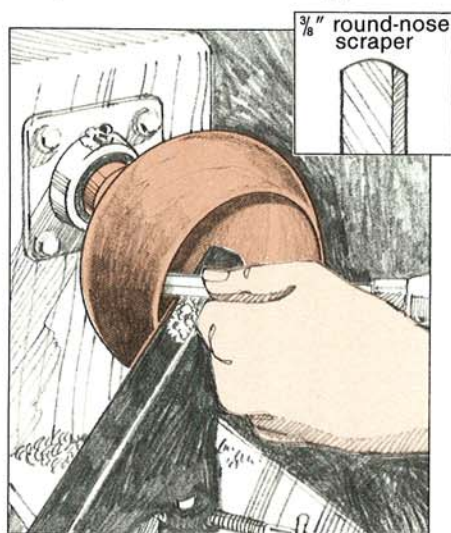
LET'S TURN THE BOWL FIRST

1 Using your lathe's faceplate as a template (we used a 3" faceplate), mark its perimeter on two pieces of $\frac{3}{4}$ "-thick scrap. Cut them to shape. Center and glue one of these auxiliary faceplates to the *bottom side* of the bowl blank. After the glue dries, center and screw this assembly to the metal faceplate you used as a template. Mount it to the lathe as shown in the Bowl Profile Drawing at *lower right*.

2 Using the full-sized templates presented in the Section View Drawing *far right* as a guide, make cardboard templates of the lid and bowl. For the time being, set the lid template aside. We'll return to it later.

3 With a lathe speed of 1,000 rpms, turn the outside of the bowl to shape using a $\frac{1}{2}$ " gouge. See the Section View Drawing for exact dimensions. (When turning, we frequently checked the bowl's shape by matching it against the template.)

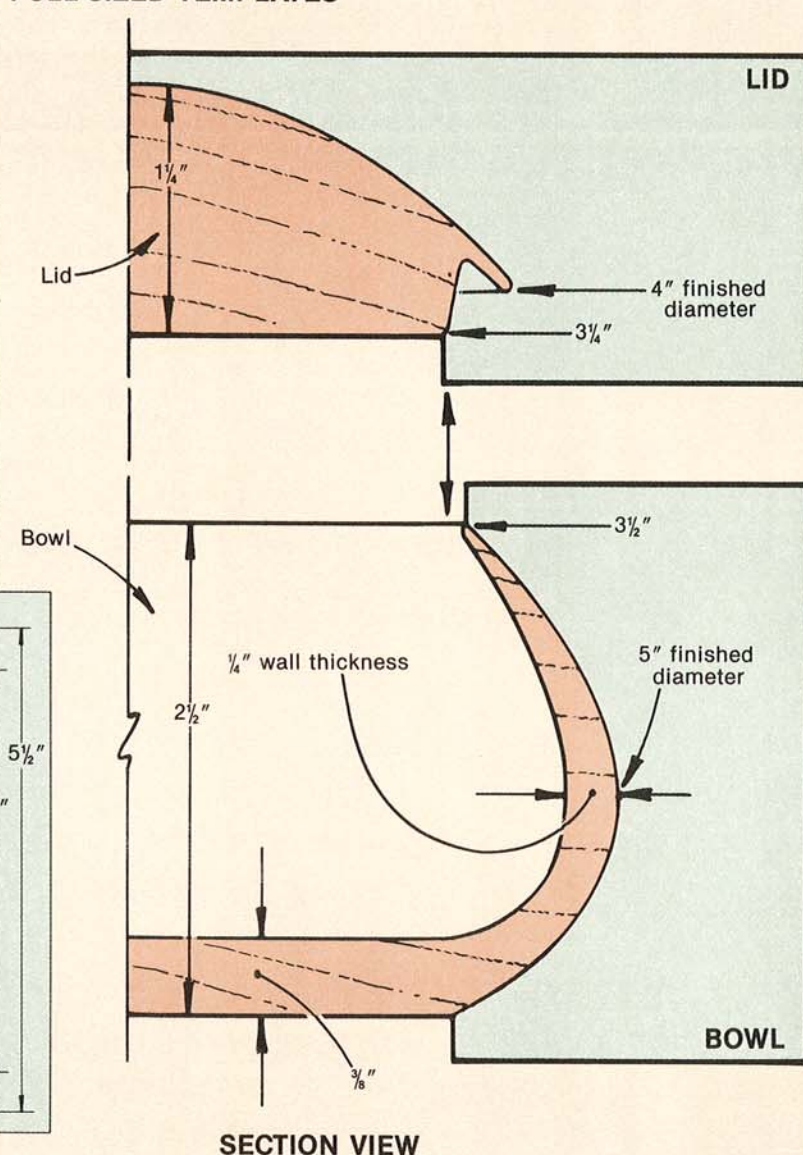
4 Next, turn the inside of the bowl to shape. (We started with a $\frac{3}{8}$ " bowl gouge and did the final shaping with a $\frac{3}{8}$ " round-nosed scraper at a speed of about 1,200 rpm. See *below*.) Turn the bowl wall to $\frac{1}{4}$ " thick and the bottom to $\frac{3}{8}$ " thick. (You'll further reduce the thickness of the bowl bottom when parting the bowl from the auxiliary faceplate and finish sanding.)



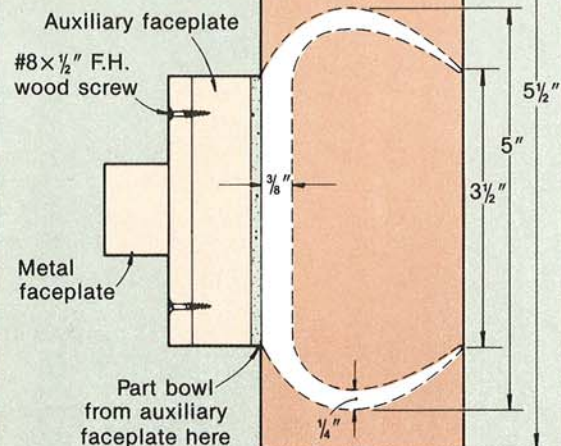
5 With the work turning at about 1,500 rpms, sand the inside and outside of the bowl. Wrap the sandpaper around felt to keep from burning your fingers. (We started with 80-grit paper and progressed to 100-, 150-, and finally 220-grit sandpaper.)

6 Slow the lathe to the slowest speed. Use a parting tool to separate the bowl from the auxiliary faceplate, making the cut just at the glue line. Be careful not to cut through the bottom of the bowl. Remove the auxiliary faceplate from the metal one.

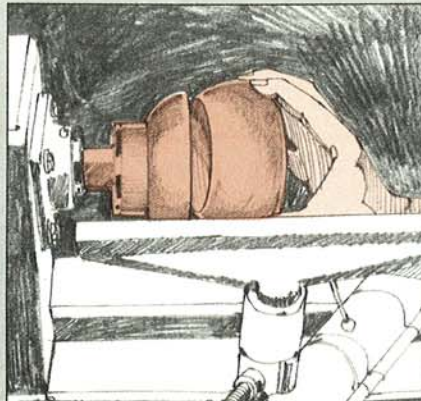
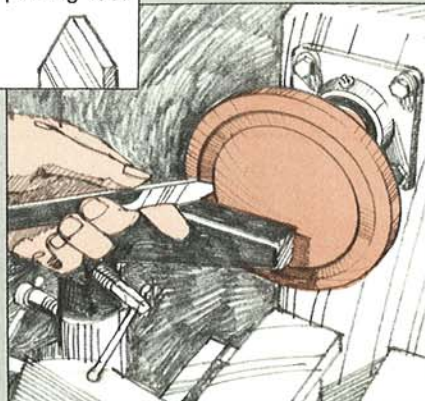
FULL-SIZED TEMPLATES



BOWL PROFILE DRAWING



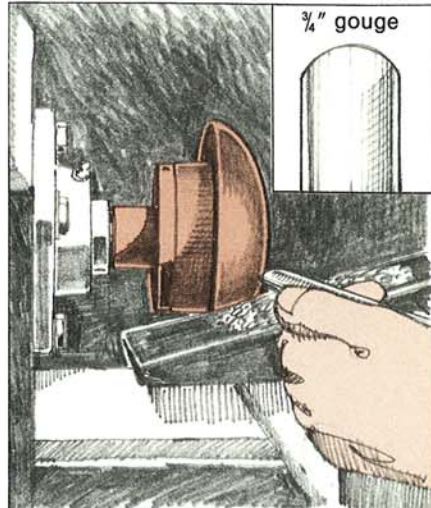
1/2" parting tool



the shape of one against the other, and turned the lid more as necessary.)

8 Sand the lid smooth. Separate the lid from the auxiliary faceplate with a parting tool. Angle the tool in about 5° to make the concave surface on the

3/4" gouge



underside of the lid. As you finish this cut, be careful not to let the lid fall to the floor. (We had a helper hold his hand next to the lid and catch it when the parting cut was completed.)

THE FINAL SANDING AND FINISHING

1 Sand the bottom of the bowl and the bottom of the lid smooth. (We used a flexible 3"-diameter sanding disk with 150-grit sandpaper chucked to our drill press. Then we changed to 220-grit sandpaper.)

2 Sign your name on the bottom of the bowl and apply the finish of your choice.

BUYING GUIDE

• **Bowl blank.** 6x6" square by 4" thick, air-dried for a minimum of 3 years. Species available: walnut, cherry, and butternut. \$10 ppd. per block from Johnson Wood Products, R.R. 1, P.O. Box 69, Strawberry Point, IA 52076.

NOW, SHAPE THE LID

1 Center and glue the remaining auxiliary faceplate to the top of the lid blank. Allow the glue to dry. Screw the auxiliary faceplate to the metal faceplate. Then, mount the assembly to the headstock spindle.

2 Turn the lid to a diameter of 5". Next, turn the bottom of the lid (the surface facing the tailstock) flat.

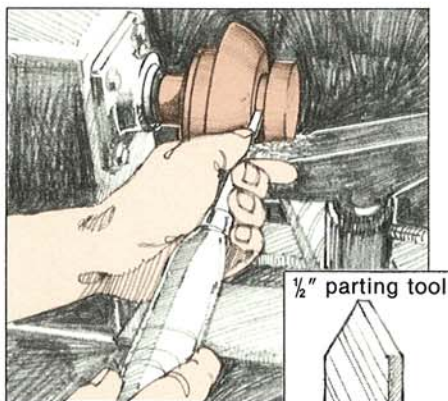
3 Using a 1/4" parting tool, slowly and carefully form the rabbet as shown being cut in drawing A above. (To avoid creating too thin a rim on the lid, we found it best not to turn the rabbet more than 3/8" deep.) Stop frequently and check the fit of the bowl's rim in the rabbet as in drawing B.

4 Cut a third auxiliary faceplate, but make it 1/4" larger in diameter than the metal faceplate. Center and glue it to the bottom side of the lid. (We used the tailstock to "clamp" this faceplate to the bottom of the lid.)

5 Turn the third auxiliary faceplate to the exact diameter of the metal faceplate (3" in our case). Check this diameter with calipers. This simplifies centering the lid in the next step.

6 Slide the tailstock away and remove the bottom side of the lid and the workpiece from the lathe headstock. Next, center and screw the metal faceplate to the third auxiliary faceplate on the bottom side of the lid. With a parting tool, separate the lid's top from the auxiliary faceplate as shown below.

7 Turn the dome of the lid (facing out) to a rounded shape that conforms



to the contoured lid template using a 3/4" gouge. (When the lid was just about to its finished shape, we unscrewed the auxiliary faceplate and lid from the metal faceplate. Then, we placed the lid on the bowl, checked