

**NEW
FEATURES
INSIDE!**

Weekend Woodworking™

January 1996
Vol. 9 No. 1 • Issue 49

FROM THE EDITORS OF WOOD® MAGAZINE

In this issue

- ◆ Precision dado jig
- ◆ Finishing pointers
- ◆ Shop tips

Plus these great projects

- ◆ Serving board
- ◆ Lath-art wall hanging
- ◆ Magazine rack
- ◆ Wooden-bead necklace
- ◆ Chopping block

\$4.95 U.S. \$5.95 Canada

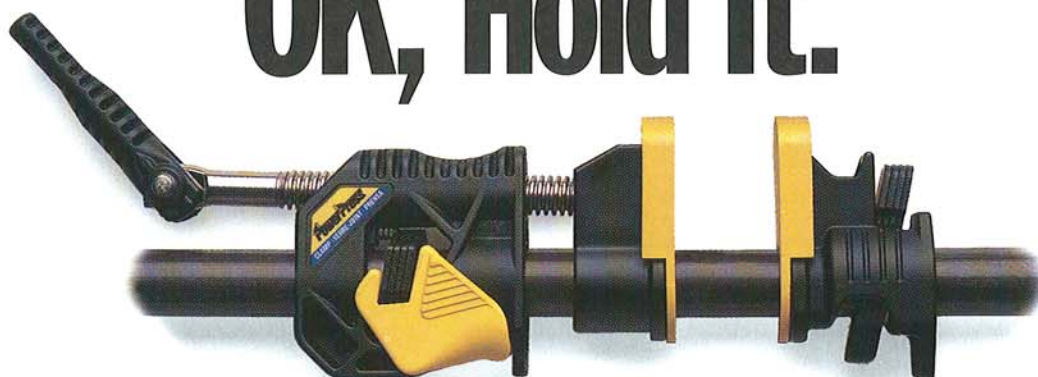


Display until January 1

**TRY THIS
TERRIFIC
SCROLLSAWN
SHELF**

See page 18

OK, Hold It.



Now Spread 'Em.



The innovative POWER PRESS™ Pipe Clamp, from the makers of QUICK-GRIP® Bar Clamps, is more than just a pipe clamp. By simply reversing the two movable clamping sections, it quickly becomes a spreader. Perfect for all kinds of woodworking applications, the POWER PRESS Pipe Clamp can do anything a regular pipe clamp can do, only faster. It works on both threaded and unthreaded pipe. And two rubber pads keep gripping surfaces from marring your work. The most versatile pipe clamp to hit the shelves, the POWER PRESS Pipe Clamp is going to revolutionize the way you work.

Look for it wherever quality tools are sold.



FROM THE MAKERS OF QUICK-GRIP® BAR CLAMPS

Weekend Woodworking™

FROM THE EDITORS OF WOOD® MAGAZINE

JANUARY 1996

VOL. 9, NO. 1 • ISSUE 49

CHIP-CARVED SERVING BOARD 6

Even if you've never tried chip carving, you'll be able to master the simplified cuts in our exclusive design.

COVERED-BRIDGE LATH ART' 10

The romantic appeal of a famous Iowa landmark can be yours forever in a lath-art picture that's fun to make and easy to paint.

VICTORIAN SCROLLSAWN SHELF 18

This attractive walnut shelf is a replica of an antique we found in an 1877 mansion. Our full-sized patterns put a piece of history within your reach.

CHEF'S CHOPPING BLOCK 22

We put all the toughness and durability of an old-fashioned end-grain chopping block into a version small enough to fit comfortably on your countertop.

OAK MAGAZINE RACK 25

Organize reading materials next to your favorite chair for clutter-free convenience and easy storage.

FUN-TO-MAKE WOODEN-BEAD NECKLACE 28

You can transform small pieces of wood from your scrap bin into wearable art using our shop-proven methods.



Page 6



Page 10

SHOP-SMART TIPS

5

How to clean saw blades • Taming power cords • Small-parts finishing tactic • Engraving wrench reminders on your tools • Router-bit height gauges

JIGS & TECHNIQUES

16

Our jig custom-fits your router, letting you make dadoes with deadly accuracy. Put the jig to work right away making the scroll-sawn shelf on *page 18*.

FINISHING SCHOOL

30

A great finish starts with smoothly sanded wood. Refer to our shop-tested Sanding Schedule chart for dependable information matching woods with a variety of finishes.



Page 18



Page 28

A New Name, and a Whole Lot More

Those of you who have been subscribing to this publication for a while have come to expect from us a potpourri of well-designed woodworking projects served up with complete how-to instructions. And let me assure you that projects will continue to be the meat and potatoes of the magazine.

But effective with this issue, we have changed the publication's name to **Weekend Woodworking™** to reflect our coverage of other topics of woodworking interest, too. For example, "Shop-Smart Tips" is a department designed to bring you an assortment of ideas to save you time and money and to make your workshop experience as safe and pleasurable as possible. Take a look at *page 5* to see the first installment. With "Tried-and-True Jigs and Techniques" (*pages 16 and 17*), we will present, in step-by-step fashion, methods that will help you become a better woodworker. From time to time, we'll also include jigs and fixtures that can make even difficult tasks easy. In "Finishing School" (see *page 30*), we will cover how to apply a variety of finishes to your woodworking projects as well as how to prepare wood surfaces. Here's hoping that you get even more enjoyment and value from our new, improved magazine.

Bob Settlin

Weekend Woodworking™

FROM THE EDITORS OF WOODS MAGAZINE

Publishing Director **MAX RUNCIMAN**

Editor **LARRY CLAYTON**

Managing Editor **JIM HARROLD**

Senior Writer **ROBERT J. SETTIC**

Assistant Art Director **ROD STOKES**

Design Editor **JAMES R. DOWNING**

Production/Office Manager **DARLENE REYNOLDS**

Assistant Design Editor/Project Builder **JAN HALE SVEC**

Project Builder **CHARLES I. HEDLUND**

Administrative Assistant **LOUISE ANDERSON**

Publisher **WILLIAM R. REED**

Marketing/Advertising Director **CHRISTOPHER W. SCHRAFT**

Western Advertising Manager **JON BOOK**

Eastern Advertising Manager **JAMES N. FORD**

Direct Response Marketing **JANA WEDDELL, LISA WIEMKEN**

Marketing Manager **RICK JALLISTER**

Marketing/Advertising Svs. Supervisor **PAT HENDERSHOTT**

Administrative Assts. **KATHY GARLAND, SHERYL MUNYON**

ADVERTISING OFFICE: 1912 Grand Ave, Des Moines, IA 50309

Phone 515/284-2235

Circulation Director **SUSAN SIDLER**

Associate Circulation Director **KATHI PRIEN**

Business Manager **JANET NELSON**

Associate Product Manager **DARCY SHAW**

Meredith Publishing Group

President **CHRISTOPHER M. LITTLE**

Custom Marketing **BILL MURPHY**

Controller **MAX RUNCIMAN**

Circulation **HAL ORINGER**; Operations **DEAN PIETERS**



Chairman and Chief Executive Officer **JACK D. REHM**

President and Chief Operating Officer **WILLIAM T. KERR**

Chairman of the Executive Committee **E.T. MEREDITH III**

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

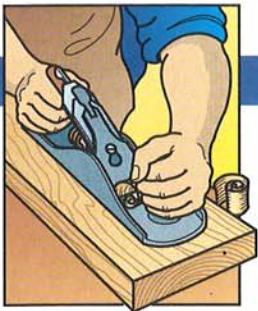
The *Weekend Woodworking™* Staff

CUSTOMER SERVICE INFORMATION

For service on your subscription, please write: **Weekend Woodworking™** Customer Service, P.O. Box 55364, Boulder, CO 80322-5364. Enclose a recent label from your magazine for better service. Or, you may phone toll-free **800/374-3669**. Address letters and questions to: **THE EDITOR, Weekend Woodworking™**, 1912 Grand Ave., Des Moines, IA 50309-3379.

WEEKEND WOODWORKING™ (ISSN 1042-6094; Canadian GST Reg. #R123482887) is published bimonthly in January, March, May, July, September, and November by Meredith Corporation, 1716 Locust Street, Des Moines, IA 50309-3023. Second-class postage paid at Des Moines, Iowa, and additional offices. **SUBSCRIPTION PRICES:** One year \$27.97 in the United States and its possessions. Canada and other countries add \$6 per year. **POSTMASTER:** Send address changes to: **WEEKEND WOODWORKING™**, P.O. Box 55364, Boulder, CO 80322-5364. **COPYRIGHT MEREDITH CORPORATION, 1995. ALL RIGHTS RESERVED. PRINTED IN U.S.A.**

Statement of Ownership, Management and Circulation (Required by 39 U.S.C. 3685) 1. Title of Publication: Weekend Woodworking f.k.a. Weekend Woodworking Projects. 2. Publication No. 1042-6094. 3. Filing Date: September 29, 1995. 4. Issue Frequency: bimonthly. 5. No. of Issues Published Annually: 6. 6. Annual Subscription Price \$27.97. Complete Mailing Address of the Known Office of Publication is 1716 Locust Street, Des Moines, Polk County, IA 50309-3023. 8. Complete Mailing Address of the Headquarters of General Business Offices of the Publisher: 1716 Locust Street, Des Moines, Polk County, IA 50309-3023. 9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor: Publisher: William R. Reed, 1912 Grand Avenue, Des Moines, IA 50309-3379; Editor: Larry Clayton, 1912 Grand Avenue, Des Moines, IA 50309-3379; Managing Editor: James V. Harrold, 1912 Grand Avenue, Des Moines, IA 50309-3379. 10. Owner: Meredith Corporation, 1716 Locust Street, Des Moines, IA 50309-3023. The Names and Addresses of Stockholders Owning or Holding 1 Percent or More of the Total Amount of Stock: The Bank of New York, 925 Patterson Plank Rd., Secaucus, NJ 07094; Bankers Trust Co., Corporate Securities Services, 16 Wall Street - Level D, New York, NY 10005; Boston Safe Deposit & Trust Co., c/o ADP Proxy Services, 51 Mercedes Way, Edgewood, NY 11717; Brown Brothers Harriman & Co., 63 Wall Street - 8th Floor, New York, NY 10005; Chase Manhattan Bank, N.A., One Chase Manhattan Plaza, 38 Proxy Dept., New York, NY 10081; Chemical Bank, Auto Settle Department, Four New York Plaza - 4th Floor, New York, NY 10004; Mellon Bank, N.A., c/o ADP Proxy Services, (see address above); Northern Trust Co. - Trust, c/o ADP Proxy Services, (see address above); Norwest Bank MN - Trust, 255 Second Avenue South, Minneapolis, MN 55479-0047; SSB - Custodian, c/o ADP Proxy Services, (see address above); U. S. Trust Co. of New York, 770 Broadway, New York, NY 10003; Wells Fargo Institutional Trust Co., 45 Fremont St., 16th Floor, San Francisco, CA 94105. Through some of the nominees listed above, the E. T. Meredith and Bohlen families and family foundations own directly or beneficially, approximately 29% of the issued and outstanding stock of the corporation. Each nominee listed above holds stock for one or more stockholders. 11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities: None. Item 12 of PS Form 3526 not applicable. 13. Publication Name: Weekend Woodworking f.k.a. Weekend Woodworking Projects. 14. Issue Date for Circulation Data: September 1995. 15. Extent and nature of Circulation: A. Total No. Copies (Net Press Run): Average No. Copies Each Issue During Preceding 12 Months, 324,842; Actual No. Copies of Single Issue Published Nearest to the Filing Date, 300,000. B. Paid and/or Requested Circulation: 1. Sales Through Dealers and Carriers, Street Vendors, and Counter Sales (Not Mailed): Average No. Copies Each Issue During Preceding 12 Months, 10,667; Actual No. Copies of Single Issue Published Nearest to the Filing Date, 12,000. 2. Paid or Requested Mail Subscriptions (Include Advertisers' Proof Copies/Exchange Copies): Average No. Copies Each Issue During Preceding 12 Months, 207,468; Actual No. Copies of Single Issue Published Nearest to the Filing Date, 196,224. C. Total Paid and/or Requested Circulation (Sum of 15b1 and 15b2): Average No. Copies Each Issue During Preceding 12 Months, 218,135; Actual No. Copies of Single Issue Published Nearest to Filing Date, 208,224. D. Free Distribution by Mail, (Samples, Complimentary, and Other Free): Average No. Copies Each Issue During Preceding 12 Months, 14,293; Actual No. Copies of Single Issue Published Nearest to Filing Date, 10,726. E. Free Distribution Outside the Mail; (Carriers or Other Means): Average Number Copies Each Issue During Preceding 12 Months, 3,217; Actual No. Copies of Single Issue Published Nearest to Filing Date, 3,050. F. Total Free Distribution (Sum of 15d and 15e): Average No. Copies Each Issue During Preceding 12 Months, 17,510; Actual No. Copies of Single Issue Published Nearest to Filing Date, 13,776. G. Total Distribution (Sum of 15c and 15f): Average No. Copies Each Issue During Preceding 12 Months, 235,645; Actual No. Copies of Single Issue Published Nearest to Filing Date, 222,000. H. Copies Not Distributed: (1) Office Use, Left Overs, Spoiled: Average No. Copies Each Issue During Preceding 12 Months, 3,450; Actual No. Copies of Single Issue Published Nearest to Filing Date, 0. (2) Return from News Agents: Average No. Copies Each Issue During Preceding 12 Months, 85,748; Actual No. Copies of Single Issue Published Nearest to Filing Date, 78,000. I. Total (Sum of 15g, 15h(1), 15h(2), 15i) Average No. Copies Each Issue During Preceding 12 Months, 324,842; Actual No. Copies of Single Issue Published Nearest to Filing Date, 300,000. Percent Paid and/or Requested Circulation (15c/15gX100): Average No. Copies Each Issue During Preceding 12 Months, 92.57%. Actual No. Copies of Single Issue Published Nearest to Filing Date, 93.79%. 16. This statement of ownership will be printed in this January, 1996 issue of this publication. 17. Signature and Title of Editor, Publisher, Business Manager, or Owner: (Signed) William R. Reed, Publisher. Date: September 29, 1995. I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including multiple damages and civil penalties.)



SHOP-SMART TIPS

SHARE YOUR FAVORITE SHOP TIPS, TECHNIQUES, & JIGS

Earn money for your workshop discoveries. Include photos or sketches to help explain your method. We cannot return any items. We publish only

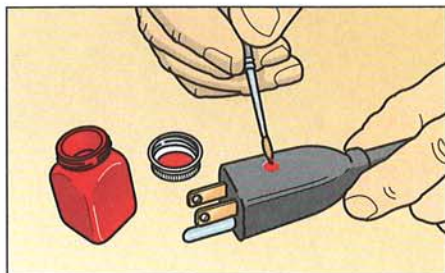
original ideas. We pay a minimum of \$40.00 for each published tip; more for jigs and detailed techniques. Mail your submissions to:

My Favorite Tips/Jigs/Techniques
c/o Weekend Woodworking™
1912 Grand Avenue, GA 312
Des Moines, IA 50309

A neat way to trace power-tool cords

You know you should disconnect the power cord when making adjustments to your machinery, but finding the right cord among several can be a hassle.

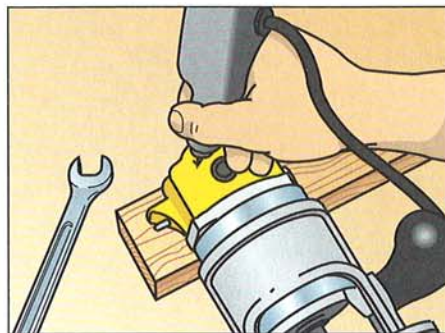
Use model paint to color-code your tools and power cords. Paint a small dot on the tool itself, and another dot on the plug. Use a different color for each tool.



Let's see—which wrench do I need?

Trying to remember the right wrench size to adjust each tool in your shop is an impossible task. There has to be some way of keeping track of this pesky detail.

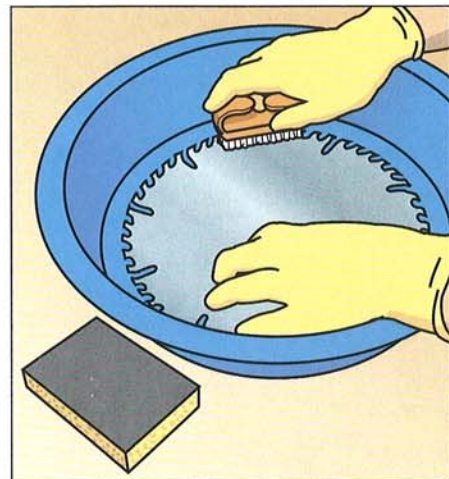
Use a vibrating engraver to etch wrench size information directly onto your tools. That way, you'll be able to make adjustments quickly.



Shining solution for pitch-covered saw blades

You need to clean off the accumulated pitch on your tablesaw blade, but you put off the chore because you can't find a suitable container.

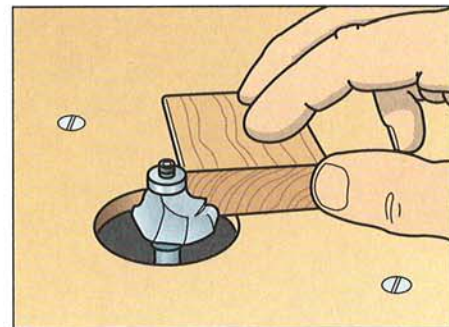
Pick up an oil-change pan from an automotive supply store. It is big enough to handle 10"-diameter blades, and requires only a minimum of cleaning solution. Household oven cleaner is an effective blade cleaner. (Use outdoors or in a well-ventilated area.) An old fingernail brush and Scotch-brite scrubber complete the cleanup kit.



How not to raise router bits to new heights

Adjusting the height of a bit in a table-mounted router can be tricky. Exactly reproducing the setting you used the last time can be nearly impossible.

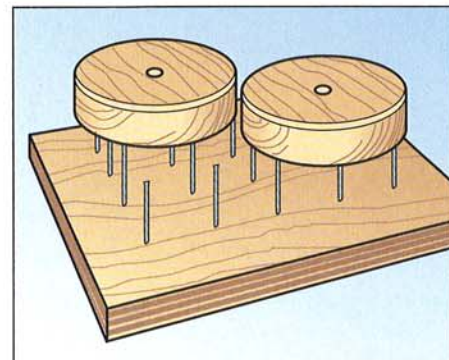
Eliminate this frustration by keeping samples of frequently used router profiles. Use the samples as height gauges to duplicate the setting at a later date.



A simple finishing tactic for small parts

You've sprayed a finish on several small parts, but then you discover that the finish also stuck the pieces to the newspaper on your finishing table.

Prevent this problem from happening with a quick-to-build parts holder. Partially drive 1 1/4" brads into a 1" grid pattern on a piece of scrap stock. You can use a closer grid pattern to support even smaller parts.



Chip-Carved SERVING BOARD



We designed this serving board as a project that even first-time chip carvers can successfully complete. We eliminated the tedious geometric cuts of some chip-carving designs, and replaced them with easy-to-make flowing lines. Follow our complete step-by-step instructions and gain the skill and confidence you need to decorate this and other projects.

PREPARE THE CARVING BLANK

1 Rip and crosscut a piece of $\frac{3}{4}$ "-thick basswood to $8\frac{1}{4} \times 16$ ". See our Buying Guide opposite page, top right for a source of precut blanks. Sand both faces of the blank to remove milling marks.

2 Photocopy the pattern for the serving board in the WW PROJECT PATTERNS insert in the center of the magazine. Use masking tape

to secure one edge of the pattern to the blank. Put carbon paper (we used Saral brand graphite transfer paper) between the pattern and the blank, then trace all lines with a sharp pencil to transfer the pattern, the outline of the blank, and the centerpoint of the hole. Double-check that you have marked all the lines, then remove the pattern. See the Tip at *right* for a way to prevent smudging the lines. Drill the $\frac{3}{8}$ " hanging hole at the marked location. Cut the serving board to shape with a scrollsaw or bandsaw, then sand the edges.

YOU'RE READY TO CARVE

Note: To carve this design, you'll need two different knives: the chip-carving knife and the stab knife, shown in the Carving Tools drawing on page 8. If you're not familiar with the techniques of chip carving, first read Chip-Carving Basics beginning on page 8 for a brief explanation. If you're an experienced chip carver, sharpen your knives, then begin cutting the design.

1 Begin carving the central design of the serving board with the ovals for the heads of the wheat stalks, starting with the ovals on the sides of the central design. The oval at the center will be the hardest to carve because the grain of the wood is parallel to the direction of the oval. As you cut this oval, the grain of the wood will try to run out ahead of the cut. To prevent this, first cut the surface fibers of the wood, using the chip-carving knife with a light touch. Then, go back and use the pressure needed to make the cut to full depth. Finish all the ovals in the central design (you'll complete the wheat heads later with the stab knife).

2 Cut the curved outside stalks found on this part of the pattern. To do this, cut the line down one side of one outside stalk, and turn the board. Then, cut the opposite outside stalk.

3 Cut the horizontal band in the central design at this time to establish a starting point for the stalks above and below the band. Following the same procedure as you did before, cut the remaining wheat stalks in the central design both above and below the band.

CARVE THE BORDER AND HANDLE DESIGNS

1 Carve the ovals in the border design first, using the same technique as for the central design. Next, carve the long stalk lines. Now,

BUYING GUIDE

Serving Board Blanks. Precut basswood serving board blanks \$19.95 ea. plus \$6.00 shipping per order (MO residents add \$1.44 sales tax per serving board). Write to Pam Gresham, P.O. Box 6136, Branson, MO 65616, or call 417/335-2150. Pam Gresham also has written several books on chip carving. Write or call for more information.



complete the border design by making the short curved cuts.

2 Make the stab knife marks in the ovals to complete the wheat heads. Use the stab knife to mark the wood, rather than to remove chips. Refer to Chip-Carving Basics for details on using this knife.

3 Carve the long curved line in the handle design. Complete the carving by making the cuts that form the bell-like flowers and leaves on the handle.

4 Use a pencil eraser to remove remaining pattern lines. Then, put 220-grit sandpaper in a sanding block and lightly sand the surface of the board to remove any remaining marks. Do not sand any more than absolutely necessary, or you may remove carving details.

5 We decided against staining our board because most wood stains make basswood look blotchy. To make our board safe for food contact, we applied two coats of Behlen's Salad Bowl Finish.

Shop Tip

Spray the transferred pattern lines with Deft (aerosol lacquer) or similar fixative to prevent smudging. A light "dusting" coat will dry quickly and provide all the protection you need.

Continued

Chip-Carving Basics

Chip-carving is a folk art that was practiced by many European peasants to decorate utilitarian items such as boxes, plates, and spoons. Remember these humble origins as you practice the cuts, and you'll accept the inevitable irregularities of handcarving as a part of its low-tech charm. You'll find these slight inconsistencies in the work of even the most skilled professional carvers.

CHIP-CARVING KNIFE

STAB KNIFE

To get started in the right direction, you'll first need some basic understanding of the tools you'll be using, and the proper method of handling them.

The style of chip carving demonstrated in this project requires only the two knives shown above. You'll use the chip-carving knife (shown in the top drawing) for most of the carving. This knife enables you to remove precisely cut pieces of wood to leave an incised pattern in the project.

The stab knife (shown in the bottom drawing) does not actually cut chips, but makes impressions in the wood to add decorative accents, such as the lines radiating from the wheat heads in this design.

THE CHIP GRIP

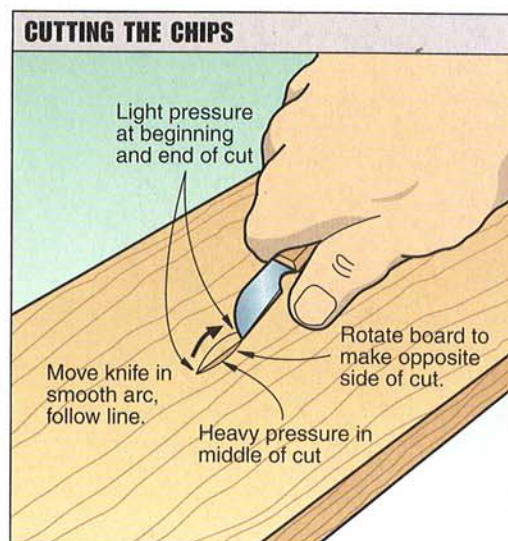
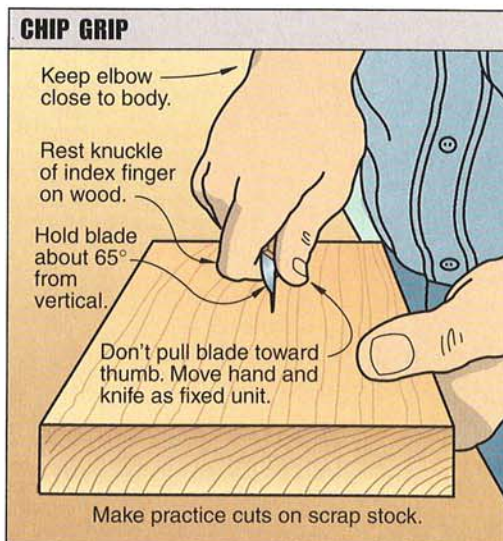
For this project, you'll need to learn just one method of holding the chip-carving knife. (We'll cover the stab knife later.) Refer to the Chip Grip drawing *bottom left*. Grasp the knife in your right hand (or left, if you're left-handed) with the first joint of your thumb against the side of the blade end of the handle. Wrap your fingers around the handle so its top edge runs diagonally across your palm.

Place the workpiece on your lap. (This is one of the best things about chip carving: you have to be sitting down to do it!). Turn your knife-hand wrist so the end of the blade, the tip of your thumb, and the knuckle of your index finger rest on the wood. This places the blade at about a 65° angle to the wood, pointing toward you. Hold your carving-arm elbow close to your body.

Note that your entire hand is locked in this position to make the cut. Do not pull the blade toward your thumb—keep your thumb at the same distance from the blade during the cut, moving your hand as a fixed unit.

CUTTING THE CHIPS

Holding the knife at a fixed angle means that the width of any chip determines its depth (both dimensions will be approximately equal). As you carve, visualize where the tip of the



knife is in the wood, and push in deeply enough to reach the center of the chip.

With the curved cuts in this design, for example, you'll start each side of the chip with light pressure, increase the pressure as you move the knife through the widest part of the design, and ease off at the end of the cut. Refer to the Cutting the Chips drawing *opposite page, bottom right* to help you with your technique. Practice on scrap stock before starting on the serving board.

THE STAB KNIFE MAKES GREAT ACCENTS

The stab knife is not used to make chips. Instead, you use it to make an impression that looks somewhat like an arrowhead. Hold the knife as you would an ice pick, the long side of the blade away from you. Push the knife straight down into the wood at the end of the pattern line (inside the wheat head) as shown in the Using the Stab Knife drawing *below*. Rock the knife handle toward you to create the thin point of the line. The length of the line is determined by how far back you rock the blade. Return the handle to vertical, and then pull the knife from the wood.

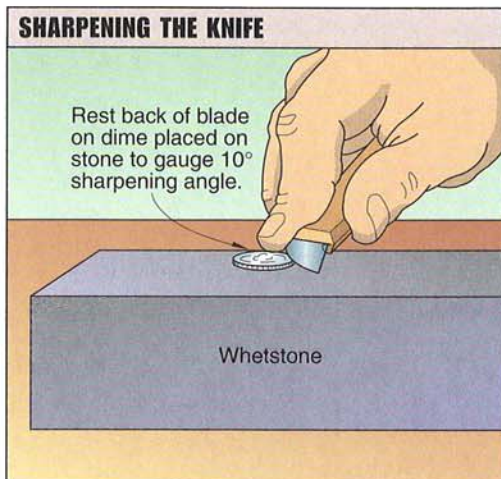
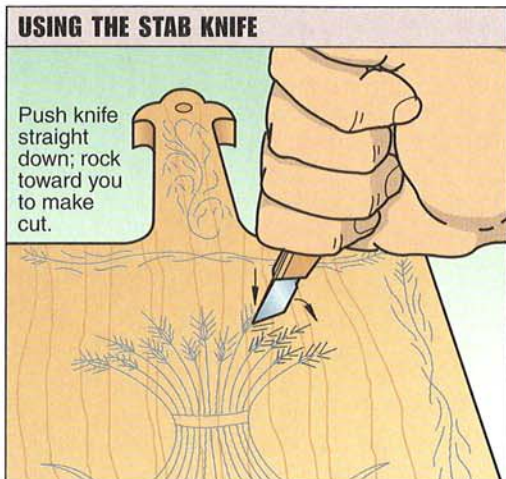
KEEP YOUR KNIVES SHARP FOR CRISP CUTS

You'll need sharp knives to make the clean precise cuts characteristic of the best chip carving.



With a sharp knife and practice, you'll be able to produce crisp, clean cuts like these, creating the shadows that make the design come to life.

ing. Keep your knives sharp by honing them on an ultra-fine stone as shown in the Sharpening the Knife drawing *below*. Hold the side of the chip-carving knife at a 10° angle to the stone. For the stab knife, hone at the factory angle—about 30°. Resharpen the knives periodically as you work. Whenever cross-grain cuts begin looking fuzzy, or when you have to increase cutting pressure, it's time to resharpen. It is true that you are far less likely to cut yourself with a sharp knife. That's because a dull knife requires extra cutting pressure, which can lead to slips. ■



Project design: Pam Gresham
Illustrations: Roxanne LeMoine, Carson Ode
Project builder: Pam Gresham
Photograph: Craig Carpenter

A Fun-To-Do Lath-Art Project



Covered Bridge *in* Madison County

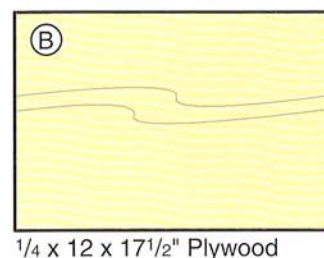
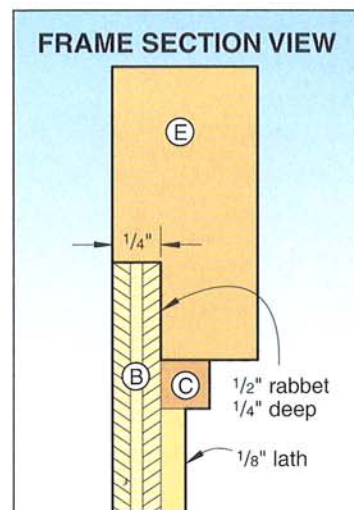
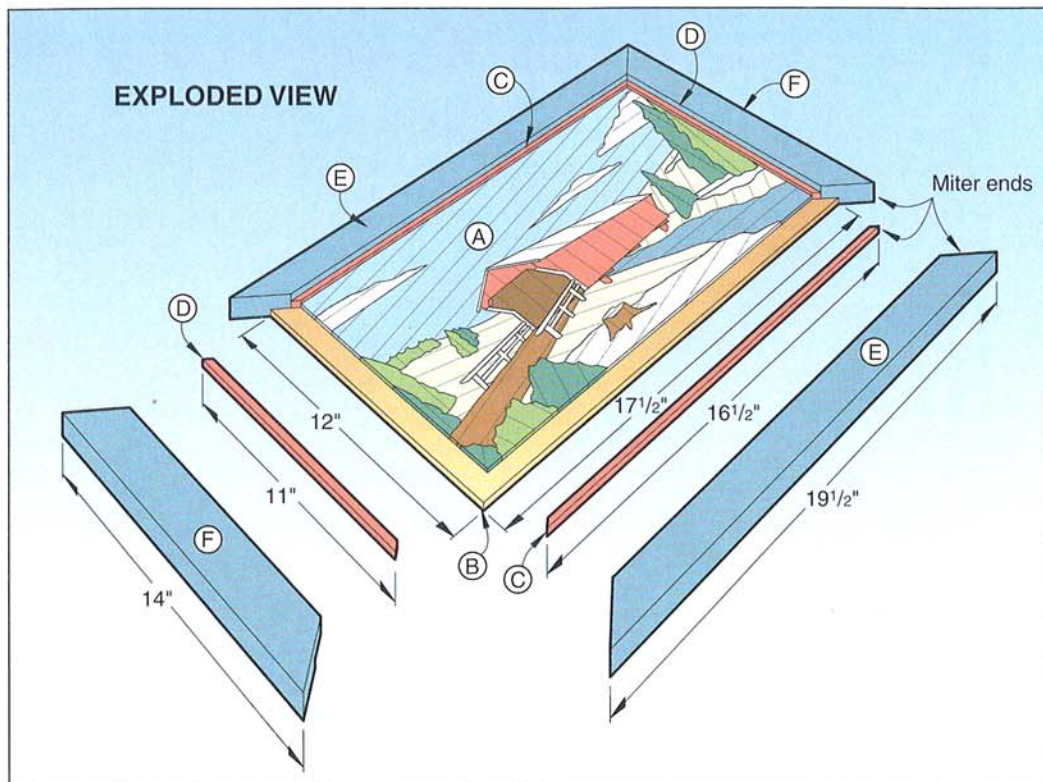
This handsome wall hanging captures the Imes Bridge in Iowa's rural Madison County shortly after it was dusted with the first snowfall of the year. We created our masterpiece using rough-sawn wood lath and quick-drying acrylic paints. Find the full-sized pattern for the scene in our WW Project Patterns insert in the center of the magazine.

Note: To build this project, you will need one piece of pine $\frac{3}{4} \times 7\frac{1}{4} \times 48$ ", and a piece of $\frac{1}{4}$ "-thick plywood $12 \times 17\frac{1}{2}$ ".

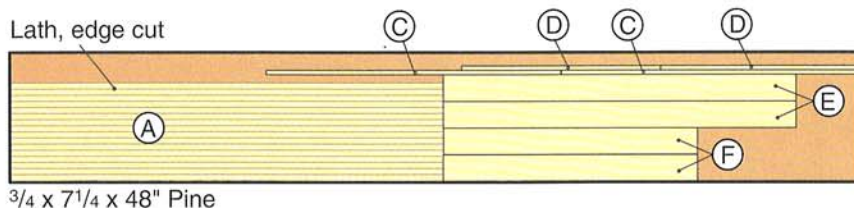
START WITH THE THIN STRIPS

1 Build a pushblock like the one shown in the Pushblock Exploded View *opposite page, bottom*. You'll also need to refer to the WW PROJECT PATTERNS insert in the center of the magazine for a full-size pattern of the grip on the handle side of the jig. Photocopy this pattern, and adhere it to the stock for the jig with spray adhesive. Then, bandsaw or scrollsaw the handle to shape. With this fence-supported pushblock, you can safely rip thin strips between your tablesaw blade and rip fence. The replaceable end block allows you to push

Continued



CUTTING DIAGRAM



BILL OF MATERIALS					
Part	Finished Size			Matl.	Qty.
	T	W	L		
A strip assembly	1/8"	15 3/4"	23 1/2"	P	1
B back	1/4"	12"	17 1/2"	FP	1
C* inner frame edges	1/4"	1/4"	16 1/2"	P	2
D* inner frame ends	1/4"	1/4"	11"	P	2
E* frame edges	3/4"	1 1/2"	19 1/2"	P	2
F* frame ends	3/4"	1 1/2"	14"	P	2

*Cut part to finished size during construction. Please read all instructions before cutting.

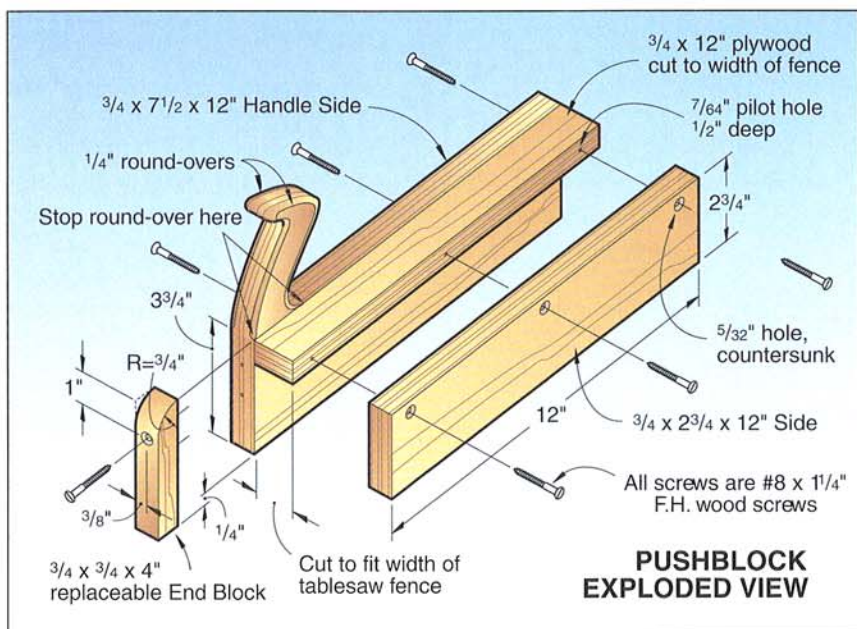
Materials Key: P—pine; FP—fir plywood.

Supplies: 2—sawtooth picture hangers with nails, acrylic paint in colors listed in Buying Guide.

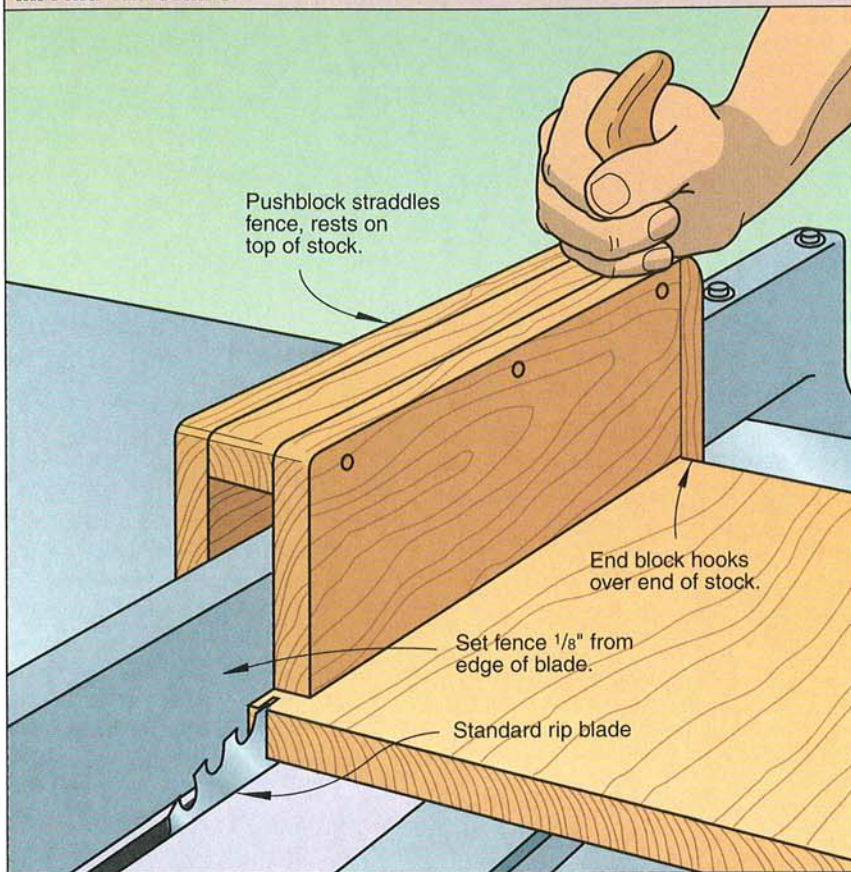
Buying Guide:

Bridge Lath-Art Painting Kit. Eight 2-ounce bottles of Delta Ceramcoat paint: burnt umber, white, ivory, forest green, burgundy rose, deep river green, Cape Cod blue, periwinkle blue. Order #1359, \$12.95 plus \$3.50 shipping and handling in USA from Meisel Hardware Specialties, P.O. Box 70WW, Mound, MN 55364-0070. Credit card customers call 800/441-9870. MN residents add 6.5% sales tax.

Additional patterns. Brochure of lath-art patterns \$1 ppd. available from Diane R. Settich, 742 Arkansas, Lawrence, KS 66044.



RIPPING THE STRIPS



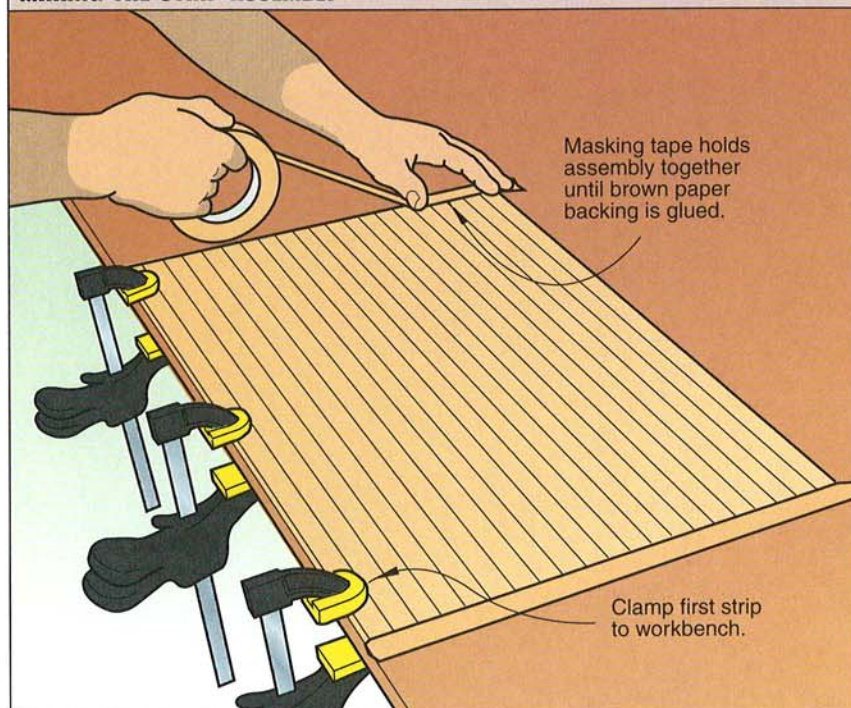
thin pieces completely through the cutting area, eliminating the chance of kickback. As an added benefit, we located the handle out of the way so your fingers remain a safe distance from the blade during the cutting operation.

2 Using the pushblock as shown in the Ripping the Strips drawing left, rip 3/4"-thick pine stock into 21 strips 1/8" thick by 23 1/2" long. We used a standard rip blade in our tablesaw. The slightly rough surface left by the blade on the strips makes a desirable texture when finishing the project. For an even rougher texture, you could rip the strips with your bandsaw.

3 Begin to make the strip assembly (A) by positioning the strips good side down on your workbench, and securing them together snugly edge-to-edge as shown in the Making the Strip Assembly drawing below left. *Note: The clamps hold only the first strip in position. You do not need to clamp the strip assembly together to remove slight gaps between the strips. That type of irregularity is part of the rustic appearance of this lath-art technique.*

4 Cut a piece of heavy brown paper such as Kraft or brown wrapping paper to 17x22 1/2". See Tip No. 1 opposite page, top right for suggestions on preparing the strips for glue. Using a 3" paint roller, foam brush, or playing card, quickly spread a thin, even coat of yellow woodworker's glue on the paper. Place the glued paper against the slat assembly, centering it. *Note: The paper will overlap the width of the strips by about 1/2" on each edge, but its length will be a bit shorter than the overall size of the strip assembly. Be careful to keep the strips of wood edge-to-edge. Using a flat piece of wood or 4"-wide putty knife, level the paper on the wood to remove any air bubbles or evenness. Later, when the glue has dried, use a utility knife to trim the paper even with the edges of the strip assembly. Then, turn the strip assembly over on your workbench, with the good side facing up.*

MAKING THE STRIP ASSEMBLY



ADHERE THE PATTERN, AND CUT

1 Make a photocopy of the Cutting Pattern in WW Project Patterns, and adhere it with spray adhesive to the good side of the strip assembly. Align the long edge of the pattern with the edge of the assembly, and center it from end-to-end.

2 Make two photocopies of the Assembly Pattern found in WW Project Patterns. Tape the corners of one of these patterns to your workbench to use as a reference pattern during the cutting operation.

3 Rip and crosscut a piece of $\frac{1}{4}$ "-thick plywood to $12 \times 17\frac{1}{2}$ " for the back (B). Make certain that this piece has square corners, to make later steps easier. Adhere the second Assembly Pattern to the plywood with spray adhesive, centering it. *Note: There should be an even $\frac{3}{4}$ " border between the outline of the pattern and the ends and edges of the plywood.* Be certain that you get a good bond between the pattern and the plywood back, or you could experience trouble later with the picture separating from the back. Set the back aside for now.

4 Scrollsaw the slat assembly into a number of sections for easier handling. Then, use a no. 2 blade in your scrollsaw to cut the individual parts. Strive to cut so that your blade just skims the pattern outlines. That way, no sanding will be necessary to make the pieces fit. *Note: Remember that the lath-art technique has a rustic appearance, and slight gaps between the pieces are expected, even desirable.* See the Strategies for Small Parts drawings below for cutting suggestions. Also see Tip No. 2 right for another idea for dealing with tiny pieces.

5 As you cut each piece, write the part number on the back (the side with the brown paper). Then, place the individual pieces on the reference Assembly Pattern that you taped to your workbench. Refer to the Assembling the Pieces drawing on page 14, bottom for a summary of the handling procedure.

PAINT THE PIECES, THEN ASSEMBLE

1 Remove the paper patterns from the front of the pieces. If necessary, use lacquer thinner to dissolve the adhesive. Residue from spray adhesive on the parts can prevent the water-based acrylic paints from penetrating into the wood and adhering properly.

2 Using the photo at the beginning of this article and the paint key letters on the pattern, paint the front side and edges of each piece. The Color Key drawing on page 15, bottom serves as a quick reference. You can also refer to the full-sized Cutting Pattern and Assembly Pattern in WW Project Patterns. We used acrylic paints thinned with an equal amount of water. (See the Buying Guide accompanying the Bill of Materials for our source for paint.) Brush the paint on the piece, and immediately wipe off the excess for a washed look. You want the grain and texture of the wood to show through, so don't apply the paint too heavily. To obtain deeper colors, you can leave the paint on longer before wiping, or apply a sec-

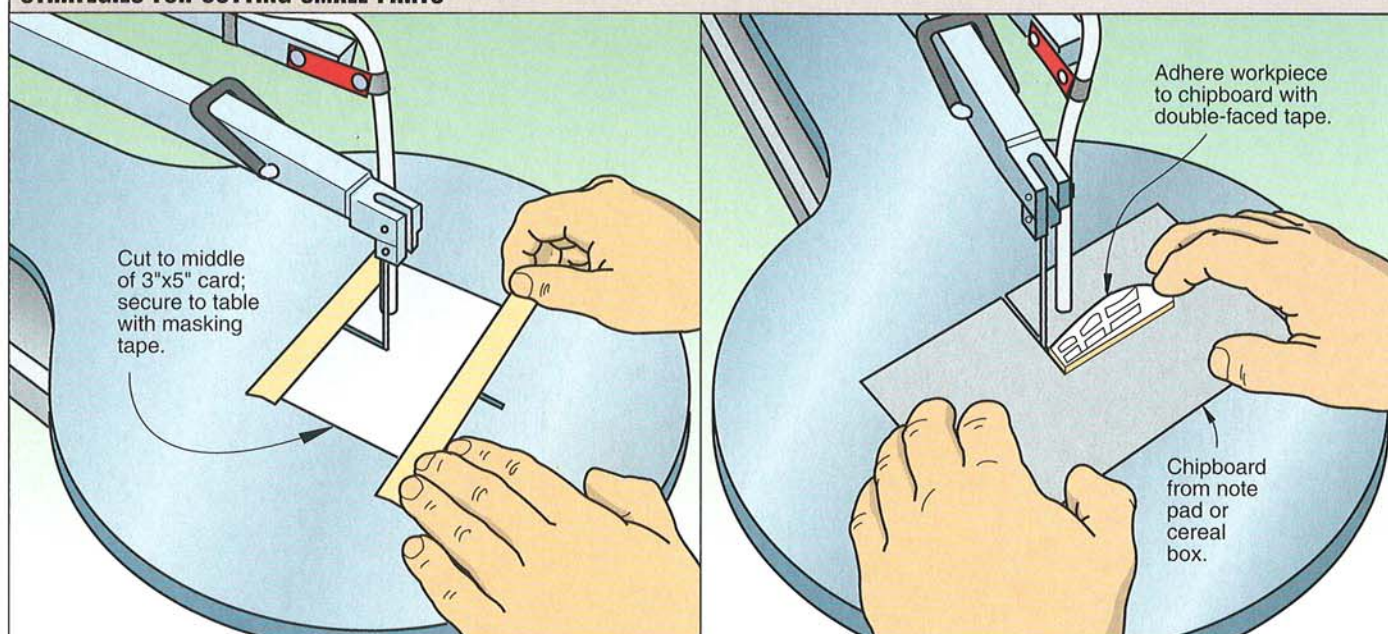
Shop Tip

No. 1—Protect your workbench top from accidental glue spills and drips by putting waxed paper under the strip assembly.

Shop Tip

No. 2—Clean up sawdust and scraps from around your scrollsaw before cutting small parts. That way, if you drop a piece, you'll be able to find it easily.

STRATEGIES FOR CUTTING SMALL PARTS



Shop Tip

No. 3—Flux brushes work great for painting the pieces. You'll find these inexpensive brushes (also called acid brushes) in the plumbing department of your hardware store. You'll also find other shop uses for these brushes: we use them for spreading glue and getting stain into tight areas.

apply a second coat. Experiment with your technique and color mixtures on scrap stock before you begin to paint the pieces for the picture. See Tip No. 3 *left* for a suggestion for inexpensive and versatile brushes.

3 Begin the painting with the straight-edged pieces which form the perimeter of the picture. After painting, adhere each piece with cyanoacrylate (instant glue) to the pattern on the plywood back (B) as shown in the Assembling the Pieces drawing below. Continue with the remaining pieces until you complete the painting and assembly process.

FINISH BY ADDING THE FRAME

1 Rip four pieces of $\frac{1}{4}$ "-thick stock to $1\frac{1}{4} \times 17\frac{1}{2}$ " to make initially oversized blanks for the inner frame edges (C) and inner frame ends (D). **Note:** To continue the rustic appearance of the assembly, do not plane or

sand the frame parts (C, D, E, F) after cutting them. Miter-cut parts C and D to fit the perimeter of the picture, and paint them. Next, glue them to the back.

2 Rip four pieces of $\frac{3}{4}$ "-thick stock to $1\frac{1}{2} \times 20\frac{1}{2}$ " to make initially oversized blanks for the frame edges and ends (E, F).

3 Chuck a $\frac{3}{4}$ " straight bit into your table-mounted router, and set the bit $\frac{1}{4}$ " above the surface of the table. Adjust your fence so $\frac{1}{2}$ " of the bit is exposed. Refer to the Frame Section detail accompanying the Frame Exploded View to see the $\frac{1}{4} \times \frac{1}{2}$ " rabbet needed. Rout a rabbet along one edge of each of the four frame pieces.

4 Miter-cut the frame edges and ends to fit around the pieces assembled on the plywood back. Next, paint the frame. Then, glue and clamp the frame pieces to the assembly. ■

ASSEMBLING THE PIECES

STEP 1
Cut parts and place them on reference pattern.

Reference pattern taped to bench surface

STEP 3
Remove parts in order from reference pattern, paint and glue on to permanent pattern on plywood base.

STEP 2
Center and glue permanent pattern to $\frac{1}{4} \times 12 \times 17\frac{1}{2}$ " plywood base.

PAINTING GUIDE

Refer to Color Key drawing below.

Delta Ceramcoat colors:

burnt umber, ivory, white, burgundy rose, forest green, deep river green, Cape Cod blue, periwinkle blue.

BU=paint with burnt umber, and wipe off. Give opening of bridge a second coat for deeper tone.

W=paint with white, and wipe off for semi-transparent whitewash effect.

BR=first coat is whitewash "primer" applied as described above. Follow with

burgundy rose painted on and wiped off.

I=paint ivory, and wipe off.

FG=paint forest green, and wipe off.

DRG=paint deep river green, and wipe off.

CB/PB=paint Cape Cod Blue, wipe off, and let dry. Then, apply a coat of periwinkle blue, and wipe off.

BU/PB/CB=mix 1 part burnt umber, 2 parts periwinkle blue, and 3 parts Cape Cod blue.

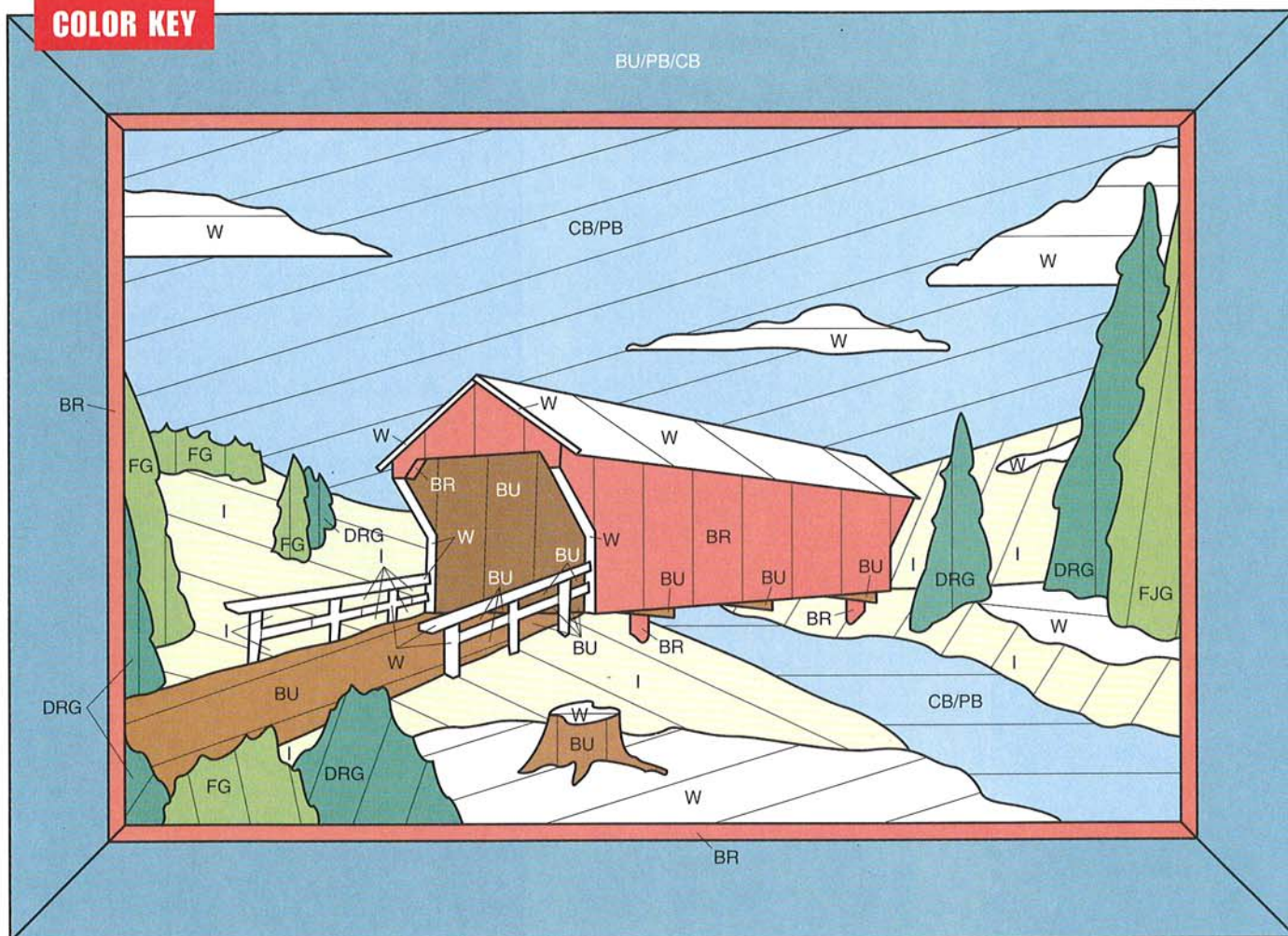
Project design: Diane R. Settich

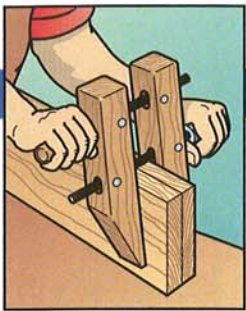
Illustrations: Roxanne LeMoine, Kim Downing

Project builder: Rick Hutcheson

Photograph: Craig Carpenter

COLOR KEY





TRIED-AND-TRUE JIGS & TECHNIQUES

Cut Right-On Dadoes With Our Shopmade Dado Jig

THE JIG CUSTOM-FITS YOUR ROUTER

Because our jig has parallel guiding fences that keep your router's base contained, your handheld router won't wander off course when cutting a dado. We designed our jig for a $5\frac{3}{4}$ " router base, but you can change the spacing of the fences to better suit your tool. Simply alter the dimensions with asterisks on the Exploded View drawing. The completed jig lets you rout stock up to 26" wide.

LET'S BUILD OUR JIG, ONE STEP AT A TIME

● Except for the solid wood handles, all other parts of the jig are $\frac{3}{4}$ "-thick Baltic birch plywood. To make the jig as shown, rip four pieces 4×36 ". Then, rip a piece 2" wide for the end block.

● Mark the ends of the $\frac{1}{4}$ "-wide slot on the fences. Regardless of the length of the fence, the slot begins $5\frac{1}{2}$ " from one end, and stops $3\frac{3}{4}$ " from the other end. Use multiple passes to rout this slot with your table-mounted router. Raise the bit in $\frac{1}{4}$ " steps.

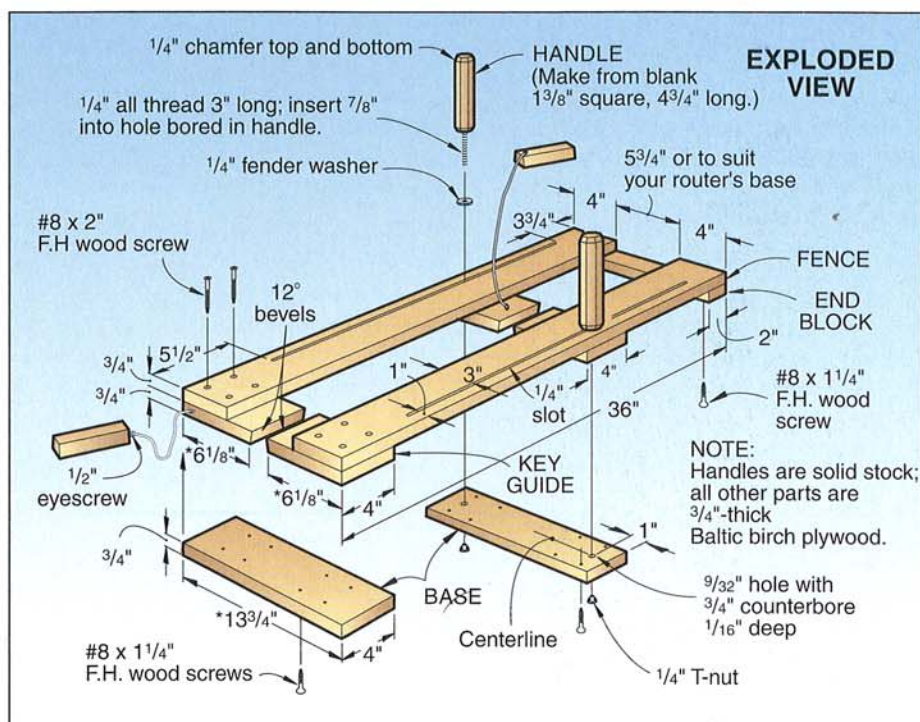
● Set your tablesaw blade to 12° from vertical, then cut the keys as shown in **Figure 1 on page 17, top left**. Clamp a key to each base, carefully centering and squaring it. Make the angled cuts for the key guides, then crosscut to finished length. Glue and screw the base to the key guides. Attach the fences as shown in **Figure 2 and Figure 3**.

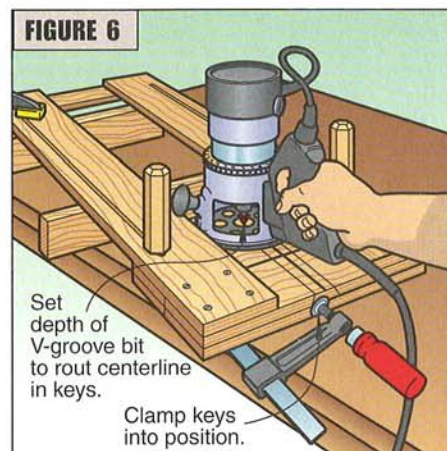
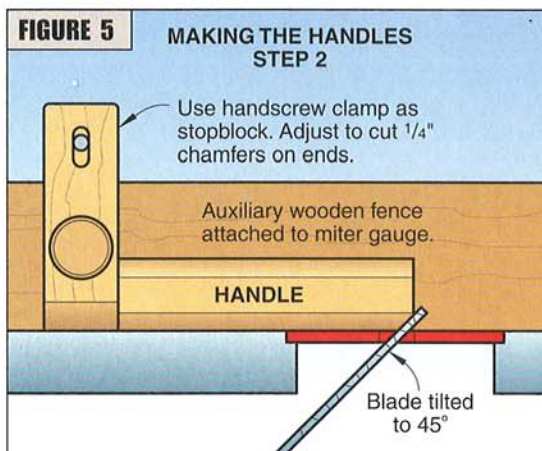
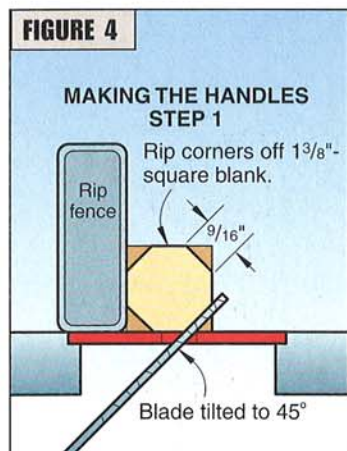
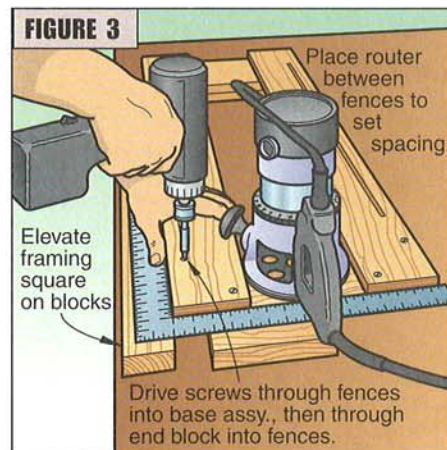
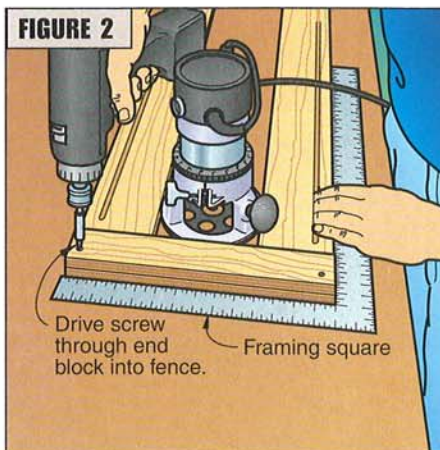
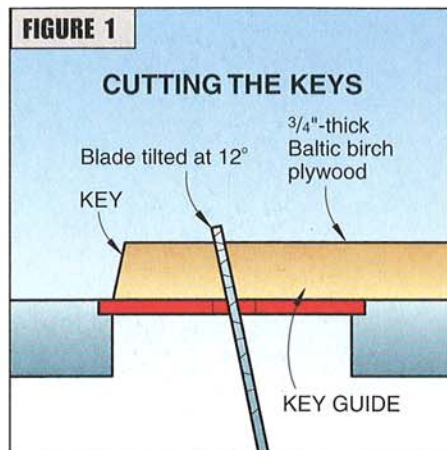
● Drill the counterbores and holes in the remaining base/key guide assembly where shown in the Exploded View. To make the handles, follow the procedure in **Figure 4 and Figure 5**.

● Chuck a V-groove bit in your router to mark the centerline of the keys as shown in **Figure 6**. Tether the keys to the jig with eyescrews and string. ■



Don't grieve over sloppy router-cut dadoes. Instead, gear up for accuracy with this easy-to-make-and-use scrapwood problem solver.





LET'S PUT THE JIG TO WORK

◆ Mark the centerline of the dado location on your stock, then align the jig as shown in the drawing *right*. Be sure to clamp the jig securely to the stock.

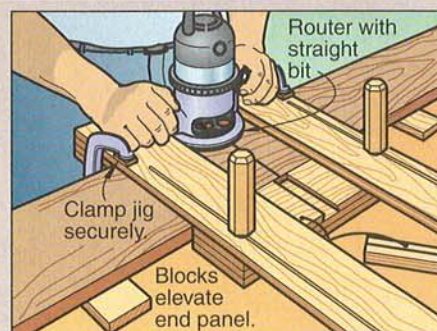
◆ Always keep the router in the same position as you push it along to make the cut. Rotating the position of the router can lead to inaccurate dados.

◆ You can use backing boards to prevent tearout where the bit enters and exits the stock. Use double-faced tape to adhere scrapwood to the stock or the

inner faces of the base/key guide assembly of the jig. If you attach the backing boards to the jig, the first dado you rout will precisely mark the edges of the dado, making it easy to line up later cuts.

◆ Don't overload your router; remove only 1/4" of stock per cut.

◆ Explore the versatility of the jig by using it to make dados that are stopped at one or both ends. You can also use a dovetail bit to create a dovetailed dado for a strong and decorative joint.



Align centerlines on keys with centerline of dado on stock. Remove keys, then rout as shown above.

Victorian-Era CURIO SHELF



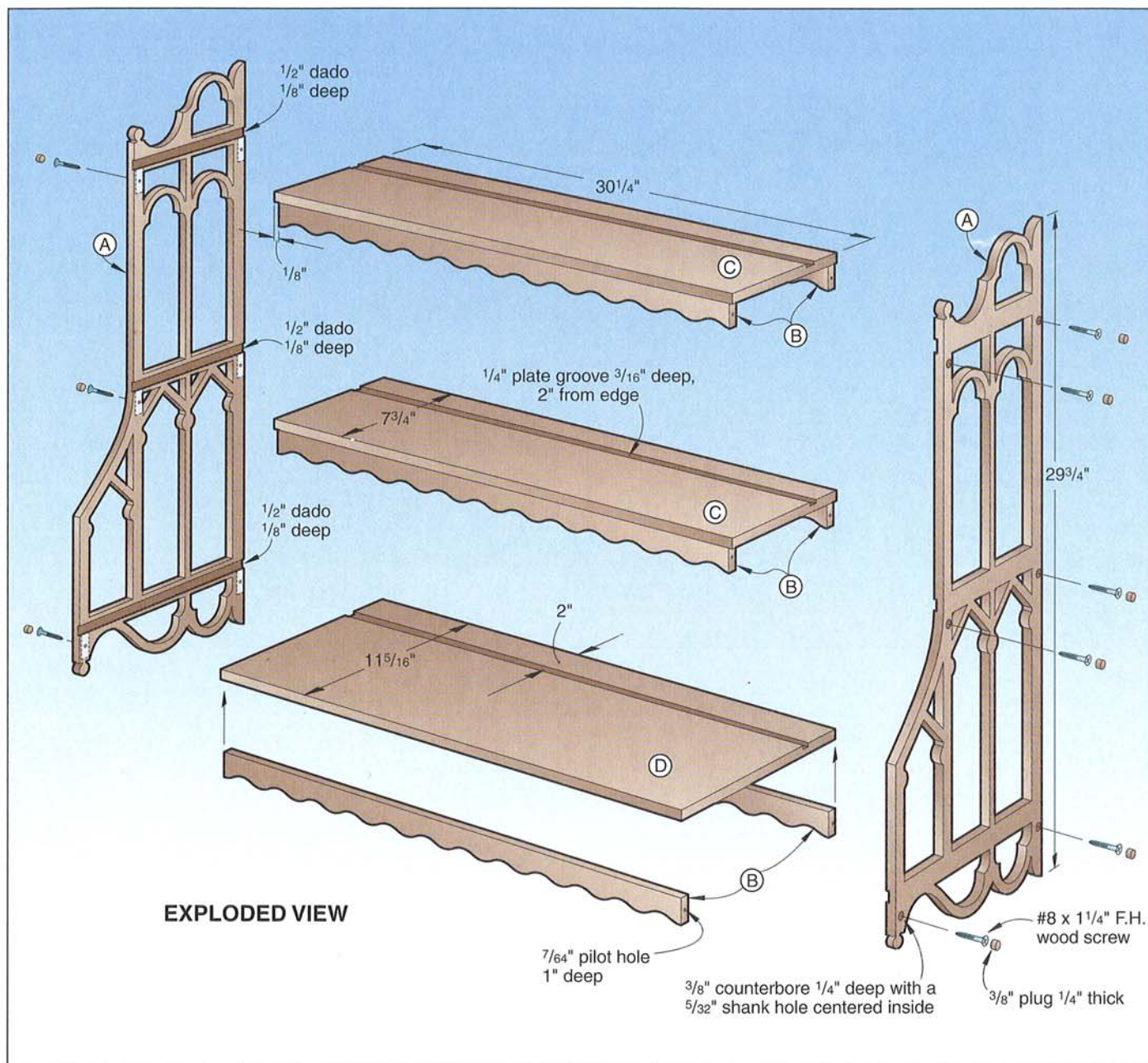
You don't have to be a scrollsawing Picasso to complete this attractive walnut shelf, a replica of an antique we found in an 1877 mansion. In fact, most of your scrollsaw work will be simple straight cuts. The trick is to use Forstner bits for uniform curves in the cutouts. We think you'll be surprised how easy it is to complete this project's handsome end panels.

Note: You'll need some thin stock for this project. You can resaw or plane thicker stock to size.

START WITH THE SIDES

1 Edge-join 30" lengths of ½"-thick walnut to form oversized blanks 11½" wide for the end panels (A). Let the glue dry, then rip to 11⅝" wide. Next, sand the surfaces smooth.

Continued



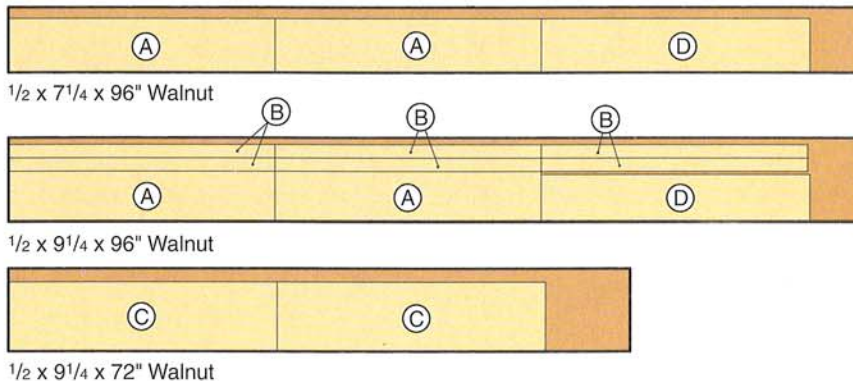
BILL OF MATERIALS					
Part	Finished Size			Mati.	Qty.
	T	W	L		
A end panels	1/2"	11 5/16"	29 3/4"	W	2
B valances	1/2"	1 1/4"	30"	W	6
C top & mid shelves	1/2"	7 3/4"	30 1/4"	W	2
D bottom shelf	1/2"	11 5/16"	30 1/4"	W	1

Please read all instructions before cutting.

Material Key: W—walnut.

Supplies: 12—#8 x 1 1/4" flathead wood screws, 2—#10 x 2" flathead wood screws, finish.

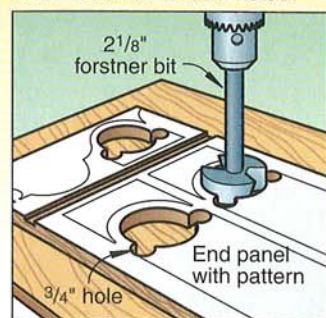
CUTTING DIAGRAM



Curio Shelf

Shop Tip

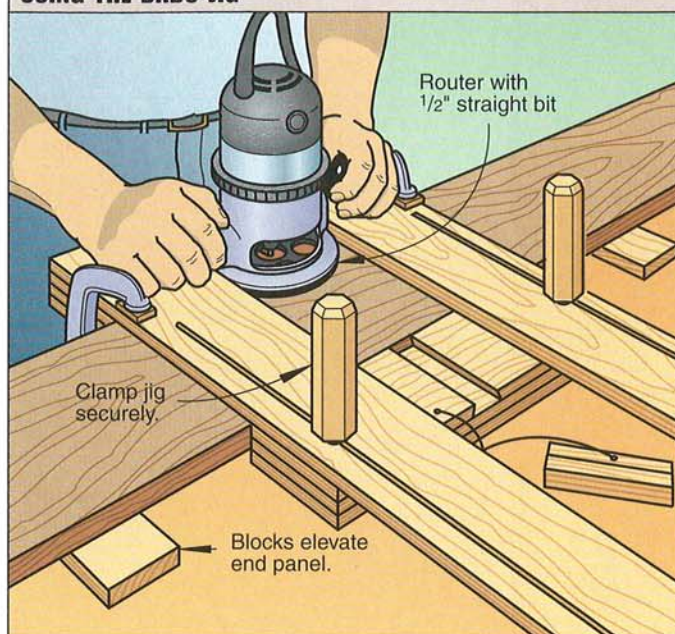
No. 1—Use Forstner bits to cut the curved edges of the cutouts in the end panels as shown in the drawing below. We used $\frac{3}{4}$ " and $2\frac{1}{8}$ " bits for these holes.



Shop Tip

No. 2—Take your time when making straight scrollsaw cuts. Straight cuts on the scrollsaw can be the most difficult to make. Relax, and let the blade cut at its own speed to ensure that you get a clean, straight cut.

USING THE DADO JIG



2 Make two photocopies of the full-sized end panel and valance patterns in the WW PROJECT PATTERN insert in the center of the magazine. Set aside the valance patterns. Adhere the patterns to the end panel blanks with spray adhesive. Then, mark the six hole centerpoints of one end panel with an awl, and drill a $\frac{1}{16}$ " hole at each point. *Note: This procedure lets you transfer the location of the counterbores to the opposite side of the blank. The side panels are mirror images of each other, not identical.* Chuck a $\frac{3}{8}$ " bit into your drill press, and drill the counterbores on the side opposite the pattern, centering the bit in the $\frac{1}{16}$ " hole. Next, drill the counterbores in the other end panel blank at the centerpoints marked on the pattern. Then, drill the $\frac{5}{32}$ " screw shank holes centered inside the counterbores.

3 Cut the dadoes in the inside face of the end panels as shown in the Using the Dado Jig drawing above. *Note: We used the router jig shown in the Jigs and Techniques section on pages 16-17 to cut the dadoes for this project. You also can use a tablesaw*

with a dado blade. Make sure that you machine the dadoes on the surfaces opposite the counterbores. *Note: On one side, you will rout through the pattern; on the other, you will need to transfer the dado locations to the opposite side of the blank with a square. Use a backing board at the end of the cuts to prevent tearout.*

4 Put a no. 9 blade in your scrollsaw, and cut the front edge and the top and bottom ends of the end panels to shape. For an easy way to make smooth radius cuts, see Tip No. 1 at left. Next, drill $\frac{1}{8}$ " blade start holes where shown on the pattern, and make your inside cuts. Refer to Tip No. 2 at left for a suggestion that can improve the accuracy of the

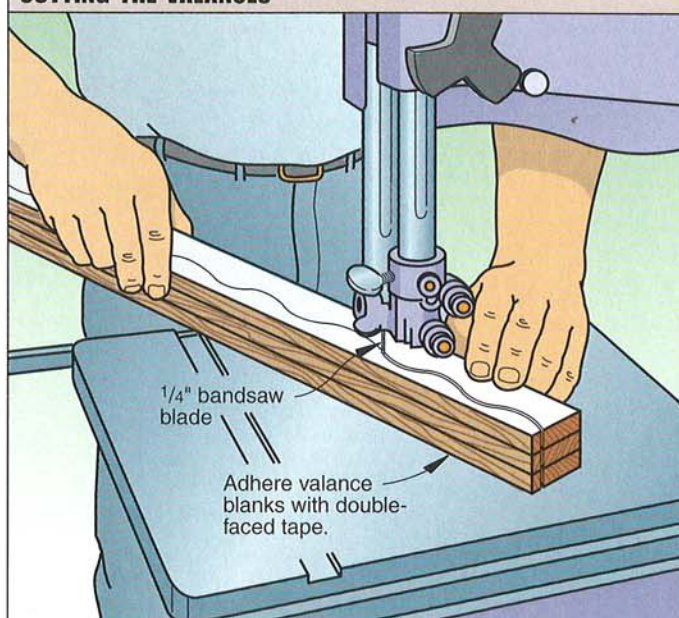
straight scrollsaw cuts you will make.

5 Remove the patterns from the end panels, and sand any rough edges.

NEXT, CUT THE VALANCES

1 Rip and crosscut six $1\frac{1}{2} \times 30$ " pieces from $\frac{1}{2}$ "-thick walnut to form the blanks for the valances (B).

CUTTING THE VALANCES



2 Adhere the blanks together face-to-face with double-faced tape in two stacks of three. Then, adhere one pattern to the top blank in each stack. Next, install a $\frac{1}{4}$ " blade in your bandsaw, and carefully bandsaw the valances (B) to shape as shown in the Cutting the Valances drawing *opposite page, bottom*.

3 Sand the bandsawn edges smooth with a drum sander. Separate the valances, and remove the tape. Hand-sand the faces of all the valances to final smoothness.

NOW, MAKE THE SHELVES

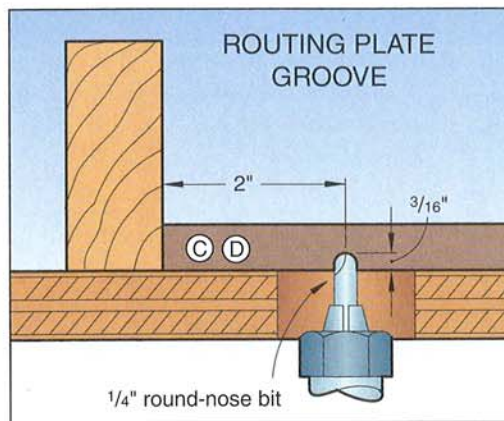
1 Rip and crosscut the top and two mid shelves (C) and the bottom shelf (D) to size from $\frac{1}{2}$ "-thick walnut. If you don't have stock wide enough for these parts, edge-join as you did for the end panels.

2 Install a $\frac{1}{4}$ " roundnose bit into your table-mounted router, and adjust the fence to 2" from the edge of the bit. Now, rout a plate groove $\frac{3}{16}$ " deep in the top back edge of the shelves (C, D) where shown in the Routing the Plate Groove drawing *above right* and Exploded View.

ASSEMBLE AND FINISH THE SHELF

1 Dry-clamp (no glue) the shelves to the end panels, and check the fit. Hold a valance in position to check the length of a shelf, and then trim the shelves, if necessary. **Note:** *If you have to trim the length of the valances, trim equal amounts from both ends to keep the pattern centered.* Use a framing square to make sure the assembly is square as shown in the Squaring the Shelf Assembly drawing at *right*. Next, remove the clamps, then glue, reclamp the assembly, and check again for square.

2 Glue and clamp the valances in place, setting the front valances $\frac{1}{8}$ " in from the front edge of the shelf assembly. Then, fit the back valances flush with the back edge of the shelf. When the assembly is dry, drill $\frac{7}{64}$ " pilot holes, into the shelf ends, and then screw the shelf assembly



together with #8x1 $\frac{1}{4}$ " flathead wood screws as shown in the Exploded View.

3 Cut twelve $\frac{3}{8}$ " plugs from $\frac{1}{4}$ "-thick scrap walnut. For a suggestion on selecting the plugs, refer to Tip No. 3 at *right*. Glue the plugs into the holes in the end panels, aligning the grain of the plug with the end panel. Let dry, and sand the plugs flush.

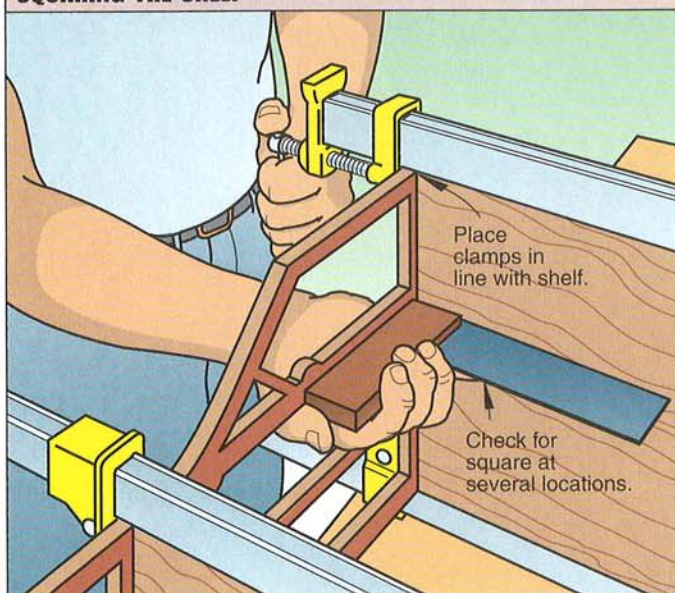
4 Finish-sand the assembled shelf, and wipe clean. Now, apply your finish (we used two coats of Deftoil Medium Walnut Finish).

5 To hang the finished shelf, first locate the studs on the wall where it will hang, and transfer the locations to the rear valance of the top shelf. Drill $\frac{3}{16}$ " holes in the rear valance, and make sure the unit is level on the wall. Then, screw the unit to the wall with #10x2" roundhead wood screws. You also can hang the shelf with hollow-wall anchors. ■

Shop Tip

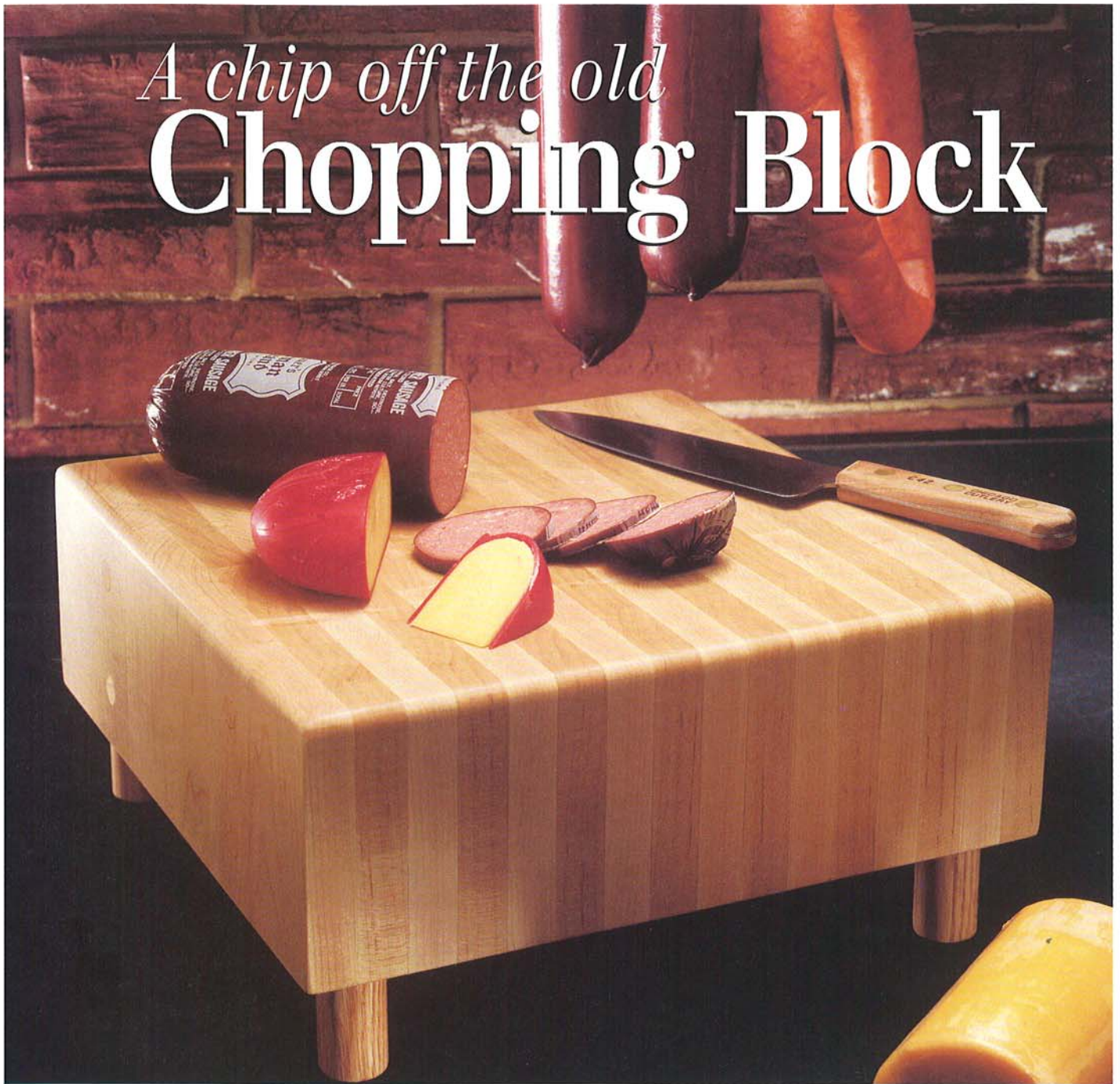
No. 3—Cut the plugs from a variety of grain patterns, and light and dark sections of stock. That way, you will be able to select plugs for the best color and grain match, making them nearly invisible in the end panels.

SQUARING THE SHELF



Written by: Jon Greising
Project design: James R. Downing
Illustrations: Roxanne LeMoine, Carson Ode
Project builder: Chuck Hedlund
Photograph: Craig Carpenter

A chip off the old **Chopping Block**



***R**emember that tough, reliable chopping block you used to see in the neighborhood butcher's shop? Now, you can build a down-sized version just like it. Our modified and refined model, with its tough end grain, fits perfectly on kitchen countertops. And, we know you'll be pleasantly surprised when you discover how easily it goes together.*

FIRST, MAKE UP THE MAPLE LAMINATIONS

1 From 3/4"-thick stock (we used hard maple), rip and crosscut five pieces to 4x36". Letter three of the pieces A and two of them B. From the same stock, rip and crosscut two pieces to 2x36" and letter them C.

2 Edge-join the three A boards to form a 12x36" lamination. We used Titebond II water-resistant glue. To ensure flat laminations, we first placed waxed paper on the benchtop, positioned the maple pieces on it, aligned the ends, and clamped the outside pieces at their sides. Next, we spaced three bars across the top, and clamped them to the bench to hold the laminations flat. Make up a second 12x36" lamination by edge-joining the B and C boards as shown on the Maple Laminations drawing below.

3 After the glued laminations dry, remove the clamps and scrape off the squeeze-out from both surfaces of each board. See the Tip at right for a sanding suggestion. Then, sand the surfaces with a belt sander. We used the edge of our framing square to check for flatness.

4 Using your tablesaw and miter gauge fitted with an extension, square-cut one end on each lamination. Crosscut eight 4"-long pieces from each lamination.

ALTERNATE THE LAMINATIONS

1 Dry-clamp (no glue) the butcher block to check the assembly. Alternate the 4"-long AAA and CBBC laminated pieces where shown on the Exploded View on page 24.

BILL OF MATERIALS					
Part	Finished Size			Matl.	Qty.
	T	W	L		
A maple lamination	3/4"	4"	36"	M	3
B maple lamination	3/4"	4"	36"	M	2
C maple lamination	3/4"	2"	36"	M	2

Please read all instructions before cutting.

Material Key: M—maple.

Buying Guide: Behlen's Salad Bowl Finish. Safe for food contact and use after drying 72 hours. One pint, catalog no. 85006, \$10.25 ppd. Order from Armor Products, Box 445, East Northport, NY 11731. Or call 800/292-8296 to order.

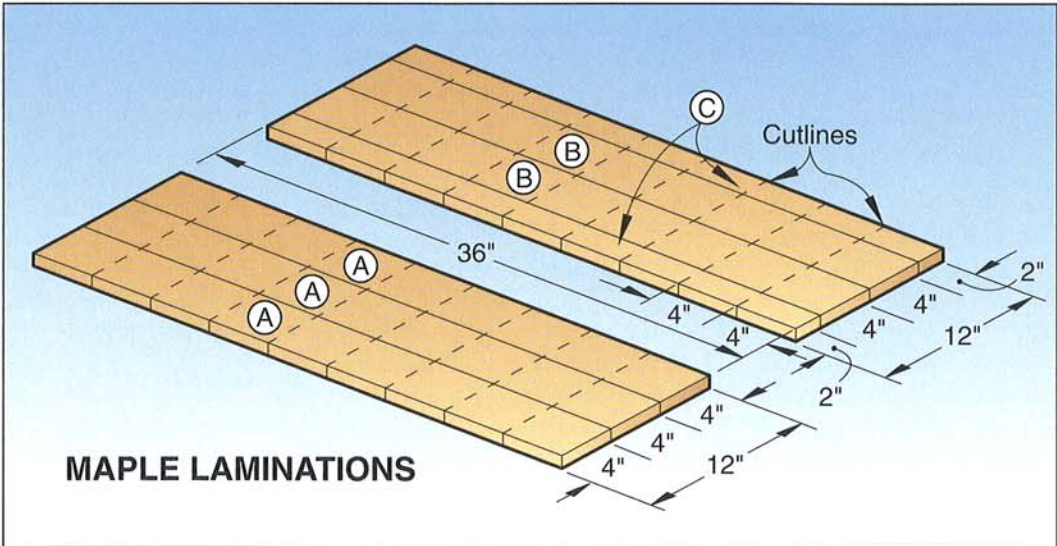
Shop Tip

Use strokes the full length of the stock when belt-sanding. If necessary, walk back and forth slightly for full coverage. You'll be much more likely to keep the board flat.

2 Before you proceed further, gather your clamps, some TiteBond II glue, a flat pan, and a small paint roller. Also, have a hammer and some 4d finish nails handy.

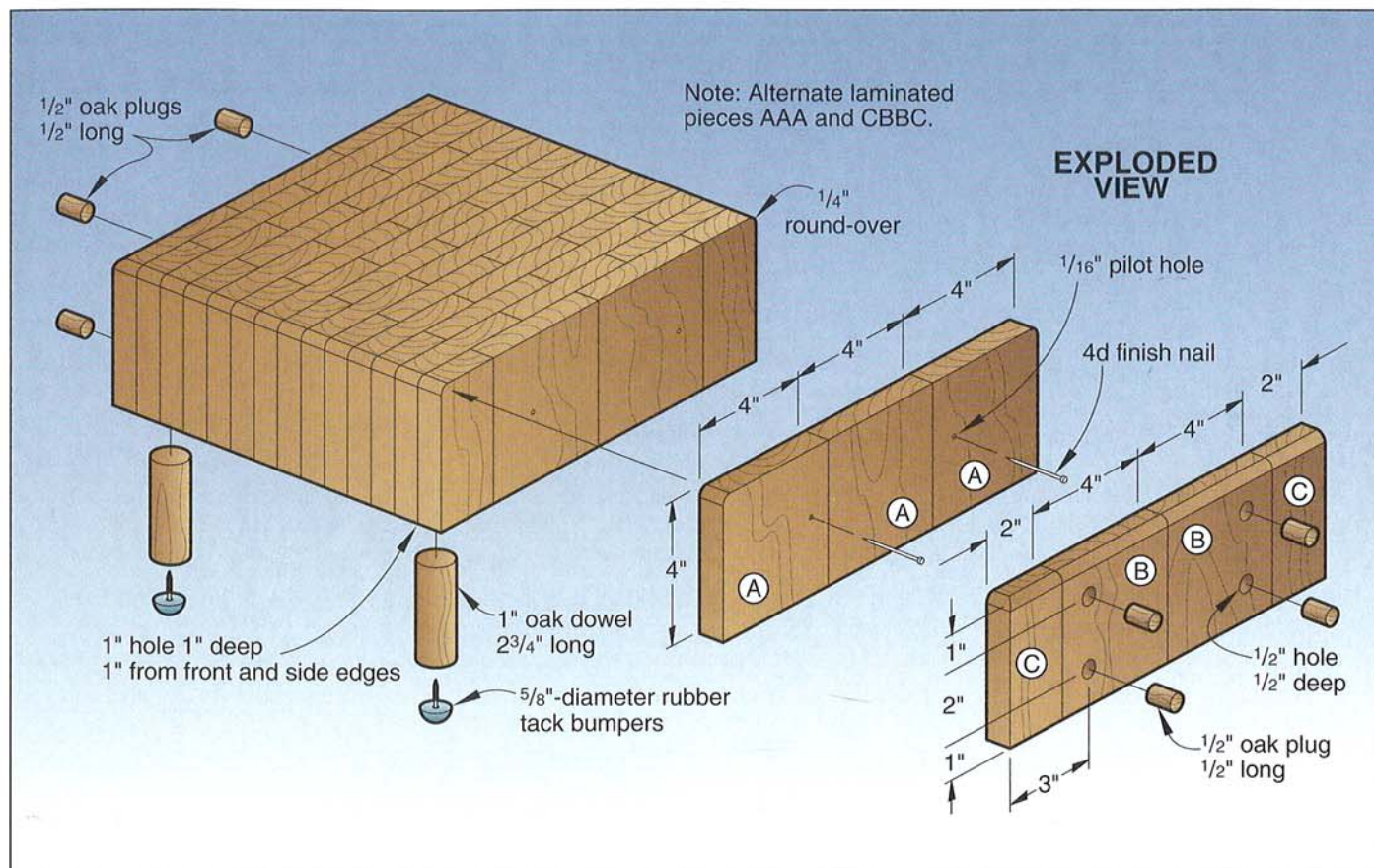
3 To assemble the butcher block, place an outside piece facedown. Using the paint roller, apply a uniform coat of glue to the exposed surface of the piece. Then, stack the next board on top of the first, align the edges, and drill two 1/16" pilot holes through the top board and barely into the bottom board. Now, clip off 3/8" from each 4d nail, and drive them into the pilot holes as you continue building the block. We drove two nails each time.

4 Repeat this process of gluing, stacking, and nailing until you've assembled all 16 sections of the block. Alternate the AAA and



Continued

Chopping Block



CBBC boards in order to create the alternating block pattern. Now, clamp the block with bar clamps across both the top and bottom to equalize clamping pressure. Wipe off any glue squeeze-out with a damp cloth. Now, let this clamped assembly dry thoroughly overnight or longer.

5 Remove the clamps, and sand the end-grain surfaces. We started with 60-grit sandpaper on our belt sander, and progressed to 120-grit. Then, sand all surfaces on the block with 150-grit sandpaper in a palm sander.

NOW, ADD THE FINISHING TOUCHES

1 Select the top face of the block, and rout a $\frac{1}{4}$ " round-over along the top edges. Next, turn the block over, and lay out the center-points for the 1" holes in each corner 1" in from the edges. Locate the centerpoints for the four $\frac{1}{2}$ "-diameter holes on the two ends where shown on the Exploded View. We added this detail to simulate the plugged counterbores concealing the bolts used to hold authentic butcher's blocks together

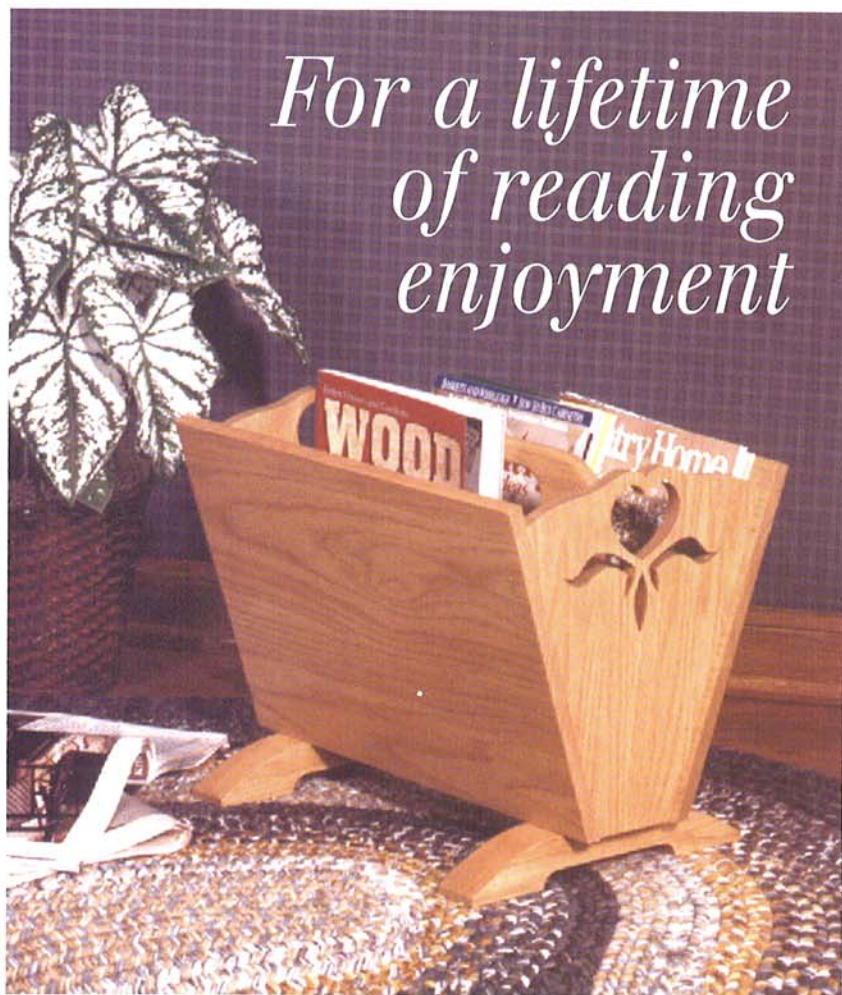
2 Bore the four 1"-diameter holes 1" deep into the bottom of the block where marked. We used a Forstner bit. Bore the $\frac{1}{2}$ "-diameter holes $\frac{1}{2}$ " deep into the ends where marked.

3 Crosscut four $2\frac{3}{4}$ " lengths of 1" oak dowel. Glue them in the holes in the bottom of the butcher block. Next, using a $\frac{1}{2}$ " plug cutter, make eight $\frac{1}{2}$ "-long plugs from oak scrap. Glue the plugs into the holes drilled into the sides, and then sand them flush with the surface. You may use $\frac{1}{2}$ "-diameter dowels in place of the plugs.

4 Find the center on the bottom of each 1" dowel foot. Next, drill a $\frac{1}{16}$ " pilot hole $\frac{3}{8}$ " deep into each dowel foot. Drive a $\frac{5}{8}$ "-diameter rubber tack bumper into each pilot hole. You can purchase tack bumpers at many hardware stores.

5 Finish-sand all surfaces, ending with 220-grit sandpaper. Apply a non-toxic finish. We wiped on Behlen's Salad Bowl Finish (see the Buying Guide accompanying the Bill of Materials). ■

Project design: David Ashe
Illustrations: Roxanne LeMoine
Photograph: Wm. Hopkins



*For a lifetime
of reading
enjoyment*

Heart-Motif MAGAZINE RACK

Every lounge chair needs a nearby companion to keep your favorite reading materials at the ready. When we decided to build one, we looked at a lot of designs before settling on this distinctive and sturdy magazine rack. It goes together in a wink, with tools most of you already have in your workshops.

Note: You'll need some thin stock for this project. You can either plane or resaw thicker stock to the thicknesses listed in the Bill of Materials.

LET'S CUT THE PARTS OUT FIRST

1 To make the side panels (A) and end panels (B), edge-join enough $\frac{1}{2}$ "-thick stock (we used red oak) to make two $11 \times 15\frac{1}{2}$ " side panels and two 10×11 " end panels. After the glue dries, sand the surfaces, and square adjacent edges on all panels. Next, bevel-rip the bottom edge of each side panel (A) at 20° from vertical where shown on the Exploded View. Return the saw blade to vertical, and cut each side panel to final size. Put the side panels and the sawed-off pieces aside; you'll need them again in Step 7.

2 Using double-faced tape or beads of hot-melt glue, stack the blanks for the end panels face-to-face with the edges and ends flush. Make two photocopies of the end panel in the WW PROJECT PATTERNS insert in the center of the magazine. Adhere one of the photocopies to the top blank with spray adhesive.

3 Cut the angled sides of the stacked end panel blanks. We made the cuts on our tablesaw using the miter gauge with a wooden extension attached. (You could also cut the end panels on a bandsaw.) Save the cut-off pieces of the end panels to use later when clamping the magazine rack.

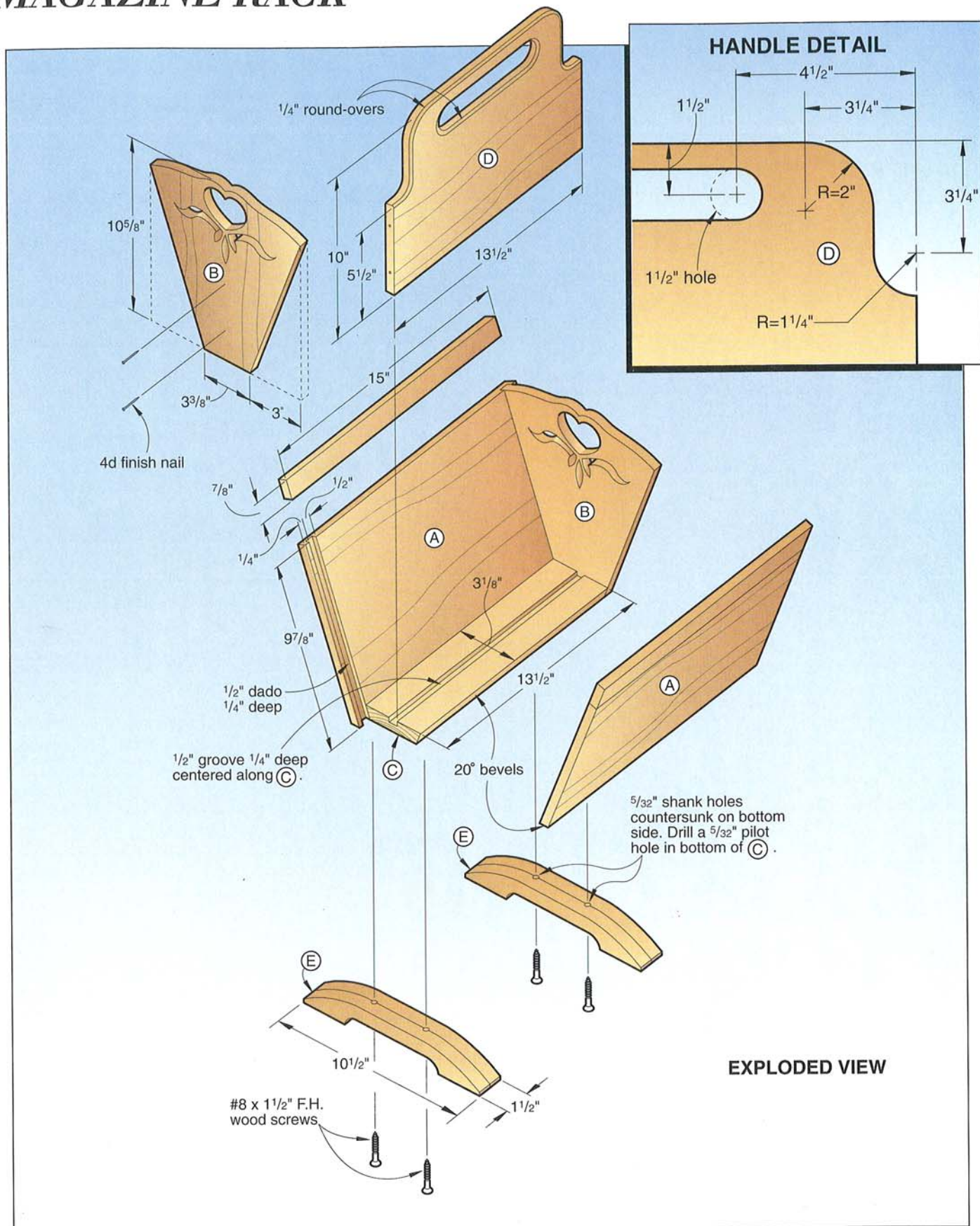
4 Separate the end panel blanks from each other, and remove the tape. Adhere the remaining end panel pattern to the blank with spray adhesive. Drill $\frac{1}{4}$ " blade start holes through the decorative cutout areas where indicated, and scrollsaw the areas to shape. (We used a No. 7 blade.) Next, scrollsaw the top of each of the end panels to shape. Now, remove the patterns from the end panels, and sand all of the cut edges.

5 Cut the bottom (C) to size, bevel-ripping both edges at 20° from vertical where shown on the Exploded View. Then, crosscut to length.

6 Mount a $\frac{1}{2}$ " dado blade in your tablesaw, and elevate it to make a cut $\frac{1}{4}$ " deep. Then, adjust your rip fence, and cut a groove centered along the top surface of the bottom (C). Next, re-set your rip fence, and cut $\frac{1}{2}$ " dados $\frac{1}{4}$ "

Continued

MAGAZINE RACK



BILL OF MATERIALS

Part	Finished Size			Matl.	Qty.
	T	W	L		
A* side panels	½"	10¾"	15"	O	2
B* end panels	½"	9¾"	10⅝"	O	2
C bottom	½"	3⅛"	13½"	O	1
D handle	½"	10"	13½"	O	1
E* feet	1½"	1½"	10½"	O	2

*Cut part to final size during construction. Please read all instructions before cutting.

Materials Key: O—oak

Supplies: 4d finish nails, #8 x 1½" flathead wood screws; stain, clear finish.

deep along both ends of the inside face on both side panels (A) where dimensioned on the Exploded View.

7 To complete the side panels (A) and create the look of stopped dados, glue and clamp a ½x⅞x15" cut-off scrap to the top edge of each side panel. Wipe off any glue squeeze-out. After the glue dries, remove the clamps. Then, sand the joints.

8 To make the handle (D), cut a piece of ½"-thick oak to 10x13½". Using the dimensions on the Handle detail accompanying the Exploded View *opposite page, above*, lay out the slot-hole centerpoints, and the end radii. Bore the 1½"-diameter holes at the ends of the slot, scrollsaw the slot between the holes, and then cut the end radii. (We placed scrap under the handle while boring the holes to prevent chip-out where the bit exits the wood.) Chuck a ¼" round-over bit into your table-mounted router, and rout round-overs along the edges where indicated on the Exploded View. Sand the routed edges.

9 For the feet (E), cut four pieces of ¾"-thick stock to 3¼x12". Next, glue and clamp these pieces together into two pairs, face-to-face with the edges and ends flush. Make two photocopies of the foot in WW PROJECT PATTERNS, and adhere each one to a foot blank. Then, scrollsaw or bandsaw both feet to shape. Sand the cut edges. Drill and countersink the screw holes where indicated on the pattern. Now, remove the patterns, and sand all of the parts to final smoothness.

ASSEMBLE AND FINISH THE RACK

1 Dry-clamp (no glue) the side panels, end panels, bottom, and handle to ensure that they fit properly. Then, glue, assemble, and clamp these parts as shown *below*. (We used the angled cutoff pieces saved earlier to help hold the sides, and scrap 2x4 to hold the bottom in place when clamping.) Remove the clamps after the glue dries.

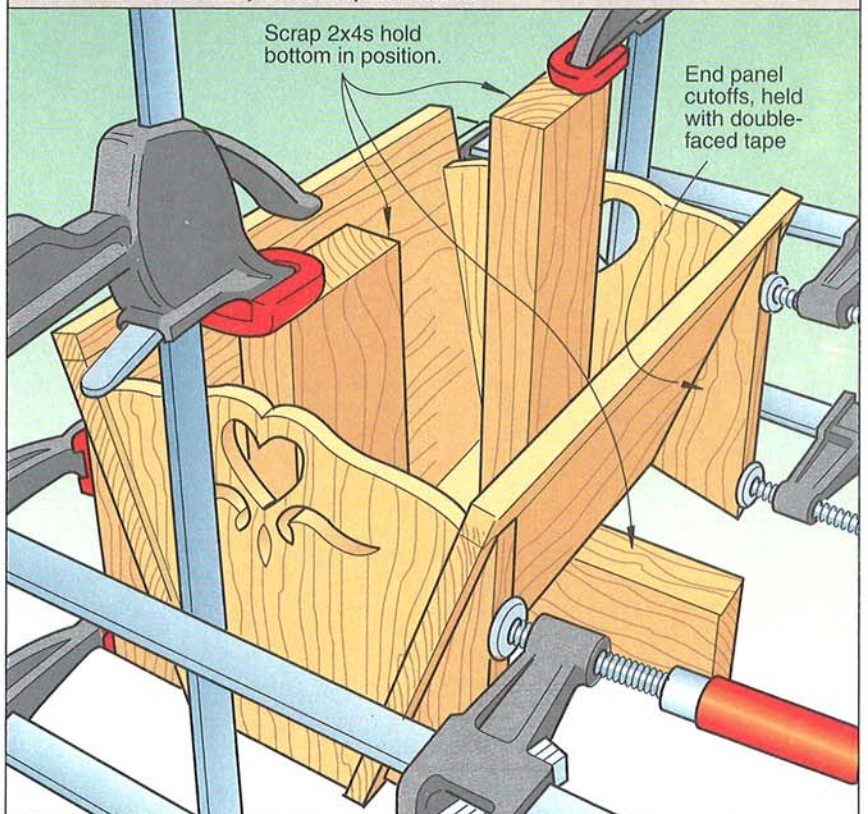
2 Glue the handle into position. Next, using a 4d finish nail with its head clipped off as a bit, drill pilot holes, and then drive two 4d finish nails through each end piece (B) and into the handle (D). Countersink the nails with a nail set, and fill the holes.

3 Sand the bottom smooth. Then, glue and screw the feet to the bottom, positioning them 1" in from the ends of the sides.

4 Apply the finish of your choice. We chose an oil finish (Minwax Antique Oil). It would have been too difficult to spray or brush a surface finish into the interior of the magazine rack. Following the manufacturer's recommendation, we applied two coats, allowing 24 hours' drying time after the first coat. ■

Project design: Doug Nicolet
Illustrations: Jamie Downing, Carson Ode
Photograph: John Hetherington

CLAMPING THE SIDES, BOTTOM, AND ENDS



A Scrapwood Special



Wooden-Bead NECKLACE

*W*ooden jewelry, once considered an oddity, recently has become a mainstream fashion accessory. And with our full-sized patterns and step-by-step directions, you can outfit your family and friends in terrific-looking necklaces quickly, easily, and without much cost. They'll be "in" and so will you.

SELECTING YOUR STOCK

While developing the techniques for making these beads, we tried a variety of different hardwood species. For light-colored beads, birch and maple worked well. We thought bird's-eye maple would look good, but the figure got lost in the small scale of the beads. On the other hand, the relatively coarse texture of oak and ash seemed overpowering with these small beads. Among the darker woods, cherry and walnut gave good results. But we made our real favorites with scraps of tropical hardwoods, which shaped cleanly and buffed to a pleasing luster.

LET'S MAKE SOME FACETED BEADS

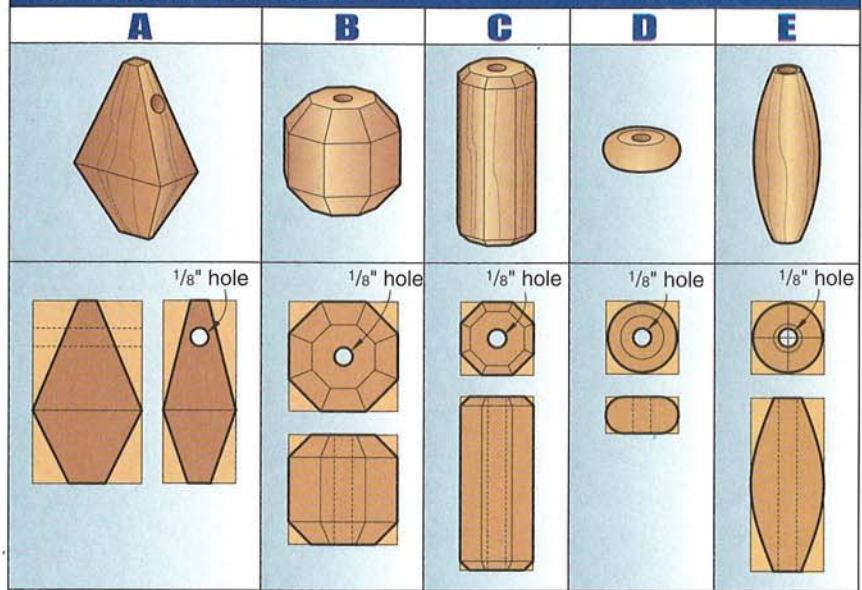
1 Select one or more of the faceted beads (A through C) on the Bead Style Chart *opposite page, top right*. *Note: These are just a few of the many shapes possible. Feel free to experiment.* Lay out the outlines and hole centerpoints on your stock. To get the most from your lumber, cut out blanks for similar beads next to each other as shown in the Making Multiple Bead Blanks drawing *opposite page, top left*. Drill the $\frac{1}{8}$ " holes on your drill press, and then make a partial rip cut with your scroll-saw to separate the rows of beads. Then, scroll-saw the individual bead blanks from the stock. To drill holes in individual bead blanks, refer to the Tip *opposite page, middle*.

2 Start shaping the bead facets at your stationary disc sander, using 80-grit paper. Don't worry if the faceted angles on your bead differ from the drawing. Variations like that prove that your beads are handcrafted.

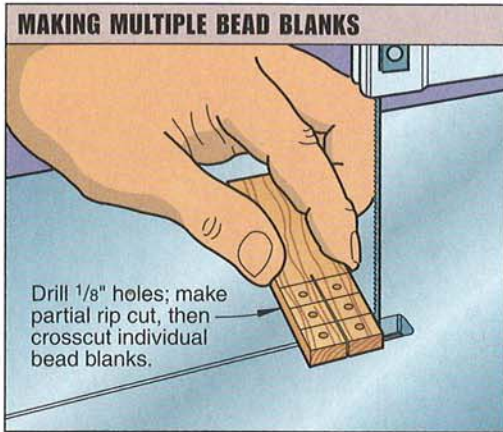
3 Chuck a 5" sanding disk with 120-grit paper into your drill press, and set the speed to 500 rpm or less. Carefully sand all surfaces of the bead, using light pressure as shown in the Sanding the Facets drawing *opposite page, bottom*. Then, repeat the sanding procedure with 220- and 320-grit sandpaper.

4 Cut a circle of leather, and adhere it to your sanding disk. You can use leather from an old article of clothing or purchase leather at a hobby store or shoe-repair shop. Lightly hold a stick of rouge polishing compound against the spinning disk, then polish the beads. As an alternative, you could rub the beads with an oil finish, such as Minwax Antique Oil Finish. Read and carefully follow the instructions on the label.

BEAD STYLE CHART



MAKING MULTIPLE BEAD BLANKS



ROUND BEADS ARE EASY TO SHAPE

1 To make beads with rounded profiles, like D and E on the Bead Style Chart, begin by drilling and cutting individual blanks as you did for the faceted beads.

2 You will need to attach each bead blank to a mandrel. We discovered two successful strategies. With the first, you insert a pop rivet inserted through the hole in the blank. Gently squeeze the handles of the riveting tool until the rivet begins to expand slightly, securing the blank. If you use too much pressure on the handles, you will split the blank. *Note: Select a rivet at least 1/8" longer than the thickness of the bead blank. This will help keep the expanded area of the rivet outside the hole in the blank, making eventual separation of the bead and rivet easier.* With the second method, you use the shank of a 1/8" drill bit as a mandrel. If you have more than one 1/8" bit, try that shank as well. A small change in manufacturing tolerances between bits may give you the exact friction fit you need.

3 Chuck the pop rivet or drill bit with the bead blank attached to it into your hand-held

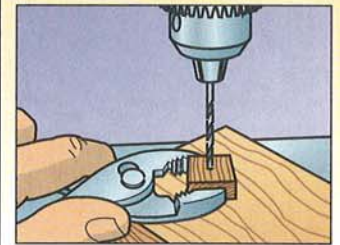
drill. Then, put 80-grit sandpaper on the sanding disk in your drill press. Set the drill-press speed to 500 rpm or less, and turn it on. Start your hand drill, and gently touch the spinning bead blank against the sanding disk as shown in the Forming a Bead drawing below. Slowly change the angle of the drill to shape the profile of the bead.

4 Remove the bead blank/mandrel from your drill, and chuck it into the drill press. Refine the shape of the bead with 120-grit sandpaper as shown in the Sanding a Bead drawing below. Use light pressure when sanding. Continue the procedure with 220- and 320-grit sandpaper. Use wire cutters to clip through the rivet, freeing the bead.

5 Finish the beads, using the polishing technique described earlier, or with an oil finish. Stringing the beads on fiber cord from a craft shop gives them a casual look; using a purchased metal chain gives them a slightly more formal appearance. ■

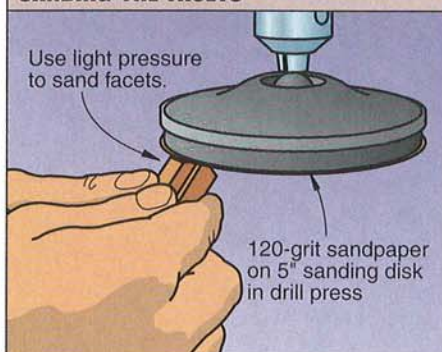
Shop Tip

Use pliers to safely grip small parts on the drill-press table as shown below. You'll have a firm grip, with your fingers safely away from the bit.

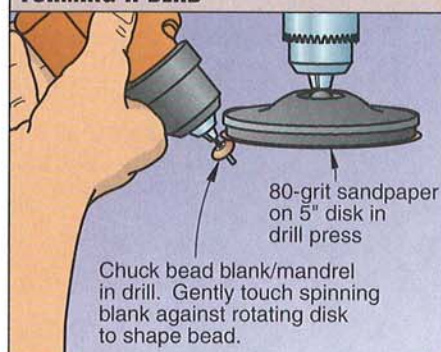


Project design: David Ashe
Illustrations: Roxanne LeMoine, Carson Ode
Project builder: Bill Wright
Photograph: Craig Carpenter

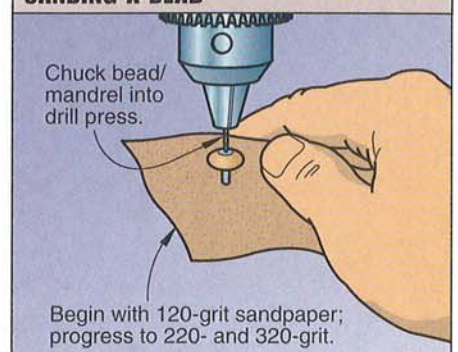
SANDING THE FACETS



FORMING A BEAD



SANDING A BEAD





Hand-Sanding: The Secret To a Great Finish

Sure, power sanding tools can remove rough spots and uneven edges. But for that final prep work prior to applying a finish, nothing beats hand-sanding. Here's a look at what to use when hand-sanding to get silky-smooth results.

WHAT GRITS TO USE AND WHEN

Sandpaper selection doesn't have to be mysterious. We get good results from both garnet and silicon carbide papers in our shop. Not surprisingly, the more expensive the paper, the longer it lasts.

Typically, we follow a progression through several grits in what is called a sanding schedule. For your next sanding job, feel free to use our shop-tested Sanding Schedule chart below which takes into consideration both the kind of wood you're sanding as well as the desired finish. ■

SANDING SCHEDULE				
FINISH TYPE	GRITS			
Softwoods	1st	2nd	3rd	4th
Oil	120	150	180	220
Polyurethane, Lacquer (Clear)	120	150	180	—
Polyurethane, Lacquer (Over Stain)	100	120	—	—
Water Base	120	150	180	—
Paint	120	150	180	—
Hardwoods				
Oil	150	180	220	320
Polyurethane, Lacquer (Clear)	120	150	220	—
Polyurethane, Lacquer (Over Stain)	120	150	180	220
Water Base	120	150	180	—
Paint	*100	*150	220	—
*Optional machine sanding				

FOUR STEPS TO SANDING SUCCESS

Before you begin hand-sanding, machine-sand through the first grit listed on the Sanding Schedule for the combi-

nation of wood and type of finish you will apply. Then, use that same grit as the starting point for hand-sanding. ■

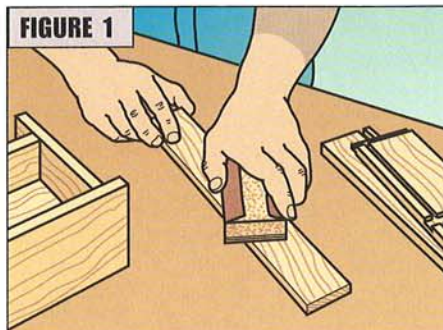


FIGURE 1 ▲ Sanding before assembly is a good rule to follow. This also will save on the time required for final sanding.

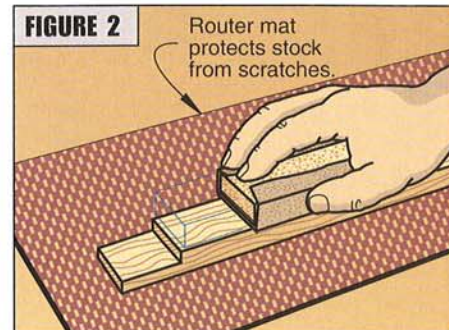


FIGURE 2 ▲ Keep the sanding block flat to avoid rounding over critical mating surfaces. Use long strokes and light pressure.

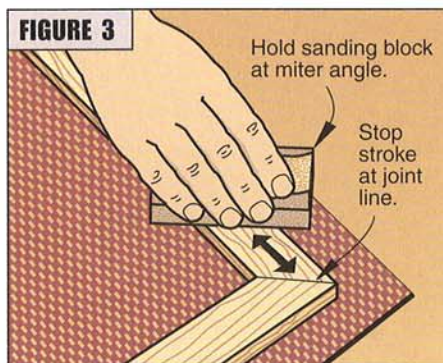


FIGURE 3 ▲ Always sand with the grain. Where grain direction changes, sand up to the joint line from both directions.

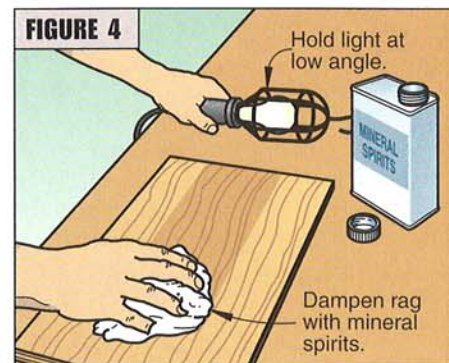
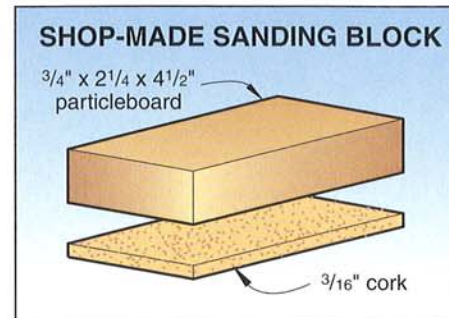


FIGURE 4 ▲ Directional lighting reveals milling marks. Wiping with mineral spirits lets you see any other surface defects.

SANDING BLOCK FLATTENS THE WOOD

One very effective way to sand surfaces flat and even is with a sanding block.

We make sanding blocks in our shop by contact-cementing a piece of 3/16"-thick cork to 3/4"-thick particleboard. Many hardware stores stock rolls of sheet cork, and sell it by the foot. After you adhere the cork, rip and crosscut a supply of 2 1/4 x 4 1/2" blocks to handle quarter-sheets of sandpaper. ■



WE FIGURE YOU SHOULDN'T HAVE TO BE A PRO TO WORK LIKE ONE.



We believe that every woodworker deserves to benefit from the same heft and precision we build into our professional tools. Which is why we make tools for the master craftsman, the do-it-yourselfer and everyone in between.

Nice thing about Delta is, you can jump in at any level you like. You're still buying Delta Quality.

Take these bench tools for example. They're Delta through and through. The 10" Bench Table Saw gives you big-time rip capacity and big saw precision. Team it up with that 8 1/4" Compound Miter Saw and you'll be doing decks and crown moldings and cabinets, like a pro. Mill your own stock from 1/8" to 6" thick, up to 12" wide, with your own 12" Portable

Planer. Then finish off the job with our new 4" x 6" Belt/Disc Sander.

It stands to reason that if Delta has been the choice of professional woodworkers for over 75 years – it might be a pretty safe way to start building your shop. At a price that fits nicely into a benchtop budget.

For the name of the nearest dealer, home center or hardware store carrying Delta tools, call Delta International Machinery Corp., 800-438-2486. In Canada, 519-836-2840.

**THE
POWER
OF THE
PROS**

DELTA
WOODWORKING MACHINERY
A Pentair Company

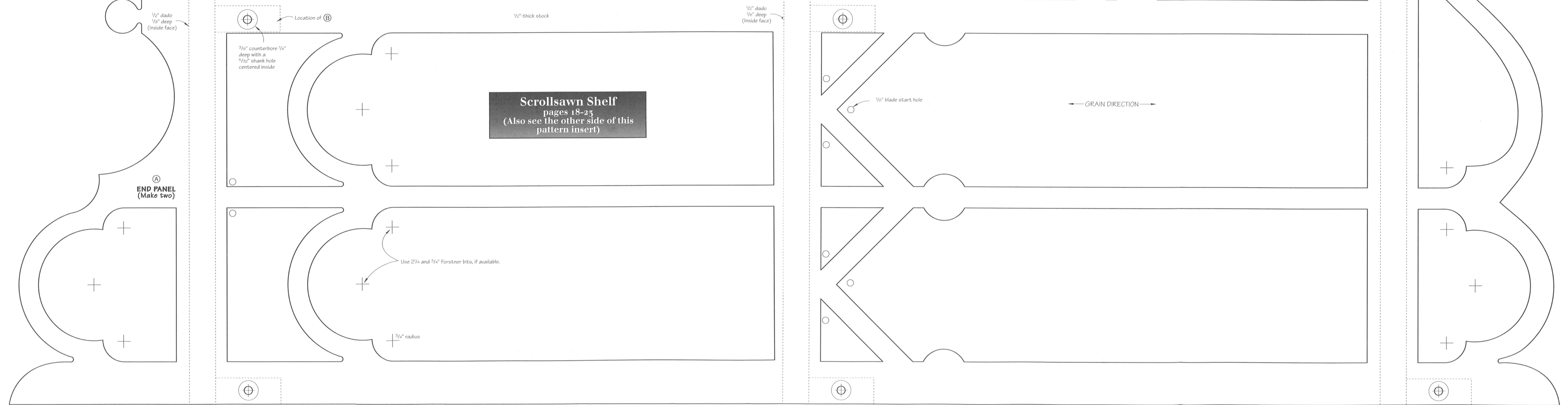
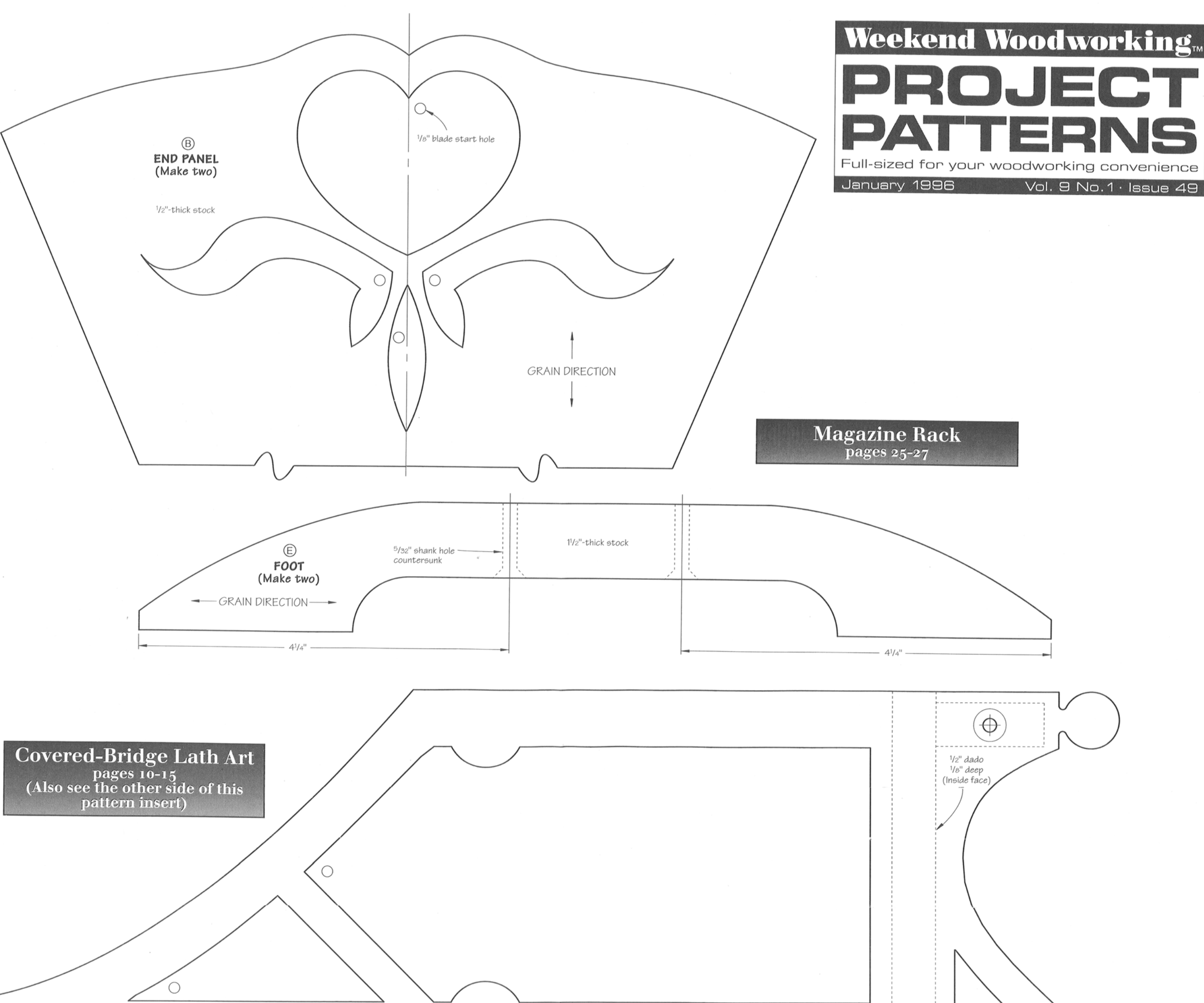
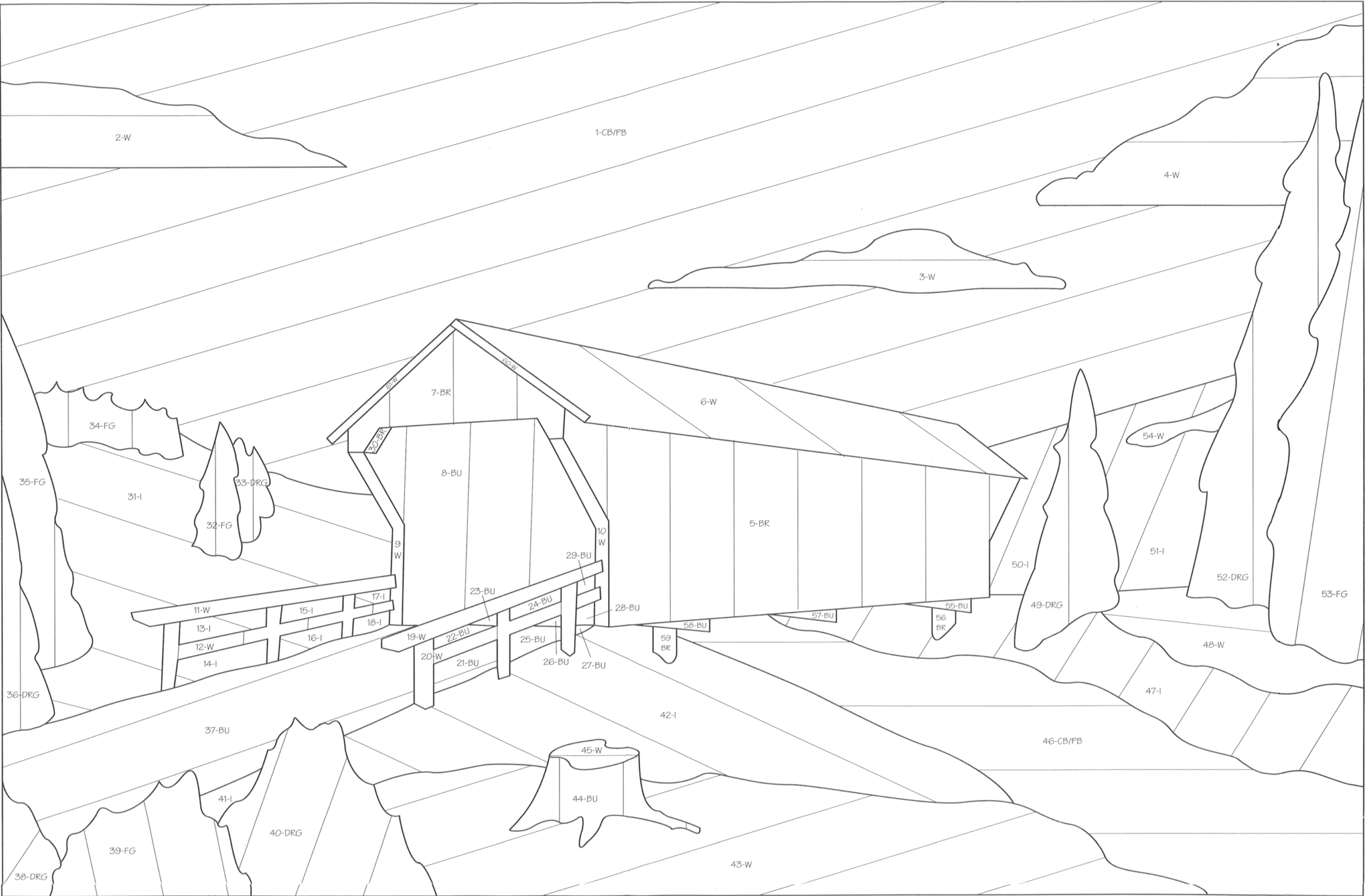
Delta funds these national PBS programs.



The New Yankee Workshop with Norm Abram.



The American Woodshop with Scott Phillips.

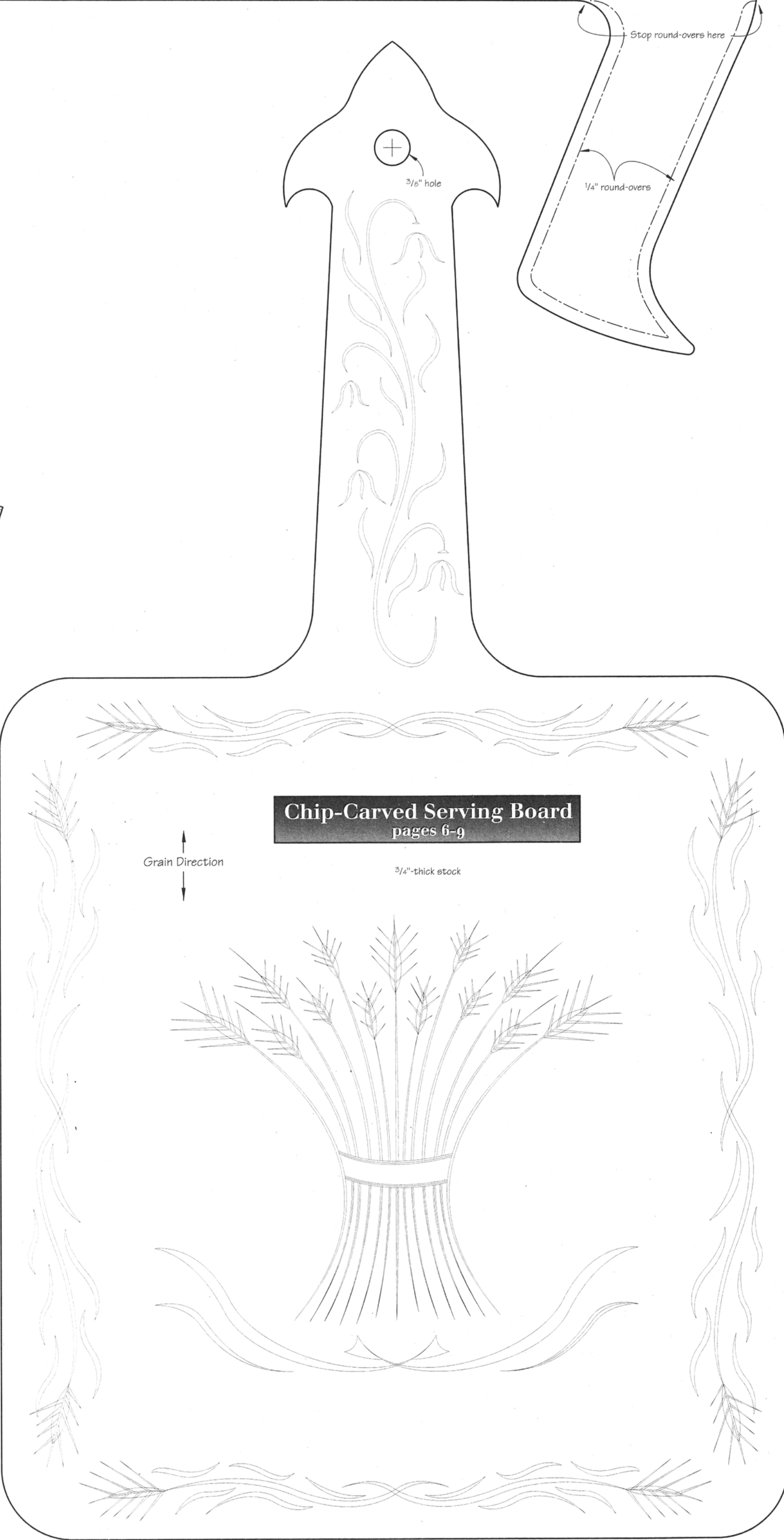
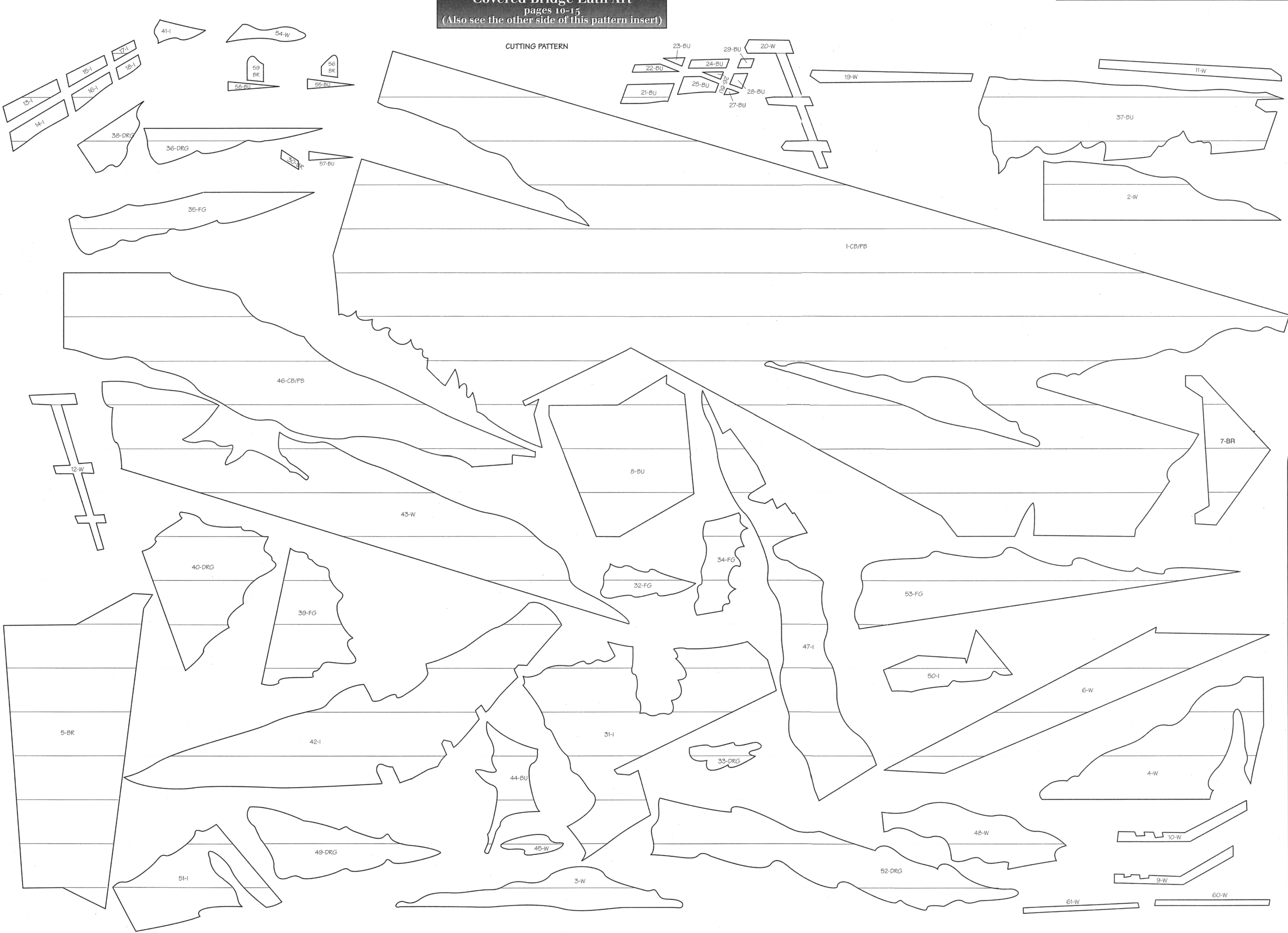
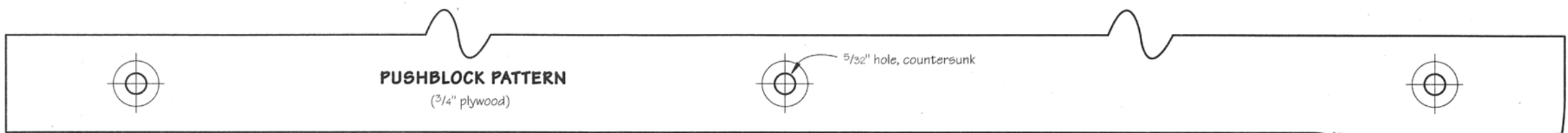


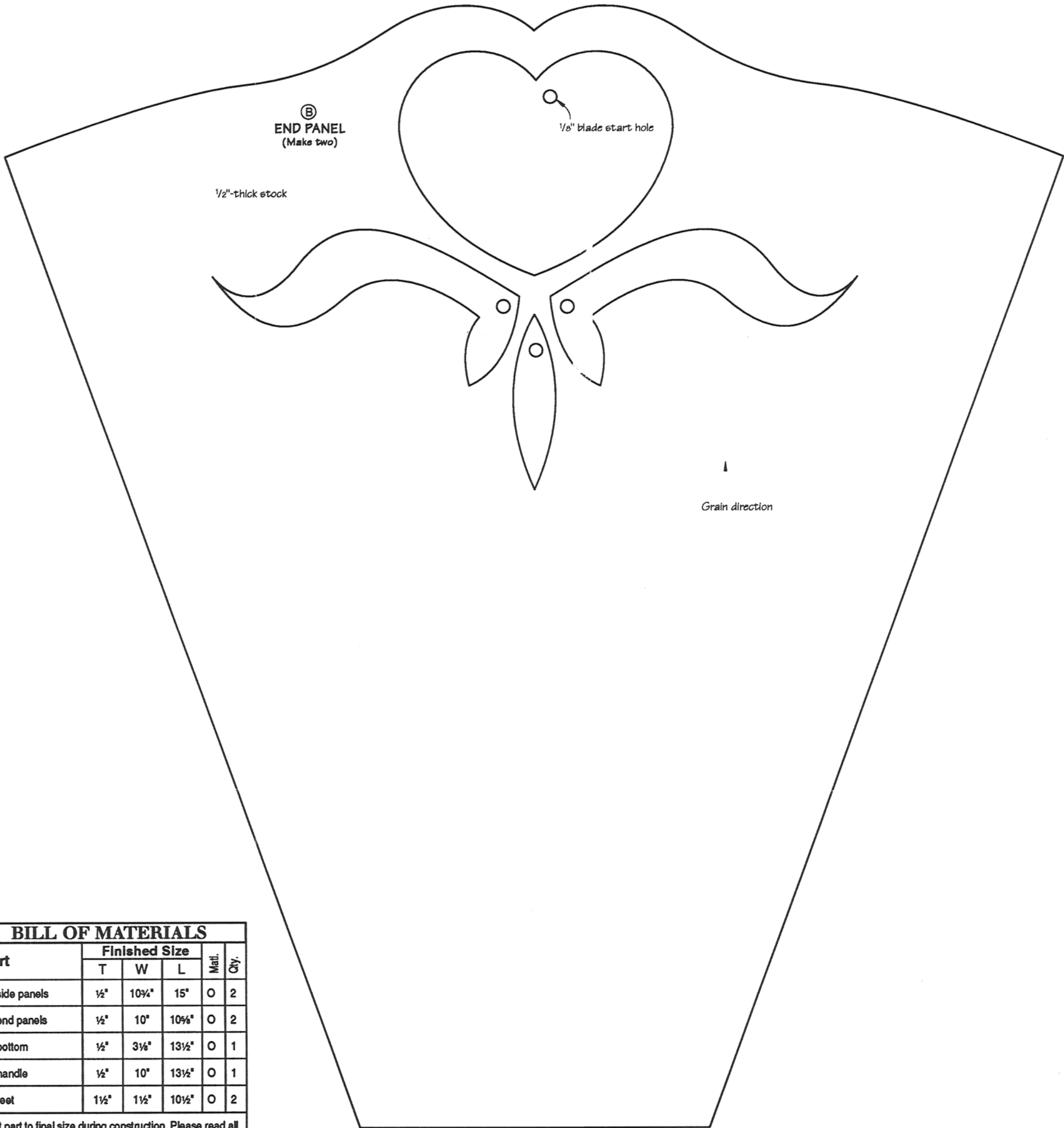
©
YALANCE
(Make 6)
1/2"-thick stock

Scrollsawn Shelf
pages 18-21
(Also see the other side of this pattern insert)

Covered Bridge Lath Art
pages 10-15
(Also see the other side of this pattern insert)

CUTTING PATTERN





BILL OF MATERIALS					
Part	Finished Size			Mati.	Qty.
	T	W	L		
A* side panels	½"	10¾"	15"	O	2
B* end panels	½"	10"	10¾"	O	2
C bottom	½"	3¼"	13½"	O	1
D handle	½"	10"	13½"	O	1
E* feet	1½"	1½"	10½"	O	2
*Cut part to final size during construction. Please read all instructions before cutting.					
Materials Key: O—oak					
Supplies: 4d finish nails, #8 x 1½" flathead wood screws; stain, clear finish.					