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FALL 2015 ■ ISSUE 60

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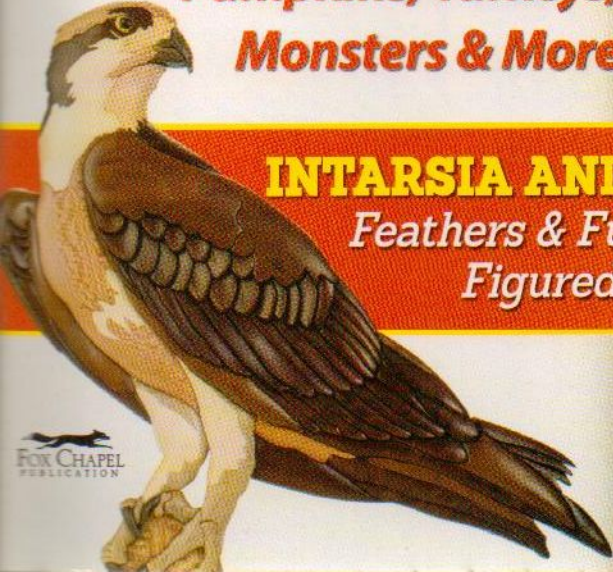
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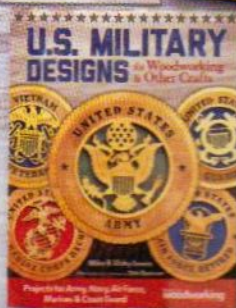


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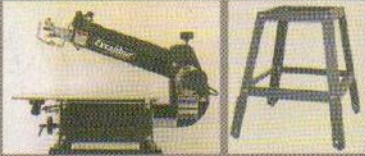


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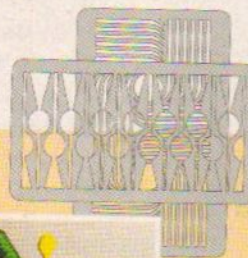
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• Full-size Patterns & Detailed Instructions

Download and print full-sized Casserole Trivet patterns (page 50), as well as detailed step-by-step instructions to make your own musical monster (page 65).

• Bonus Photos

See more photos from Open House at www.wood-show.com.



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Teamwork

I'm not sure how you envision us. Perhaps you imagine hip young professionals, or experienced suburbanites, or crotchety fogies. In truth,



Mindy, Shannon, Alan, Bob, Carly, and Michele share a moment of team pride at Open House.

we are all and none of the above. Bob, Carly, Jon, Michele, and I span three decades in age, with a combined 81 years of experience in print publishing, and our level of hip vs. crotchety depends on the day and the deadline. In short, we are a team. We combine perspectives, strengths, and types of experience to solve problems and make products.

One of those products is, of course, this magazine, and it is a great example of team synergy. I am an organizer, Bob is the technical guy, Michele networks, Carly chases details, and Jon makes the whole cohesive. Plus, our newly retired Fox photographer, Scott Kriner, has contributed terrific images for the past 10 years; the former editor, Shannon Flowers, oversees production details; and our publisher, Alan Giagnocavo, personally signs off on every issue. Among our contributors, Kathy Wise has written articles every issue for 11 straight years. Judy Gale Roberts, John Nelson, Judy Peterson, Kathleen Ryan—I could name dozens of people who either have been part of the publication for years or are new to us but share years of experience. And, of course, your comments and suggestions are invaluable in helping us make the magazine you want to read.

In this issue, you'll read about some of our other projects. On page 10 we've shared some highlights from this year's Open House. In some ways, we play to our strengths: I usually book articles, so I book teachers; Michele sells ads, so she sells booth space, etc. The whole Fox team helps us by selling tickets, running the website, sending press releases, organizing the Fox Store, staffing the show, and so much more. We also appreciate the feedback we receive from those of you who attend the show, which helps us make it better each year. Please visit the Open House website, www.wood-show.com, for more photos. And save the date for next year: May 6-7, 2016.

We have also joined forces with the company book experts to develop and edit the woodworking books. Among our completed projects is a revised and expanded omnibus edition of Tony and June Burns' puzzle patterns (see page 12). If you have specific ideas for books you'd like to read—or write!—please send a note with a description of the idea and we'll see what we can do.

In the meantime, I hope you enjoy the issue. Thanks for being part of the team!

Mindy Kinsey
kinsey@FoxChapelPublishing.com

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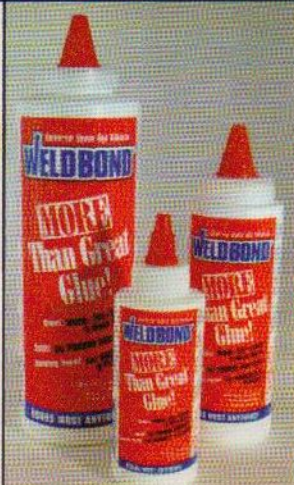
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A Song for All Ages

As young children, the first Sunday school song my brother and I learned was "Jesus Loves Me." Throughout our lives, this dear little song has been one of our favorites for various reasons. Recently I acquired a version of this song for seniors. My brother just turned 67 years old, and I wanted to do something special with Paul Boer's "Jesus Loves Me" pattern (Spring 2015, Issue 58).

My husband cut the plaque, and I stained it with a vinegar and steel wool stain. I made a copy of the song, and then put the plaque and the song in a frame. I thought you would like to see a picture of it. I've included the words to the senior version of "Jesus Loves Me."



My husband has been a scroller for almost 20 years. He does beautiful work but hasn't tried to design a piece yet. He spends hours each day out in his wood shop "making dust;" it's a nice retirement hobby.

Thank you for this design. It will be used many times over to make gifts.

**Maureen and
Garry Horton**

Via e-mail

Jesus Loves Me

Jesus loves me, this I know
Though my hair is white as snow
Though my sight is growing dim,
Still He bids me trust in Him.

CHORUS:

*Yes Jesus loves me. Yes Jesus loves me.
Yes, Jesus loves me for the Bible tells me so.*

Though my steps are oh, so slow,
With my hand in His I'll go
On through life, let come what may,
He'll be there to lead the way.

CHORUS

When the nights are dark and long,
In my heart He puts a song.
Telling me in words so clear.

"Have no fear, for I am near."

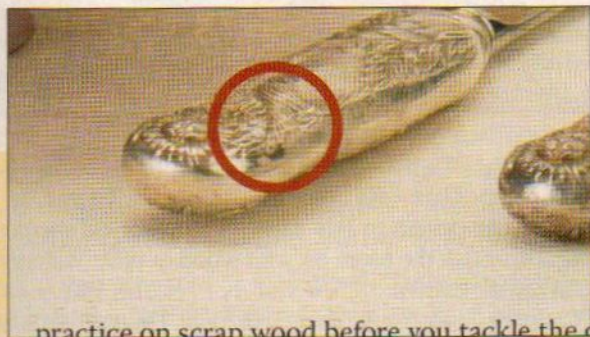
CHORUS

When my work on earth is done,
And life's victories have been won.
He will take me home above,
Then I'll understand His love.

CHORUS

I love Jesus, does He know?
Have I ever told Him so?
Jesus loves to hear me say,
That I love Him every day.

CHORUS



Fox Hunt

Heriberto Saldana of Madelia, Minn., and John Kohe of Blackball, New Zealand, were randomly drawn from the participants who located the fox in our last issue (Summer 2015, Issue 59). The very first appearance of the white fox was in the lead photo of Carole Rothman's Tiered Cake Box article on page 60.

Find the fox in this issue, and tell us the page number and location. Two readers randomly selected from all correct replies will receive a \$25 Fox Chapel Publishing gift certificate. Entries must be received by June 1, 2015, to be eligible. *NOTE: The contest fox is an outline drawing that would face left if his feet were on the "ground" (other foxes appearing in SSW&C don't count).*

Send your entry to SSW&C, Attn: Find the Fox, 1970 Broad Street, East Petersburg, Pa., 17520, or enter online at www.ScrollSawer.com.

Scrolling Shortcuts + Crackle Paint

I normally use the intarsia patterns in your magazine, but I was intrigued by John Nelson's scrolling shortcuts method in *Scroll Saw Woodworking & Crafts Holiday 2014* (Issue 57).

I basically followed John's instructions; the only thing I added was a crackle medium on the sled rails. I painted the rails white first, added a coat of crackle medium, and then painted the rails red, green, or black. This method allows the white to show through the cracks.

I hope you offer more of John's patterns for this method in future issues.

Sallie Stahl
Goodells, Mich.



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you a copy of my first project. My Grand-daughter.
The whole family is standing in line to have their
photo cut next. Keep up the good work.
Thanks again. -Smitty."*



Postcard Scene ▲

Alan Chapman of Coffs Harbor, NSW, Australia, recreated an old postcard with 45 different kinds of wood. He cut more than 1,200 pieces to create this beautiful intarsia artwork.



Piano Girls ▲

Don Critchley of Swindon, Wiltshire, England, used a pattern from Kathy Wise's book *Intarsia Woodworking Projects* to make this intarsia scene for his granddaughter. The piece is made of purple heart, black walnut, iroko, boxwood, sycamore, elm, and ebony wood.



Whitetail Deer Portrait ▲

Ray Morgan of Blooming Grove, N.Y., scrolled this whitetail deer from a Charles Dearing pattern. He cut it in a live-edge maple slab; if you look closely, you can see some green moss on the edge of the bark. He finished it with Danish oil and a coat of Tru-Oil gunstock finish. When it was dry, he buffed it to a satin finish to create a hard and smooth look.



Parrot Birdhouse

Jutta Vyner of Wodonga, NSW, Australia, customized Sue Mey's birdhouse pattern from *Scroll Saw Woodworking & Crafts Holiday 2014* (Issue 57). She made the pattern smaller and changed the bird to a parrot (there aren't any cardinals in Australia).

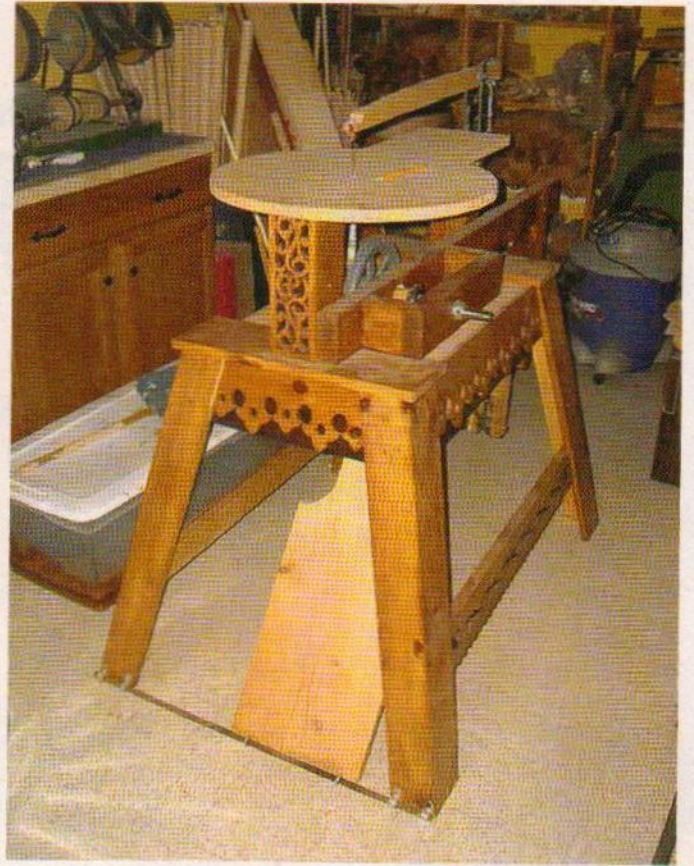
Share Your Latest Work!

Send a slide, professional print, or digital image (300 dpi minimum) with 100 words about you and your piece. Include your hometown, the name of the pattern maker, and a list of wood and materials used. Send to Reader Gallery, *Scroll Saw Woodworking & Crafts*, 1970 Broad Street, East Petersburg, Pa., 17520, or e-mail glasmyre@foxchapelublishing.com.



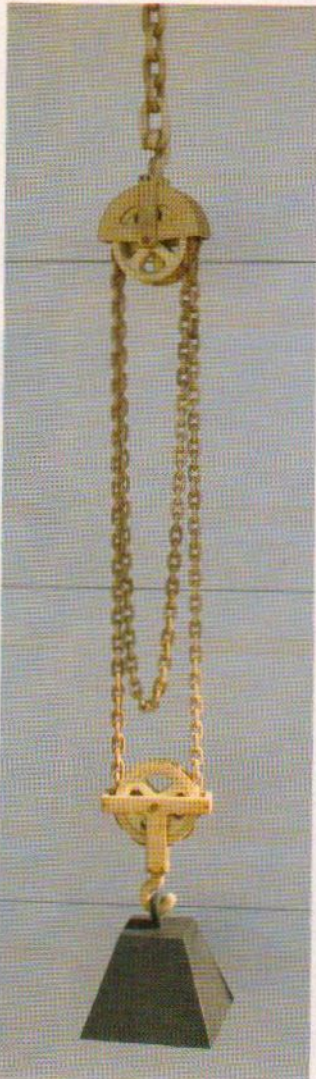
Marooned ▲

Luis Martinez of Aguadilla, Puerto Rico, designed this piece. He used pine, padauk, ebony, zebra wood, and other local wood. He embellished the frame with sand and seashells.



**Victorian-Inspired ▲
Foot-Powered Scroll Saw**

Jim Paulson of Haskins, Ohio, used a scroll saw to make this foot-powered scroll saw. He modified designs by Roy Underhill and Paul Church to create a base and apparatus that could be made of wood and used commercially available hardware parts. He added a touch of the Victorian age to his version of the saw design.



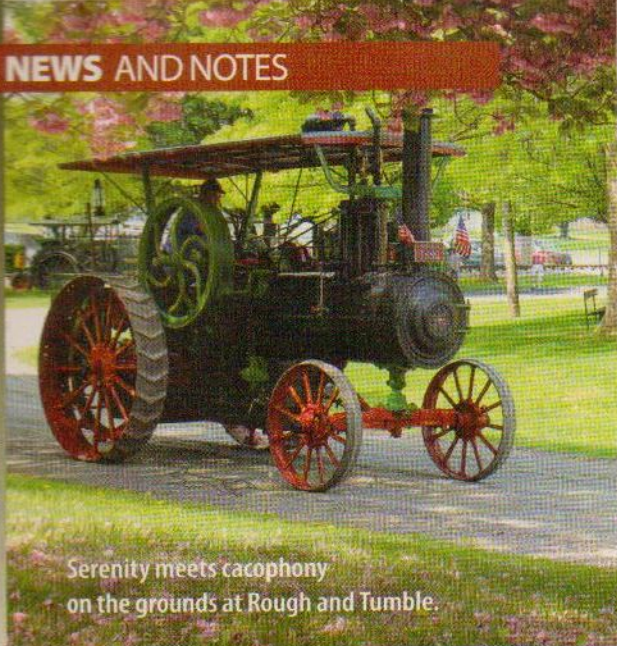
Wooden Chain Hoist

Allyn Leppäla of Marengo, Wis., modeled this chain hoist after one his father had. He cut the links, put a radius on each link with a router, and then broke each link to attach them. Breaking the links makes the glue line less visible than cutting the links. Allyn made the chain and guards of birch and used aspen for the pulleys.



Duesenberg Automobile ▲

Charles Svajgl of Papillion, Nev., used cherry and oak to scroll this model of a 1930 Duesenberg automobile, based on a pattern from Cherry Tree Toys.



Serenity meets cacophony on the grounds at Rough and Tumble.

Fox Chapel Publishing's 2015 Open House & Woodworking Show

Proving sawdust & steam are a perfect pair

Photos by Sandy Ertz,, Llara Pazdan, and Shane Rottier

"Our second Open House at Rough and Tumble was even better than the first," said the president of Fox Chapel Publishing, Alan Giagnocavo. "We had more vendors, more world-class teachers, a great new location for the classrooms, and more than 10,000 books in the Fox Store. And we just about doubled the number of attendees, so we are on the right track."

The event took place on May 8 and 9, 2015, in conjunction with the Rough and Tumble Engineers Historical Association's annual Spring Steam-Up. The museum's grounds near Lancaster, Pa., attracted woodworkers from all over the Mid-Atlantic region and New England, as well as the Midwest; California; Nova Scotia and British Columbia, Canada; and even Israel. The format of the show remained the same as last year, but a number of small changes seemed to make a big difference to show attendees.

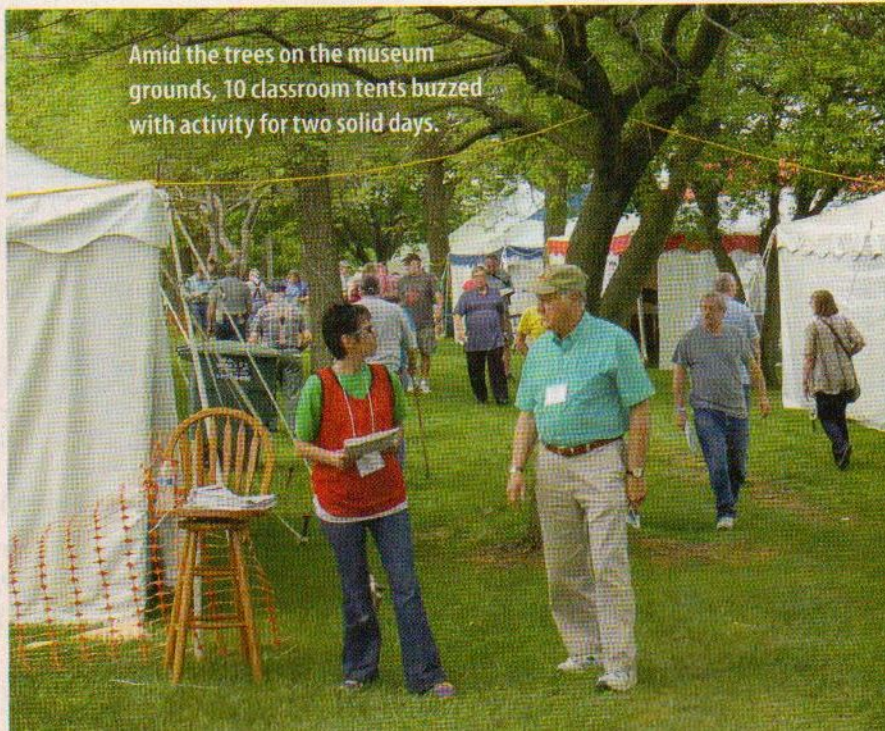
The classroom area was moved behind the demonstration barn, which provided a little more quiet and a lot more space. Each class had bigger tents and more seating, although the most popular classes were still standing-room only. Judy Gale Roberts, Carole Rothman, Judy Peterson, Shawn Ferguson (and his son Jeremy), and Rolf Beuttenmuller all presented classes on scrolling topics. Additional offerings in carving, turning, pyrography, and general woodworking rounded out the schedule of 40 classes.

The vendor barn was packed with exhibitors, and new lighting made it easy to see their wares. Among them, Groff & Groff lumber offered wood, Ben Fink's Wood Shop sold scroll saw blades, and RJR Studios demonstrated Sand Flee tools and handed out Mother's Day plaques. Epilog Laser cut snowflake ornaments for attendees. Seyco, Arbortech, MDI

Renowned intarsia artist and author Judy Gale Roberts shared her expertise with standing-room-only participants.



Amid the trees on the museum grounds, 10 classroom tents buzzed with activity for two solid days.



In the vendor barn, scrollers found items to purchase, demonstrations, and valuable information from helpful exhibitors.



Attendees trying their hand at the scroll saw were assisted by members of the Tri-County Scrollers and Woodcrafters.



Bargain hunters browsed through thousands of books in the Fox Store tent.

Woodcarvers Supply, and Hillcrest Carving offered woodworking tools. Some of the vendors donated door prizes, and Fox employees held hourly drawings. Plus, Fox Chapel acknowledged 56 loyal readers who have subscribed to *Scroll Saw Woodworking & Crafts* and/or *Woodcarving Illustrated* for more than 10 years. Each reader who identified him or herself received a gift certificate to use in the Fox Store.

In the demonstration barn, volunteers from the Tri-County Scrollers and Woodcrafters taught attendees to scroll an animal puzzle. The South Central Pennsylvania Wood Turners sponsored demonstrations of bowl, cup, and top turning and helped visitors turn a pen. Additional booths offered hands-on crafts and carving, while outside, chainsaw artists Zoe Boni and Joe Dussia of Appalachian Arts Studio carved logs into sculptures. Visitors wandered the grounds to explore Rough and Tumble's steam-driven sawmill, scale models, blacksmith shop, antique cars, and more.

The pairing of sawdust and steam seems to work. As woodworkers, vendors, demonstrators, and instructors left the show, they all said the same thing: "I can't wait for next year!"



Carole Rothman's scrolled bowls class was a popular choice for scrollers at the show.

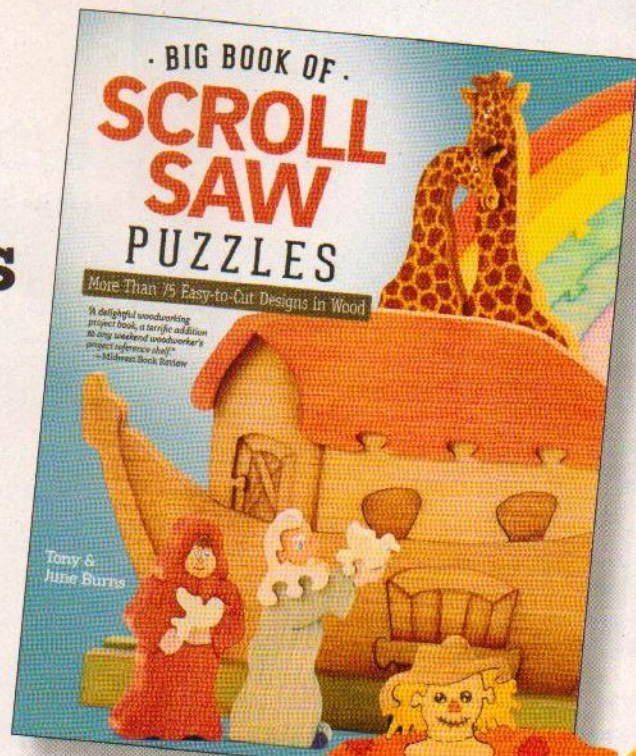
Join us next year May 6-7, 2016! Check out more photos, plus save-the-date information for the 2016 show, online at wood-show.com.

BOOK REVIEW:

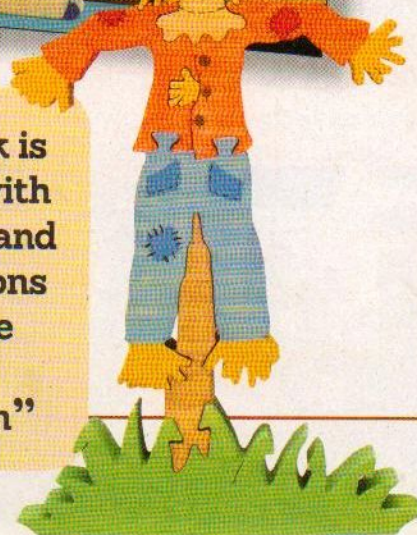
Big Book of Scroll Saw Puzzles

Making puzzles is a fun and easy way to start scrolling. This book is packed with patterns and instructions that make scrolling fun for beginners while feeding the creativity of more advanced woodworkers. Tony and June Burns have been making puzzles for more than 30 years. Their expertise shines through in the thoughtful components of every puzzle pattern, including creatively shaped keys and detail lines that help you get the painting just right. The book starts with a helpful section of basic scrolling tips and then steps through a puzzle project one cut at a time. Once you've mastered the basics, enjoy more than 75 animal, farm, Noah's ark, and holiday-themed patterns, including a half-dozen that have never been published. Even previously released patterns have been updated and fine tuned for inclusion in this book. You'll be scrolling and painting like an expert in no time, and your family and friends will be clamoring for their favorite puzzles.

Big Book of Scroll Saw Puzzles: More Than 75 East-to-Cut Designs in Wood by Tony & June Burns; ISBN 978-1-56523-859-6. Available from Fox Chapel Publishing, 800-457-9112 or foxchapelpublishing.com, or your local retailer.



“This book is packed with patterns and instructions that make scrolling lots of fun”



New Owner for Mike's Workshop

Mike Moorch built a great business, Mike's Workshop, selling Flying Dutchman scroll saw blades. Although he loved his customers and selling blades, Mike decided to retire this year. He sold the business to Kari and Vernon Brown of The Wooden Teddy Bear. Mike said, "I've dealt with The Wooden Teddy Bear for a long time, and I know they'll do a great job serving the customers."

Kari and Vernon will continue the business under the name "Mike's Workshop" and are excited to both distribute and sell Flying Dutchman scroll saw blades. Kari said, "Our goal is to keep the same integrity and customer service Mike has had over the years."

The website, www.mikesworkshop.com, is still active, and you can order online or by phone. The new phone number is 503-760-1614, and the fax is 503-761-2674. Contact Vernon or Kari with questions at contact@mikesworkshop.com.

SAW 2016 Expo

The board of directors of the Scroll Saw Association of the World (SAW) is celebrating 18 years by announcing the 2016 S.A.W. Expo. The event will be held on July 8 and 9 at the Ramada Plaza Hotel & Oasis Convention Center in Springfield, Mo. It will include vendors, seminars, and a banquet. All scrollers are welcome—watch the SAW website for more information.

Mark your calendars, and visit www.saw-online.com for more information. You can also keep up with the group on Facebook: www.facebook.com/groups/SawAssociationWorld.



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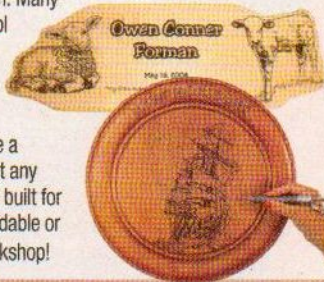
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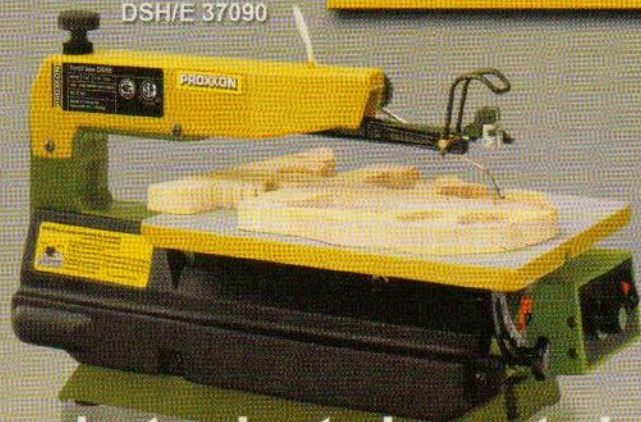
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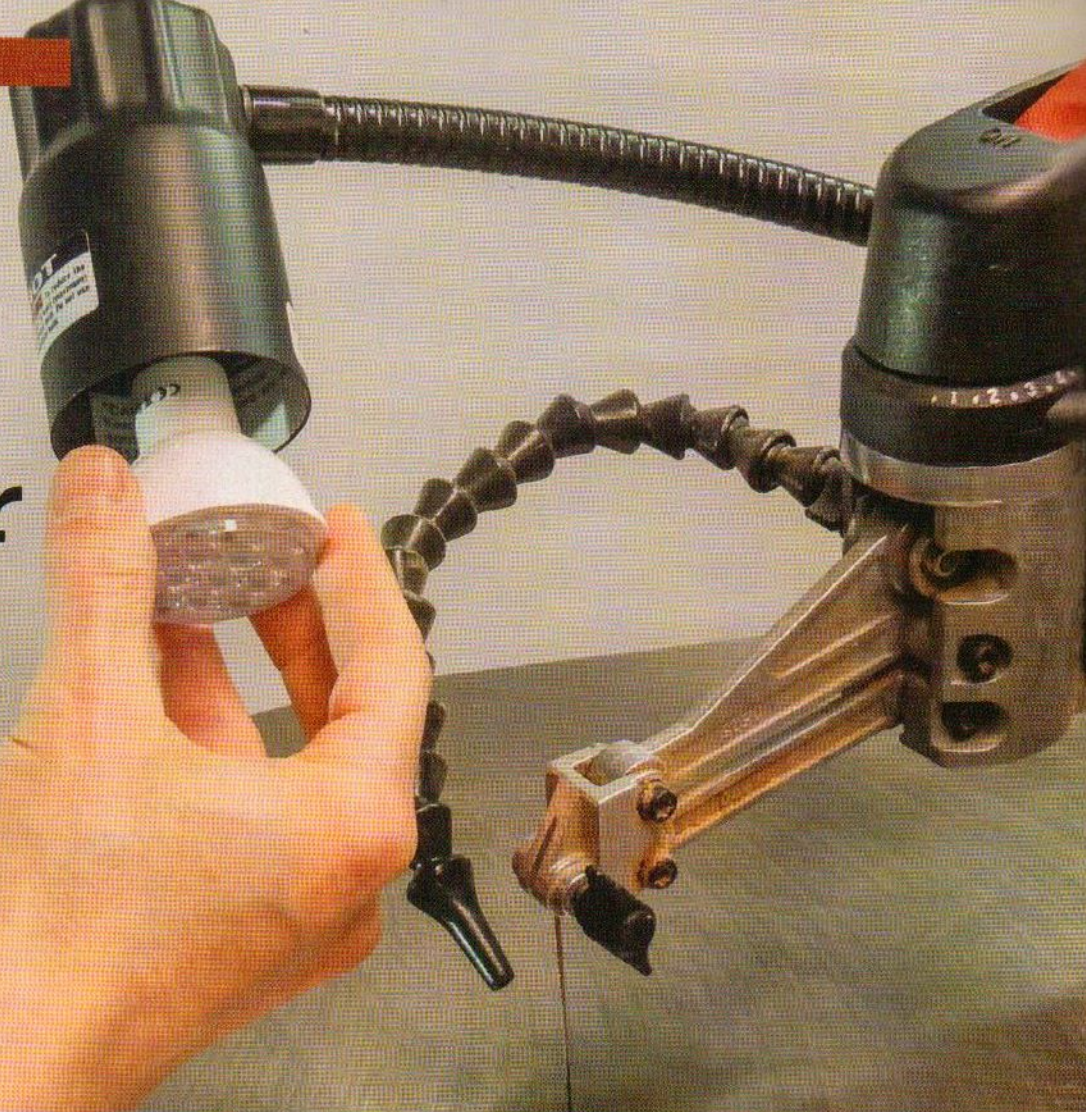
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Shed Some Light on Your Work

Replacing your saw's standard incandescent bulb with an LED bulb can make scrolling more enjoyable.



TOP TIP

For brighter and more natural light, replace the standard bulb in your scroll saw's integrated light with an LED bulb. For example, my DeWalt 788 takes an E17/R14 bulb, which is available in several styles. They only use 4 watts, so they don't get very warm, but they are equivalent to a 45-watt incandescent bulb. Just for comparison, the standard bulb (and max rating for the DeWalt fixture) is only 25 watts! At \$12 to \$15, LED light bulbs are more expensive than incandescent bulbs, but they are more durable and will last longer.

When buying an LED light bulb, consider view angle and color temperature. LED bulbs are considered "reflector" bulbs, so they come in two different view angles: 60° (flood) and 30° (spot). The spot bulb focuses more light and seems slightly brighter than a flood bulb. In addition, LED bulbs have three color temperatures. Warm white will be more like an incandescent (somewhat yellow), cool white will be like a fluorescent (somewhat stark), and daylight will be whiter than sunlight and can seem slightly bluish, but is better for colors.

Bill Levering
Via e-mail

Packing Tips

When packing a project for shipping, don't pack it directly in Styrofoam pellets or paper. They will rub on the finish as the package is jostled. Place your project in a plastic storage bag, a freezer bag, a kitchen garbage bag, or a plastic leaf bag. Then, use whatever packing material you like. The plastic acts as a lubricant and preserves the finish, keeping the project looking its best through the shipping process.

Dave Van Ess
Chandler, Az.



TOP TIP In our Fall issue wins a \$25.00 Fox Chapel Publishing Gift Card. Send your tips or techniques to: Info Exchange,

Scroll Saw Woodworking & Crafts, 1970 Broad Street, East Petersburg, Pa., 17520 or e-mail Editors@ScrollSawer.com.

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val·ue (vāl'yoo) n. - An amount considered to be a fair and suitable equivalent for something else; a fair price or return, i.e., "Exceptional performance that continues for decades makes HEGNER Saws an unparalleled value among their peers."

sat·is·fac·tion \sə-təs-'fak-shən/ n. - a happy or pleased feeling, i.e., "Desirable features and superior results provide lasting, everyday satisfaction for owners of HEGNER Saws."



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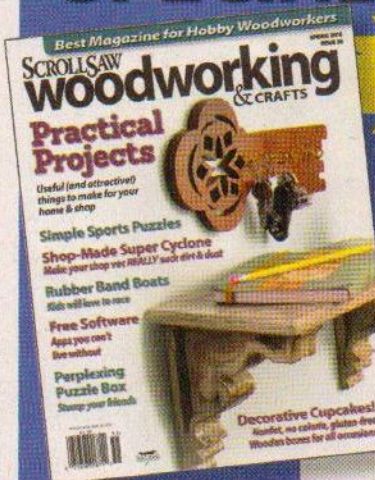
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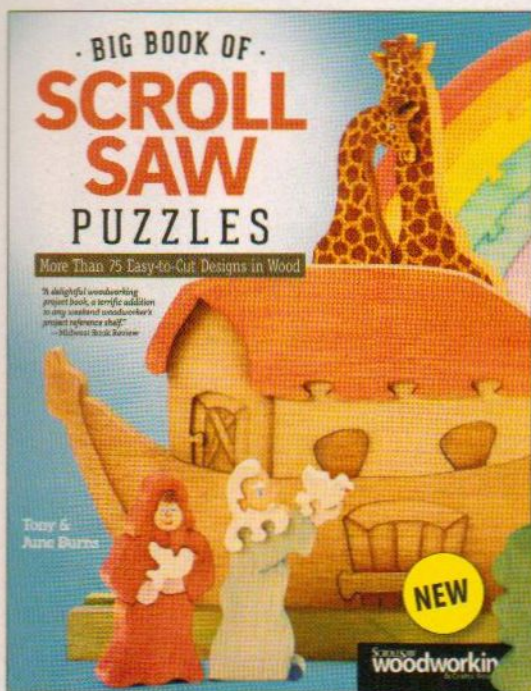
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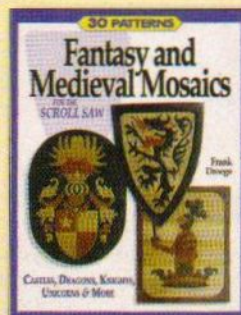


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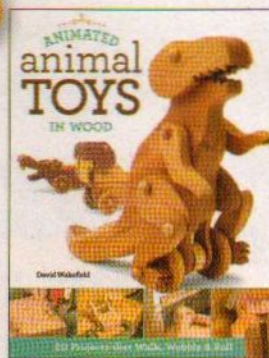


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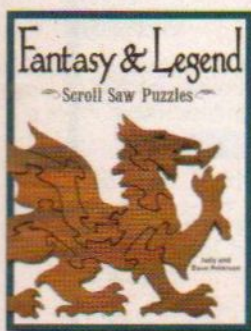
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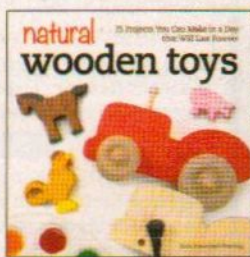


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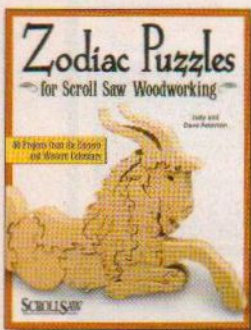
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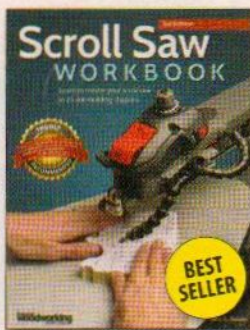
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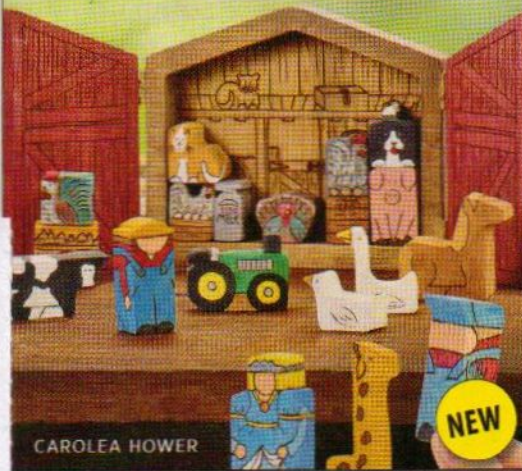


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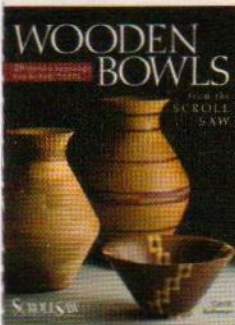
By Carolea Hower

When we featured Carolea's first puzzle playset in *Scroll Saw Woodworking & Crafts* magazine, the response from readers was overwhelming! Her colorful chunky brainteasers combine a clever puzzle and a fun playset in one self-contained carrying case.

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- Nativity in the Manger
- Snowmen in the Hills
- Father Christmas at the Inn



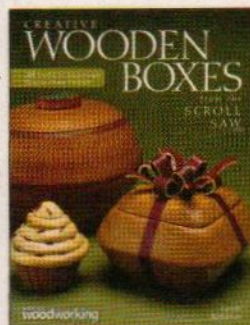
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By Carole Rothman

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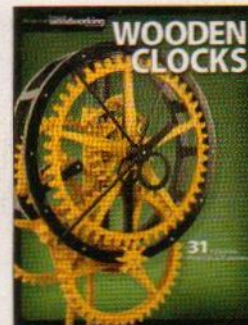
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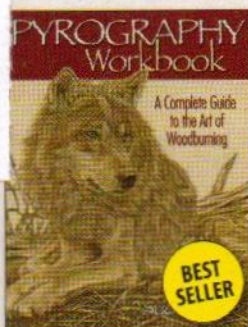
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31 Favorite Projects & Patterns

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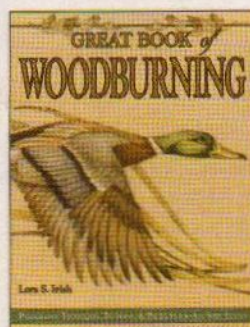
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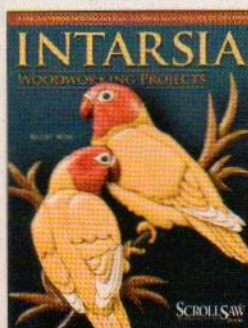
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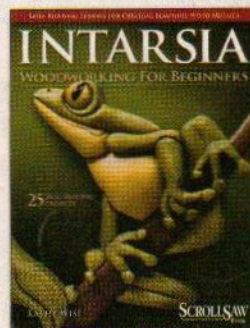
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By Kathy Wise

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Favorite Titles Reborn with Excellent Quality Patterns!

Thanks to technology improvements, we have been able to go back into our archives and republish two out-of-print titles. At the 2015 Fox Woodworking Show, visitors loved the new edition of *U.S. Military Designs for Woodworking & Other Crafts*—we're glad to have it back in print with redrawn high-quality patterns. And even if you have earlier editions of Tony & June Burns's books, you'll love the new versions of their patterns in the *Big Book of Scroll Saw Puzzles*. I guarantee it!

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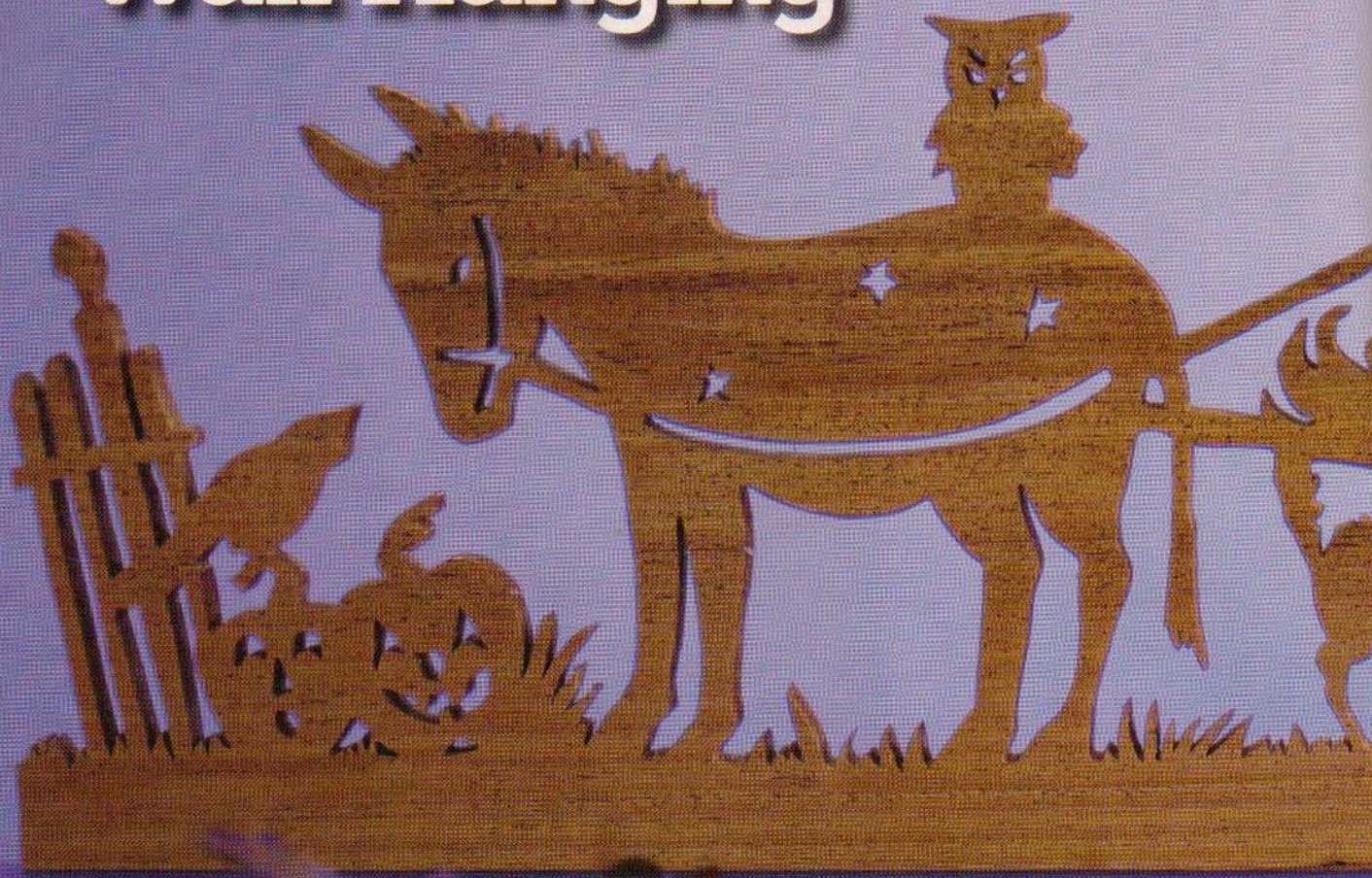


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Halloween Wall Hanging



Spooky design for holiday decorating

*By Gloria Cosgrove
Cut by Leldon Maxcy*

Cut this attractive design from a medium or dark hardwood to dress up your home in time for Halloween. Because some of the fretwork is delicate, you could also cut it from plywood and paint it black.

Cutting the Wall Hanging

When you attach the pattern to the blank, make sure the grain runs the length of the pattern. Drill the required blade-entry holes, and cut the fretwork. Depending on the size of your scroll saw, you may need to use spiral blades to cut some of the end pieces, because the pattern is long and thin. Remove the pattern, sand as needed, and remove the sanding dust. Apply a finish and attach a D-ring hanger behind the donkey's neck and in the middle of the pumpkin's head (as marked on the pattern).



Materials & Tools

Materials:

- Mahogany, ¼" (6mm) to ½" (13mm) thick; 8" x 21¾" (203mm x 552mm)
- Spray adhesive
- Sandpaper
- Clear finish or black paint
- D-ring hangers: 2 each small

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Tools:

- Scroll saw blades, #2 reverse-tooth, #2/0 spiral (optional)
- Drill with assorted small bits
- Screwdriver



Art has always been a part of Gloria Cosgrove's life. Gloria started sketching as a child. She quilted and worked with pastels, watercolors, and oil paints before discovering scherenschnitte (paper cutting). With her daughter, Alison, she maintains a mail-order business selling original artwork and papercutting patterns. For more of her work, visit www.papercuttingsbyalison.com.

Pattern for the **HALLOWEEN WALL HANGING** is in the pattern pullout section.

Fall Projects Gallery

A selection of Fall-themed projects from around the web

By Kathleen Ryan

Pumpkins plumping on the vine, colored leaves crackling under foot, and kids heading back to school mean that fall is around the corner. It's time to dive into projects designed to welcome the change of seasons. Here are a few ideas we hope will inspire your creativity and enhance your home.

Note: These projects are intended as inspiration only. The patterns are not in this issue, nor are they necessarily available from the designers.

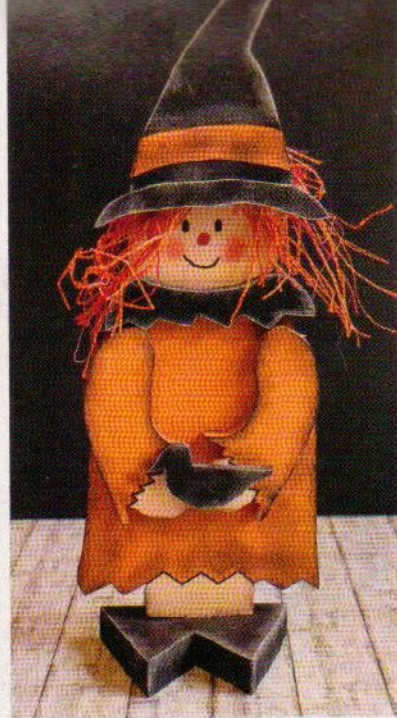
COUNTRY FALL SCENE

Michael Landers cut this attractive saw blade wall hanging, which was designed by White Tail Designs LTD. Made from oak plywood with a birch plywood backing board, the country scene measures 8" by 8". For more of Michael's work, visit www.scrollsawtreasures.etsy.com.



WILHEMINA, THE FRIENDLY WITCH

Too cute to be scary, this 14"-tall witch was designed and crafted by the team of artists at Craft Ideas, based in Germany. Cut from plywood, the witch has raffia hair and is painted with acrylics. For more project ideas, visit www.craftideas.info.



BAT PILLAR CANDLE PEDESTALS AND PLACE HOLDERS

Designed to be both cute and creepy, this set from Sheila Landry Designs was cut from maple. The bats serve as either place card holders or dish identifiers. Shown in natural wood, the set can easily be painted black for a spookier effect. For more projects like this, visit www.sheilalandrydesigns.com.





FLYING WITCH PENDANT

Susan Burkhart used a wall plaque pattern by Patrick and Patricia Spielman to create this Halloween pendant. Susan resized the pattern, cut the piece from walnut, and attached the jewelry findings. For more ideas, visit www.etsy.com/shop/OohLookItsARabbit.



LOLLYPOP TURKEY

Diana Thompson cut her colorful Thanksgiving centerpiece from sassafras and added details with colored pencils. She used colorful lollipops placed in holes to form a delectable turkey tail. For more of Diana's work, visit www.scrollsawinspirations.com.

CROW HARVEST

Judy Gale Roberts used the natural colors of walnut and cedar to create this evocative autumn scene. She added texture with a Wonder Wheel. The finished piece is 16½" by 19½". For more of Judy's patterns, visit www.intarsia.com.



WELCOME TO OUR PATCH

Bill Matthews Jr. and Holly Adamczyk of Uniquely Crafted Signs made this festive fall hanger, which measures 14" by 16". For durability outdoors, the pieces were cut from treated wood and painted with high-quality exterior paints. For more of their work, visit www.uniquelycraftedonline.com.



CAT AND JACK O' LANTERN PUZZLE

This freestanding handcrafted wooden puzzle, designed and made by Claire Calderone and the team at Puzzimals, was cut from birch plywood and measures 5½" wide by 6½" tall. For more of their work visit www.etsy.com/shop/Puzzimals?ref=hdr_shop_menu.

Turkey Napkin Ring

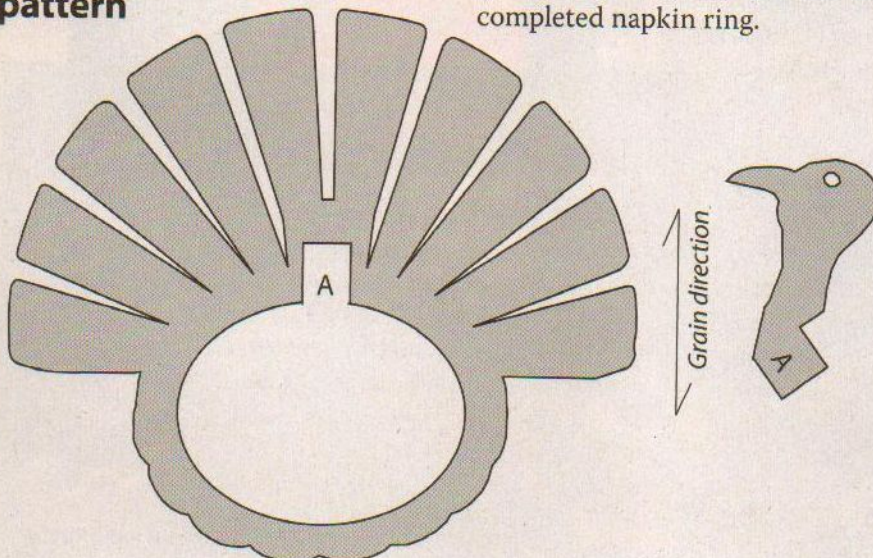
Stack-cut this design to create one for every place setting

By William Lack



This simple design looks great at Thanksgiving dinner. If you want to add color, consider letting the young people in your family use paints or watercolor crayons to brighten each turkey's tail feathers.

Napkin ring pattern



Making the Project

Measure the stock and verify that it is actually $\frac{1}{4}$ " (6mm) thick; plywood is often $\frac{3}{16}$ " (5mm) thick. Adjust the width of Slot A to match the thickness of your blank. Attach the pattern and stack-cut the head and body. Fit Tab A into Slot A and add a dab of white glue. Allow the glue to dry, and stain or finish the completed napkin ring.

Materials & Tools

Materials:

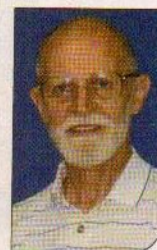
- Plywood or hardwood, $\frac{1}{4}$ " (6mm) thick; body, tail, $3\frac{1}{4}$ " x $3\frac{1}{2}$ " (83mm x 89mm); head, 1 " x $1\frac{1}{2}$ " (25mm x 38mm)

- Stain or finish
- White glue

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Tools:

- Scroll saw blades: #2 reverse-tooth
- Drill with assorted small bits



The late William Lack designed the project. His son, Tim, allowed us to publish the pattern in his memory. Visit William's website at www.LackWood.com.

Lace-Edged Bowl

Embellish a standard stacked-ring bowl with fancy fretwork

By Jay Hammerle

While making a bowl one day, I realized that they are either left open at the top or a second set of rings is inverted and attached to make a vase. In an attempt to give my bowls a different look, I created one where the lip of the bowl turned out. Eventually, I added a fretwork lace pattern to decorate the lip. Aside from the top lip, this bowl uses standard stacked-ring bowl-making techniques.



Customizing the Pattern

This pattern is designed for a $\frac{3}{4}$ " (19mm)-thick board, which places the rings $\frac{3}{4}$ " (19mm) apart. If you choose a thicker or thinner board, you must adjust the distance between the rings accordingly. At a 45° angle, the rings should be the same distance apart as the wood is thick; for a 1" (25mm)-thick board, make the rings 1" (25mm) apart. To customize the pattern further, I suggest you use Dave Van Ess's Angle Calculator (www.scrollmania.com/AngleCalc.html), which will do the math for you. I laminated two different varieties of wood together, but you could use a single species or even a single solid piece of wood, if you have one large enough.

Getting Started

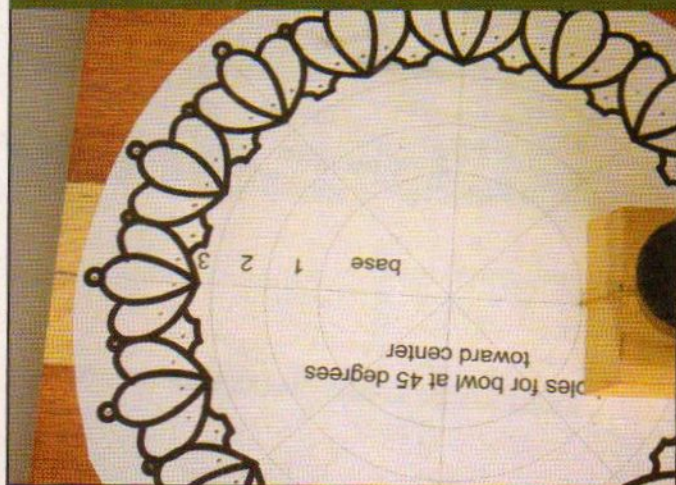
Attach the pattern to the center of the blank with spray adhesive. I use a small roller, or brayer, to smooth the pattern from the center to the edges to remove any wrinkles or bubbles. Then, use an awl to make dimples for the blade-entry holes in all of the frets around the lace edge of the bowl. You will make the lace blade-entry holes and cuts with a vertical blade. Use a piece of scrap cut at a 45° angle to make the dimples for the blade-entry holes for the bowl rings.

TIP

EASIER BLADE FEEDING

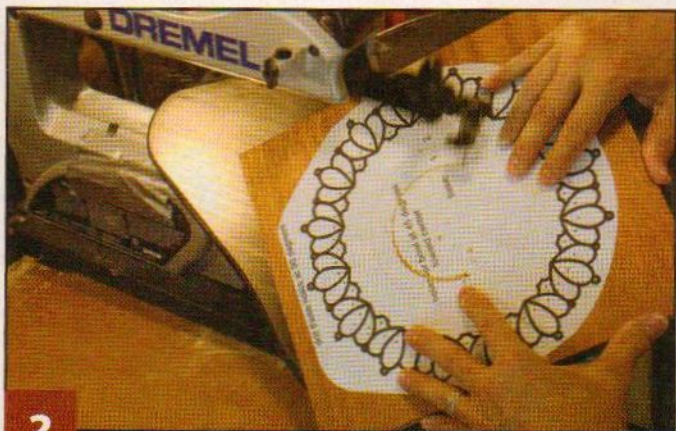
After drilling and sanding around the blade-entry holes, use an awl to enlarge the hole slightly. My saw is a bottom feeder, so I enlarge the holes on the bottom of the blank. If your saw top feeds, slightly enlarge the holes on the top.

BOWL: MAKING THE RINGS



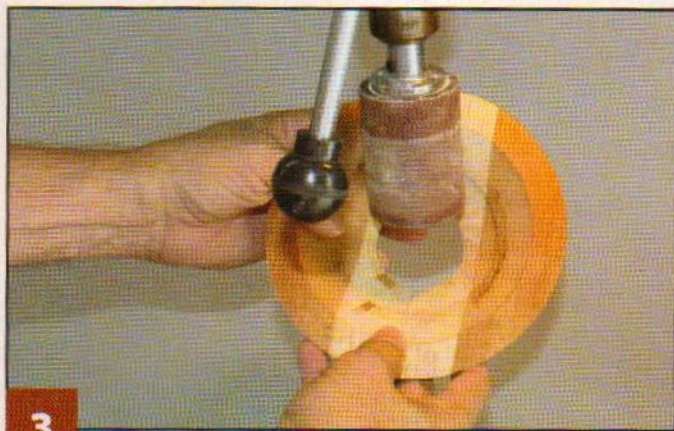
1

Drill the blade-entry holes. Drill vertical $\frac{1}{16}$ " (2mm)-diameter blade-entry holes for the lace frets. Use the angle guide or adjust the drill press to drill the blade-entry holes for the bowl rings at a 45° angle. After drilling the holes, flip the blank upside down and sand off any rough spots left by the drill bit.



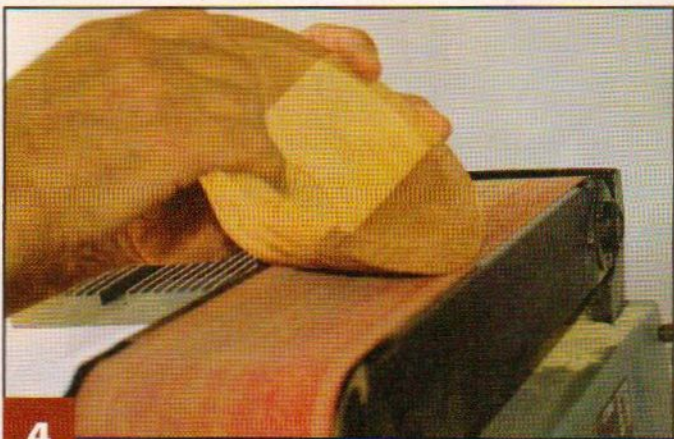
2

Cut the rings. Set the saw table to 45° and cut the innermost ring (the base). It's easier to cut from the center out. Set the base aside and cut the other two or three rings (depending on how deep and narrow you want the bowl to be). Invert the rings and glue them together, but do not glue the base on yet.

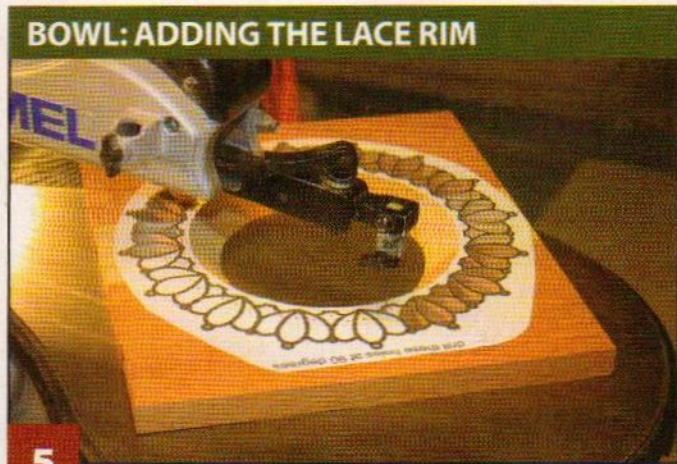


3

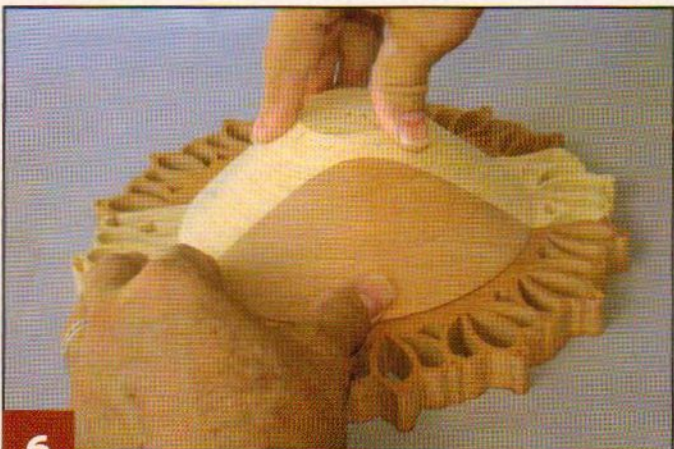
Smooth the inside and outside of the bowl rings. Use a belt sander to smooth the outside of the rings. Then, use a drum sander or spindle sander to sand the inside of the bowl rings.



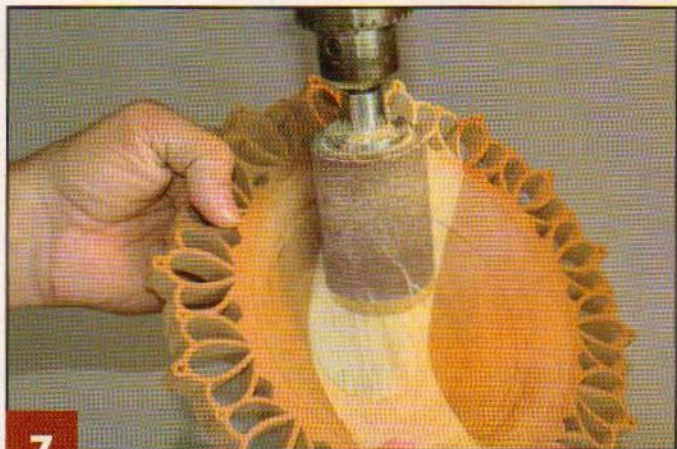
4 **Finish assembling the bowl.** Align the grain of the base with the grain of the rings, and glue and clamp the base to the rings. When the glue is dry, use a belt sander to sand the base flush with the edges of the rings. Finish sanding the outside of the bowl now; it is much more difficult to sand after you attach the lace rim.



5 **Cut the frets.** Return the saw table to horizontal. Cut the lace frets, and then cut or drill the tiny holes at the tips of the lace. Finally, cut the perimeter of the rim.



6 **Attach the lace rim to the bowl.** Invert the lace rim and align its grain with the grain on the bowl; glue and clamp it in place.



7 **Finish sanding and shaping the bowl.** Use a drum or spindle sander to smooth the joint between the bowl rings and the lace rim. Round or feather the top edge of the lace rim with a palm sander, if desired. Then, sand the outside of the bowl where the lace rim joins the bowl rings. Remove all glue squeeze-out; glue spots will show when you apply the finish.

Finishing the Bowl

Allow the bowl to set for 24 hours, and check it again for glue spots or raised grain. Then apply a finish, such as walnut oil (from the grocery store) or a natural stain.

Materials & Tools

Materials:

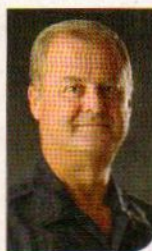
- Wood, such as mahogany and maple, 3/4" (19mm) thick: 11" x 11" (279mm)
- Spray adhesive
- Glue, such as Elmer's wood or Gorilla
- Sandpaper
- Finish, such as walnut oil or natural stain

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

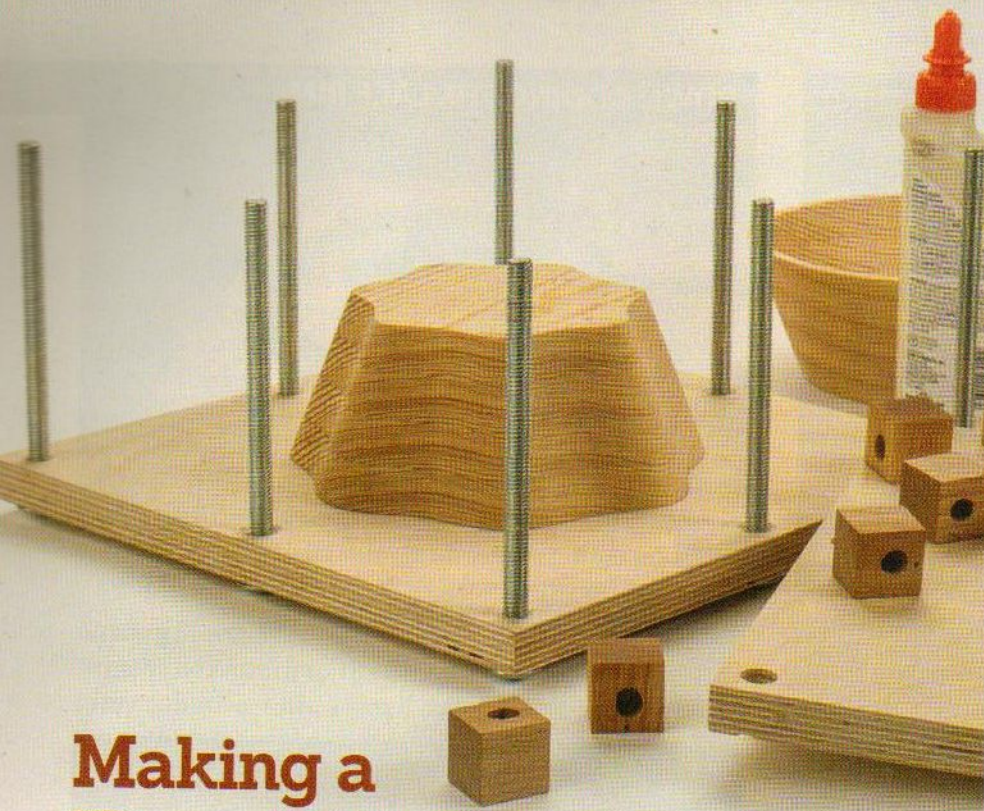
Tools:

- Scroll saw blades, such as FD Ultra Reverse: #5 reverse
- Awl
- Sanders: belt, drum, spindle
- Drill with bit: 1/16" (2mm)-dia. brad point
- 45° angle jig
- Clamps

Patterns for the **LACE-EDGED BOWL** are in the pattern pullout section.



Jay Hammerle retired from the Houston police department, and he lives in Katy, Tex., with his wife and daughter. He has two grown sons. Jay has been working with wood for many years and has been cutting and designing patterns for more than five years. Contact Jay via e-mail at JayHammerle@yahoo.com.



Making a Bowl Press

Make a press from common hardware and scrap wood

By Dave Van Ess

If you make scroll-sawn bowls, eventually you will want a bowl press. I developed this press through trial and error; I made a dozen prototypes before settling on this design. Wood turners first developed bowl presses, and their presses were round or octagonal because the turned bowls are round, but I found a square press is easier to make and accommodates bowls of any shape.

This simple press uses the longest carriage bolts I could find, which are 6" (152mm) long. That allows you to make a bowl up to 5" (127mm) tall. To make a press to accommodate taller bowls, use shorter carriage bolts, coupling nuts, and threaded rods.

Making the Press

Cut the top and bottom to size, and mark a registration triangle on

the front side. Flip the stack upside down and draw lines $\frac{1}{2}$ " (13mm) in from all four sides; if desired, draw a 5" (127mm)-diameter circle in the center. Mark the middle of each side on the lines. Drill eight $\frac{3}{8}$ " (10mm)-diameter holes on the marks. Separate the stack, drill a blade-entry hole, and cut the optional center circle in the bottom piece only. Sand the top and bottom, and apply paste wax to each; the wax makes it easy to remove any excess glue.

Feed the carriage bolts through the under side of the bottom, and use a fender washer and hex nut to snug the bolts tightly into the wood. Then, loosen the nuts and remove the nuts and washers, leaving the bolts in place. You can use any size carriage bolts, and you can extend the length of the bolts using coupling nuts (which

are basically long nuts). Thread the coupling nuts onto any length of threaded rod, and thread the other end of the coupling nuts onto the carriage bolts.

Using the Press

Place the inverted bowl layers on the press bottom, with glue between the layers; the center hole allows access to the bowl while it is clamped. Slide the top down over the bolts or threaded rod and add the fender washers. Thread hex nuts or wing nuts down the bolts and tighten them against the top to apply pressure on the bowl rings. You can drill $\frac{3}{8}$ " (10mm) diameter holes in scrap wood to act as spacer blocks (to reduce the time spent spinning nuts down and up on the bolts). For large oval or rectangular bowls, remove the middle bolts and use scrap wood to extend the reach of the press.

Materials & Tools

Materials:

- Plywood, $\frac{3}{4}$ " (19mm) thick:
2 each 12" x 12" (305mm x 305mm)
- Sandpaper
- Paste wax

Basic Press

- Carriage bolt, $\frac{3}{8}$ " (10mm) dia.:
8 each 6" (152mm) long

Oversized Bowl Press

- Carriage bolts, $\frac{3}{8}$ " (10mm) dia.:
8 each 1 $\frac{1}{4}$ " (32mm) long
- Threaded coupling nuts,
 $\frac{3}{8}$ " (10mm) dia.: 8 each
- Threaded rod, $\frac{3}{8}$ " (10mm) dia.:
10' or more

Tools:

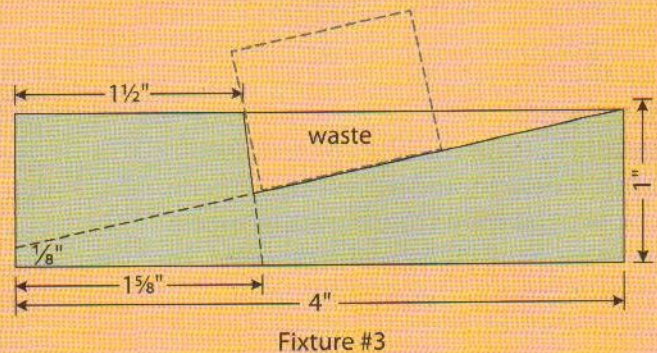
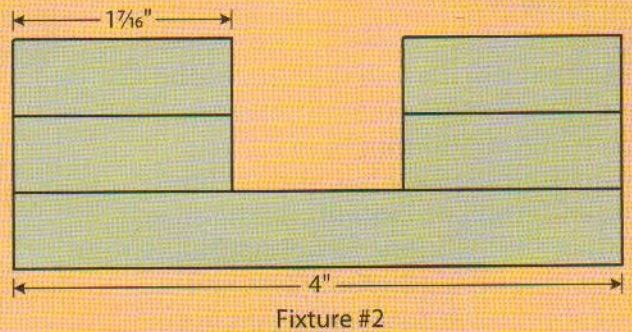
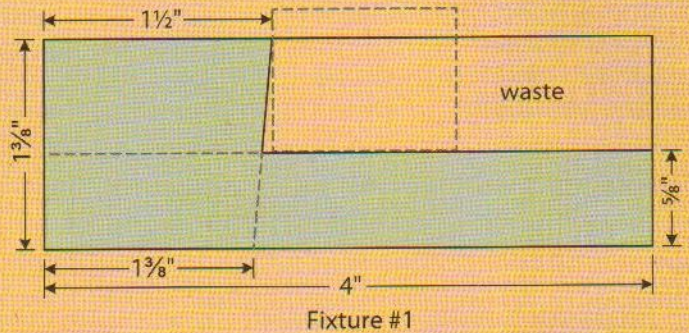
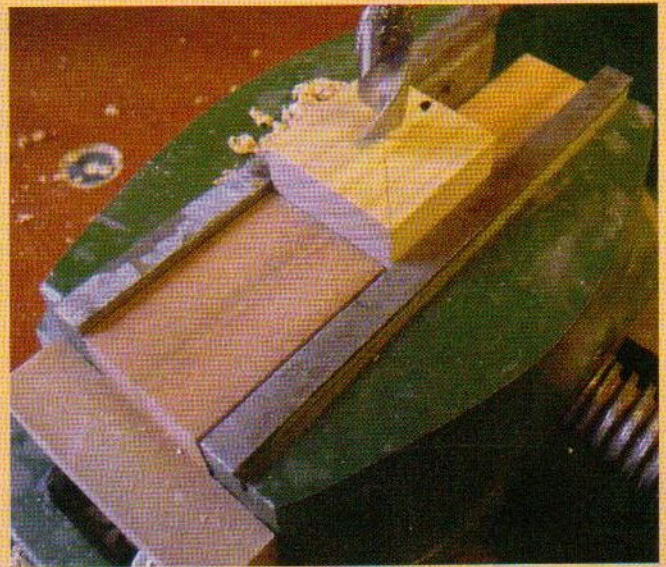
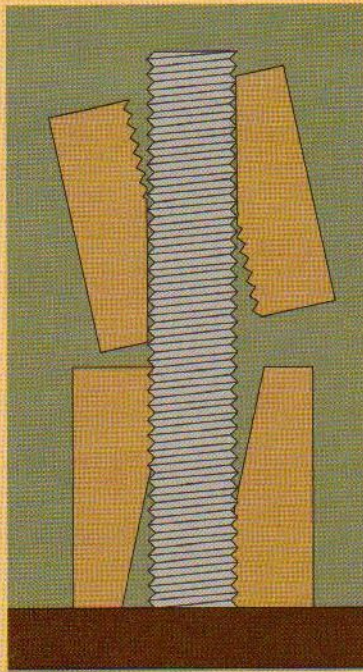
- Scroll saw blades: #5 reverse-tooth
- Drill with bits: $\frac{3}{8}$ " (10mm) dia.
- Measuring tools: ruler, square
- Sander
- Wrench: size to fit $\frac{3}{8}$ " (10mm) hex nuts

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Lock Blocks

I've developed a set of blocks that don't require you to use spacer blocks or spend time spinning nuts up and down the bolts. These blocks slide down the bolts at an angle until they reach the press, where they straighten and the internal threads catch on the threads of the bolt, which allows you to tighten the blocks.

To make these blocks, drill a $\frac{5}{16}$ " (8mm)-diameter hole down the center of a 1" (25mm)-square maple block. Add threads to the inside of the hole with a $\frac{3}{8}$ " (10mm)-16 tap. Then, tilt the blank 12.3° and drill another $\frac{3}{8}$ " (10mm)-diameter hole. While it's possible to tilt a drill press table to drill the angled holes, I've included drawings to create simple jigs from MDF that make it easy to drill, tap, and re-drill the blocks. Use Fixture #1 in a vise to drill the hole straight through the center of the block; use Fixture #2 in a vise to hold the block while you tap (apply a bit of paste wax to the tap before using to make it easier to cut the threads); and use Fixture #3 to drill the angled hole. Dunk the completed blocks in mineral oil to keep glue from sticking to them while in use.



Materials & Tools

Materials:

- Maple: 8 each 1" (25mm) square
- Mineral oil
- Scrap wood for jigs

SPECIAL SOURCES:

Pre-cut 1" (25mm) cubes (JC8912) are available in lots of 100 for around \$20 (with shipping) from Woodworks Ltd., 800-722-0311, www.craftparts.com.

Tools:

- Drill press with vise
- Drill bits: $\frac{5}{16}$ " (8mm)-dia. brad point, $\frac{3}{8}$ " (10mm)-dia. Forstner
- Tap with handle: $\frac{3}{8}$ " (10mm)-16

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.



Dave Van Ess of Chandler, Ariz., is a retired engineer who has been woodworking for nearly 40 years. He has introduced more than 200 Cub Scout leaders to the joys of scroll sawing.

Fretwork Witch

Simple paint tricks accent this classic design

By John A. Nelson

Scare off the gremlins around your house by hanging this witch in your window. Enlarge or reduce the pattern to any size and use nearly any thickness of wood. You can paint the project or use the natural colors of the wood. I painted the front and back of one of my projects, and I painted just the edges of the other one.



Making the Project

Size the pattern as desired. Apply two coats of black paint to the front and back of the wood, if desired. When the paint is dry, apply a coat of clear spray sealer. If you plan to paint just the edges, skip the black paint and apply two coats of clear finish to the front and back. Rub the finish lightly with steel wool. Wipe off any dust, and use spray adhesive to attach the pattern to the front of the blank and a piece of plain paper to the back (to protect the finish).

Drill blade-entry holes and cut the frets. Drill the $\frac{1}{4}$ " (6mm)-diameter hanging hole, and cut the perimeter of the witch. Paint the edges of the witch black, if desired, and remove the pattern. Use mineral spirits to remove any excess adhesive. Sand off any paint that bled, and buff the piece with steel wool. Wipe off any dust and apply a coat of paste wax so the project feels as good as it looks.

TIP

MASKING THE FRONT AND BACK

If you plan to paint just the edges, apply a heavy coat of spray adhesive to the pattern and backing paper. That way, the pattern and backing paper will act as masks to keep the paint off the front and back of the project.



Materials & Tools

Materials:

- Plywood, $\frac{1}{8}$ " to $\frac{3}{8}$ " (3mm to 10mm) thick: 8" x 9" (203mm x 229mm)
- Spray finish: clear satin or gloss
- Steel wool: #0000
- Spray adhesive
- Paper
- Paint: black

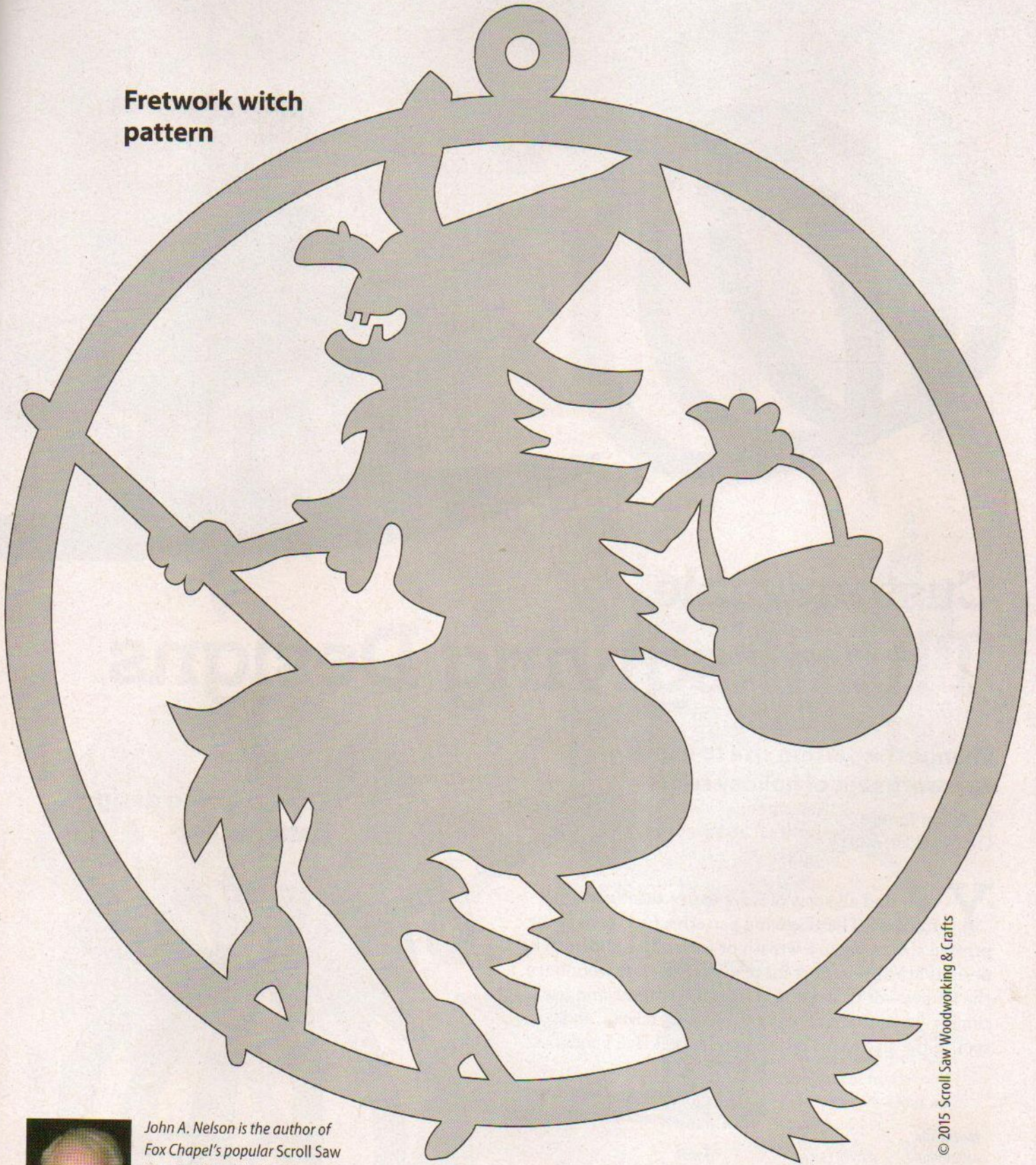
- Mineral spirits
- Paste wax

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Tools:

- Scroll saw blades: #5
- Drill with bits: $\frac{1}{4}$ " (6mm) dia. and assorted small

**Fretwork witch
pattern**



John A. Nelson is the author of Fox Chapel's popular Scroll Saw Workbook, available at www.foxchapelpublishing.com.

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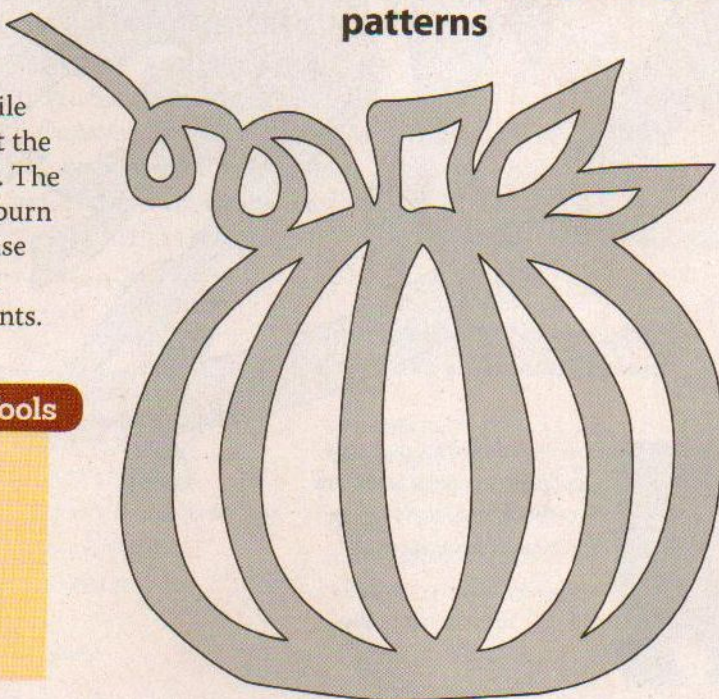
Customizable Thanksgiving Designs

Change the pattern size to make an assortment of holiday crafts

By Alison Tanner
Cut by Leldon Maxcy

You'll find all sorts of ways to use these versatile fretwork Thanksgiving patterns. Cut them at the printed size to make a wreath or garland, as shown. The designs are also perfect for place cards—just woodburn the names—or coasters. Enlarge the patterns and use thicker wood to make wall hangings or trivets, and reduce the size to make earrings or necklace pendants.

Thanksgiving design patterns



Materials & Tools

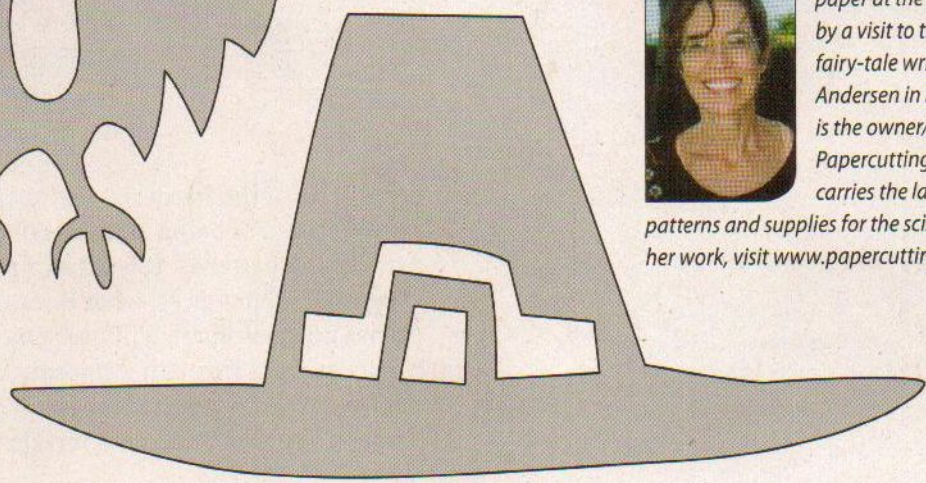
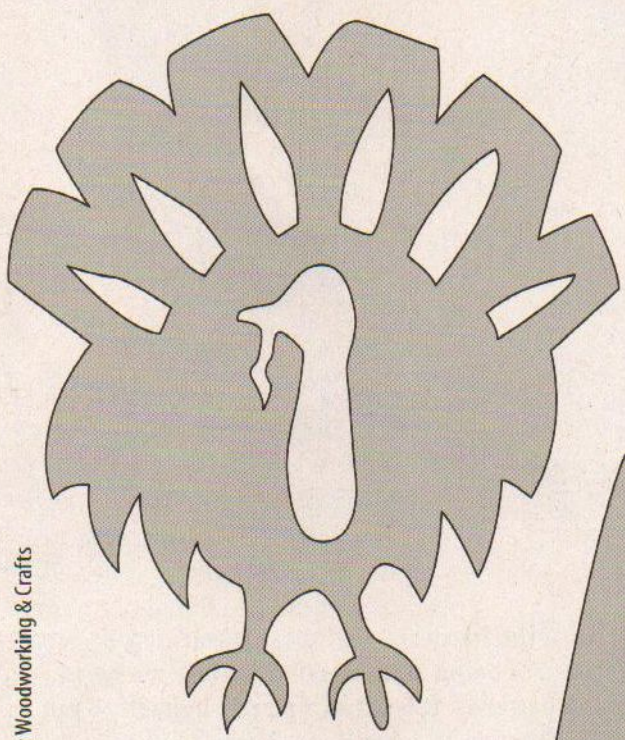
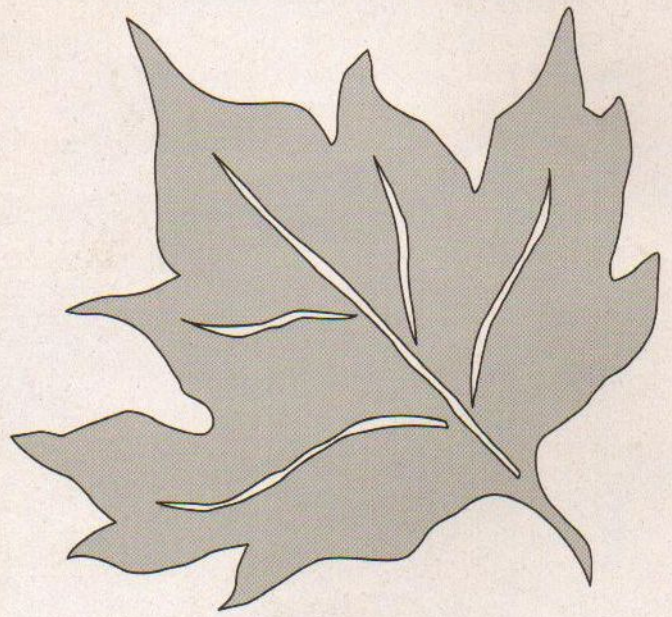
Materials:

- Hardwood, 1/8" (3mm) thick: sized to fit the pattern
- Spray adhesive
- Sandpaper
- Wire or string
- Clear finish

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Tools:

- Scroll saw blades: #2 reverse-tooth
- Drill with assorted small bits



Alison Tanner began cutting paper at the age of 8, inspired by a visit to the home of fairy-tale writer Hans Christian Andersen in Denmark. Alison is the owner/creator of Papercuttings by Alison, which carries the largest variety of patterns and supplies for the scissorist. For more of her work, visit www.papercuttingsbyalison.com.

Designing a Puzzle Pattern

Refining a pattern from
first idea to final design
is a puzzle in itself

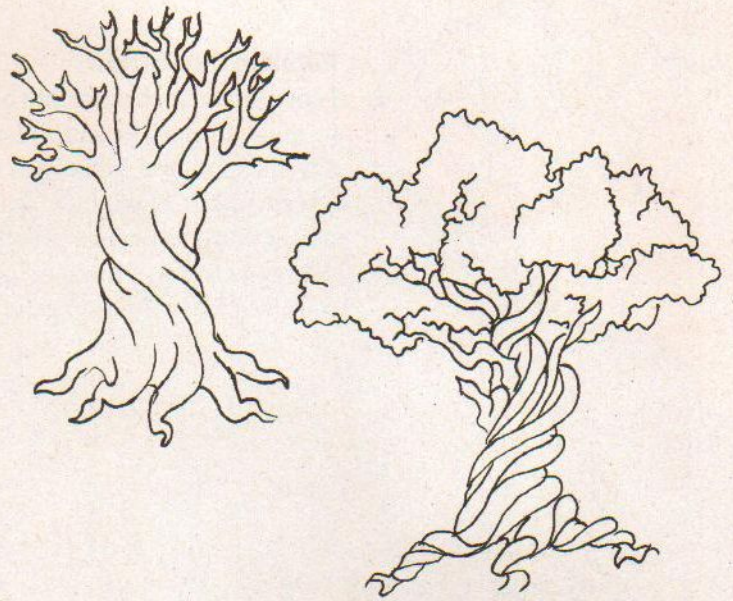
By Judy Peterson



One of the hardest—and most rewarding—parts of being a professional puzzle maker is designing patterns. It is often a puzzle in itself to put together what works, what doesn't, what I like, and what my customers will like. One of my more recent puzzles went through a rigorous design process which I thought I'd share, so you could get a peek into the wacky world of designing puzzles.

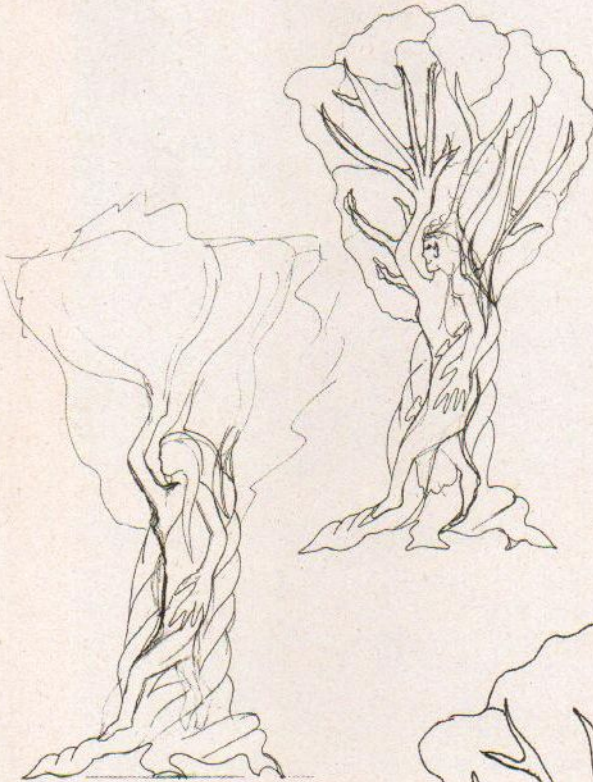
Inspiration

Anyone who knows me knows about my love of fantasy creatures, so they won't be surprised to learn that I wanted to design a dryad puzzle. (A dryad is a tree nymph or female tree spirit from Greek mythology. Each is bonded to her tree.) When I first started thinking about the dryad, I knew I wanted her fading into her tree. Traditionally, the tree should be old and gnarly, so I did a quick search for reference materials and found a few sample trees.



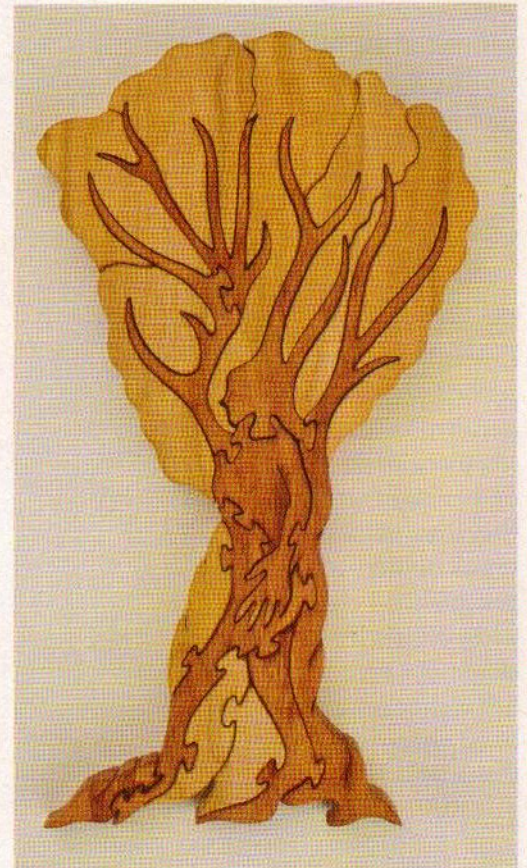
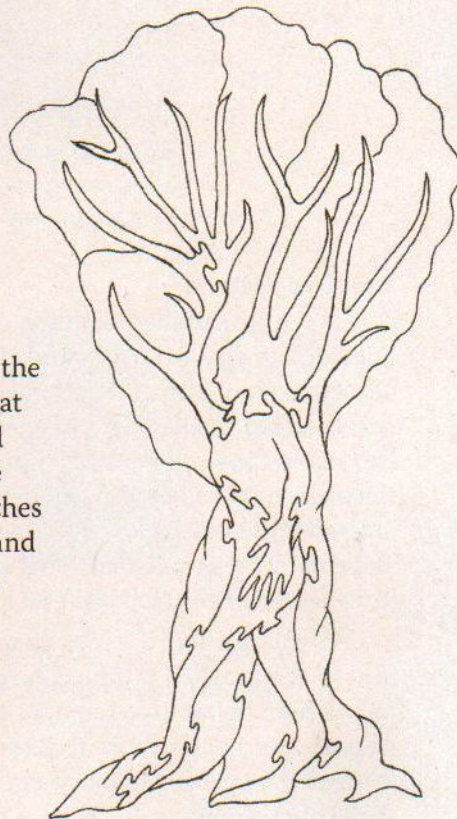
Sketches

To start, I inserted a female profile figure into the tree with one arm raised. Then, I started distorting the figure. I lengthened the arms and legs and turned the raised arm and hand into branches. I also made a first attempt to turn her hair into branches. These two sketches show you just how rough the beginnings of a puzzle are. The first sketch shows a fairly well-defined trunk and roots, where the second sketch concentrated on the branch structure. Both show a rough figure.



Making the First Pattern

I used parts of each sketch for the first pattern. This is the point at which I made a clean copy and did a trial cut. I cut one puzzle but wasn't satisfied. The branches looked too much like antlers, and the head and hair were wrong.



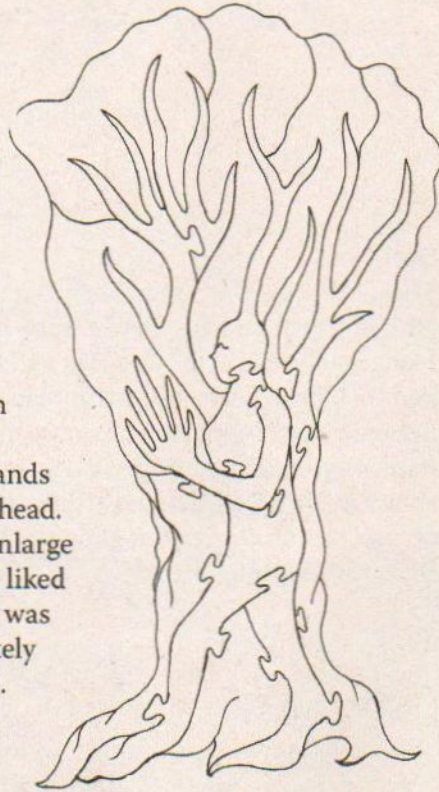


Refining the Pattern

I separated the branch at the back of her head and changed the raised arm to make it more graceful. I changed the keys on her left arm to eliminate a weak spot, and I changed the two pieces of trunk at the base of the tree to one piece. Then, I cut another puzzle with the changes. This puzzle was better, but I still wasn't really happy with it. However, I had an art show to get ready for, so I finished both puzzles and took them along. One of them sold, so I knew I was on the right track.

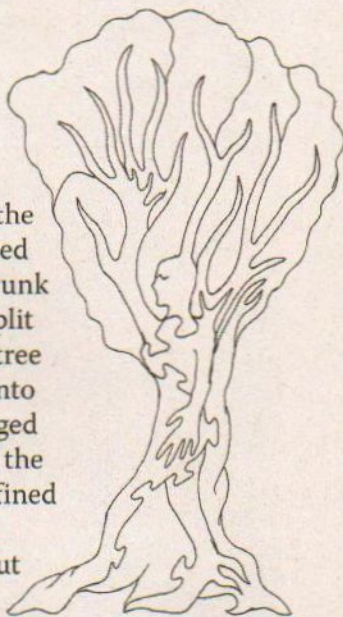
The Red Herring Pattern

At the art show I attended, an artist friend suggested that I redesign the dryad so both hands were in the foliage above her head. In order to do that, I had to enlarge the tree trunk substantially. I liked the idea, but not the result. It was pretty clunky and was definitely not one of my better patterns. I only cut it for this article.



Close, But...

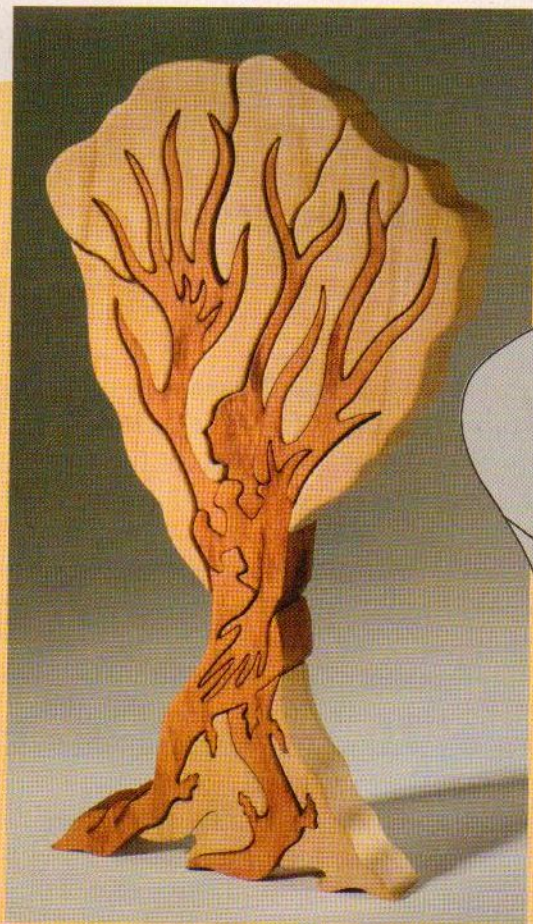
I went back to the second version of the pattern. I eliminated the piece of tree trunk on her right and split that long piece of tree trunk on her left into two pieces. I changed a key on her leg to the shape of a root, refined her right arm and hand shape, and cut the puzzle.



The Final Pattern

I wasn't quite satisfied with the cut version of pattern 4. I decided to go all the way and eliminate the piece of tree on her left arm and hip. I lengthened the fingers on her left hand and changed the keys—I changed the keys on her legs to roots and made those on her body into better shapes. I eliminated the piece of trunk on the right side of her torso, and then extended the foliage lower on her body. I cut the puzzle again, and finally I was satisfied. That said, there will always be a few little tweaks, because I can't let a design alone for long!

As you can see, the idea changed considerably from the idea to the finished puzzle. The dryad has become the tree, rather than being inserted in it. Her tree parts have become smooth, not gnarly. Note that the eye detail is a dotted line; some of my customers like it cut and others don't. Cut the eye as desired.



Cutting the Dryad Puzzle

Attach the pattern to the blank and cut along the lines. Plan the cuts so you cut the smaller pieces free from the larger blank, and reassemble the pieces as you go along. Use a flap sander to round the edges of each piece to give them a finished look.

To finish the puzzle, I stained the dryad with a very light cherry stain, and then dipped all of the pieces in clear Danish oil. If using a dark wood, I would oil only the dryad and leave the foliage and trunk pieces bare.

Materials & Tools

Materials:

- Cherry, $\frac{3}{4}$ " (19mm) thick:
5 $\frac{1}{2}$ " x 9 $\frac{3}{4}$ " (140mm x 248mm)
- Blue painter's tape
- Spray adhesive
- Danish oil: clear
- Stain: light cherry

Tools:

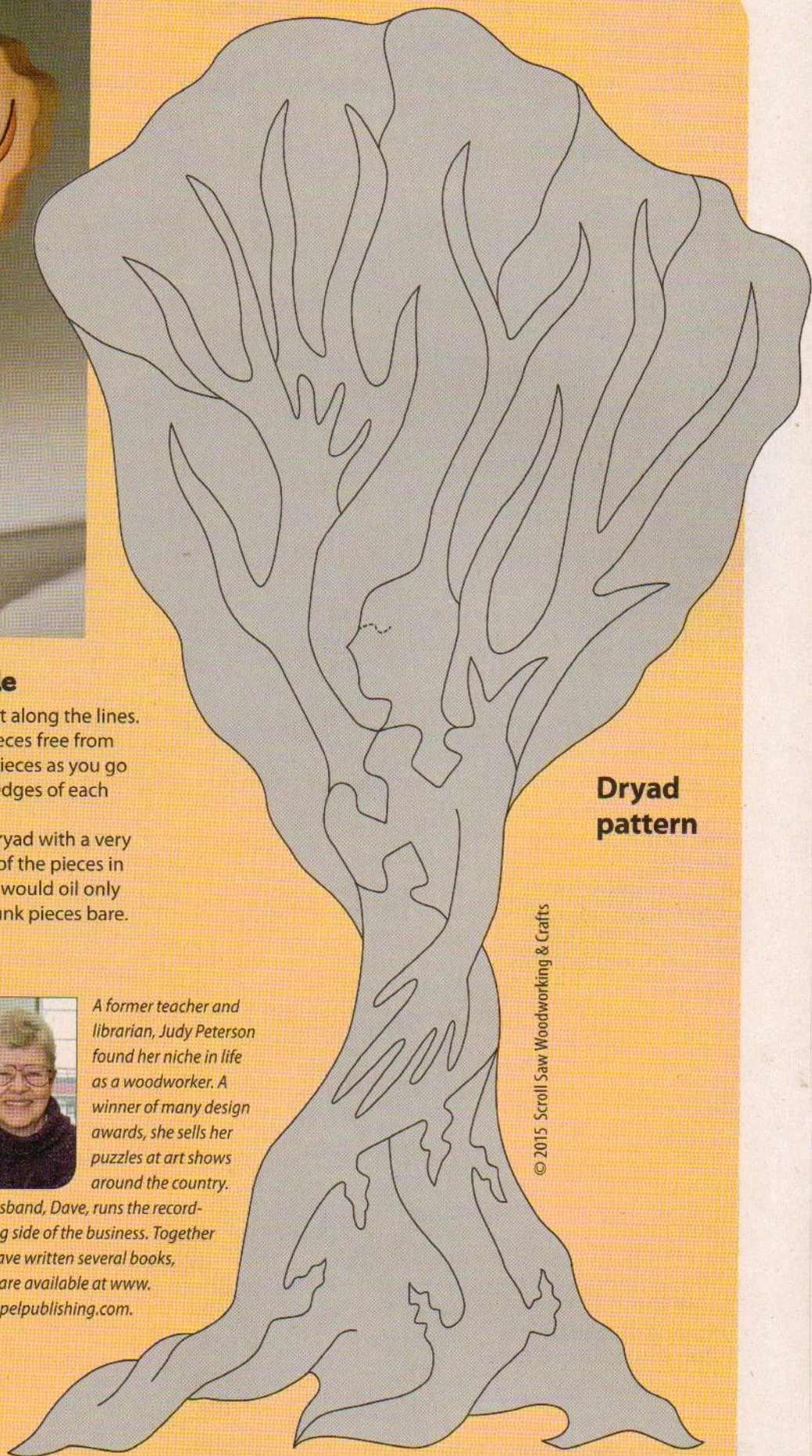
- Blades, such as Flying Dutchman ultra reverse: #7
- Sanders: drum, flap

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.



A former teacher and librarian, Judy Peterson found her niche in life as a woodworker. A winner of many design awards, she sells her puzzles at art shows around the country.

Her husband, Dave, runs the record-keeping side of the business. Together they have written several books, which are available at www.foxchapelpublishing.com.



**Dryad
pattern**

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Osprey Intarsia

Creative use of natural wood color and figure make this project stand out

By Janette Square

Pattern by Bruce Worthington

There is something elegant and awe-inspiring about seeing one of these raptors soaring high above, scouting for its dinner in the local river and ponds. This intarsia version is perched on a branch, surveying its domain.

Take time when selecting the wood for this project. Look for the perfect colors and figures to make your final project that much more outstanding! I found the figured wood I used in some of the tail feathers on the opposite end of the same board that I used for the rest of the feathers.

Cutting and Shaping the Pieces

Because many pieces look similar, number each one on your master pattern; then, make at least four copies. Keep the master copy to dry-assemble the pieces on.

Cut the individual pattern pieces or groups of pieces (as for the feather sections). Attach the patterns to the selected wood and cut the pieces. Mark the numbers on the backs of the pieces, create any necessary sanding shims (especially for the wing

sections), and shape the pieces. Shape the feathers so it looks like the lower rows of feathers tuck under the upper rows. After you finish shaping the pieces, buff them with a sanding mop.

Assembling and Finishing the Osprey

Cover a copy of the pattern with waxed paper and dry-assemble the project on it. Starting with the head, use a skewer to apply a thin coat of wood glue to the lower half of the adjoining pieces. Re-assemble the project as you glue to prevent distortion during the process. Allow the glue to dry thoroughly.

Apply a bit of white acrylic paint with the end of the skewer to make the eye highlight dot. Use a disposable foam brush to apply a heavy coat of gel varnish to the front and sides of the assembled project. Remove the excess finish; I use a rubber dental tool and an air compressor to get the varnish out of the kerfs in the feathers. Allow the varnish to dry overnight, and apply a second coat.

Materials:

Woods (sizes of wood can vary depending on the figure and color of the piece)

• Baltic birch plywood, $\frac{1}{8}$ " (3mm) thick: backing board: 16" x 18" (406mm x 457mm)

• Figured Peruvian walnut, $\frac{7}{8}$ " (22mm) thick: tail feathers, 4" x 13" (102mm x 330mm)

• Peruvian walnut, $\frac{7}{8}$ " (22mm) thick: feathers, dark body, 8" x 15" (203mm x 381mm)

• Claro walnut, 1" (25mm) thick: medium-dark body, feathers, 8" x 8" (203mm x 203mm)

• Quartersawn sycamore, $\frac{7}{8}$ " (22mm) thick: head, body, 4" x 8" (102mm x 203mm)

• Aspen, $\frac{7}{8}$ " (22mm) thick: white areas, 6" x 10" (152mm x 254mm)

• Blue pine, $\frac{3}{4}$ " (19mm) thick: feet, 4" x 6" (102mm x 152mm)

• Buckeye burl, 1" (25mm) thick: talons, beak, 3" x 3" (76mm x 76mm)

• Yellowheart, $\frac{3}{4}$ " (19mm) thick: eye, 1" x 1" (25mm x 25mm)

• Ebony, $\frac{3}{4}$ " (19mm) thick: pupil, small scrap

• Maple burl, $\frac{3}{4}$ " (19mm) thick: branch, 4" x 6" (102mm x 152mm)

• Spalted dogwood, $\frac{3}{4}$ " (19mm) thick: shading on branch, 2" x 6" (51mm x 152mm)

• Plywood, $\frac{1}{8}$ " (3mm) to $\frac{1}{4}$ " (6mm): sanding shims, assorted scraps

• Spray adhesive

• Sandpaper

• Wood glue

• Skewer

• Waxed paper

• Disposable foam brush: 1" (25mm) wide

• Varnish: clear gel

• Paper towels

• Tape: double-sided turners, clear packaging

• Permanent markers with wide, fine point: black

• Acrylic paint: antique white

• Hanger

• White pencil (to number cut pieces)

Materials & Tools

Tools:

• Blades: #7 reverse-tooth; #3; and #0 or #1

• Rotary tool with flame-shaped bit

• Sanders: flex drum, 100 to 120 for rough shaping, 220 for smoothing; mop; oscillating spindle

• Clamps

• Air compressor or compressed air

• Dental tools, rubber tipped

• Safety gear: dust mask or dust collection, eye protection, rubber gloves

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.



Trace the outline of the project onto the backing board, drill a blade-entry hole, cut the area between the legs and branch, and then cut just inside the traced line so the backing board is not visible from the front. Darken the edges of the backing board with a marker and write the varieties of wood used on the back of the backing board. Then, carefully glue and clamp the intarsia to the backing board. Attach a hanger to the back.



Pattern for the **OSPREY INTARSIA** is in the pattern pullout section.



Janette Square lives in Eugene, Ore. For more of her work, visit her website at www.square-designs.com.



Bruce Worthington of Brownstown, Mich., designs a variety of intarsia patterns. For more of his work, visit www.intarsia.net.

Creepy Spiderweb Plaque

Greet your guests with this scary seasonal design

By Leldon Maxcy

This hanging makes a great addition to your collection of Halloween decorations. I used small pieces of exotic wood for my version, but you could easily use painted plywood for the pieces, instead.

Making the Plaque

I cover the wood with blue painter's tape and use spray adhesive to attach the pattern to the tape. Drill the blade-entry holes, and then cut the design. For the lettering, I do the interior cuts first and then the outer cuts, which provides support to the pieces. Sand the pieces, and then glue the lettering and spider to the web. I didn't use clamps, but you could place a heavy object, like a book, on top to provide pressure while the glue dries. Apply two to three thin coats of spray lacquer, sanding with 500-grit sandpaper before applying the last coat. Tie fishing line through the web, and hang to enjoy!

Materials & Tools

Materials:

- Maple, $\frac{1}{4}$ " to $\frac{3}{8}$ " (6mm-10mm) thick: web, $8\frac{1}{8}$ " x $8\frac{1}{4}$ " (209mm x 216mm)
- Purpleheart, $\frac{1}{4}$ " (6mm) thick: lettering, 2" x 10" (51mm x 254mm)
- Redheart, $\frac{1}{4}$ " (6mm) thick: spider, 2" x $2\frac{1}{4}$ " (51mm x 57mm)
- Tape: blue painter's
- Spray adhesive
- Sandpaper: 120, 500 grits
- Wood glue
- Spray lacquer
- Fishing line

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

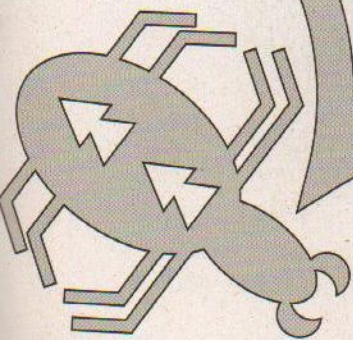
Tools:

- Blades: #2
- Drill and assorted small bits



Leldon Maxcy resides in Cullman, Ala. He has been scroll sawing since 1997. You can check out more of Leldon's projects on his website, www.ledonsscrollsawing.com.

Spiderweb plaque
patterns



HALLOWEEN

WEDNESDAY

Making a Bread Basket with a Leaf Inlay



Functional design combines bowl making with double-bevel inlay

By Carole Rothman

This graceful bread basket, adorned with an inlaid autumn leaf, integrates bowl-making and double-bevel inlay. Constructed from two rings and a base, the basket's elongated shape and straight sides allow the use of power sanders to reduce sanding time. Careful shaping produces a graceful upper edge without compromising the strength of the rim.

I cut and glued the leaf blank so the grain resembles veins. The pattern outline has no sharp turns, which reduces the chance of blade distortion while cutting. The leaf blade-entry hole disappears when you inlay the stem and, based on where you locate the blade-entry hole for the stem, you can easily fill it with sawdust and glue. I inlaid the leaf from the top down to increase the stability of the project and

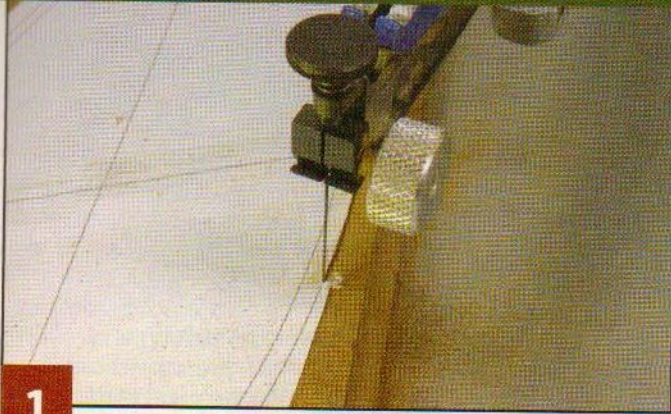
inlaid the stem from the bottom up to ensure precise placement of the stem inlay blank.

To ensure that my instructions were clear and accurate, I incorporated the suggestions of inlay specialists Jim Collins and Jim Finn, who were generous with their help.

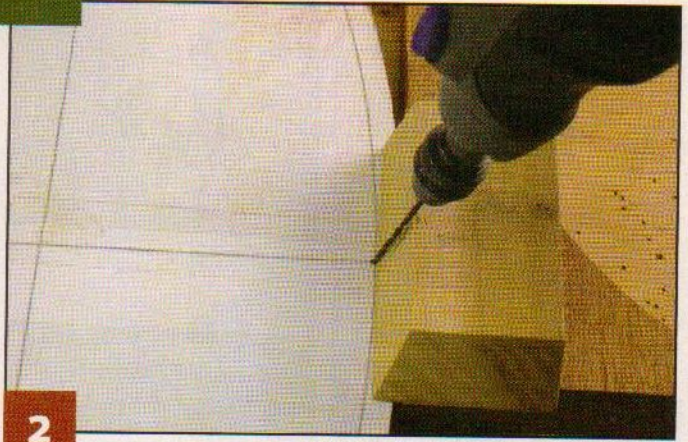
Getting Started

Cut the blanks to size. Draw intersecting guidelines on the basket rings blank. Make two copies of the basket pattern and tape them together using the guidelines. Apply adhesive to the back of the pattern, align the guidelines on the pattern with the guidelines on the blank, and press the pattern into place.

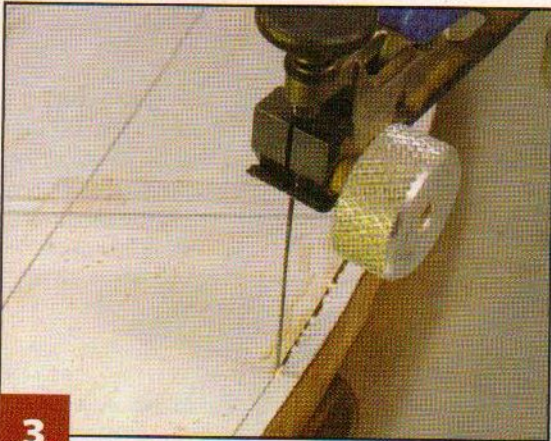
BASKET: CUTTING & ASSEMBLING THE RINGS



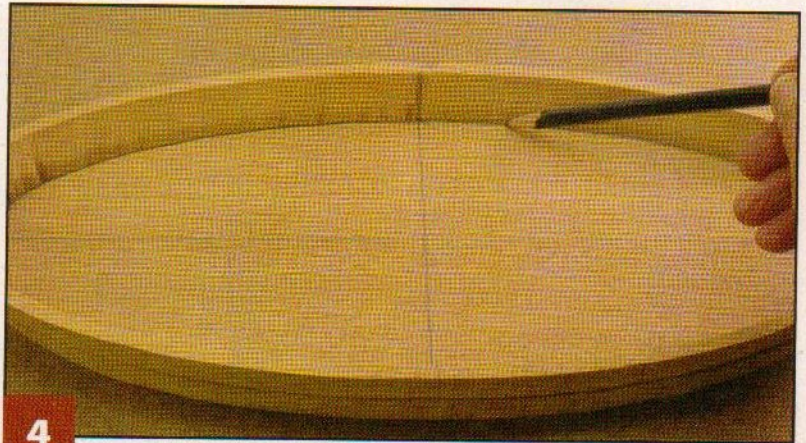
1 **Cut the outer line.** Tilt the left side of the saw table down to 20°. Cut clockwise along the outer pattern line (rotate the piece so the blade moves into the wood in a clockwise direction).



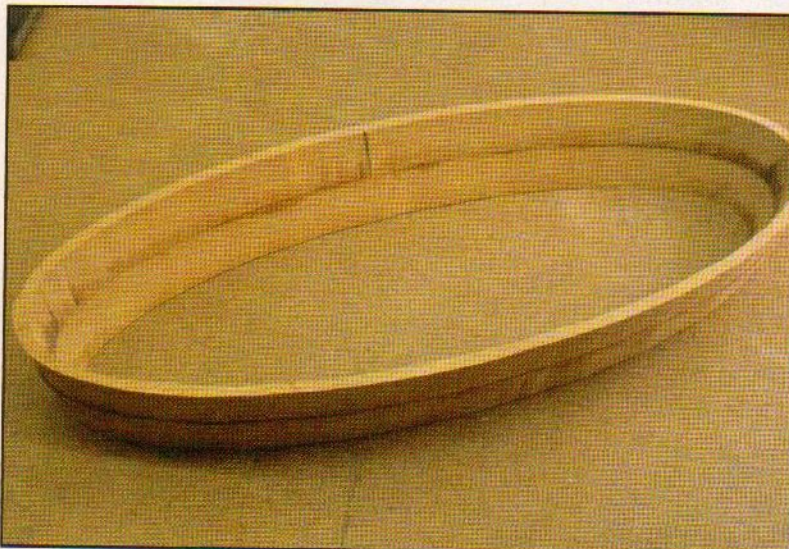
2 **Drill the first blade-entry hole.** Mark the drilling point on the pattern with an awl. Use a piece of scrap cut at a 20° angle, or tilt the drill press table to 20°, and drill the blade-entry hole at the awl dimple with the bit angled toward the center of the pattern.



3 **Complete the first ring.** Feed the saw blade through the blade-entry hole and cut clockwise on the inner pattern line. Remove the pattern, and mark the top of the ring and the top of the blank. Extend the guidelines onto the inside of the ring.



4 **Mark and cut the second ring.** Use the guidelines on the ring and blank to position the ring on the top of the blank. Trace the inside edge of the ring to mark the cutting line for the second ring. Drill a blade-entry hole at a 20° angle opposite to the first blade-entry hole. Repeat Step 3 to cut the second ring. Save the remainder of the blank for another project.

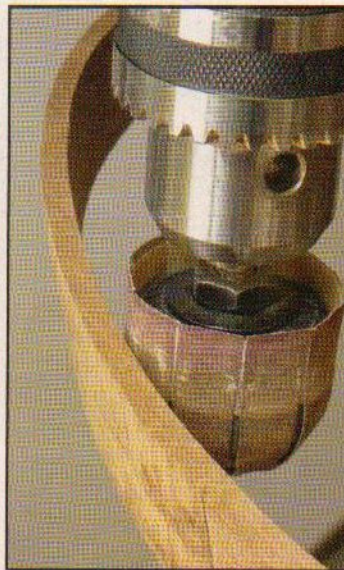
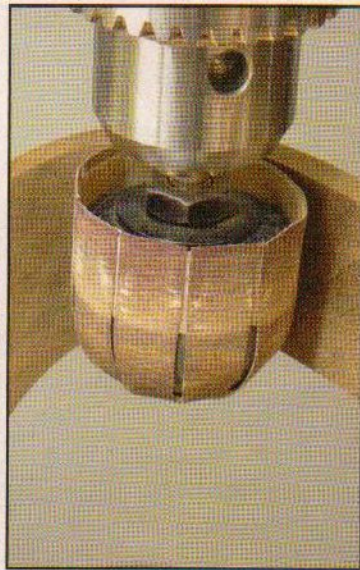
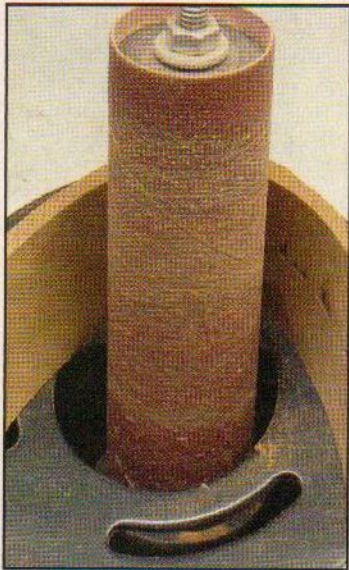


5 **Glue the rings together.** Transfer the top marks to the outside of the rings, and remove any pencil marks from the gluing surfaces. Glue the rings together. If your bowl press is not long enough to exert pressure over the entire bowl, extend it with boards as illustrated in Step 17 or use clamps and boards.

TIP

TIGHT RING JOINTS

Stack the two rings, keeping the tops aligned. Check for any gaps between them. If you can see gaps between the rings, use sandpaper attached to a flat surface, such as a granite tile, to sand the surfaces of the rings until the gaps disappear.

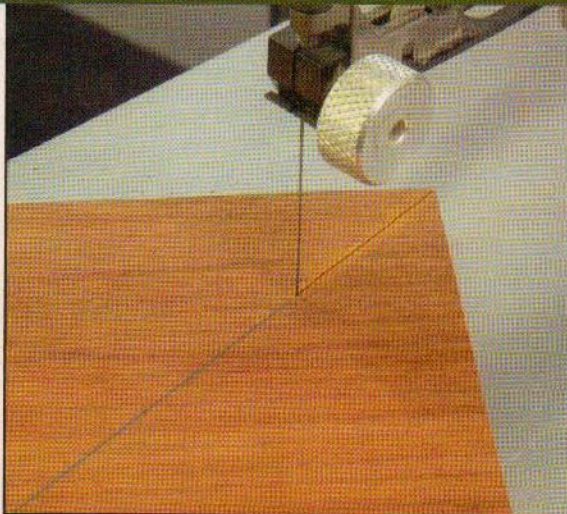


6

Sand the inside of the

rings. Use an orbital detail sander for the long sides, and use a spindle sander with a tilting table for the sharply curved ends. Leave enough wood on the underside of the bottom ring to attach the basket bottom in Step 17. Use a round inflatable sander to finish sanding the sides and to even out the contour of the inside lower edge. Use progressively finer sandpaper up to 220 grit. The inside edge of the top ring will be shaped in Step 19. Set the rings aside until Step 16.

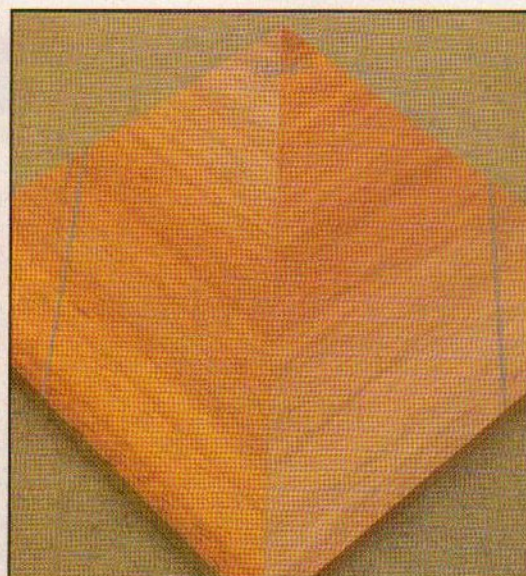
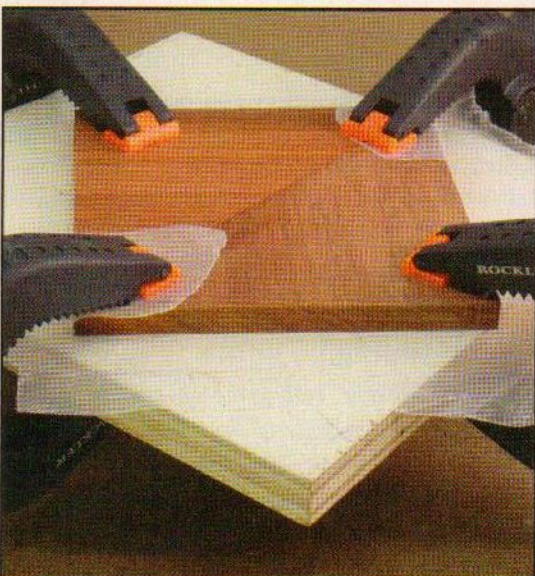
BASKET: MAKING THE LEAF INLAY



7

Cut the leaf

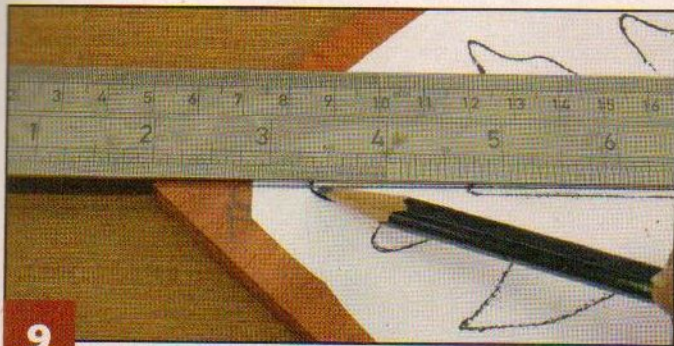
blank. Cut the blank in half diagonally. Use a belt sander or drum sander to smooth and flatten the cut edges.



8

Glue together the

leaf blank. Flip one half of the blank, and glue the pieces together so the grain lines make a V shape down the center. Clamp the pieces together until the glue dries. Then, sand the blank smooth and down to $\frac{5}{16}$ " (8mm) thick to match the thickness of the basket bottom. Mark and cut off the excess corners of wood on the sides to use for test cuts.



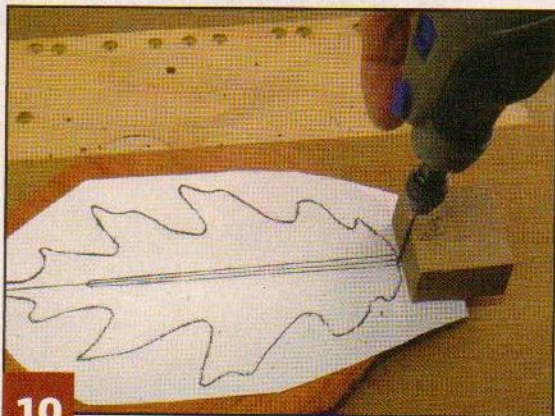
9

Place the leaf inlay pattern. Attach the leaf pattern to the glued-up leaf inlay blank, matching the centerline of the pattern with the cut line in the wood. Position the veins with the open part of the V toward the top of the leaf. Draw a line down the center of the basket bottom blank. Use small pieces of double-sided tape to attach the leaf blank to the basket bottom blank with the top point of the leaf pattern $3\frac{3}{8}$ " (86mm) from the top of the basket bottom blank and the centerlines aligned. Use clamps to draw the pieces of wood together.

TIP

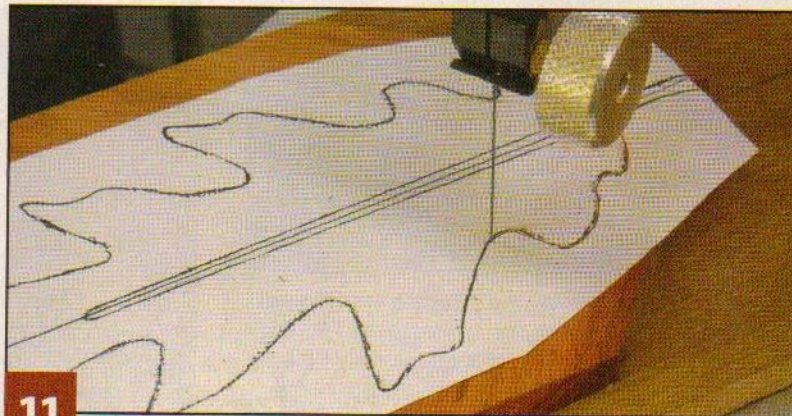
DETERMINING THE INLAY-CUTTING ANGLE

Use double-sided tape to stack scraps cut from the leaf blank and scraps the same thickness as the basket bottom. Draw a simple pattern on the top of the stack. Tilt the left side of the saw table to $2\frac{1}{2}^\circ$, and drill a blade-entry hole at $2\frac{1}{2}^\circ$ angled toward the center of the pattern. Cut clockwise around the pattern. Press the top piece down; it should seat itself into the bottom piece flush, or just slightly proud. If the top piece sits too high, decrease the angle by $\frac{1}{2}^\circ$. If the top piece sits too low, increase the angle by $\frac{1}{2}^\circ$. Repeat until the inlaid piece sits properly. Use this angle for Steps 10, 11, and 15.



10

Drill the blade-entry hole. Drill a blade-entry hole in the center of the stem, angled toward the center of the pattern. Use the inlay-cutting angle you determined through tests (see Tip). This hole will disappear when you inlay the stem in Step 15.



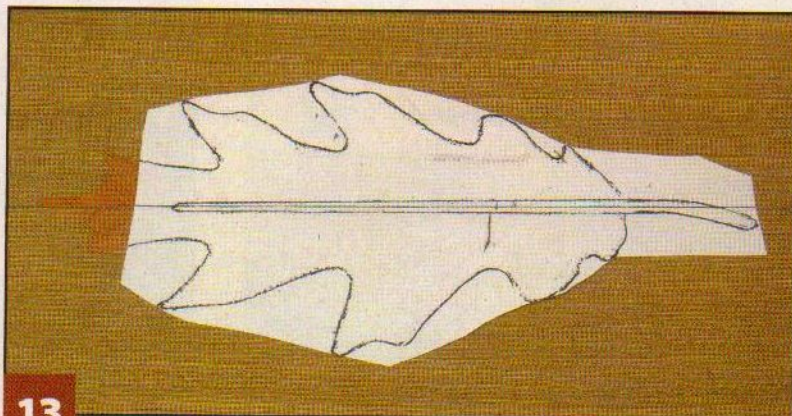
11

Inlay the leaf. Tilt the left side of the saw table down to the inlay cutting angle (see Tip). Feed the blade through the blade-entry hole and cut around the pattern in a clockwise direction. If you go off the line, work your way back to it smoothly. When you have completed the cut, push the leaf down into the basket bottom, and remove the extra wood and tape from the underside of the piece.



12

Glue the leaf into place. Remove the leaf inlay, apply glue to the edges, and glue it into the recess. Because the glue may swell the wood slightly, it might be necessary to use a mallet and block of wood to tap it gently into place. Don't tap too hard or you may split the basket bottom. Sand both sides of the bottom until the leaf and the bottom are smooth and flush.



13

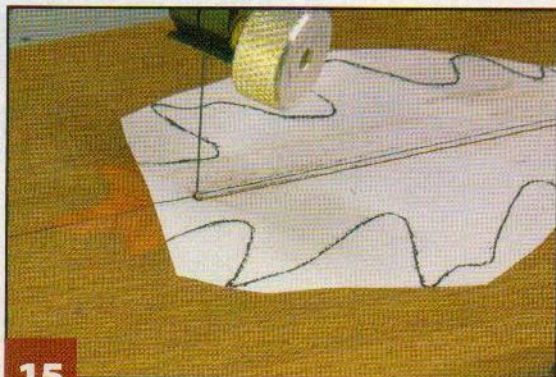
Attach another leaf pattern for the stem inlay. Through the center of the inlaid leaf, draw a line that is long enough for positioning the pattern for the stem. Attach the leaf pattern to the inlaid leaf, matching centers and lobes to ensure the correct placement of the stem inlay. Mark the top and bottom of the stem section, and transfer these lines to the sides and bottom of the blank.

TIP**ADJUSTING THE CUTTING ANGLE**

If you had to sand a lot to make the leaf inlay and basket bottom flush in Step 12, you may want to check the cutting angle at the new thickness and adjust it if necessary. Otherwise, use the same cutting angle as for the leaf.

FILLING SMALL VOIDS

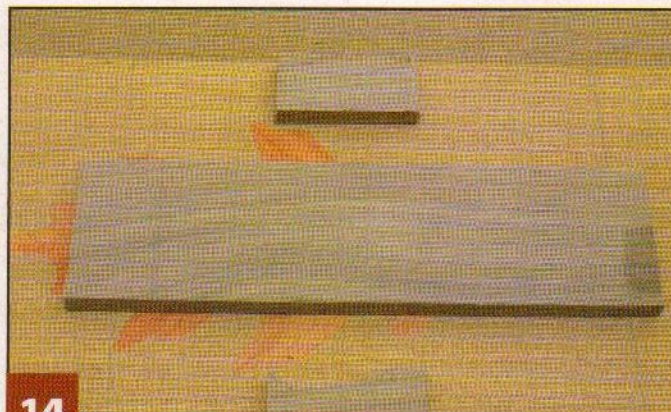
Mix matching sawdust with white glue and fill any small voids at the edges of the inlay. Sand the sections while still wet to force the sawdust into the void. Then, sand the surface smooth after the glue dries.

**15**

Cut the stem inlay. With the pattern side up and the bit angled *away* from the center of the pattern, drill the blade-entry hole at the inlay-cutting angle. With the left side of the saw table set to the inlay-cutting angle, cut *counterclockwise* around the stem. Push the stem up from the bottom, remove the waste and tape, and glue the stem into place. When dry, sand both sides of the basket bottom until smooth. Use a random orbit sander to remove any scratch marks from the surface of the leaf.

**17****Attach the basket bottom to the rings.**

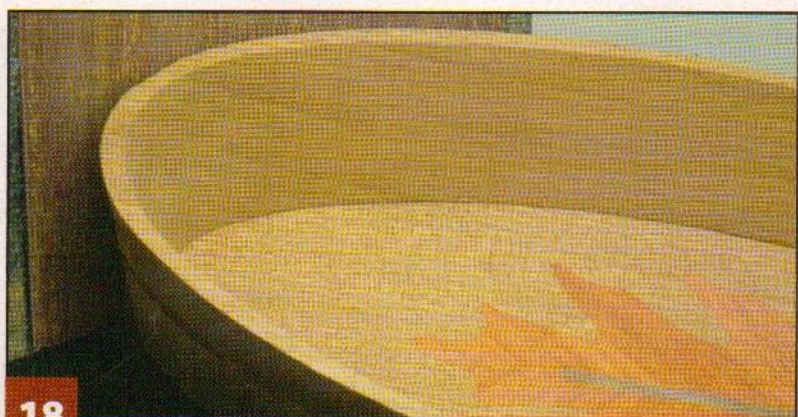
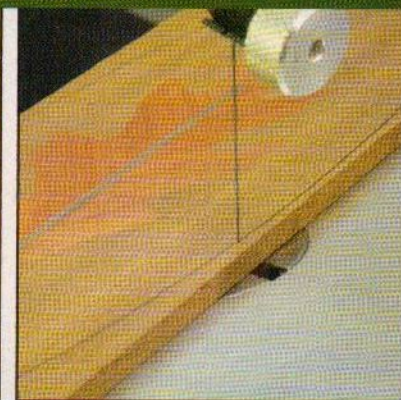
Place the rings on the base and check for gaps; use the technique explained in the Step 5 Tip to remove the gaps. Glue the bottom to the ring assembly. Clamp, let dry 10 minutes, and then remove the clamps to clean up glue squeeze-out. Re-clamp and let the glue dry thoroughly.

**14**

Attach the stem inlay blank. Use double-sided tape to attach the stem blank to the underside of the basket bottom blank using the lines as guides. Then, attach small support pieces to the sides with double-sided tape.

BASKET: COMPLETING THE PROJECT**16**

Mark and cut the outer edge of the basket bottom. Center the ring assembly from Step 6 on the top side of the basket bottom and trace its outer edge. Set the rings aside. Tilt the left side of the saw table down to 20° and cut clockwise on the line.

**18**

Sand the outside of the basket. Tilt the table of the vertical belt sander to 20° and smooth the outside of the basket to remove any blade or drill marks and glue residue. To create a gently curved lower edge, tilt the sander table to 25° and sand the lower ½" (13mm) of the basket. Use an orbital detail sander to blend the bevel into the sides. When it is smooth and shaped, sand the exterior with progressively finer sandpaper up to 220 grit. The walls should be no less than ⅛" (3mm) thick at the upper edge and even all the way around.



19

Refine the outer rim. To produce a flaring effect on the rim, use the inflatable sander with a 220-grit sleeve to round the inside of the upper edge until it almost reaches the outer edge. The outer edge remains straight to provide stability. Soften the upper and lower edges by hand, and then sand the entire bowl to 320 grit.



20

Apply the finish. Apply a coat of shellac to seal the wood. Sand until smooth with 320-grit sandpaper. Apply additional coats of shellac or a mixture of beeswax and mineral oil. Buff to a soft finish.

Materials & Tools

Materials:

- Medium-brown wood, such as sapele, $\frac{3}{4}$ " (19mm) thick: basket rings, 7" x 14 $\frac{1}{2}$ " (178mm x 368mm)
- Matching medium-brown wood, such as sapele, $\frac{5}{16}$ " (8mm) thick: basket bottom, 6" x 14" (152mm x 356mm)
- Red wood, such as padauk, $\frac{3}{8}$ " (10mm) thick: leaf, 6" x 6" (152mm x 152mm)
- Dark wood, such as walnut, $\frac{5}{16}$ " (8mm) thick: leaf stem, 2" x 7" (51mm x 178mm)
- Scraps of $\frac{3}{16}$ " (8mm)-thick stock: spacers; inlay test blanks
- Spray adhesive: temporary bond
- Double-sided tape
- Sandpaper: assorted grits up to 320

- Wood glue, such as Weldbond
- Shellac
- Beeswax and mineral oil mixture (optional)

Tools:

- Scroll saw blades: #7 (basket rings, bottom), #3 (inlay)
- Drill with bits: #54 or $\frac{1}{16}$ " (2mm)-dia. (basket rings), #60 (inlay)
- Awl
- Shop-made angle guides: 20°, inlay-cutting angle (See Step 9 Tip)
- Bowl press or clamps and boards
- Sanders: round inflatable with assorted sleeves, orbital detail, belt with tilting table, spindle with tilting table

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Demystifying the Double-Bevel Inlay

The double-bevel inlay technique involves cutting two equally thick pieces of wood at a pre-determined angle so that the cut piece from one seats into the matching recess of the other. When the technique is used with thicker wood, typically $\frac{1}{4}$ " (6mm) and greater, it is called double-bevel inlay. When used with thin wood or veneer, it is called double-bevel marquetry and the completed work requires a backing board for stability. In either case, the starting thickness of the wood should allow for some loss during sanding of the completed piece.

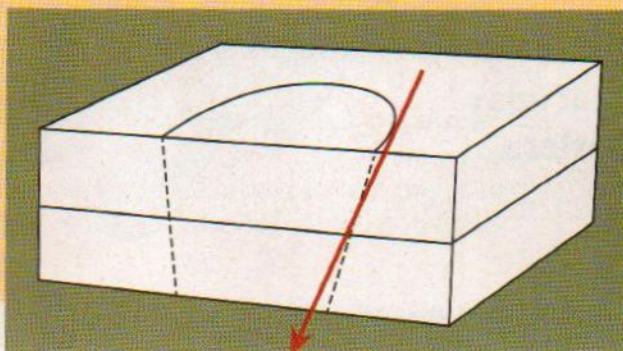
To ensure a tight joint, stack the two pieces of wood securely using either double-sided tape, clamped briefly, or hot glue. Next, choose a blade; smaller blades allow for less noticeable, more easily filled blade-entry holes.

The cutting angle depends on the blade size and stock thickness; the thinner the wood, the larger the angle. Always make test cuts to determine the correct cutting angle for each project. For $\frac{1}{4}$ " (6mm)-thick wood, start with a 2 $\frac{1}{2}$ ° angle. If the inlay drops too much, increase the cutting angle by $\frac{1}{2}$ °; if it does not drop enough, decrease it by $\frac{1}{2}$ °. Continue testing until the inlay is level with or protrudes slightly above the background wood.

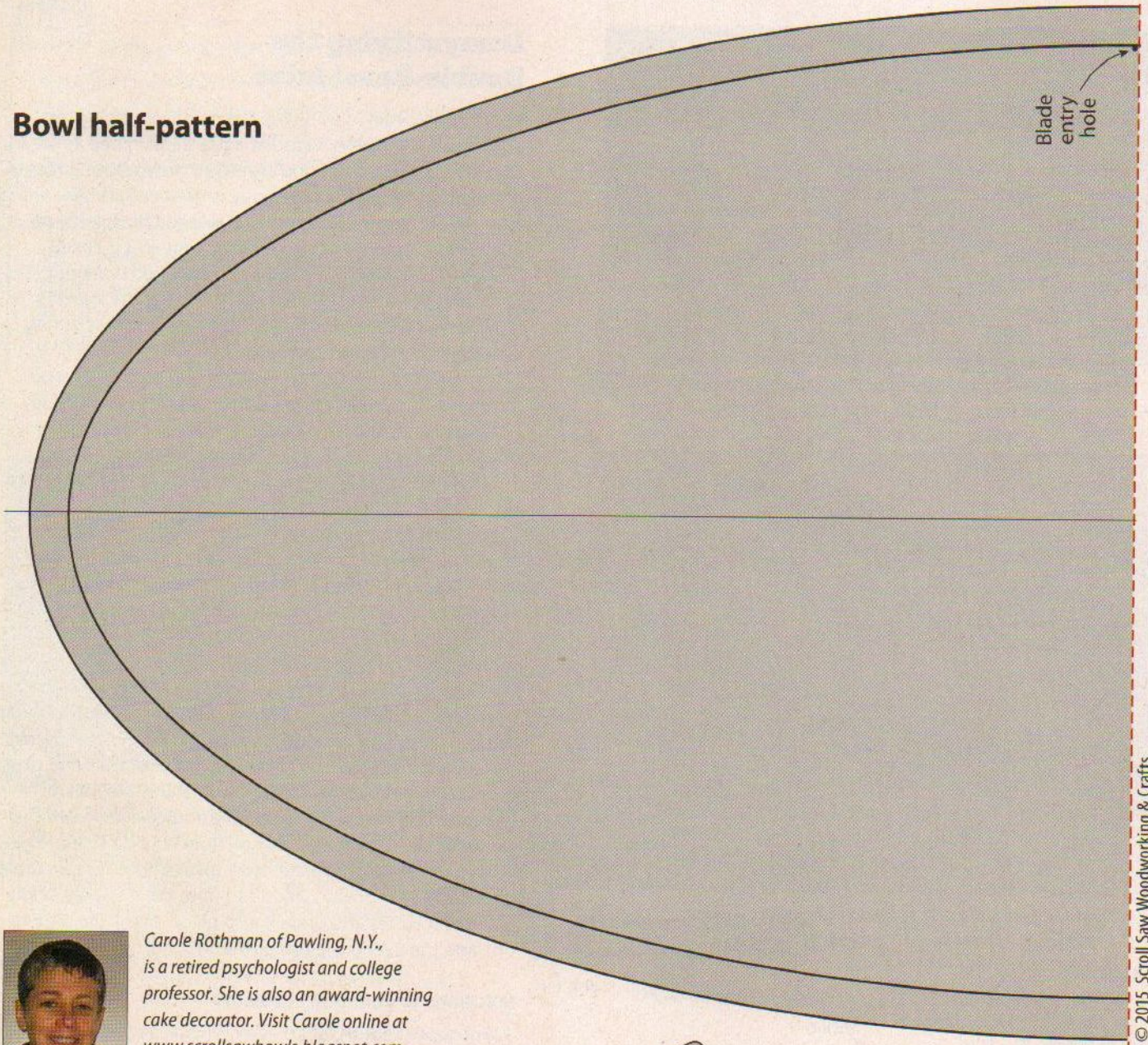
The inlay blank can be placed above or beneath the background wood. For saw tables tilted left side down and the inlay blank on top, angle the blade-entry hole toward the center, make the cut in a clockwise direction, and push the inlay down into the background. If the inlay blank is beneath, drill the blade-entry hole angled away from the center, make the cut in a counterclockwise direction, and push the inlay up. (Reverse these instructions for saw tables tilted right side down.) Once you have cut the inlay, apply glue to its edges and press it into place. Allow the glue to dry, and then sand the piece smooth.

Solutions to Common Problems

1. **Improper seating of an inlay** is usually caused by blade distortion or an incorrect cutting angle. To prevent this, round the back of the blade, check tension, do not force the blade, and always make test cuts.
2. **If you veer off the pattern line**, smoothly guide the blade back. The deviation will not be apparent once you remove the pattern.
3. **Unightly entry holes** can be filled with a mixture of sawdust and glue. Prevent them by drilling them at an angle slightly larger than the cutting angle, which hides them in waste areas (see diagram below).



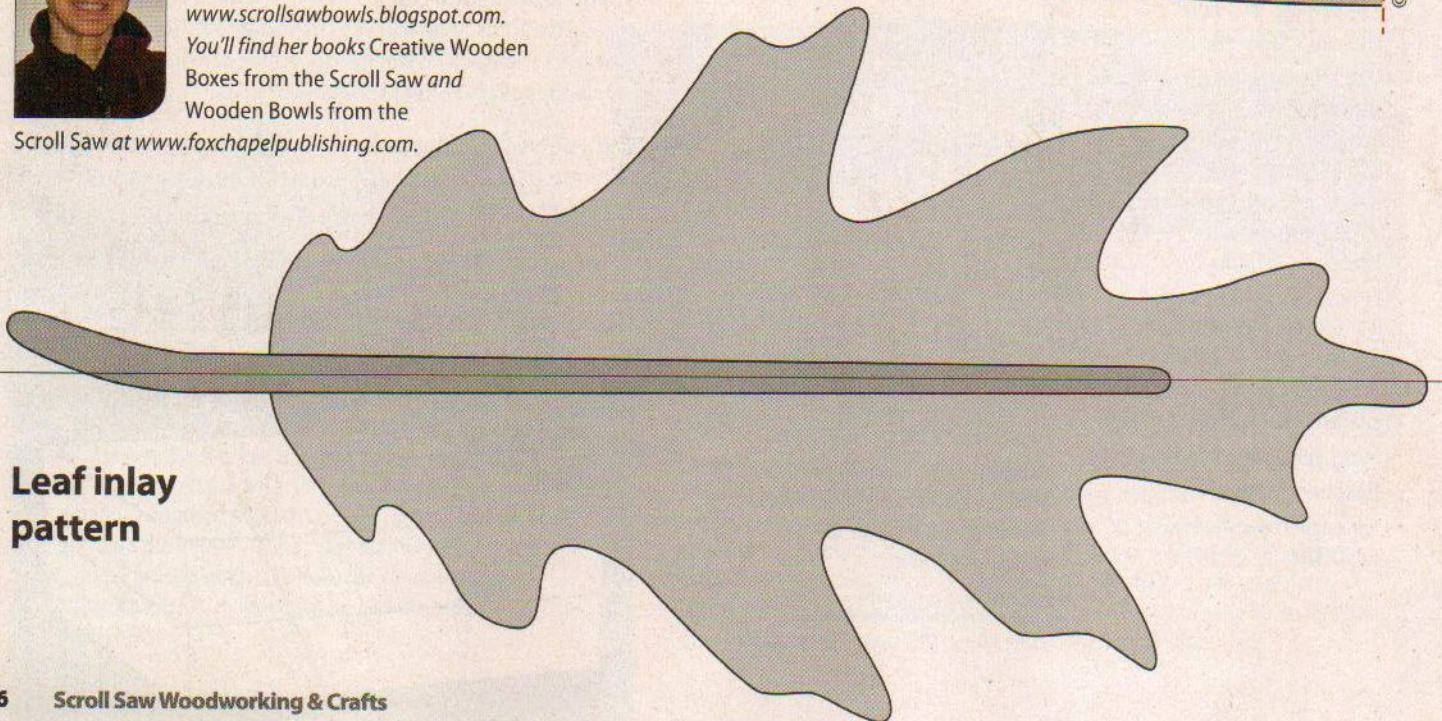
Bowl half-pattern



Carole Rothman of Pawling, N.Y., is a retired psychologist and college professor. She is also an award-winning cake decorator. Visit Carole online at www.scrollsawbowls.blogspot.com. You'll find her books Creative Wooden Boxes from the Scroll Saw and Wooden Bowls from the Scroll Saw at www.foxchapelpublishing.com.

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Leaf inlay pattern



Tawny Eagle



**Capture the spirit
of a fierce bird of prey in
a challenging fretwork portrait**

By Don Calhoun

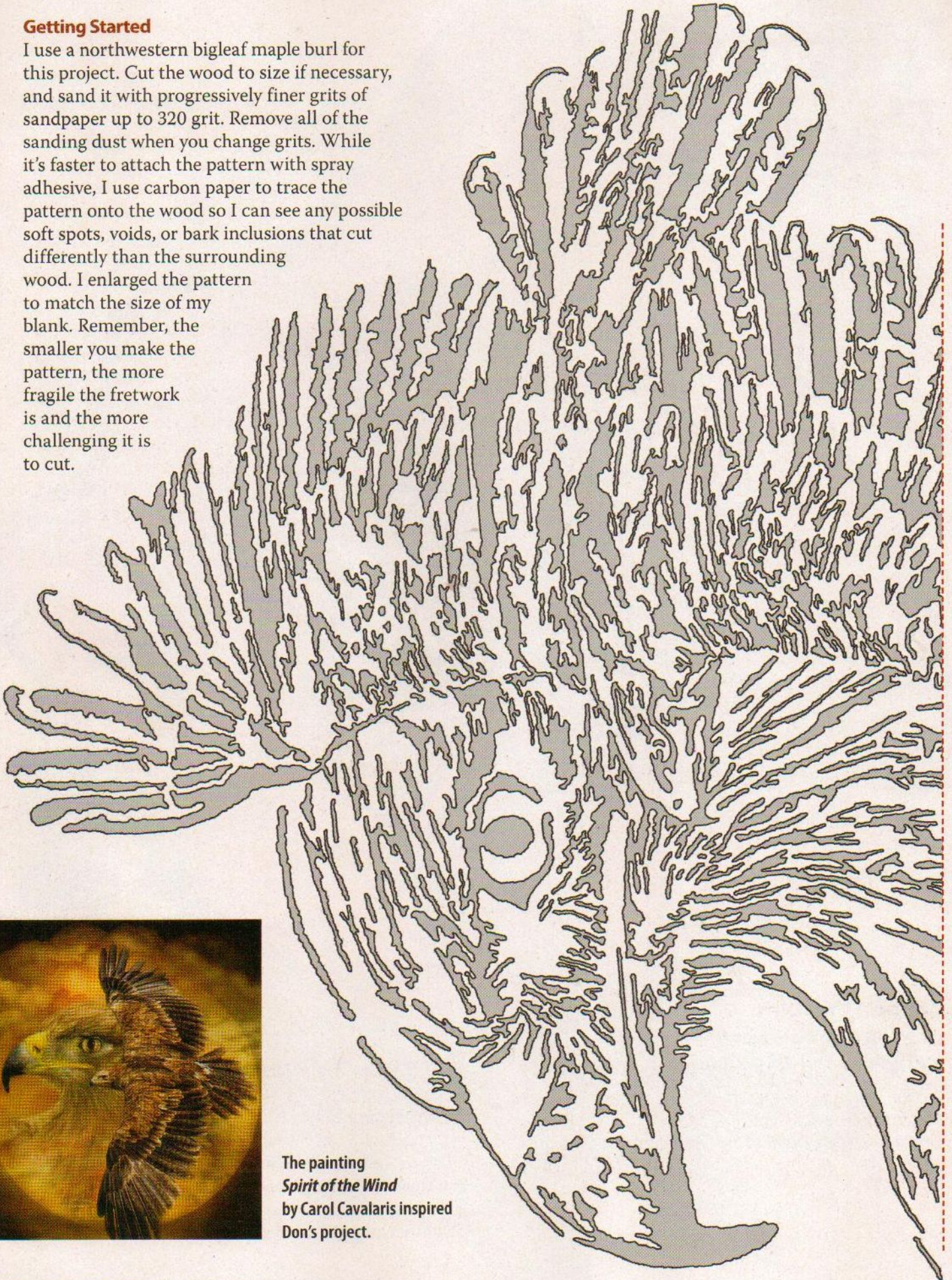
Pattern by Theodore Buzzelli

Original artwork "Spirit of the Wind" by Carol Cavalaris

I recently saw an article about the rapid decline of the tawny eagle, the smaller relative of the bald eagle that's found in Africa and Asia. This strong raptor, which is on the endangered species list, faces a 75% mortality rate before it reaches sexual maturity, and they face a high rate of nest predation by crows. This project is my homage to a less known but magnificent eagle species.

Getting Started

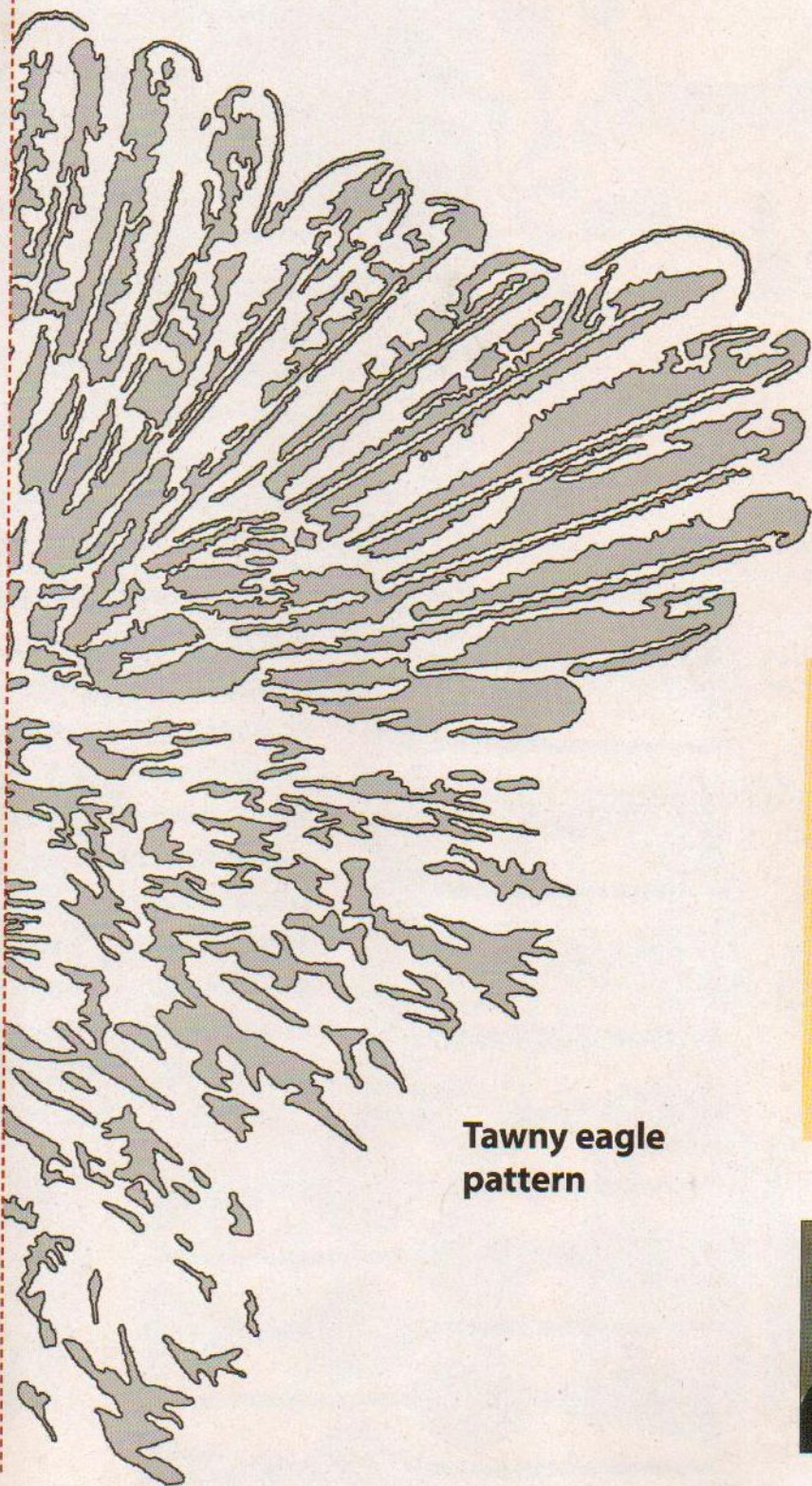
I use a northwestern bigleaf maple burl for this project. Cut the wood to size if necessary, and sand it with progressively finer grits of sandpaper up to 320 grit. Remove all of the sanding dust when you change grits. While it's faster to attach the pattern with spray adhesive, I use carbon paper to trace the pattern onto the wood so I can see any possible soft spots, voids, or bark inclusions that cut differently than the surrounding wood. I enlarged the pattern to match the size of my blank. Remember, the smaller you make the pattern, the more fragile the fretwork is and the more challenging it is to cut.



The painting *Spirit of the Wind* by Carol Cavalaris inspired Don's project.

TIP**PATTERN PLACEMENT**

If you're using a figured hardwood, trace the outline of the pattern onto a sheet of clear plastic. Hold the pattern and plastic together, and use a hole punch to cut reference holes on each side of the design. Move the clear plastic around on the blank until you find the perfect position for the design. Use a pencil to mark the alignment holes, and use the marks to help you position the paper pattern.



Tawny eagle pattern

Cutting and Finishing the Portrait

Drill blade-entry holes with a #60 bit, and use #2/0 flat or spiral blades to cut the frets. Start with the veining and small frets first; then, cut the large frets. To keep from breaking delicate areas, slow the saw speed and your feed rate, and use a zero-clearance insert on the saw table. Wipe the wood with denatured alcohol to remove any remaining carbon paper marks. Use mineral spirits to remove any adhesive residue.

Remove the burrs from the back of the project with an orbital sander and 220-grit sandpaper. Hand-sand with 220-grit sandpaper to remove stubborn burrs. Repeat the process with 320-grit sandpaper on the front. Buff with #000 steel wool, if desired. Then, apply several coats of high-gloss varnish or lacquer, sanding lightly with 320-grit sandpaper between coats. Glue a dark backing material, such as foam, to the back, and attach a saw-tooth hanger to complete the project.

Materials & Tools**Materials:**

- Bigleaf maple burl, 3/4" (19mm) thick: 18" x 19" (457mm x 482mm)
- Carbon paper or spray adhesive
- Sandpaper: assorted grits up to 320
- Clear plastic (optional)
- Pencil or stylus
- Glue
- Denatured alcohol
- Varnish or lacquer

- Black foam
- Saw tooth hanger

Tools:

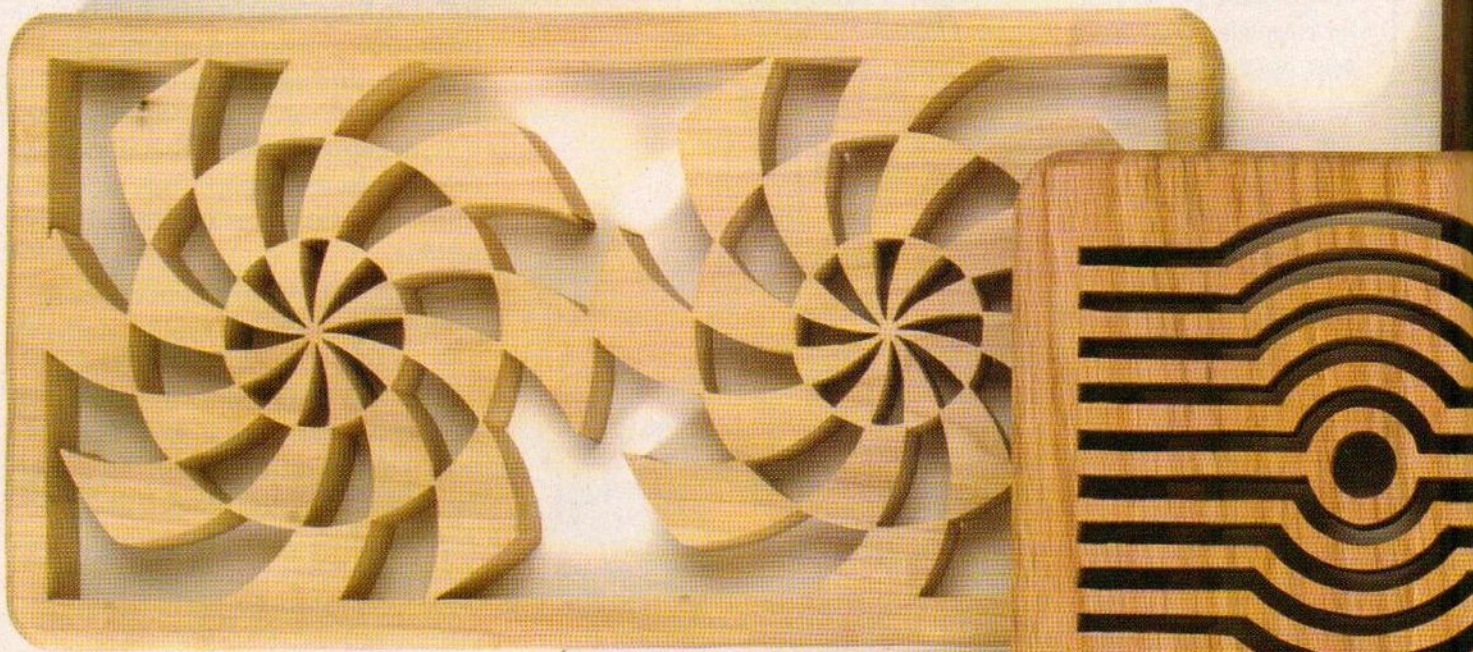
- Scroll saw blades: #2/0 flat or spiral
- Drill with bits: #60 wire size
- Sanders: belt, orbital
- Hole punch (optional)
- Hobby knife or scissors

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.



Don Calhoun began scroll sawing 14 years ago after receiving a saw as a gift. He enjoys cutting and modifying patterns to create a piece of art and has won several awards. He is the owner of Don and Inge's Creations, where he and his wife make gifts to sell at craft shows. Visit Don's website at pacificscrollsawart.com.

Casserole Trivets



Use longer blanks to make larger trivets

By Ron Forsyth

When I was having dinner with a neighbor one night, she served a casserole hot from the oven. To protect the table, she positioned two trivets side by side, which inspired me to make trivets large enough to hold a casserole dish. However, without gluing up blanks, it's difficult to find wood more than 7 3/4" (197mm) wide. I decided to design patterns that use longer, rather than wider, wood to accommodate casserole dishes.

Making the Trivets

Cover the wood with blue painter's tape and attach the pattern to the tape. Drill blade-entry holes and cut the inside frets. I cut the perimeter last, especially if the design has a round outline (see Tip). Use a 1/4" (6mm)-radius roundover bit in a router or laminate trimmer (a smaller, less expensive version of a router) to round the outside edges of the trivet. Sand the trivet and remove the dust. Finally, dip the trivet in an oil finish, such as salad bowl finish, to seal the wood and accentuate the grain.





TIP

CUTTING CORNERS

I usually cut the perimeter of the trivet last, especially if it's round. If you cut it first, you lose the corners, which are useful for leverage when guiding the wood through the saw blade. When you are cutting, you are usually watching the blade, not where you are grabbing the piece to turn it. If there are no corners, it is easy to grab a fragile part of the design and break it. This is especially true when you are doing nature scenes. I have broken many leaves and flowers when cutting other parts of the trivet.

Materials & Tools

Materials:

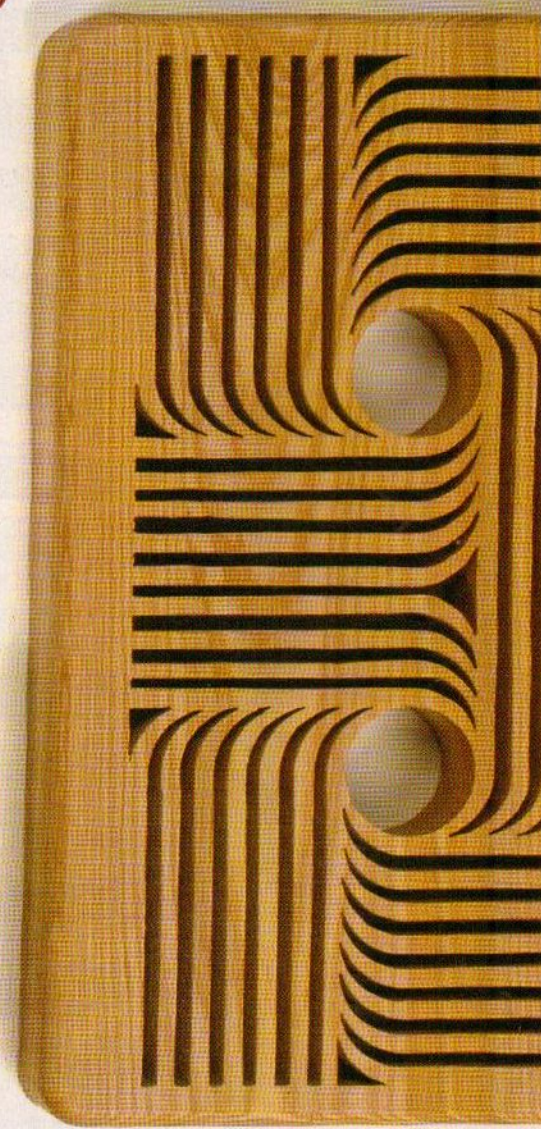
- Hardwood, ¾" to 1" (19mm to 25mm) thick: 7" x 12½" (178mm x 318mm)
- Tape: blue painter's
- Spray adhesive
- Sandpaper
- Oil finish, such as salad bowl finish

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Tools:

- Scroll saw blades: #5 reverse-tooth
- Drill with assorted small bits
- Router or laminate trimmer with bit: ¼" (6mm)-radius roundover

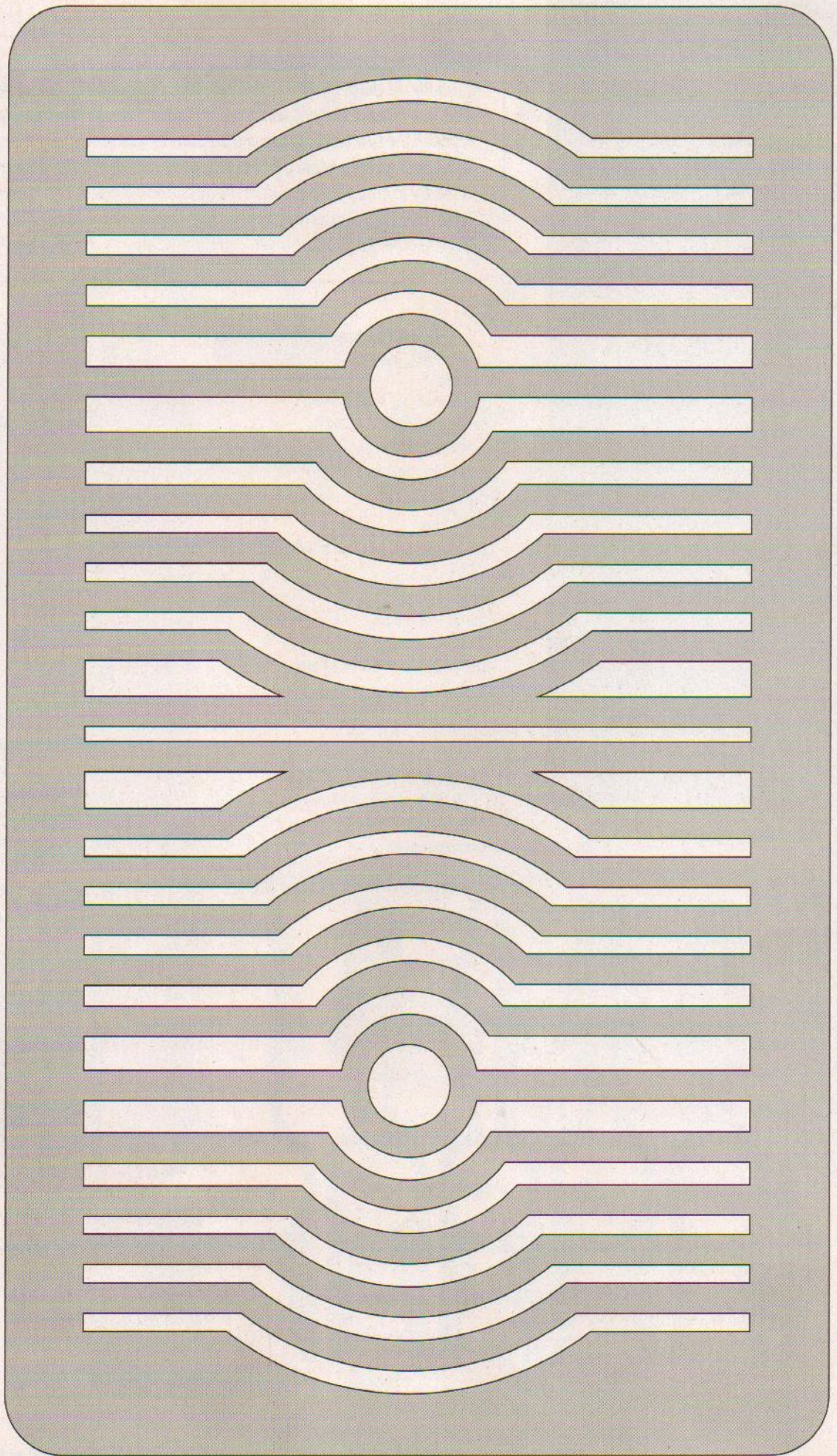
ON THE WEB Full-sized patterns for all six trivets available online.
www.scrollsawer.com



Ron Forsyth of West Linn, Or., is a retired widower. His grandson is the product tester for all of the toys he produces.

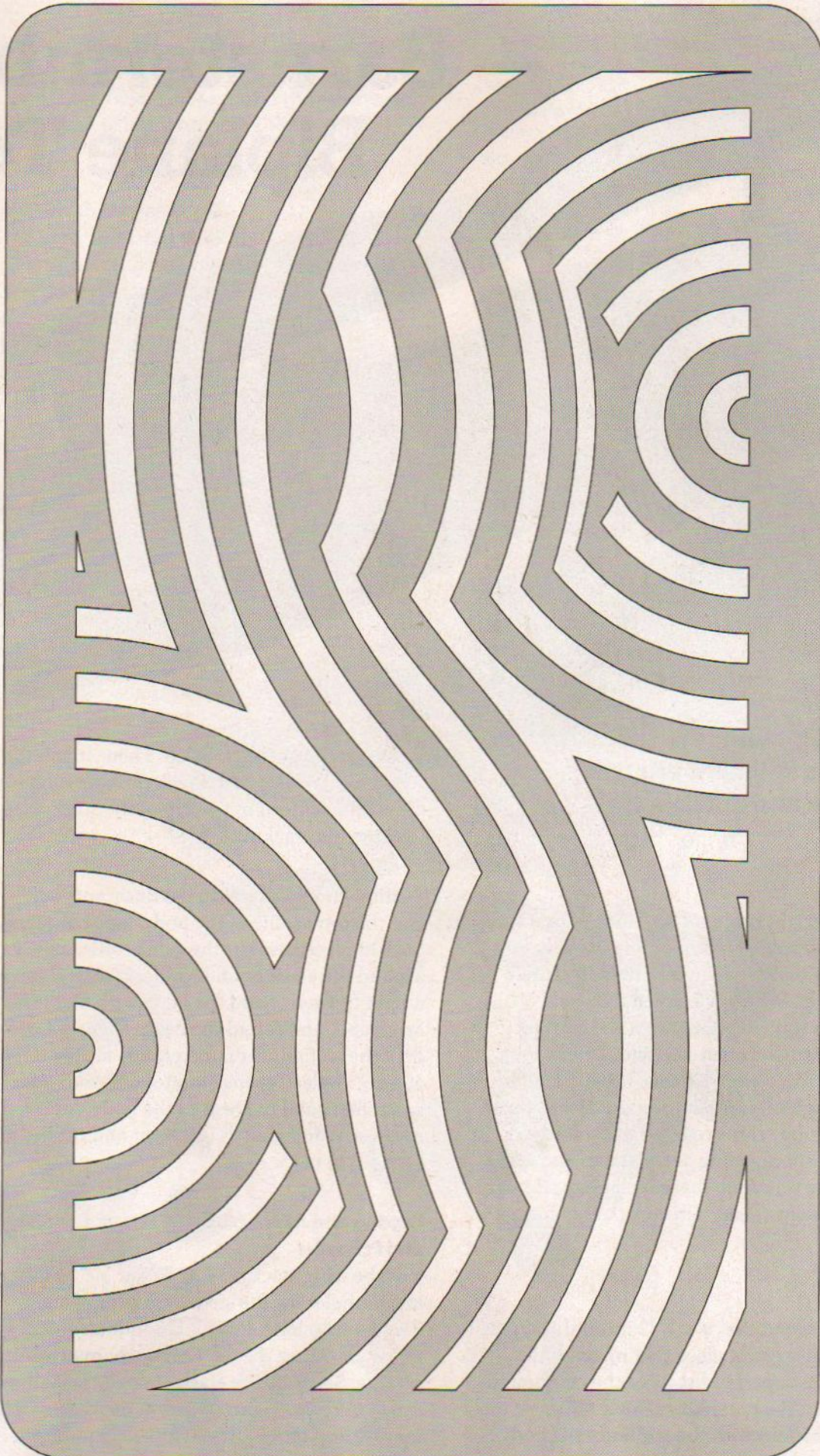
Trivet patterns

Enlarge this art to 120%, or to desired size.



Trivet patterns

Enlarge this art to 120%, or to desired size.



Barnstorming Biplane Toy



Combine compound cutting with a spinning propeller to make a fun and durable toy

By John A. Nelson

After the Wright brothers flew for the first time in 1903, the concept caught on fast. Just over a decade later, the U.S. government manufactured airplanes for use in World War I and then sold surplus planes to trained pilots when the conflict ended. The two-winged open-cockpit planes were slow, had a lot of lift, and could take off and land in the length of a football field. During the 1920s, those pilots and exhibition teams roamed the country “barnstorming”—performing aerial shows and offering rides. I remember watching those biplanes write signs in smoke way over my head. This toy pays homage to those times.

Getting Started

If you don't have wood that is a 1" (25mm) thick, glue together pieces to create a piece that matches the dimensions in the materials list. Fold the compound-cutting pattern on the dotted line, apply adhesive to the back, align the fold with the corner of the body

piece, and press it into place. Then, attach the patterns to the tail and elevator. Stack the two wing blanks and attach the pattern to the top of the stack. (See page 70 for more on stacking.)

Cutting and Assembling the Body and Tail

Cut the top profile of the body, tape the waste pieces back in place, and cut the side profile. Take extra care around the elevator and rudder notches; you will want a tight fit there. Sand the body with medium-grit sandpaper and round the edges slightly. Locate and drill the $\frac{1}{8}$ " (3mm)-diameter hole for the tail dragger at a 45° angle. Cut the elevator and the rudder pieces, sand them, and fit them to the body. Adjust the fit if necessary, and glue the elevator and rudder (the tail section) in place.

Cutting and Assembling the Wings, Landing Gear, and Propeller

Cut the wing stack, and drill four $\frac{1}{16}$ " (2mm)-diameter locator holes for the struts. Cut the struts to 2½" (64mm) long. Redrill the four strut holes at a 20° angle, using the $\frac{1}{16}$ " (2mm)-diameter holes for the centers. Separate the stack and cut the half-round notch in the top wing. Remove the pattern and sand everything smooth. Use white glue to attach the four

struts to the two wings. Let the struts stick through the wings on the top and bottom until the glue sets, and then trim them flush and sand the wings smooth. Compound-cut the wheel strut, and then cut the propeller.

Painting and Finishing the Airplane

Mask off the joint areas and paint the two assemblies; I used light gray paint to resemble a World War I biplane. Glue the body assembly to the wing assembly, making sure the wing is perpendicular to the body. Use the drawing as a guide as you attach the wheel strut. Cut the axle to 3½" (89mm) long, and cut or buy the 1¼" (32mm)-diameter wheels. Glue a wheel to one end of the axle, feed it through the holes in the wheel strut, and glue the other wheel onto the other end. Trim the axel to fit.

Buff the toy with 0000 steel wool. Touch up any paint. Make a color copy of the artwork and glue it to the plane with white glue. When the glue is dry, apply a clear finish to seal the plane. Thread a #6 by ¾" (19mm)-long round-head wood screw through a crown washer, through the propeller, through a washer, and into the wood. Buff the surfaces with steel wool again and apply a coat of paste wax.

Materials:

- Pine, 1" (25mm) thick: plane body, 1¼" x 8" (44mm x 203mm)
- Pine, ¾" (19mm) thick: wheel strut, 1½" x 2½" (38mm x 64mm)
- Baltic birch plywood, ¼" (6mm) thick: rudder, elevator, wheels (optional), 2" x 12" (51mm x 305mm); wings, 2 each 2¼" x 10" (57mm x 254mm)
- Baltic birch plywood, ⅛" (3mm) thick: propeller, 1" x 4" (25mm x 102mm)
- Dowel, ⅛" (3mm) dia.: wing struts, tail dragger, 12" (305mm) long
- Dowel, ¼" (6mm) dia.: axle, 3½" (89mm) long
- Wooden wheels (optional): 1¼" (32mm) dia.
- Sandpaper
- Spray adhesive
- Masking tape
- Acrylic paint: gray, maroon, black; red, white, blue (optional)
- Finish: clear satin or gloss
- Steel wool: #0000
- Paste wax
- White glue, such as Elmer's
- Screw, round-head wood: 1 each #6 by ¾" (19mm) long
- Washers: #6 crown, #6 flat

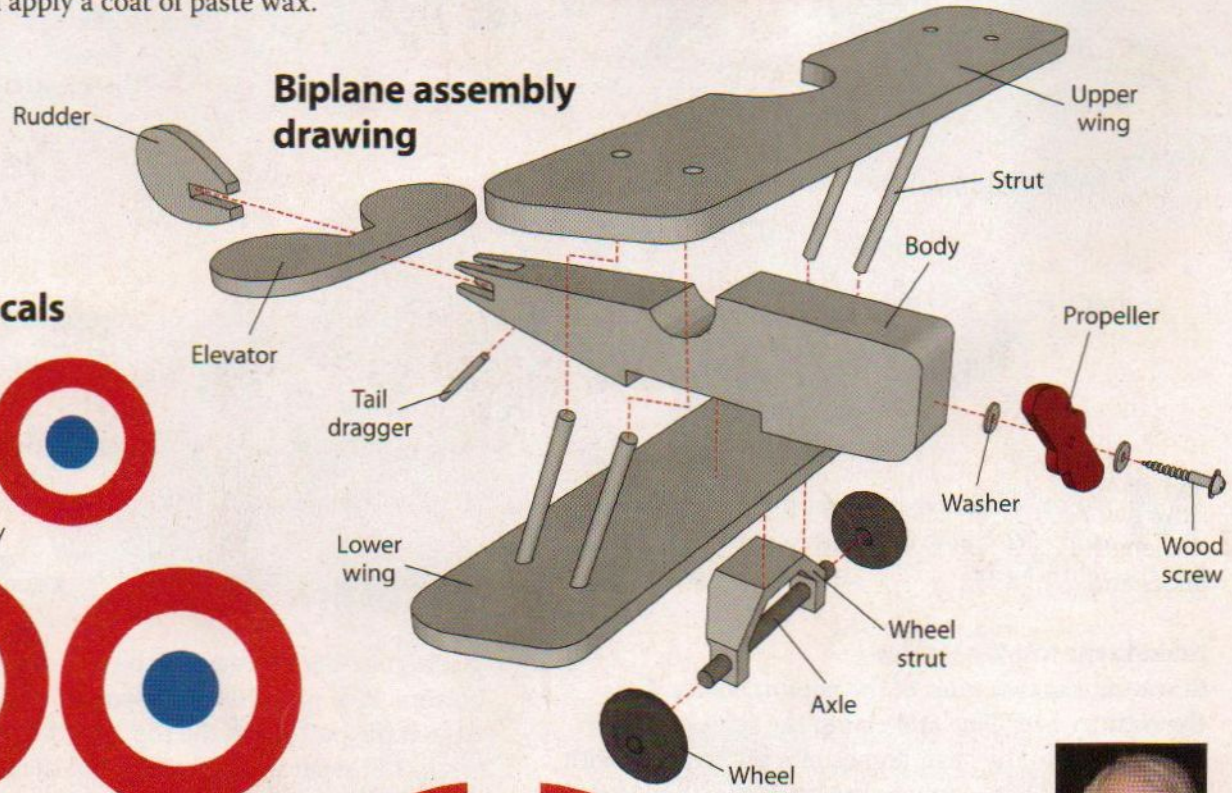
Tools:

- Scroll saw blades: #5
- Drill with bits: ⅛" (2mm), ⅛" (3mm), ¼" (6mm) dia.
- Paintbrushes
- Screwdriver
- Clamps

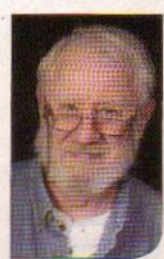
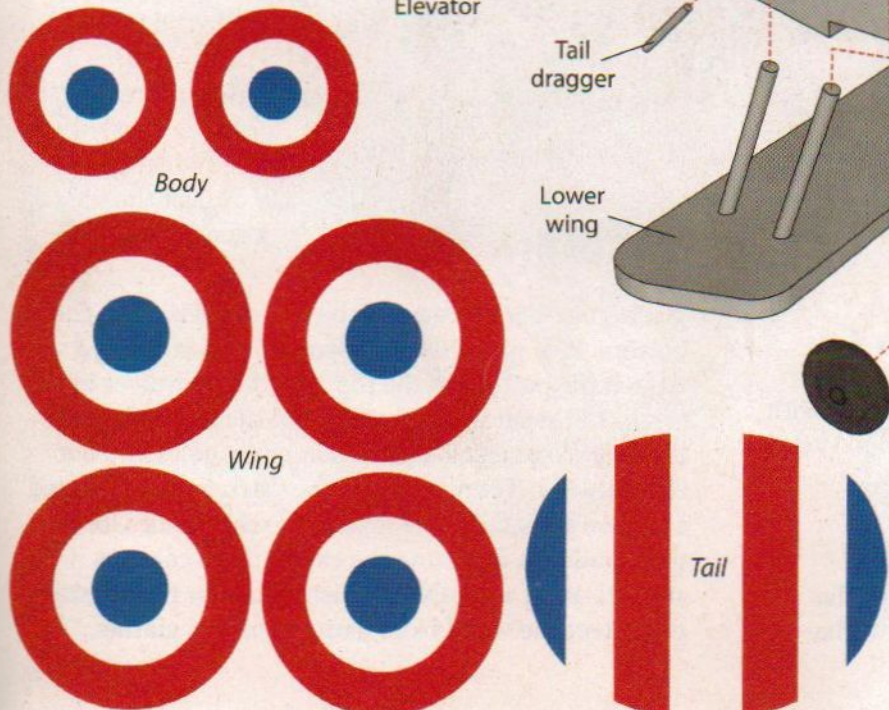
The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Patterns for the **BARNSTORMING BIPLANE TOY** are in the pullout section.

Biplane assembly drawing



Biplane decals



John A. Nelson is the author of Fox Chapel's popular Scroll Saw Workbook, available at www.foxchapelpublishing.com.

Table Accessories

Napkin holder and matching coasters are easy to cut and assemble

*By Sue Mey
Cut by Leldon Maxcy*



Make an attractive table set for your own home or as a quick but thoughtful gift.

Making the Napkin Holder

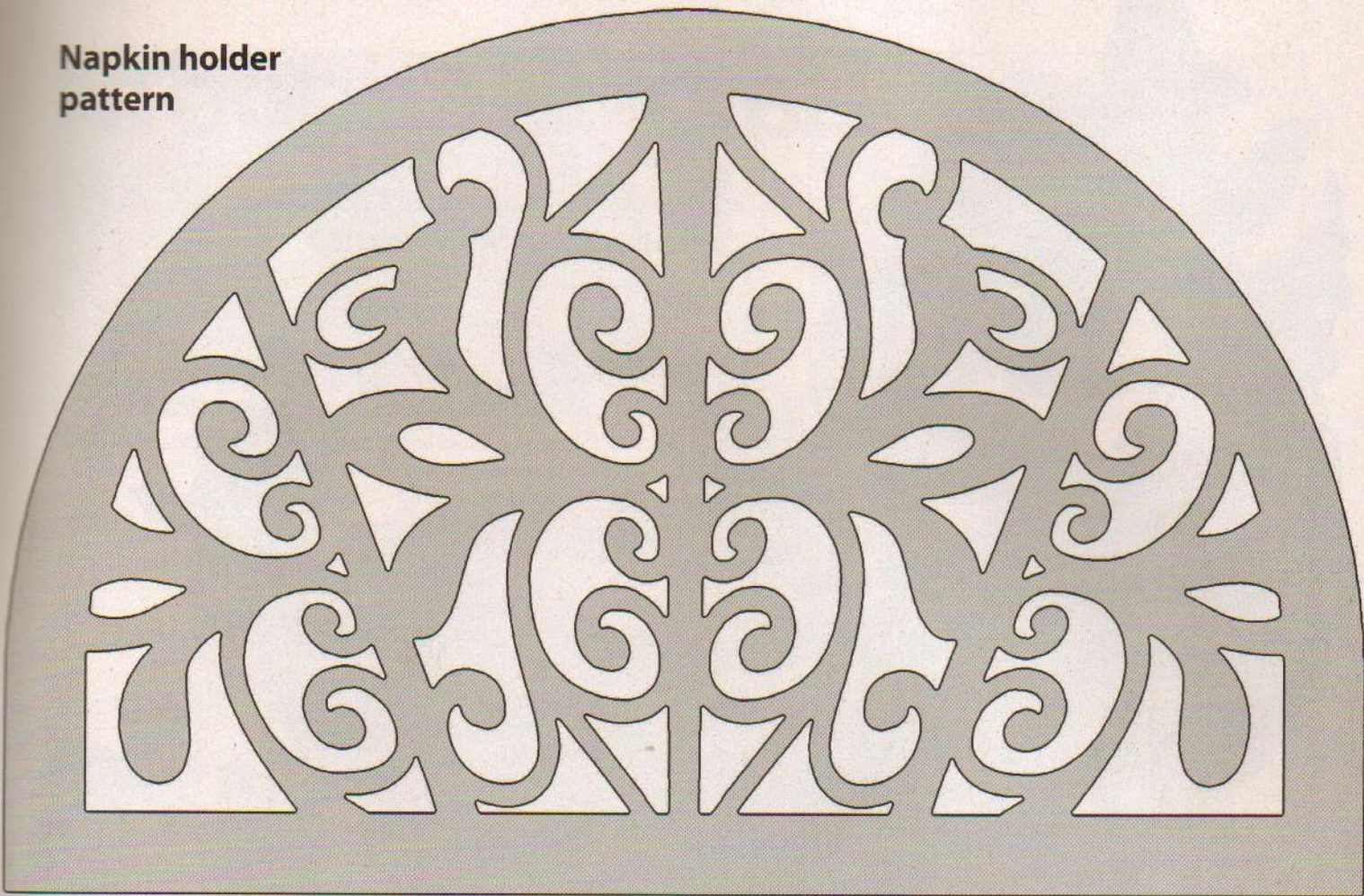
Stack-cut the two sides of the napkin holder. Cut the base to size. Glue and clamp the sides of the napkin ring to the base, and reinforce the joints with a few brads. Then, apply a clear spray finish to the completed napkin holder.

Making the Coasters

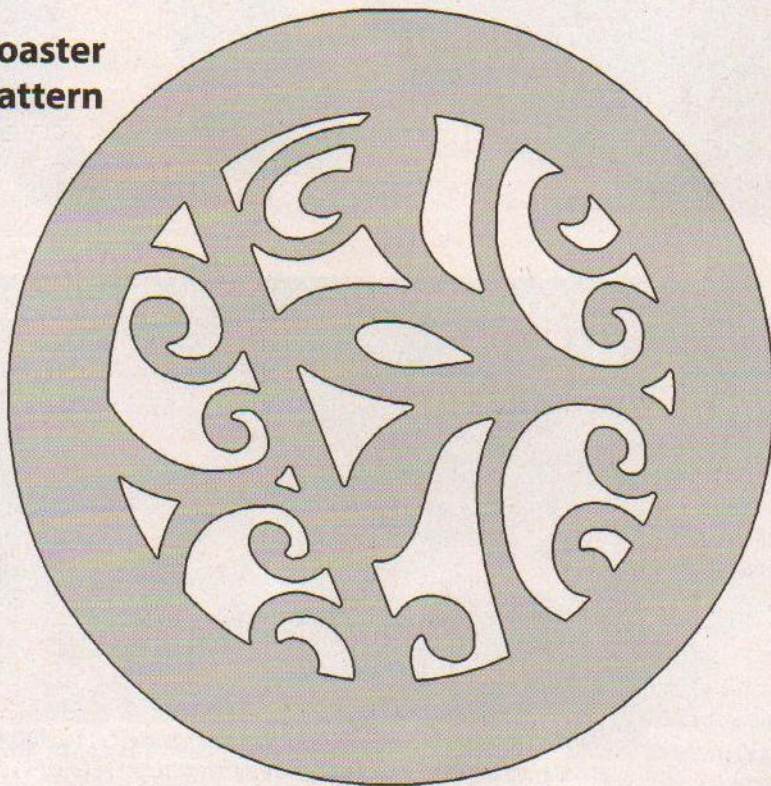
Use double-sided tape to stack the blanks for the fretwork overlays and the bases; place the overlay

pieces together on top and the bases together on the bottom. (See page 70 for information on stacking.) Attach the pattern to the top. Cut the perimeter of the stack, and separate the bases from the overlays; keep the overlays stacked. Drill blade-entry holes and cut the fretwork. Then, separate the stack, sand as needed, and glue and clamp the overlays to the bases. Use a disc sander to fine-tune the edges of the coasters. I suggest using a durable varnish finish for the coasters to protect the wood from damp cups and glasses.

Napkin holder pattern



Coaster pattern



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Materials & Tools

Materials:

- Oak, $\frac{1}{2}$ " (13mm) thick: napkin holder sides, 2 each $5\frac{1}{4}$ " x 8" (133mm x 203mm); base, 3" x 8" (76mm x 203mm)
- Oak, $\frac{3}{16}$ " (5mm) thick: per coaster overlay, $4\frac{1}{4}$ " x $4\frac{1}{4}$ " (108mm x 108mm)
- Walnut, $\frac{3}{16}$ " (5mm) thick: per coaster base, $4\frac{1}{4}$ " x $4\frac{1}{4}$ " (108mm x 108mm)
- Spray adhesive
- Tape: double-sided
- Sandpaper

- Wood glue
- Brads
- Finish: clear spray varnish

Tools:

- Scroll saw blades: #2 reverse-tooth
- Drill with assorted small bits
- Clamps
- Disc sander (optional)

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.



Sue Mey lives in Pretoria, South Africa. To see more of her work, including a wide variety of patterns and pattern-making tutorials available for purchase, visit www.scrollsawartist.com. She can be contacted at suem@storage.co.za. Her pattern book, *Lighted Scroll Saw Projects*, is available from www.schifferbooks.com and other outlets.

Lazy Raccoon

Use overlays and risers to add extra dimension to this cute critter

By Kathy Wise



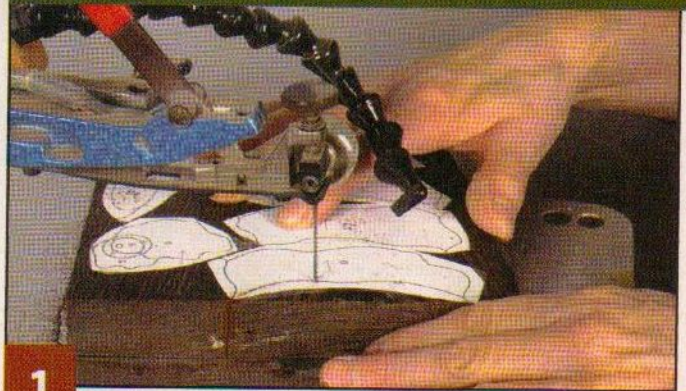
Raccoons, also known as nature's cutest tricksters, have such personality that I had to capture one in an intarsia. They twist themselves into the most awkward positions to get what they want or to get out of trouble.

On this project I have used overlays and risers, or shims, to give the raccoon a more three-dimensional look. For a more complex project, eliminate the risers and overlays and fit the feet into the body sections. Make your raccoon look alive by adding extra texture to the tail and shiny gloss to the eyes.

Getting Started

Make several copies of the pattern and keep one as a master copy for later use. Cut each pattern piece and sort them into groups by wood color. Spray adhesive onto the backs of the pattern pieces; attach them to the shiny side of clear shelf paper, such as Con-Tact® brand; and stick the patterns onto the blanks.

RACCOON: CUTTING & SHAPING THE PIECES



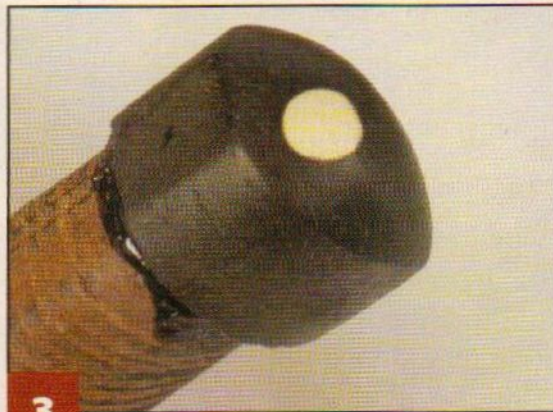
1

Cut the pieces. Use a #5 or #7 skip-tooth blade. Cut carefully and stay on the lines, especially where different colors of wood meet. When cutting 1" (25mm)-thick wood, cut carefully to make sure the blade doesn't bend, which will give you slanted edges and make the final fitting difficult.



2

Organize the pieces. As you cut the pieces, mark the bottoms with a pencil. This ensures you don't accidentally sand and shape the wrong side. Attach a copy of the pattern to the assembly/backing board. Organize the pieces on the board and check the fit. Make any adjustments, and mark the areas to sand.



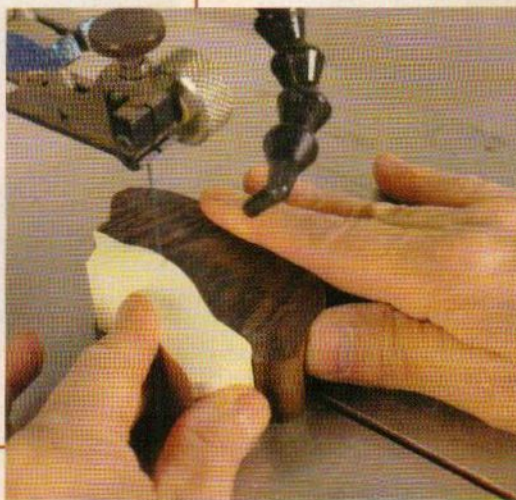
3

Make the eye highlight. Drill a hole in the wood before cutting the eye. Fit a piece of white wood to the hole, glue it in place, and cut off the excess. Then, cut the eye, glue it to the riser, and round the end. Test the fit of the eye with the surrounding pieces.

TIP

ADJUSTING THE FIT OF PIECES

If two pieces don't fit tightly together, hold the pieces together lightly and cut along the joint with a #3 blade. Adjust the pressure you apply on the two pieces when the blade goes slowly where the edges are tight, until it jumps through to an open area. This removes wood only where the fit is tight to help the pieces fit together better. If you have large slants on the edges of the pieces, use an oscillating spindle sander to remove some of the excess wood before cutting. Use this technique carefully, because it is possible to remove too much wood, which means you'll need to recut the pieces.

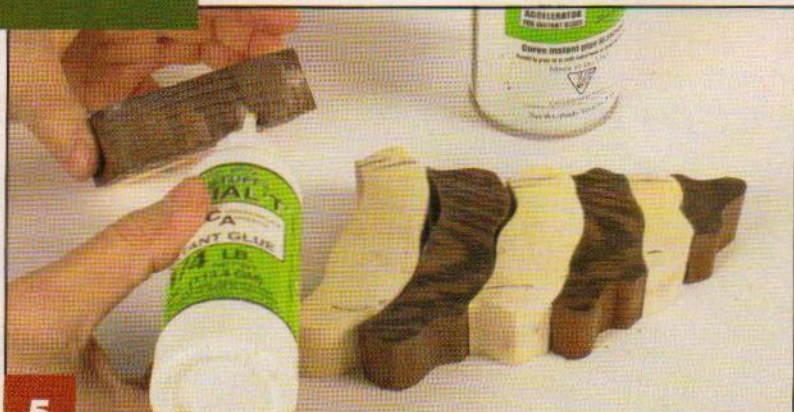


RACCOON: ADDING RISERS & TEXTURE



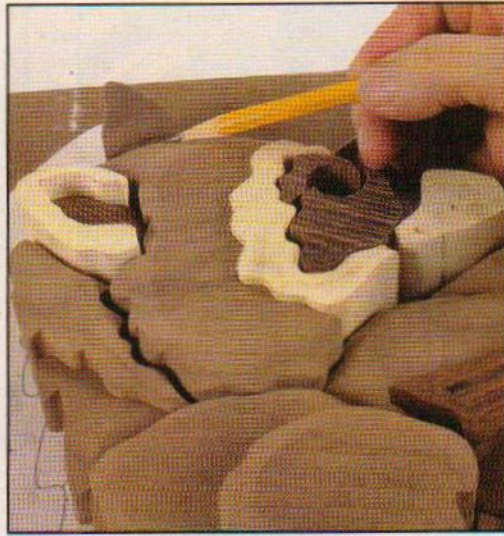
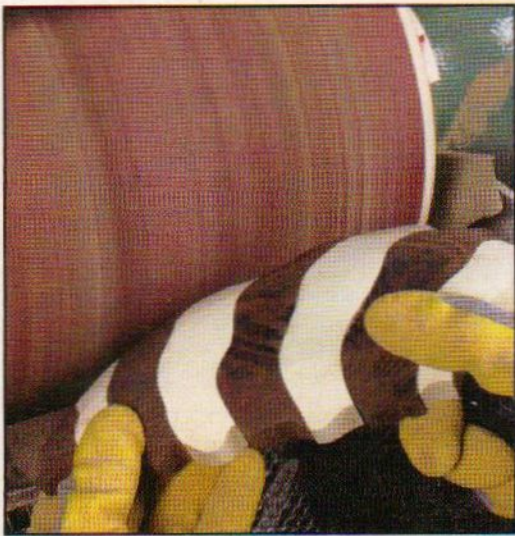
4

Attach the risers to the pieces. Cut the risers to fit inside the legs and ear, and glue the appropriate pieces to the risers. Make sure the ear riser is made from the same species as the ear and that the outer (visible) edge is flush. Mark the areas to sand using the shaping guide.



5

Prepare to shape the tail. Tack the tail pieces together with cyanoacrylate (CA) glue and accelerator. On a flat surface, apply accelerator to one adjoining side and apply three small dots of CA glue near the bottom of the other adjoining piece. Press the pieces together and allow the glue to set. This method allows you to shape the pieces as a unit to get a smooth contour, but allows you to separate the pieces for individual shaping.



6

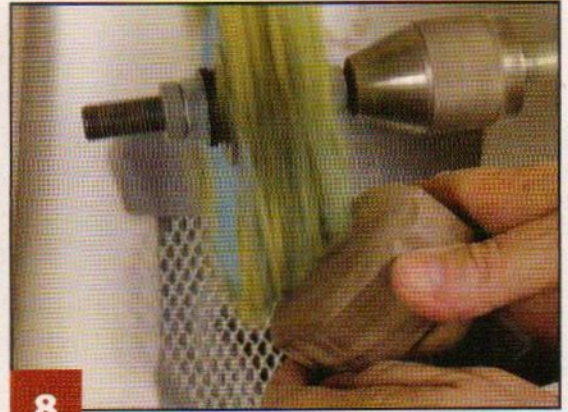
Mark and sand the pieces.

Refer to the shaping guides and mark the pieces with the areas to be sanded. Use a drum sander to shape the pieces. I use an 8" (203mm)-diameter pneumatic drum sander with a 150-grit sleeve for rough shaping and a 2" (51mm)-diameter drum with a 220-grit sleeve to smooth each piece. Round the edges first. Then, start sanding the lowest pieces. Mark the level to sand down to, and keep the marks visible as you sand. Place the pieces on the pattern often to check your progress.



7

Add texture to the feet, tail, and ear. Use a sanding drum in a rotary tool to sand any hard-to-reach areas and the small inside curves of the feet. Use a large burr to add texture to the tail, and use a small burr to add feet and ear-hair details. Then, check the overall look of the project and make any necessary adjustments.



8

Smooth the pieces. Use a 220-grit sanding mop to smooth the surface of the pieces. This makes it easier to apply varnish.

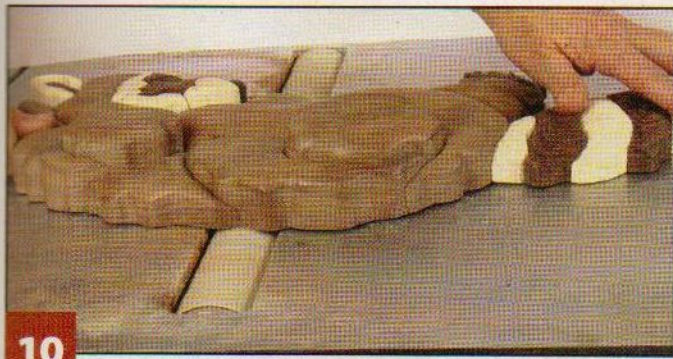
RACCOON: ASSEMBLING & FINISHING



9

Glue the pieces together.

Place waxed paper on top of the assembly board. Assemble individual pieces with dots of CA glue. Start at the head and glue together three to four pieces at a time. Allow the glue to set before moving on to the adjoining pieces. Glue together the head section, the tail section, and finally the body section. To create a tighter fit between the pieces, re-cut along the lines and then re-glue to draw the pieces closer.



10

Sand the back flat. Use a flat drum sander, such as a Sand-Flee, to smooth the back of each section to ensure a good glue joint between the pieces and the backing board.



11

Cut the backing board. Place the glued-together raccoon on top of the pattern attached to the tempered hardboard and trace the outline. Cut about 1/8" (3mm) inside the outline of the raccoon, sand the edges smooth, and paint the edges black if desired.



12

Glue the raccoon to the backing board. Turn the raccoon upside down and apply dots of wood glue and CA glue to the back of the pieces. Do not use so much glue that it will squeeze out. Spray accelerator on the backing board, position the backing board on the pieces, and press it into place. Allow the glue to set for 30 seconds, and then flip the piece right side up and apply even pressure to all of the pieces to lock them in place. Use the same CA and wood glue technique to attach the overlay feet. Reinforce the overlay joint with a few pin nails. The CA and wood glue technique allows you to skip clamps and an overnight glue-dry time.



13

Apply the finish. I use clear satin spray polyurethane. Follow the manufacturer's instructions and let the finish dry overnight. Use clear gloss finish on the eye to give the raccoon a lifelike look. Attach a hanger to the back to complete the project.

Materials & Tools

Materials:

- White wood, such as poplar or holly, 1" (25mm) thick: ear, ear riser, face, tail, 5" x 8" (127mm x 203mm)
- Black wood, such as wenge, 1" (25mm) thick: tail, face, 8" x 8" (203mm x 203mm)
- Black wood, such as wenge, 1/2" (13mm) thick: feet overlay, 5" x 6" (127mm x 152mm)
- Dark wood, such as black walnut, 1" (25mm) thick: body, 12" x 16" (305mm x 406mm)
- Dark black wood, such as ebony, 1" (25mm) thick (could use 1/2", or 13mm, thick and use a riser): eyes, 2" x 2" (51mm x 51mm)
- Tempered hardboard, 1/8" to 1/4" (3mm-6mm) thick: assembly/backing board, 13" x 22" (330mm x 559mm)
- Plywood, 1/4" (6mm) thick: assorted scraps for risers
- Glue: wood; cyanoacrylate (CA) with accelerator
- Clear shelf paper, such as Con-Tact® brand
- Spray adhesive
- Finish: clear satin polyurethane varnish; clear gloss
- Hanger: mirror-style
- Black paint (optional)

Tools:

- Scroll saw blades: #3; #5 or #7 skip-tooth
- Sanders: pneumatic drum, flat drum, sanding mop
- Rotary tool with assorted bits
- Pin nailer with pins

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Patterns for the **LAZY RACCOON** are in the pattern pullout section.



Kathy Wise is a nationally acclaimed intarsia artist. She has written consecutive articles for *Scroll Saw Woodworking & Crafts* for the past 11 years, including 48 articles for regular issues and additional patterns for a variety of special issues. Kathy has also written three books. For a free catalog of 500 patterns, contact

Kathy Wise Designs Inc., P.O. Box 60, Yale, Mich. 48097, fax 810-387-9044, www.kathywise.com, kathywise@bignet.net.



Canadian
Goose
#1004

Full Moon Nightlight

Enjoy the harvest moon year 'round

By Deb Nicholson

This nightlight, which combines basic woodworking with fretwork accents, makes a nice accent piece for the evening. The frosted spray and black paint on the acrylic plastic diffuse the light and give the full moon a subtle glow. If you would like more light, skip the black and just apply the frosted spray to the plastic and mount the light at the bottom of the box.

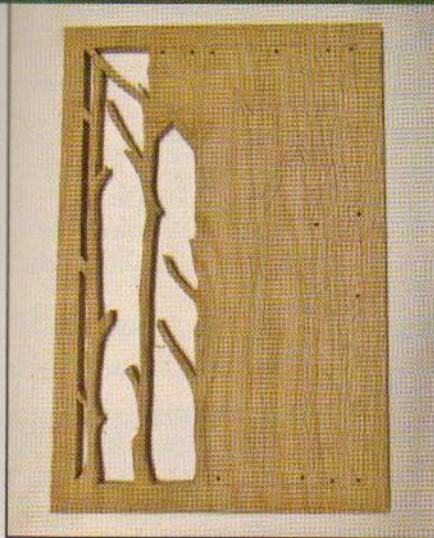
Many spray paint and spray finish manufacturers, including Krylon and Rustoleum, offer a spray frosting finish for glass. Regardless of the brand, I've found that it requires several coats to get the look I want.

Getting Started

Cut the pieces to size. Transfer any necessary patterns to the appropriate blanks; I use carbon paper to trace the designs onto the blanks.



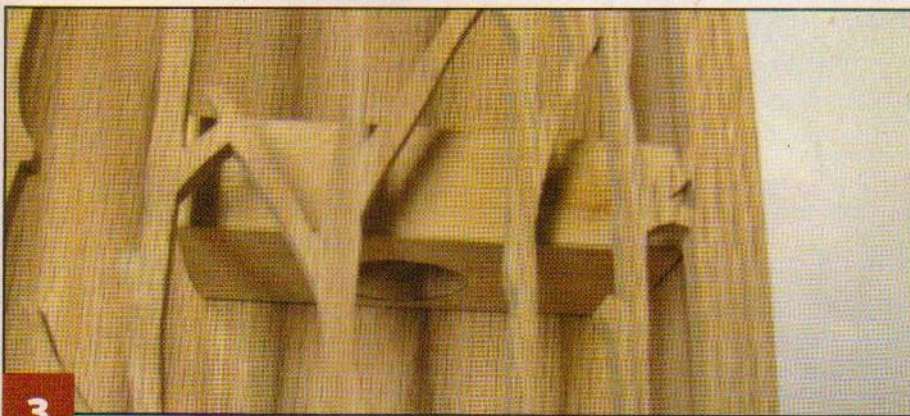
NIGHTLIGHT: MAKING THE PROJECT



1 **Cut the fretwork.** Drill blade-entry holes with a small bit and cut all of the frets in the front (A), layer 2 (B), and layer 3 (C). Sand the pieces smooth, and use small files to clean up the tight corners.



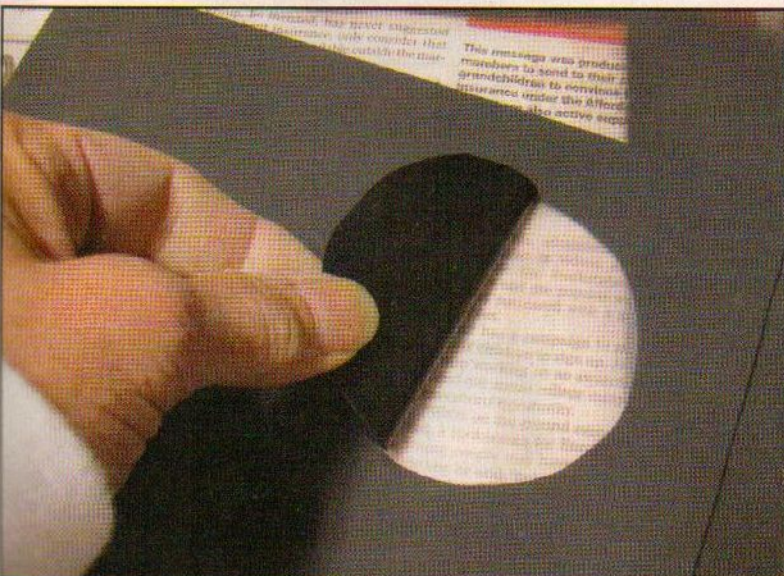
2 **Assemble the outer box.** Cut the notch in the bottom of the back (I) for the cord. Glue and clamp the front (A) and back (I) to the sides (E). Allow the glue to dry, and then sand the joints and edges. Attach the gluing blocks (K) flush with the bottom of the back on both sides.



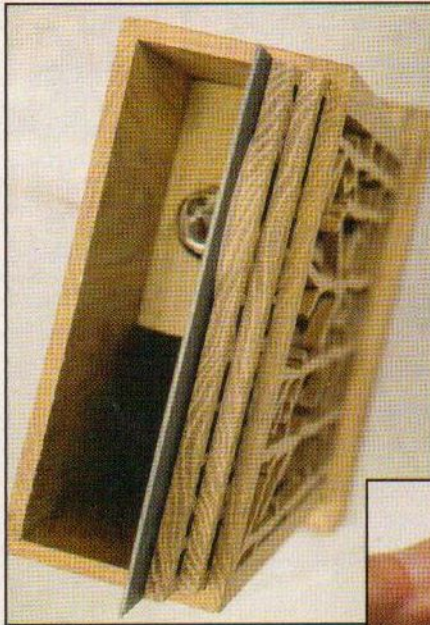
3 **Add the nightlight holder (D).** Drill the 1 $\frac{1}{8}$ " (29mm)-diameter hole. If you don't have a bit that size, drill a blade-entry hole and cut the hole on the scroll saw. If your acrylic plastic shade (J) is thicker than $\frac{1}{8}$ " (3mm), reduce the width of the nightlight holder (D) to accommodate the thickness of the acrylic plastic. Glue the holder to the inside of the back (I) 3 $\frac{1}{2}$ " (89mm) from the top and against the right side.



4 **Assemble the top (F) and bottom (H).** Sand the pieces and round the corners slightly. Refer to the drawing and glue the top liner (G) to the top.

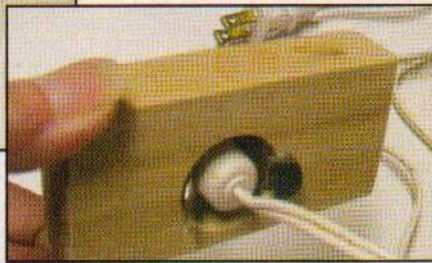


5 **Prepare the acrylic plastic shade (J).** Cut the acrylic plastic shade (J) to size and check the fit inside the box. Sand the edges if it is a tight fit. Apply several coats of frosting spray until you can no longer see through the plastic. Cut a piece of masking tape or contact paper the size of the moon and stick it to the plastic. Spray the plastic with flat black paint. Allow the paint to dry, and then remove the mask for the moon.



6

Assemble the nightlight. Mask off the glue joints on the bottoms of the front, back, and sides, and the bottom. Apply a clear matte finish to the project. Let the finish dry. Then, insert the nightlight into the holder from the bottom. The photo shows how the nightlight fits into the holder, but remember, your holder is already glued into the box. Thread the cord through the hole in the back, and then glue and clamp the bottom to the sides and the gluing blocks. Reinforce the glue joint with screws or small brads into the gluing blocks. Slide the panels and plastic into place, and add the top.



Materials:

- Oak, 1/4" (6mm) thick: 11" x 34" (279mm x 864mm)
- Oak, 3/4" (19mm) thick: 4" x 20" (102mm x 508mm)
- Clear acrylic plastic, 1/16" to 1/8" (2mm to 3mm) thick: 6 1/2" x 11" (165mm x 279mm)
- Night light: snap-in candelabra-style socket
- Glass frosting spray
- Spray paint: flat black
- Finish: clear matte
- Sandpaper
- Wood glue

Patterns for the **FULL MOON NIGHTLIGHT** are in the pullout section.

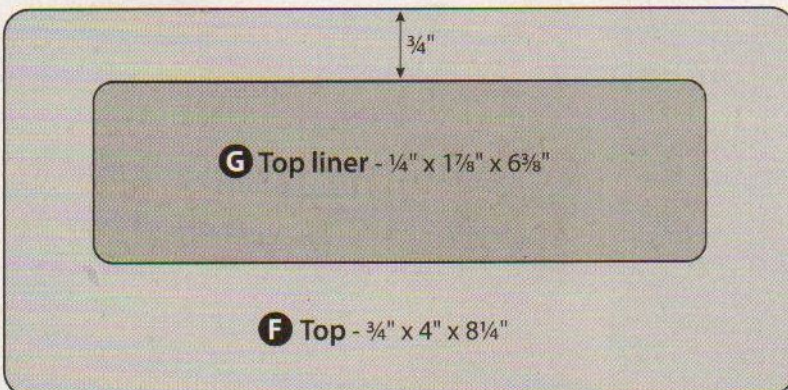
Tools:

- Drill with bits: 1/8" (29mm) dia.; assorted small
- Scroll saw blades: #2
- Palm sander
- Small files
- Clamps

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Parts List

Item	Materials	Dimensions	Presentation
A Front	Oak, 1/4" (6mm) thick	7" x 11" (178mm x 279mm)	Pattern
B Layer 2	Oak, 1/4" (6mm) thick	6 1/2" x 11" (165mm x 279mm)	Pattern
C Layer 3	Oak, 1/4" (6mm) thick	6 1/2" x 11" (165mm x 279mm)	Pattern
D Lamp holder	Oak, 3/4" (19mm) thick	1 3/4" x 3 3/4" (44mm x 95mm)	Pattern
E Sides	Oak, 1/4" (6mm) thick	2 each, 2 1/2" x 11" (64mm x 279mm)	Dimensions
F Top	Oak, 3/4" (19mm) thick	4" x 8 1/4" (102mm x 209mm)	Dimensions
G Top liner	Oak, 1/4" (6mm) thick	1 7/8" x 6 3/8" (48mm x 162mm)	Dimensions
H Bottom	Oak, 3/4" (19mm) thick	4" x 8 1/4" (102mm x 209mm)	Dimensions
I Back	Oak, 1/4" (6mm) thick	7" x 11" (178mm x 279mm)	Dimensions / Pattern
J Acrylic plastic shade	Clear acrylic plastic, 1/16" (2mm) to 1/8" (3mm) thick	6 1/2" x 11" (165mm x 279mm)	Dimensions
K Gluing blocks	Oak, 3/4" (19mm) thick	2 each 1" x 1" (25mm x 25mm)	Dimensions



Nightlight lid measured drawing



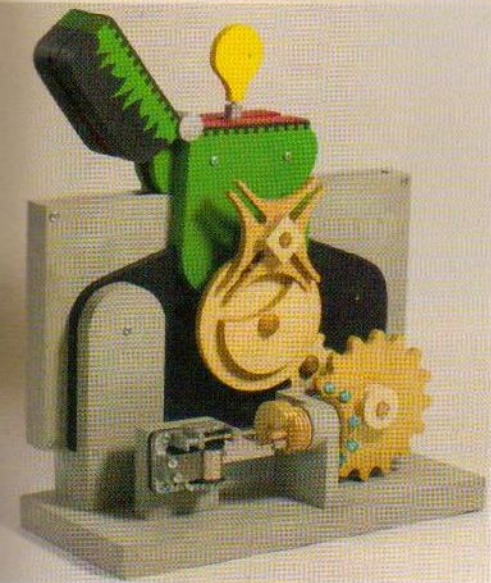
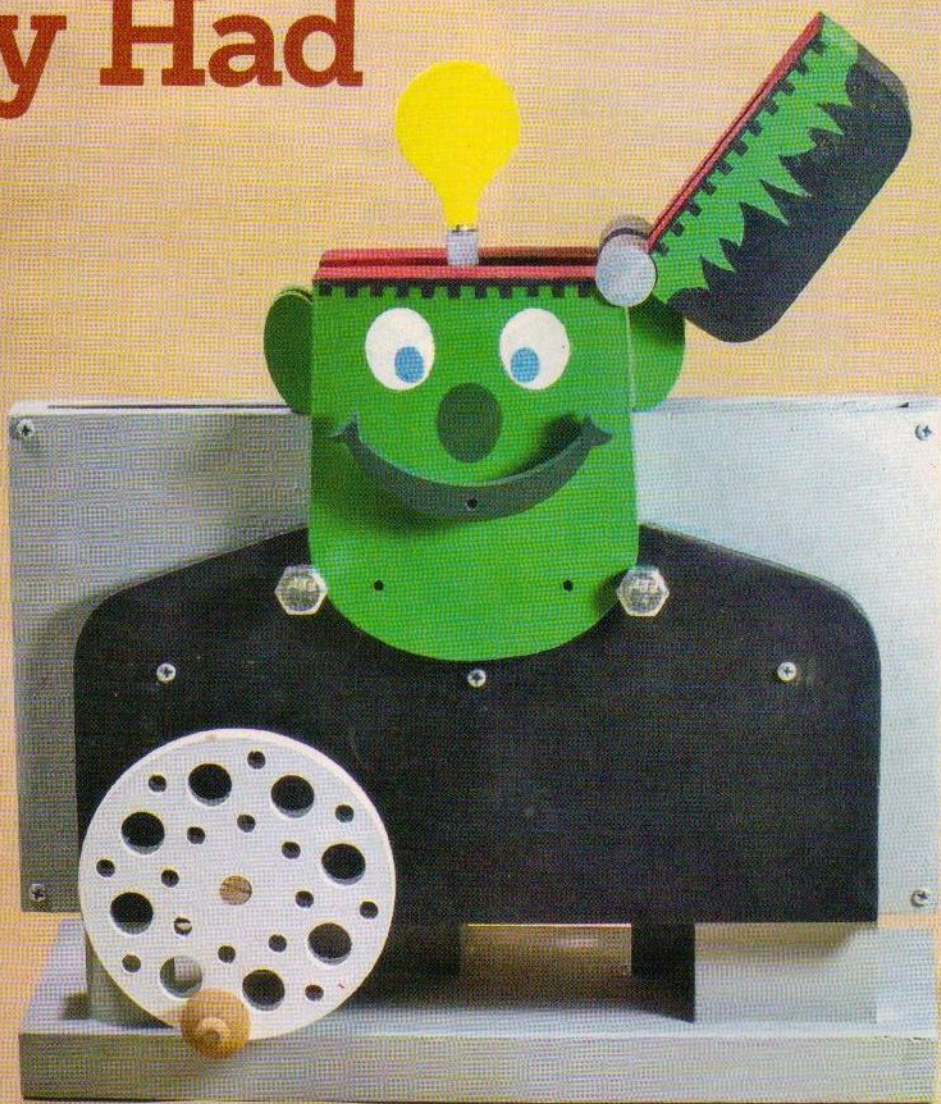
Deborah Nicholson grew up in Chicago, and has lived in Hernando Beach, Fla., since the late 1990s. An artist all of her life, she works in various mediums, including mosaics, clay, and paint, and she especially enjoys combining media. Deborah began working with wood by making frames with her father, who is also an artist.

If I Only Had a Brain

An elegant drive mechanism powers this “punny” monster music box

By John W. Hutchinson

Photos and illustrations by John W. Hutchinson

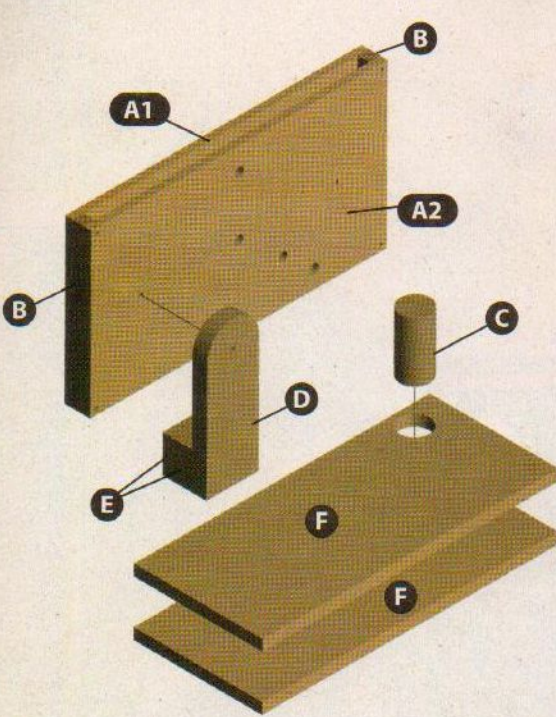


I wasn't surprised when I read that Halloween is the fourth most-popular holiday, next to Christmas, Thanksgiving, and Easter. In my family, monsters and goblins have always run a close second to Santa. Last Christmas, I made an animated trio of angels descending a stairway from heaven to the tune of “Hark! The Herald Angels Sing.” It was a hit with the gang, so for Halloween this year I decided to create an animated Halloween-themed extravaganza. My daughter suggested a Frankenstein monster, but I vetoed the idea because I couldn't find an appropriate tune to go with him. And then one day, as I was browsing the list of hand-cranked musical movements at kikkerland.com, I stumbled upon “If I Only Had A Brain.” Oh, yeah! This is where I'd typically say, “And the rest is history,” but I'd like to think that Frank will become a part of my family's history ... “Remember crazy ol' Grampa John?”

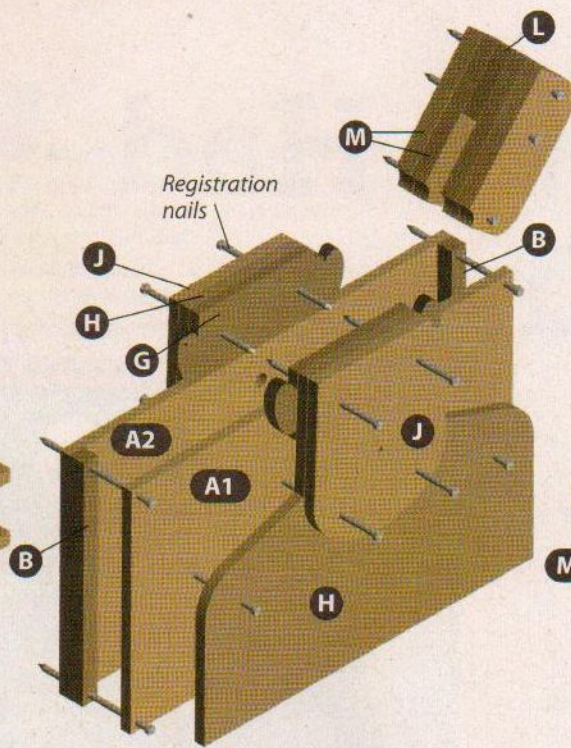
With the turn of a crank, and help from a watchmaker's mechanism, Frank's moods swing from happy, with a bright-idea light bulb, to sad, with a clueless question mark—they are punctuated with snarky half-smiles in between.

I hope you'll welcome a Frank into your home.

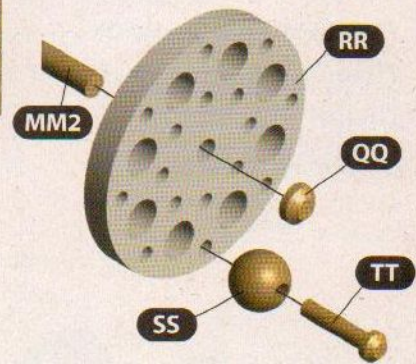
MAKING THE BASE AND CRANK



▲ Step 1: Build the screen and base. When assembling the A2-B “screen” box, do not glue on the front, piece A1. Align all pieces with finishing nails. Use a scrap of $\frac{1}{4}$ " (6mm) plywood as a shim between pieces A2 and D so there is space to insert piece H later. Roughly mask off the glue areas, and paint all of the pieces, including piece A1.



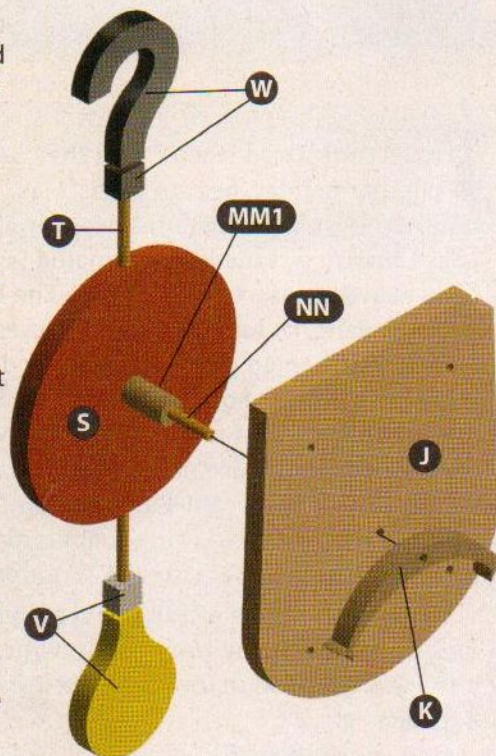
▲ Step 2: Paint and assemble Frank. Use finishing nails and the registration holes to align the pieces as you glue the M-L and two G-H-J subassemblies; remove the nails. Referring to the photos and paint guide, paint the pieces. Glue the G-H-J subassembly to A1, but do not glue A1 in place yet.



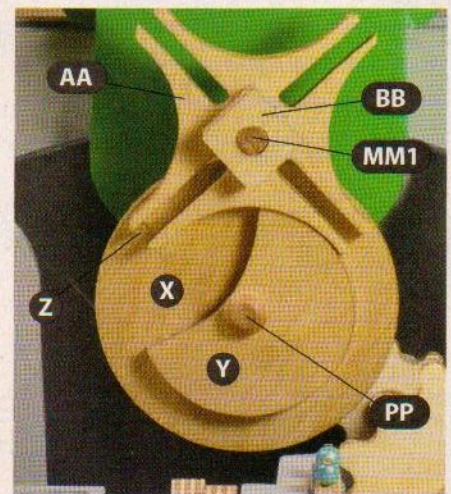
▲ Step 3: Make the crank. Cut and paint the pieces. Glue piece RR to driveshaft MM2 and cover the end with cap QQ. Size the hole through the crank knob (SS) so it spins freely on the crank axle (TT). Glue TT into disc RR.

MAKING THE ROTOR ASSEMBLY

Step 4: Build and install the rotor assembly. Cut and paint the pieces, and drill holes as marked. Use cyanoacrylate (CA) glue to attach a rotor rod (T) to the light bulb and matching square, spacing them $\frac{1}{16}$ " (2mm) apart. Repeat for the question mark, and then glue the rods into the holes in rotor disc S. Push rotor driveshaft MM1 through the back wall of the screen (A2) and dry-fit the rotor assembly to it. Fit the front screen assembly (A1) in place and adjust driveshaft MM1 so it clears the wall; remove the wall and glue MM1 to disc S. Drill a $\frac{1}{8}$ " (3mm)-diameter hole in the end of MM1 and insert extension NN. Replace the wall and dry-fit the mouth (K) onto extension NN. Make sure the mouth clears the face and rotates freely. Glue the wall to the box, and glue the mouth to the extension rod. Glue the decorative hinges (N) to the curve in the top of the head, leaving space for the rotor assembly to pass between.

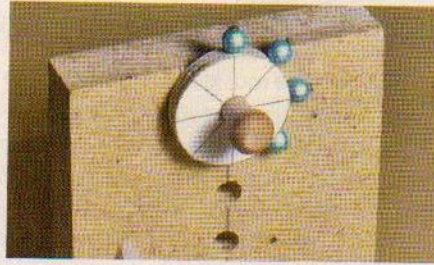
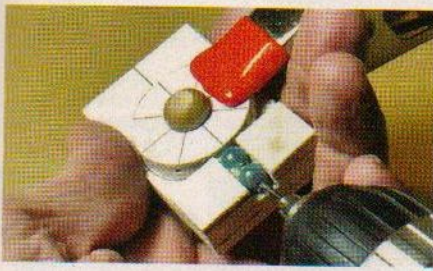


MAKING THE DRIVE

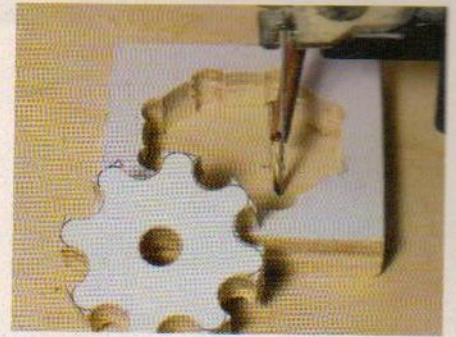


▲ Step 5: Make the Geneva Drive. Use a scrap of $\frac{3}{16}$ " (8mm) dowel to align driven wheel AA and washer BB; wood glue BB to AA and remove the dowel. Align Y and X with axle PP; glue Y to X, but do not glue the axle. Insert pin Z.

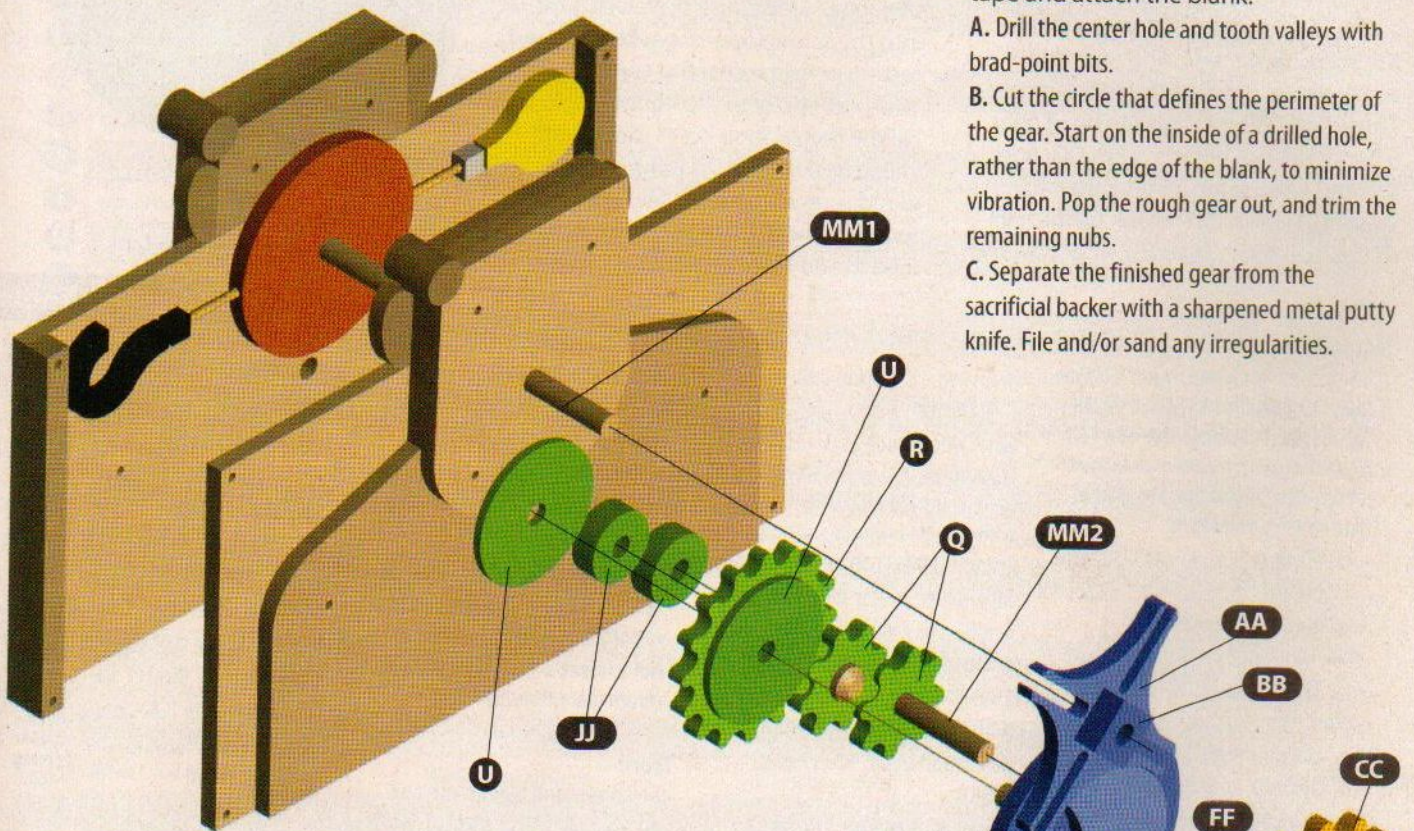
MAKING THE GEARS



▲ **Step 6: Make the bead gear.** Cut the perimeter of the bead gear (DD). If desired, make a jig as shown and drill eight holes around the perimeter as marked. Thread each bead onto a #18 by 3/4" (19mm) brass escutcheon pin, and use gel CA glue to bond the pins and beads to the wood.



▲ **Step 7: Make the spur gears.** Cover a sacrificial backing board—I use 1/8" (3mm) plywood—with double-face tape and attach the blank.
A. Drill the center hole and tooth valleys with brad-point bits.
B. Cut the circle that defines the perimeter of the gear. Start on the inside of a drilled hole, rather than the edge of the blank, to minimize vibration. Pop the rough gear out, and trim the remaining nubs.
C. Separate the finished gear from the sacrificial backer with a sharpened metal putty knife. File and/or sand any irregularities.



INSTALLING THE MECHANISMS

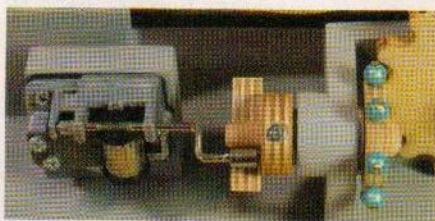
▲ **Step 8: Install the mechanisms.** Sandwich the large spur gear (R) between two large gear washers (U) and glue the three together. Slide them onto the axle in the X-Y Geneva Drive assembly and glue the two assemblies together; do not glue the axle.

Thread an axle (PP) through a gear Q and a washer JJ, glue the washer to the gear, and push the axle into place in the torso/screen wall. Look into the screen from the top and trim PP so it doesn't protrude inside. Glue the axle, but do not glue the gear.

Insert the crank driveshaft (MM2) through the screen with the crank assembly on the front. From the back, place a washer JJ and then a gear Q onto the shaft; glue the washer and the gear to each other and the shaft.

Push the Geneva Drive-spur gear assembly into place, add the Geneva Drive AA-BB assembly to the top driveshaft (MM1), and twist the driveshaft to be sure the gears turn. When you have finished adjusting the mechanism, cut the driveshaft to length and glue the AA-BB assembly to it.

MOUNTING THE MUSICAL MOVEMENT

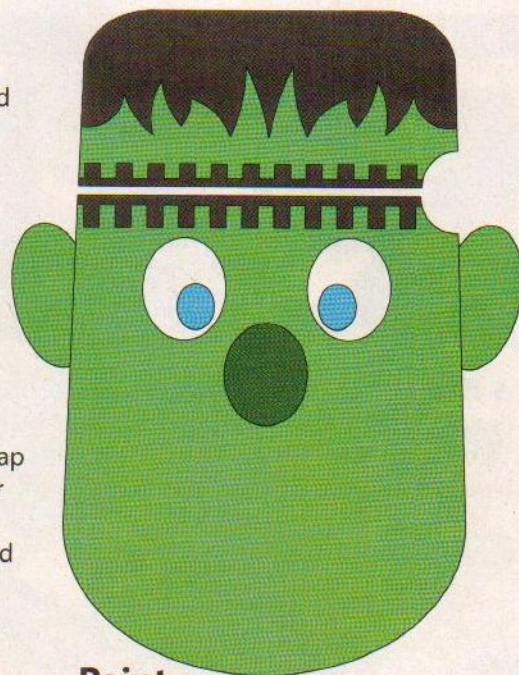


▲ Step 9: Connect the musical movement. Position the music gear mount assembly (FF-GG) so driveshaft MM2 extends through the hole in piece FF. Add the large music spur gear CC and washer JJ to the driveshaft. Adjust so the edge of piece GG aligns with the edge of the base, and glue and screw the mount assembly to the base. Thread axle PP through the bead gear, a metal washer, and through GG. Add painted washer KK, a metal washer, washer JJ, and music crank pusher HH to the axle. Glue KK to GG, and glue and

screw JJ to the axle. Glue HH to JJ and the axle.

Position the musical movement on the movement riser (UU) so its driveshaft, NOT the handle, is centered on wooden axle PP. Screw the musical movement to the riser, adjust the position of the riser, and glue and screw it to the base.

Step 10: Attach the top of the head and complete the project. Wrap a scrap of plywood with a single layer of painter's tape, and then wedge it into the screen opening with the head resting on the top of the ears. Apply two-part epoxy to the "hinge" socket. Fill the registration holes (optional). I filled the majority of mine with #4 wood screws and left a few open. Drill two extra holes on either side of the face to add the traditional neck bolts.



Paint guide

Materials & Tools

Materials:

- Baltic birch plywood: *Note: Multiple layers can be laminated to achieve the required thickness. See Parts List for cutting dimensions of individual pieces. Keep the scraps; you'll need them for jigs and shims.*
 - > 1/8" (3mm) thick: 4" x 11" (102mm x 279mm)
 - > 1/4" (6mm) thick: 18" x 26" (457mm x 660mm)
 - > 3/8" (10mm) thick: 10" x 18" (254mm x 457mm)
 - > 1/2" (13mm) thick: 6" (152mm) square
- Dowel, 5/16" (8mm) round: 8" (203mm) plus scraps
- Dowel, 5/8" (16mm) round: 2" (51mm)
- Dowel, 1" (25mm) round: 2" (51mm)
- Dowel, 3/8" (10mm) square: 11" (279mm)
- Brass rod, 1/8" (3mm) o.d.: 7" (178mm)
- Glue: wood, such as Gorilla PVA Wood Glue; gel cyanoacrylate (CA), such as Gorilla Gel Super Glue; white, such as Elmer's School Glue; 2-part epoxy, such as Gorilla brand
- Tape: blue painter's; double-sided
- Acrylic paint: black, white, bright green, dark green, red, light blue, gray, yellow
- Nails, 10d bright finish: approx. 20
- Hardwood bead, 3/4" (19mm): 1 each
- Toy axles: 1 each 7/32" (5.5mm); 6 each 5/16" (8mm) dia.
- Plastic beads: 10 each 1 7/64" (6.75mm) o.d. (I used Bead Landing Crafting Beads, Michaels SKU 260414)
- Brass escutcheon pins: 8 each #18 x 3/4" (19mm)
- Sandpaper: 80, 120, 220 grits

- Water-based polyurethane
- Musical movement: "If I Only Had A Brain" (Available from www.kikkerland.com)
- Screws and brads: as necessary to reinforce glue joints
- Metal washers, 5/16" (8mm): 2 each
- Screws, #4 wood: as needed to fill registration holes
- Bolts, steel: 2 each 5/16" dia. x 3/4" (8mm dia. x 19mm)

Tools:

- Scroll saw and blades: pin end: 10, 18.5, 20 TPI; or reverse-tooth blades: #1, #3, #5
- Hand drill, drill press, and bits: 1/16" (2mm), 1/8" (3mm), 9/64" (3.5mm), 7/32" (5.5mm), 1 1/32" (8.7mm); 1/2" (13mm), 1" (25mm); brad point bits: 5/16" (8mm), 2 1/64" (8.3mm), 2 3/64" (9mm)

- Paintbrushes
- Clamps
- Steel putty knife

Step 6 Bead Jig:

- Plywood, 1/4" (6mm) thick: 3" (76mm) square
- Pattern DD copy
- Plastic beads (see above)
- Toy axle, 5/16" (8mm) dia.
- Cyanoacrylate (CA) glue
- Drill bits: 1/16" (2mm), 2 1/64" (8.3mm)

The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Patterns for **IF I ONLY HAD A BRAIN** are in the pattern pullout section.

ON THE WEB

Detailed step-by-step instructions for reference or download, and a video link are available on our website, www.scrollsawer.com.



When not woodtinkering, John Hutchinson finds a few spare moments for his multiple professions of architect, illustrator, and writer. His work has appeared in *Fine Woodworking*, *Woodworker's Journal*, *Popular Woodworking*, *American Woodworker*, and *Woodcraft Magazine*, as well as three books by *Popular Woodworking Books*. Questions and comments? Contact John at jhutchi2@columbus.rr.com.

Parts List

	Item	Material	No.	Dimensions*	Presentation	Paint
A	Screen (1=front; 2=back)	¼" (6mm) plywood	2	5 ½" x 10" (140mm x 254mm)	Measured Drwg.	Gray
B	Screen Spacer	⅜" (10mm) square dowel	2	5 ½" (140mm) long	Dimensions	Gray
C	Support Column	1" (25mm) round dowel	1	2" (51mm) long	Dimensions	Gray
D	Support Slab – Large	½" (13mm) plywood	1	1 ¼" x 4 ¾" (44mm x 124mm)	Pattern	Gray
E	Support Slab – Small	½" (13mm) plywood	2	1 ¼" x 1 ¾" (32mm x 44mm)	Dimensions	Gray
F	Base	⅜" (10mm) plywood	2	4 ⅜" x 10" (111mm x 254mm)	Measured Drwg.	Gray
G	Face - Half	¼" (6mm) plywood	2	1 ½" x 3 ¾" (38mm x 86mm)	Dimensions	Edges only†
H	Torso & Head	¼" (6mm) plywood	2	7" x 8 ¾" (178mm x 219mm)	Pattern	Torso black; edges†
J	Face - Full	¼" (6mm) plywood	2	3 ½" x 4" (89mm x 102mm)	Pattern	1 bright green; 1 face‡
K	Mouth	¼" (6mm) plywood	1	1" x 2 ½" (25mm x 64mm)	Pattern	Dark green
L	Head Top - Half	⅜" (10mm) plywood	1	1 ½" (38mm) square	Pattern	Edges only†
M	Head Top - Full	⅜" (10mm) plywood	4	1 ½" x 3 ¼" (38mm x 83mm)	Pattern	2 edges only; 2 head‡
N	Head Hinge	⅝" (16mm) round dowel	2	1 ¾" (20.6mm) long	Dimensions	Gray
Q	Drive Gear – Small Spur	¼" (6mm) plywood	2	1 ½" (38mm) round	Pattern	Clear polyurethane
R	Drive Gear – Large Spur	¼" (6mm) plywood	1	2 ¾" (70mm) round	Pattern	Clear polyurethane
S	Rotor Disc	¼" (6mm) plywood	1	3" (76mm) round	Pattern	
T	Rotor Rod	⅜" (3mm) o.d. brass rod	2	2 ½" (64mm) long	Dimensions	
U	Large Gear Washer	⅜" (3mm) plywood	2	2" (51mm) round	Pattern	
V	Light Bulb	¼" (6mm) plywood	1	1 ½" x 2 ¼" (38mm x 57mm)	Pattern	Yellow & gray
W	Question Mark	¼" (6mm) plywood	1	1 ½" x 2 ¼" (38mm x 57mm)	Pattern	Black
X	Geneva Drive – Drive Wheel	¼" (6mm) plywood	1	3 ⅝" (84mm) round	Pattern	
Y	Geneva Drive – Blocking Disc	¼" (6mm) plywood	1	2 ⅜" (60mm) round	Pattern	
Z	Geneva Drive – Pin	⅜" (3mm) brass rod	1	½" (13mm)	Dimensions	
AA	Geneva Drive – Driven Wheel	¼" (6mm) plywood	1	2 ⅝" (68mm) square	Pattern	
BB	Geneva Drive – Washer	⅜" (10mm) plywood	1	¾" (19mm) square	Pattern	
CC	Music Gear – Large Spur	¼" (6mm) plywood	1	3 ½" (89mm) round	Pattern	Clear polyurethane
DD	Music Gear – Small Bead	¼" (6mm) plywood	1	1 ⅝" (33mm) round	Pattern	Clear polyurethane
EE	Music Gear – Beads	Plastic	8	7/64" (6.75mm) o.d.		
FF	Music Gear Mount – Large	⅜" (10mm) plywood	1	2 ⅝" x 2 ⅞" (61mm x 62mm)	Pattern	Gray
GG	Music Gear Mount – Small	⅜" (10mm) plywood	1	2" x 2 ⅝" (51mm x 61mm)	Pattern	Gray
HH	Music Crank Pusher	⅜" (10mm) plywood	1	1 ½" (38mm) round	Pattern	*
JJ	Washer – Connection	⅜" (10mm) plywood	4	1" (25mm) round	Pattern	
KK	Washer – Wall Extension	⅜" (10mm) plywood	1	1" (25mm) round	Pattern	
LL	Washer	Metal	2	⅝" (8mm) dia.	N/A	
MM1	Geneva Drive shaft	⅝" (8mm) round dowel	1	3 ½" (89mm) long; trim to fit	Dimensions	
MM2	Crank driveshaft	⅝" (8mm) round dowel	1	4 ½" (114mm) long; trim to fit	Dimensions	
NN	Driveshaft Extension	⅜" (3mm) o.d. brass rod	1	1 ½" (38mm) long	Dimensions	
PP	Toy Axle	⅝" (8mm)-dia. hardwood	3	Trim to length		
QQ	Toy Axle Cap (cut off ⅝", or 8mm, axle)	Hardwood	1	N/A	N/A	
RR	Crank Disc	⅜" (10mm) plywood	1	3 ⅝" (84mm) round	Pattern	White
SS	Crank Knob	Hardwood bead	1	¾" (19mm) dia.	N/A	
TT	Crank Toy Axle	Hardwood	1	7/32" (5.5mm) dia.; trim to length	N/A	
UU	Musical Movement Riser	½" (13mm) plywood	1	Fit per movement	Dimensions	Gray
VV	Musical Movement	Metal	1	N/A	N/A	
WW	Neck Bolts	Metal	2	⅝" (8mm) dia. x ¾" (19mm) long	N/A	

*Note: Many of these measurements are exact pattern sizes. Add gluing and cutting allowances to your blanks as desired. † Refer to photo. ‡ See Paint Guide.

To avoid repetitive instructions, this page is included in each issue to assist novice scrollers with basic scrolling techniques.



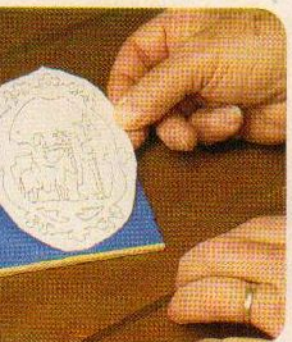
Squaring Your Table

Most scroll saws have an adjustable table that allows you to make cuts at different angles. There are times when you want the saw set at an angle, but most cutting is done with the blade perpendicular to the table. If the table is even slightly off-square, the cuts will be angled. This interferes with puzzle pieces, intarsia, segmentation, and many other types of scrolling projects.

The most common method for squaring a table uses a small metal square, or right angle tool. Set the square flat on the saw table against a blade that has been inserted and tensioned. Adjust the table to form a 90° angle to the blade.

The cutting-through method is also popular. Saw through a piece of scrap wood at least 3/4" (19mm) thick and check the angle of the cut using a square. Adjust the table until you get a perfectly square cut.

You can also use the kerf-test method. Take a 1 3/4" (44mm)-thick piece of scrap wood and cut about 1/16" (2mm) into it. Stop the saw, back the blade out, and spin the wood around to the back of the blade. If the blade slips easily into the kerf, the table is square. If it doesn't slide into the kerf, adjust the table and perform the test again until the blade slips in easily.



Attaching Patterns

Temporary-bond spray adhesive is the most common method used to attach patterns to stock. Photocopy the pattern. Spray the adhesive on the back of the copy of the pattern, wait a few seconds, and then press the pattern down onto the blank. Rubber cement or glue sticks work similarly.

You can also use graphite or carbon transfer paper. Place the pattern on the blank and slip a sheet of transfer paper in between the pattern and the blank. Use a few pieces of painter's tape to hold the pattern and transfer paper in place. Trace around the pattern with a red pen (so you know where you have traced). Choose a light-colored transfer paper for darker woods. Carbon paper costs less than graphite paper, but must be sanded off before finishing.

Stack Cutting

Stack cutting lets you cut several pieces of a project—or even several projects—at one time. Essentially, you attach several blanks together and cut them as one unit.

One way to attach blanks is with tape. Line all the layers up and wrap a layer of tape around the outside edge. You can also wrap the whole stack in tape for extra stability. Use masking tape, painter's tape, or clear packaging tape.

Hot-melt glue is another option. Glue the blanks together with a dot of hot-melt glue on each side.

You can also join pieces by driving brads or small nails into as many waste areas as you can. Cut off any overhanging nails as close to the surface as you can, and then sand them flush to avoid scratching or catching on the table.



Blade Tension

Before inserting a blade, completely remove the tension. Clamp both ends of the blade into the blade holders and adjust the tension. Push on the blade with your finger. It should flex no more than 1/8" (3mm) forward, backward, or side to side.

A blade that does not have enough tension will wander. It will also flex from side to side, making for irregular or angled cuts. If you press too hard on a loose blade, it will usually snap. A blade that has too much tension is more susceptible to breaking and tends to pull out of the blade holders. In general, it is better to make the blade too tight rather than too loose.

Blade-Entry Holes

Some patterns have blade-entry holes marked. If the pattern doesn't, place the holes near a line to be cut to prolong the blade life, but don't place the hole on a curving line or inside corner (if possible). Drill the hole perpendicular to the blank. Use a drill press if you have one; otherwise, use a hand drill and make the holes as vertical as possible. Drill through the blank into scrap wood to prevent tear out on the back side of the blank. If you have the space, use a larger bit—it will make it easier to thread the blades through. For thin veining cuts, use the smallest bit the blade will fit through.



Removing Patterns

Dampen a glued paper pattern with mineral spirits to aid in removal. Commercial adhesive removers work as well. A quick wipe of mineral spirits will remove most adhesives left behind on the wood.

ADVERTISING DIRECTORY

Advanced Machinery – page 15
800-727-6553
www.advmachinery.com

Bushton Manufacturing – page 7
620-562-3557
www.hawkwoodworkingtools.com

Carving Technologies – page 7
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www.graphictransfer.net

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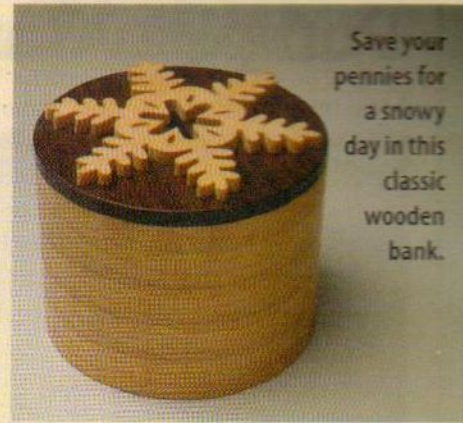
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Pumpkin Carriage Bed

Most little girls can only dream about sleeping in a bed straight out of the Cinderella story. For one lucky child, that dream came true. Jason Hulfish, an American artist who specializes in fantasy themed rooms and whose work has been seen on “Extreme Makeover Home Edition,” designed this custom-made pumpkin carriage bed. It was built by S + L Millworks Inc., in Tampa, Fla.

“We really enjoyed this project because it gave us the opportunity to do something out of the ordinary,” said the owner of S+L Millworks, Ron Sato.

According to the project leader, Garcia Rosa, the biggest challenge the team faced was working from a picture, with no measurements. “We had to scale it by looking at the 48”-diameter wheel in the back and comparing everything else to that wheel to get the correct proportions,” he said. “I worked with some true craftsman on my team and really enjoyed the challenge of this project. We had to do a lot of brainstorming to make it a reality.”

All of the parts started as templates cut from ¼”-thick plywood on a 26” Hawk scroll saw. The templates were either nailed, screwed, or attached with double-sided tape to red oak and cut with an inverted pin router.

Jason was thrilled with the finished product. “These guys were incredible!” he said. “Their work is impeccable and absolutely amazing. They are super talented, great guys to work with who really pulled a very difficult project together perfectly.”



Above: S + L Millworks Inc. of Tampa, Fla., made this full-sized pumpkin bed for a Moroccan princess.

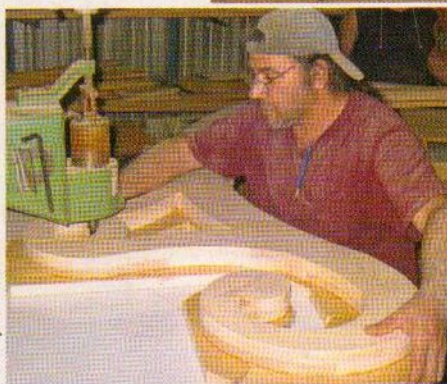


Photo by Ron Sato

Left: Garcia Rosa, who led the project, works at the inverted pin router.

Crafting Comfort for Hospice Patients

After his first wife died seven years ago, Al Hosman volunteered at the Kaplan Family Hospice House in Danvers, Mass., placing bereavement calls to families who lost loved ones. “I wanted to give back to the people who helped my wife transition from this life so peacefully by helping other patients and families when they needed it most,” said the retired organ builder.

Recently, Al realized that he could help even more by tapping into his woodworking skills. Inspired by knitted prayer squares, he came up with the idea of crafting elaborate crosses and Stars of David on a scroll saw to give to hospice patients as a bedside reminder of their faith. “I wanted to make something that would bring comfort to the patients and give their families a lasting memento of their loved one,” he said.

Working from resized patterns found in magazines, Al cuts intricate designs into pieces of mahogany, maple, or walnut. He sands each piece smooth and rubs it with an oil finish. Approximately 3” by 5” in size, the stars and crosses can be hung around the neck or on a wall.

Al said, “I hope that at the end of the day, when a patient or a family member is tired and feeling down, they look over at one of my projects and feel uplifted.”

You can reach Al Hosman at seabeescroller@gmail.com.



Photos courtesy of Care Dimensions.

Above: An assortment of Al Hosman’s scroll sawn wooden crosses and Stars of David.



Left: Al Hosman at the scroll saw.

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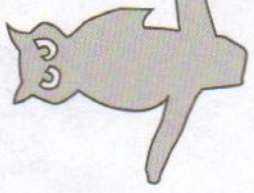
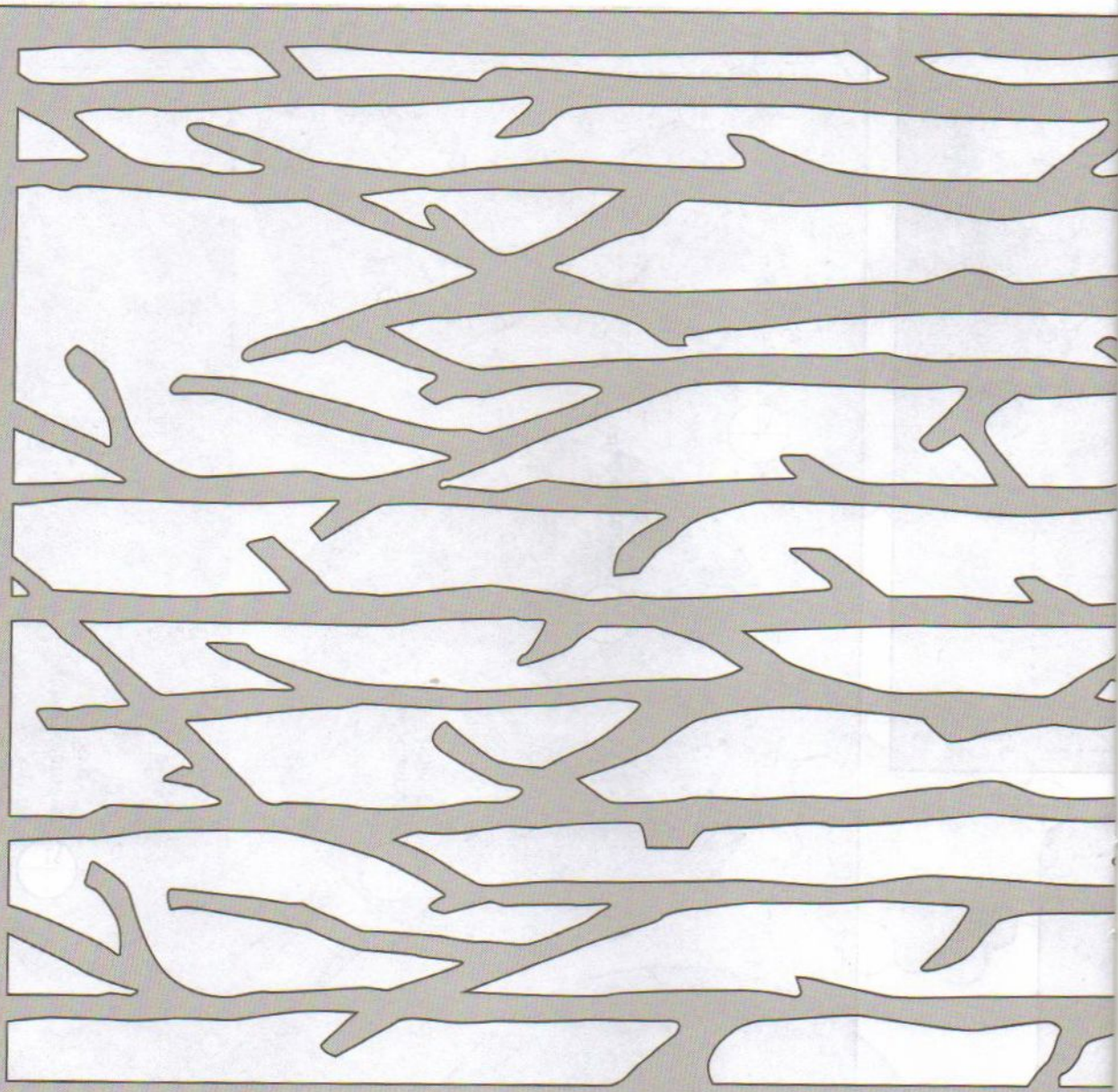
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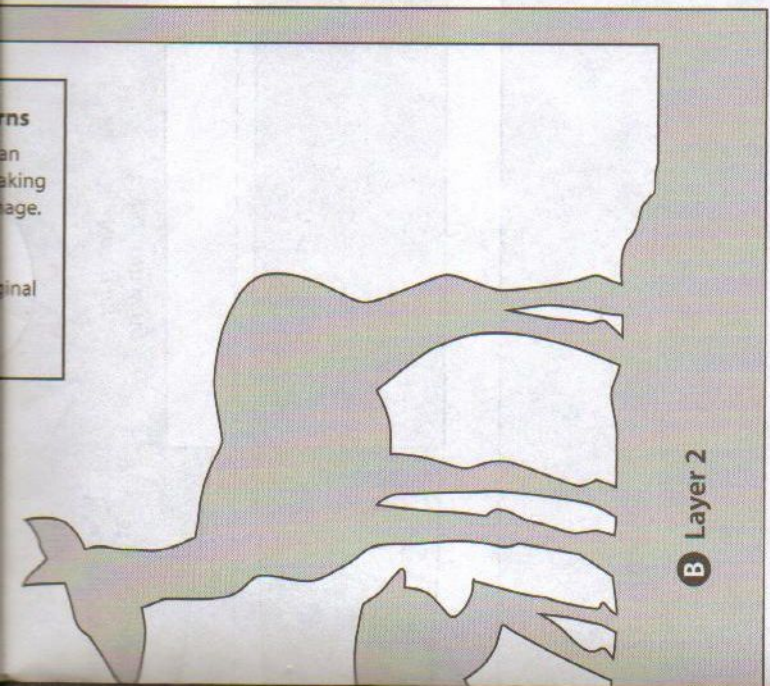
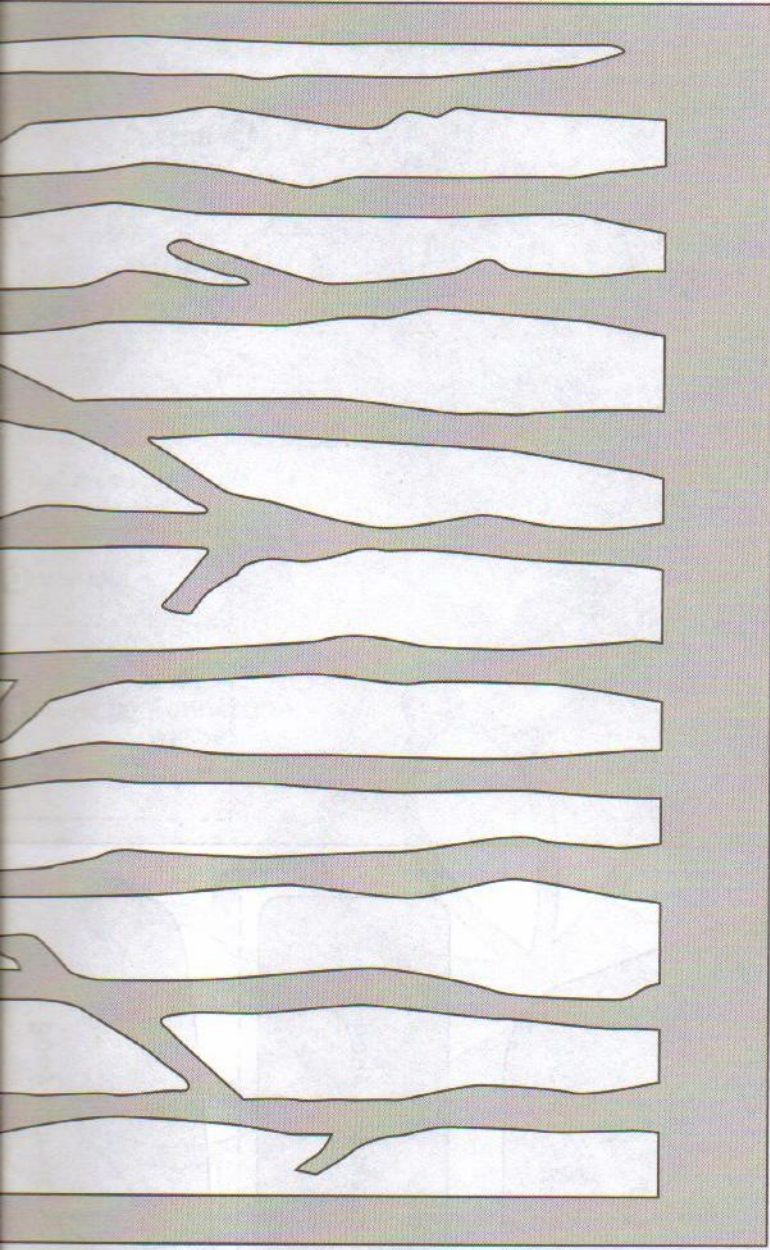


Full Moon Nightlight
 Page 62
 SSWC Issue 60
 Designer: Deb Nicholson

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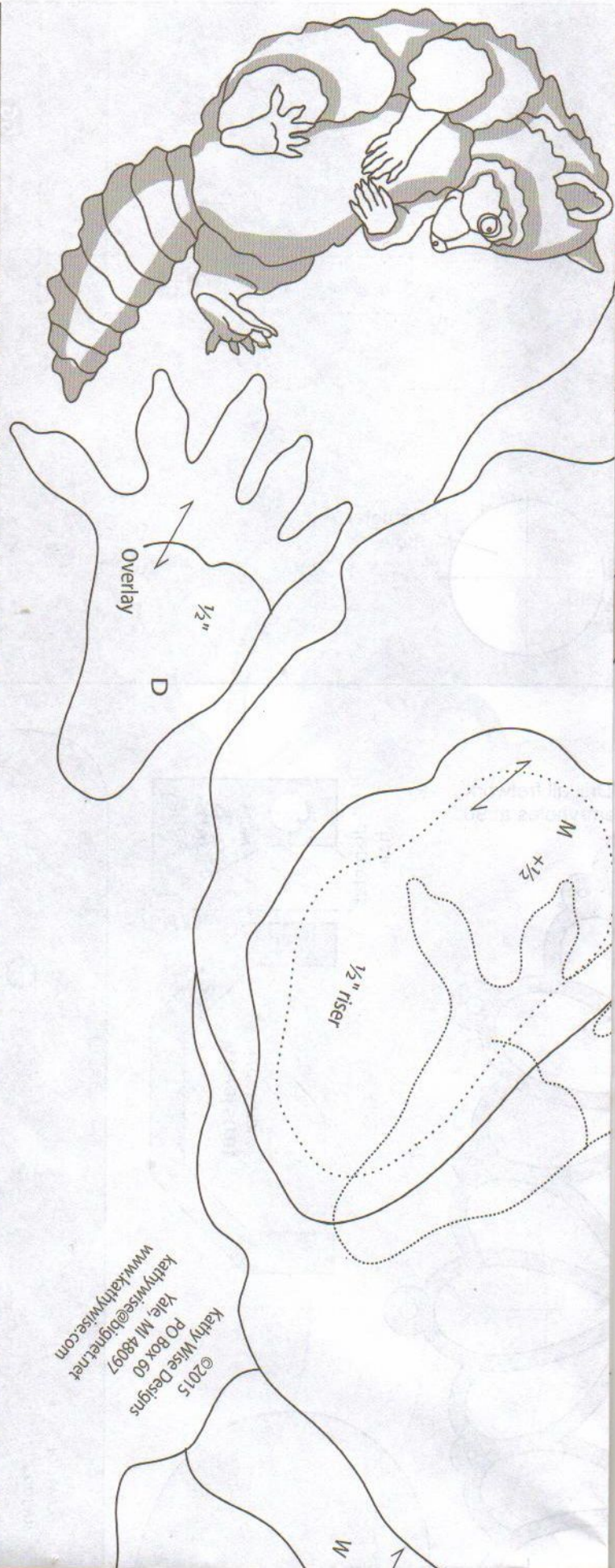


One inch



B Layer 2

ns
an
aking
age.
inal



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www.kathywise.com



Legend
 Start with 1/2" wood
 → Grain direction
 B Ebony / black
 D Medium shade of wood
 L Light shade of wood
 W Any white wood
 -1/4 Sand or plane down 1/4"
 +1/2 Use 1/2" thicker wood or shim
 1/2" riser

1/2" Overlay

MD

2014/11

8/1

1/2" riser for ear if needed

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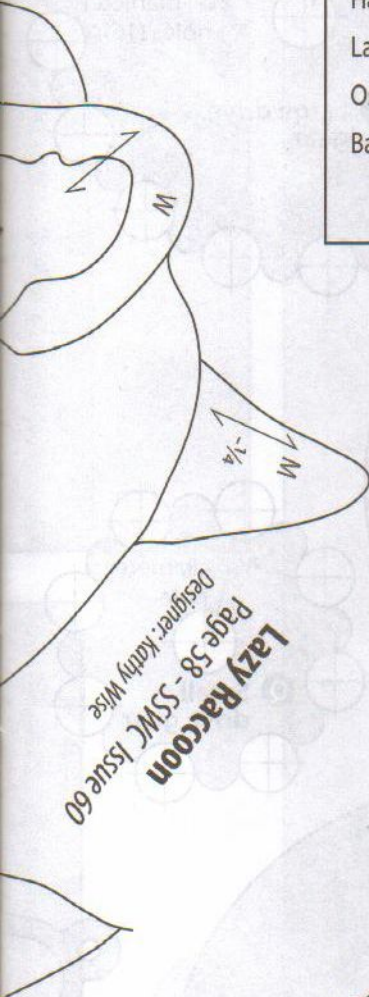
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All patterns on this pullout section: © 2015 Scroll Saw Woodworking & Crafts

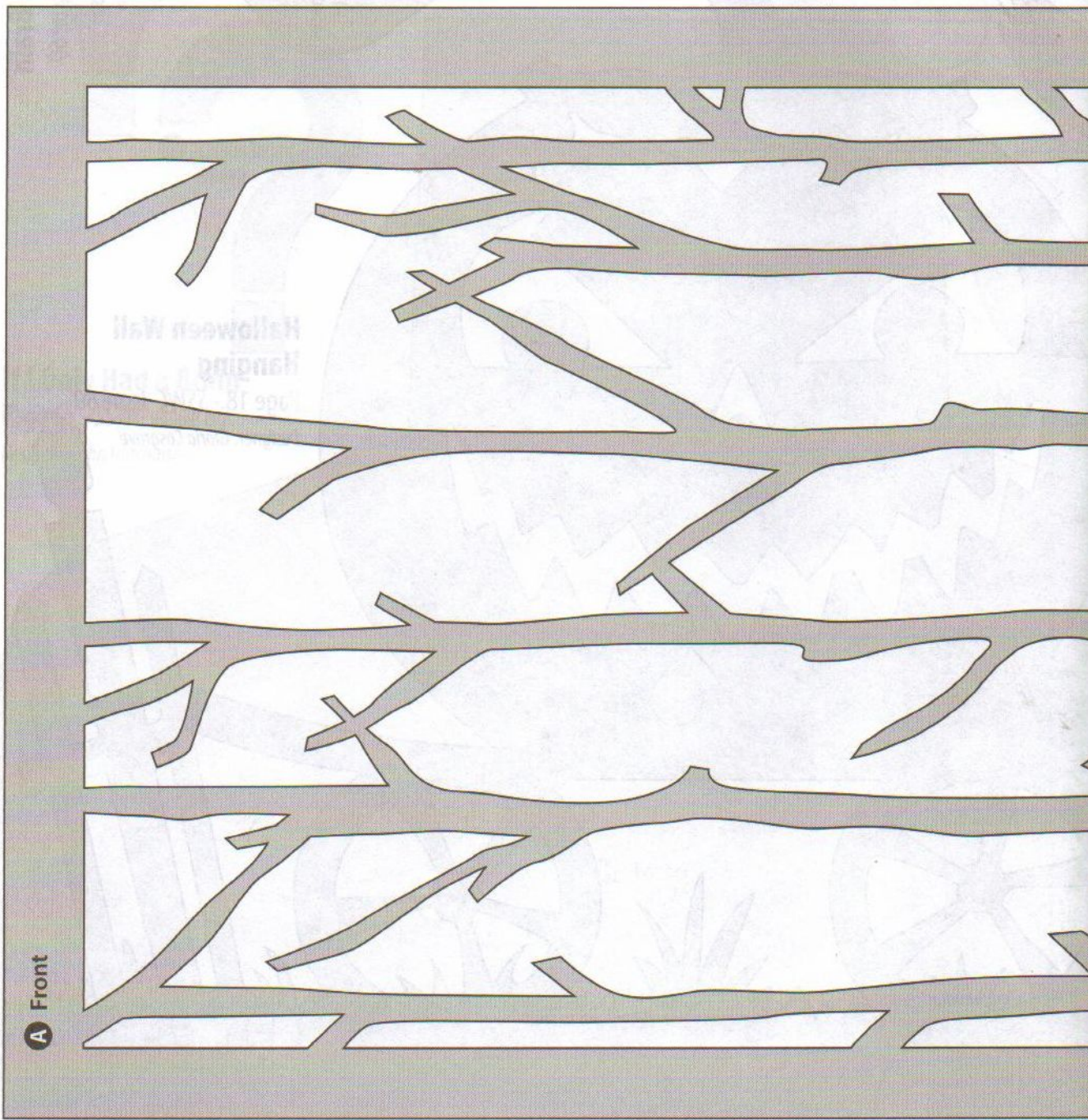
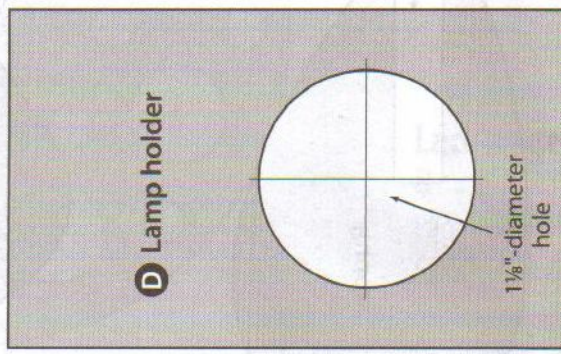
Halloween Wall Hanging	18	Lazy Raccoon	58
Lace-Edged Bowl	23	Full Moon Nightlight	62
Osprey Intarsia	36	If I Only Had a Brain	65
Barnstorming Biplane Toy	54		

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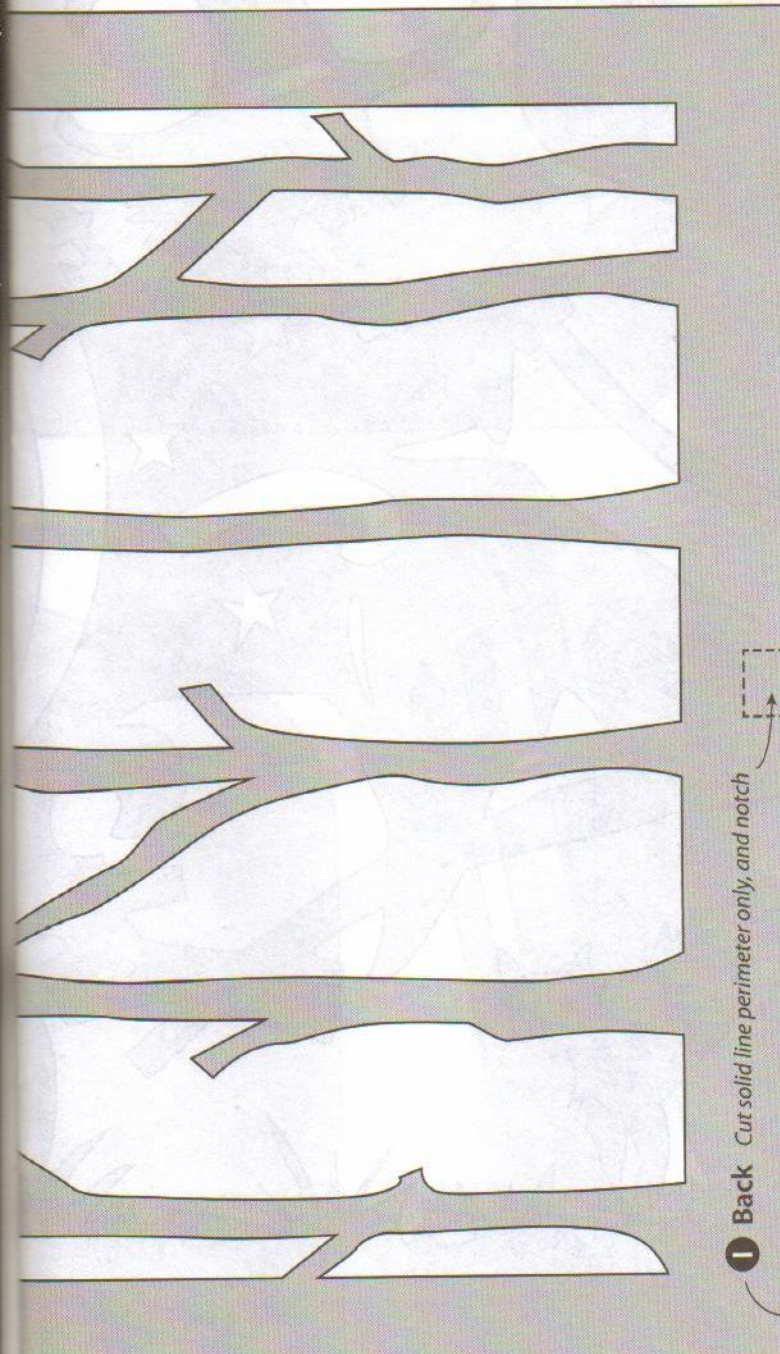
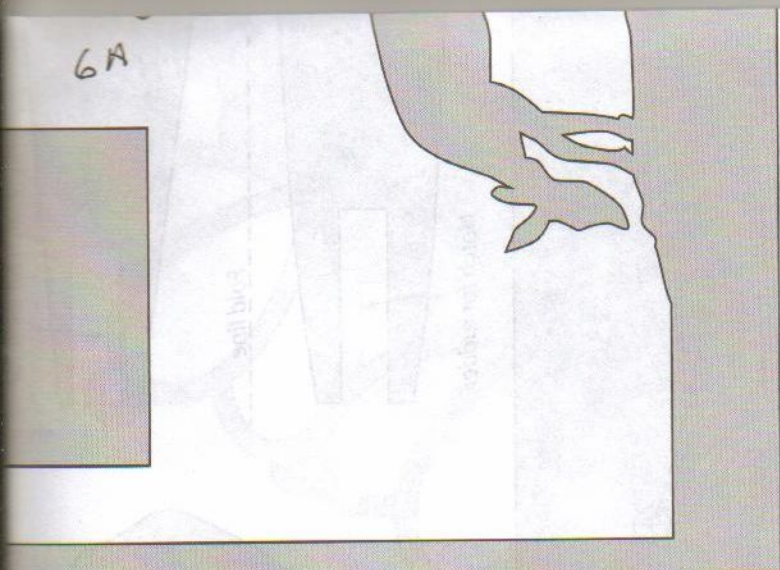


Lazy Raccoon
 Page 58 - SSWC Issue 60
 Designer: Kathy Wise

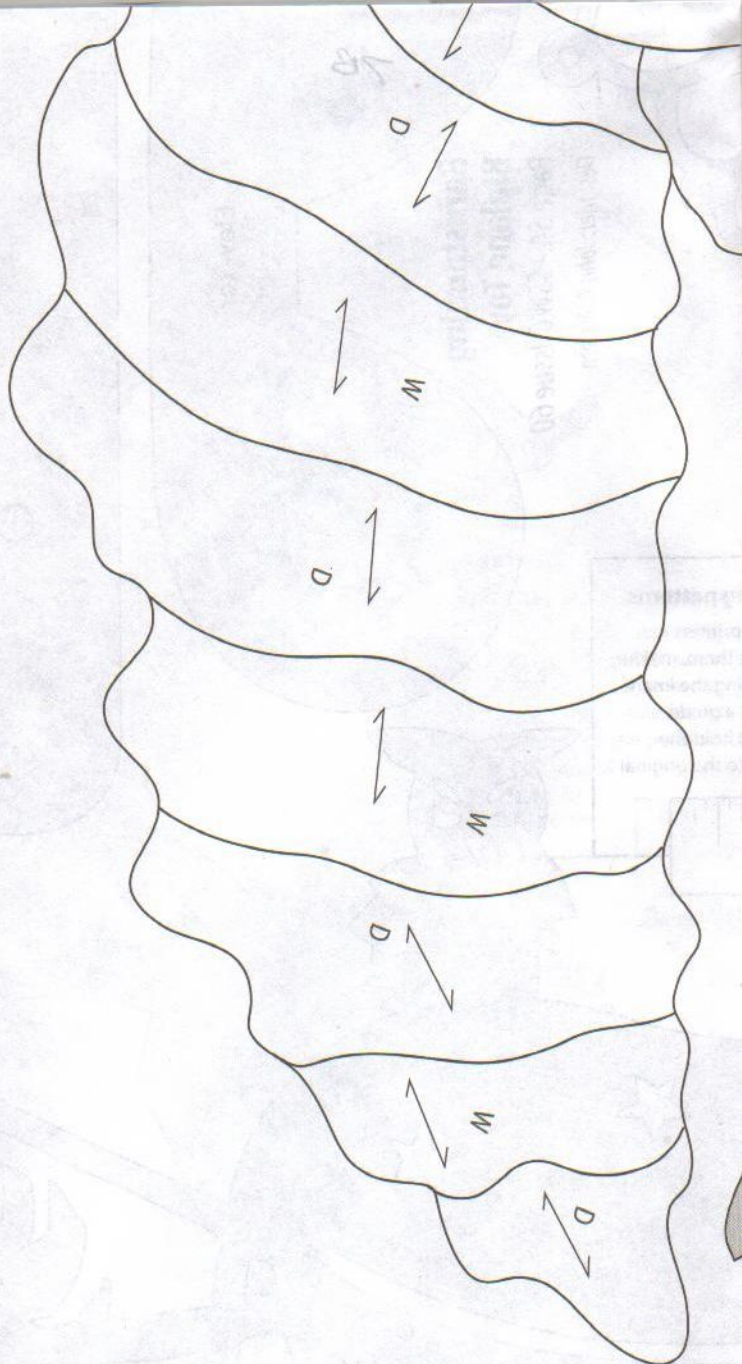




6A



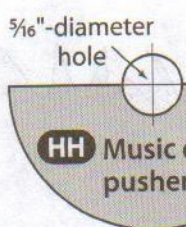
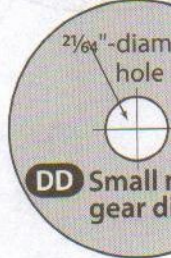
1 Back Cut solid line perimeter only, and notch

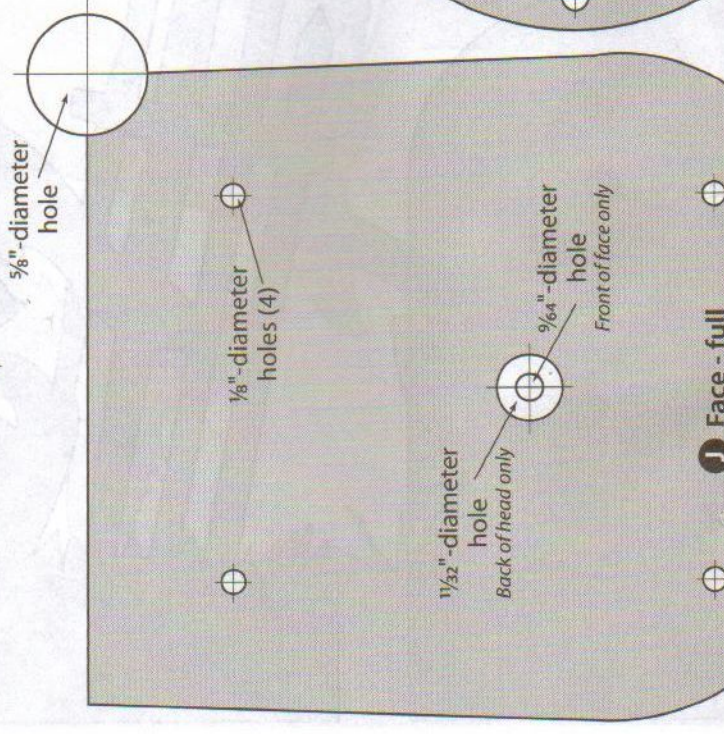
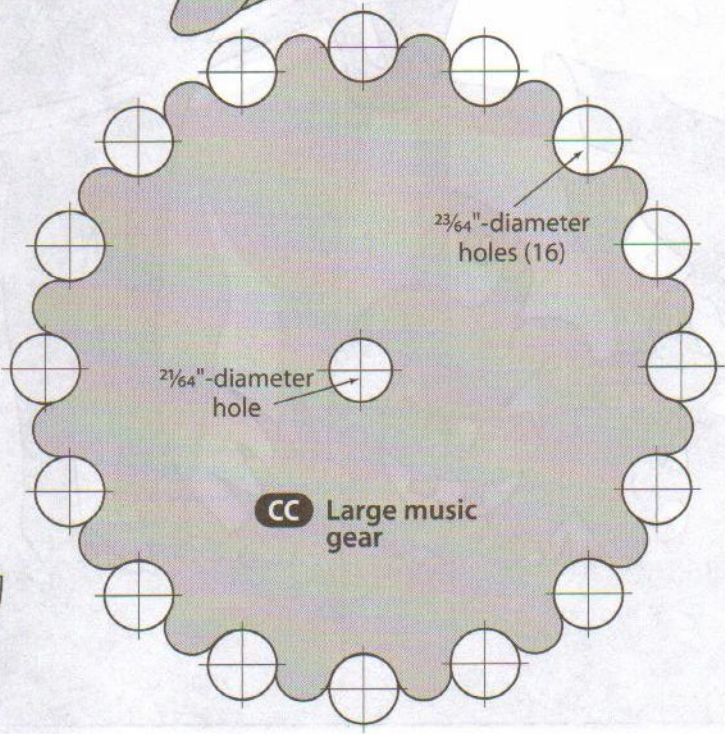
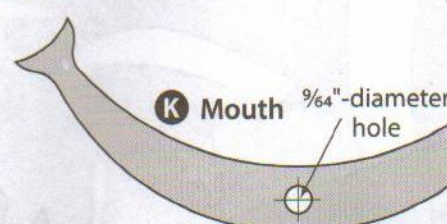


If I Only Had a Brain

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Designer: John Hutchinson





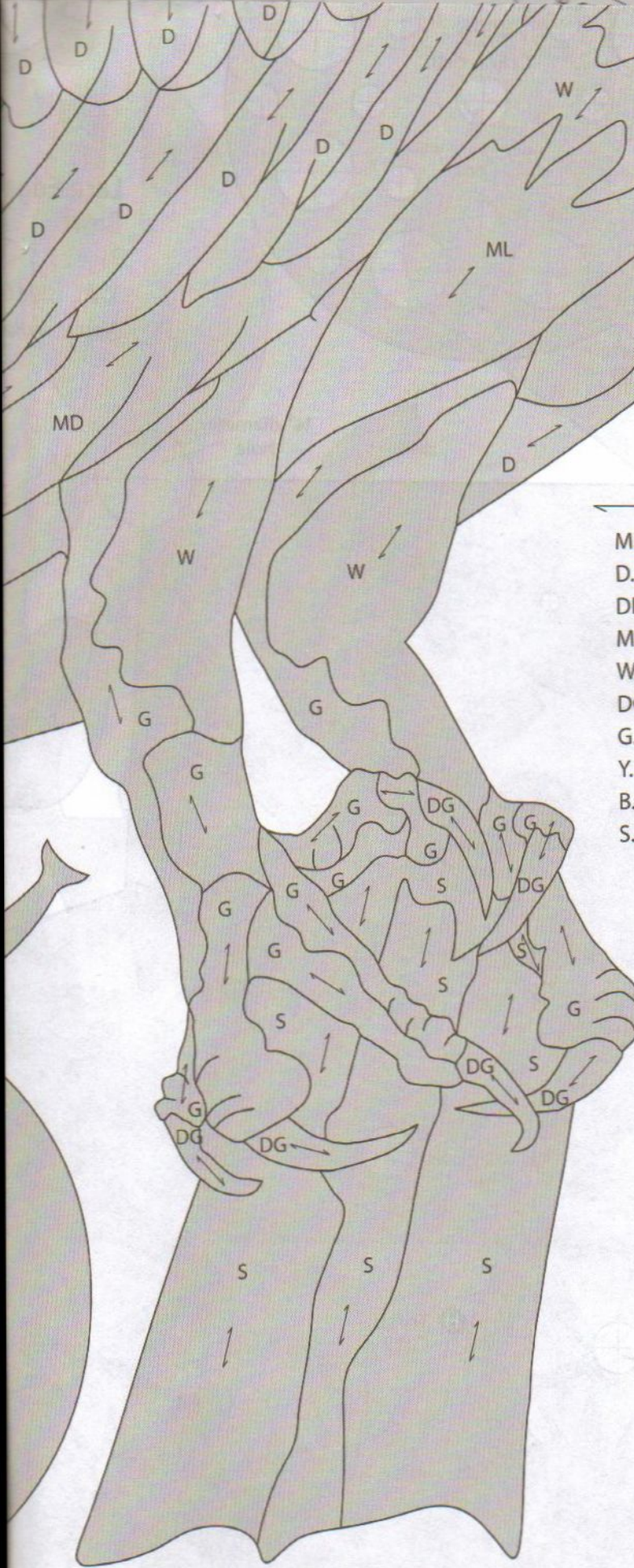
Osprey Intarsia

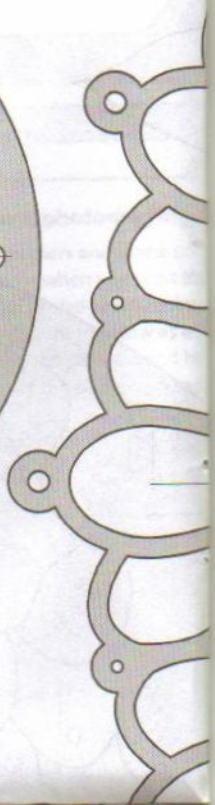
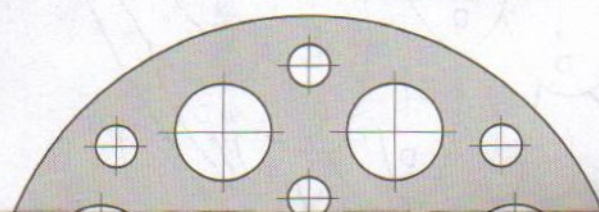
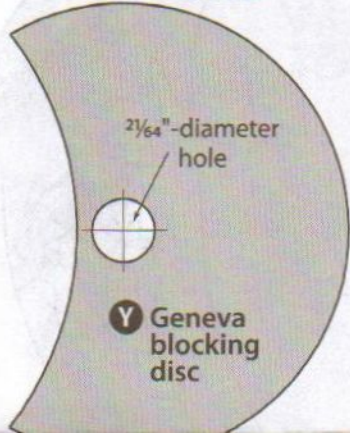
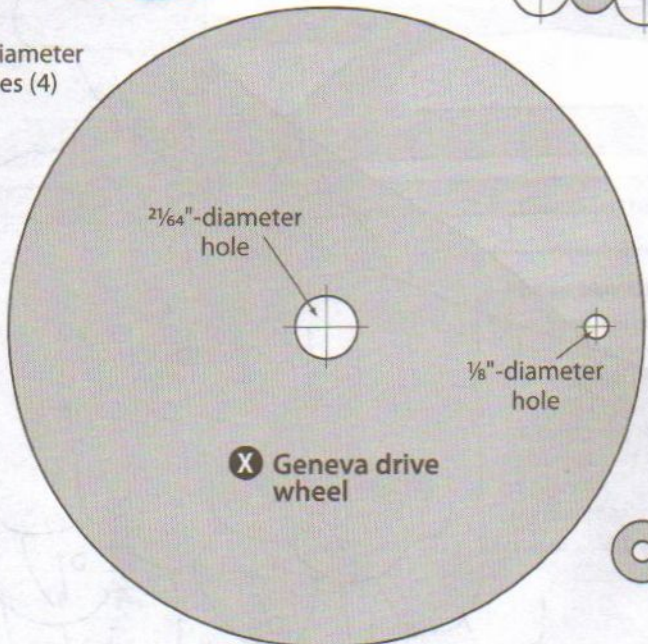
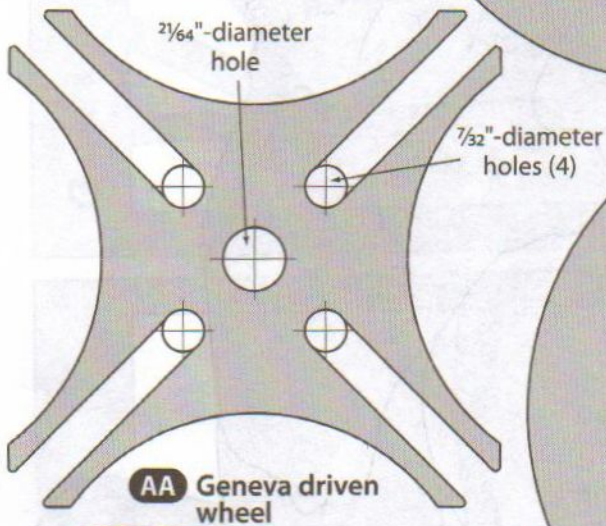
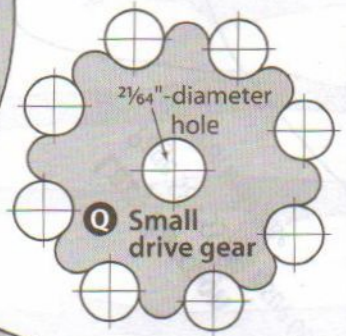
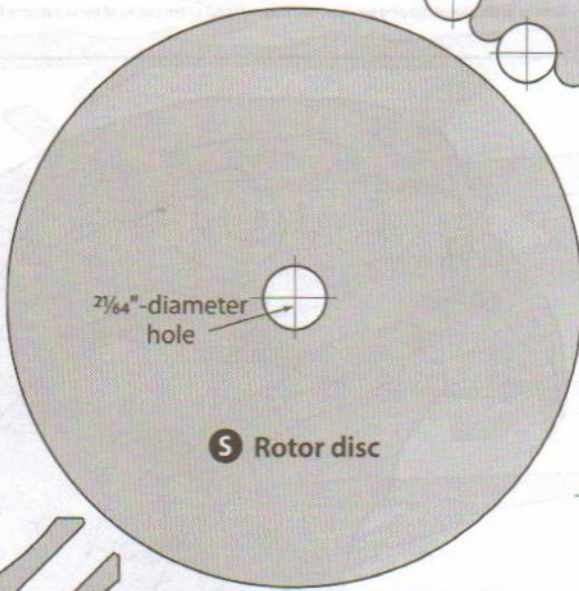
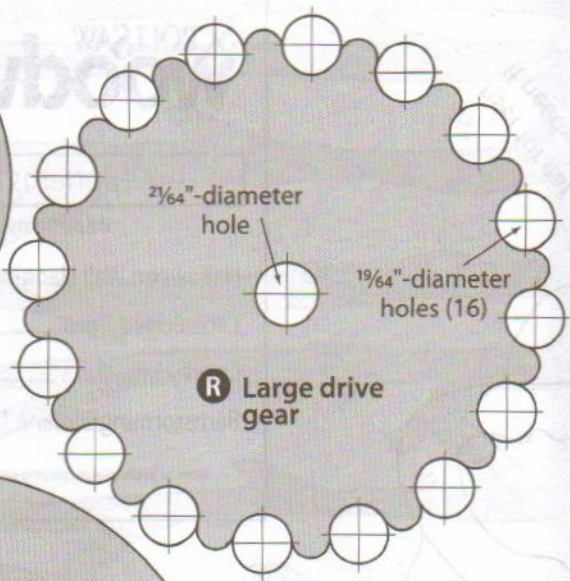
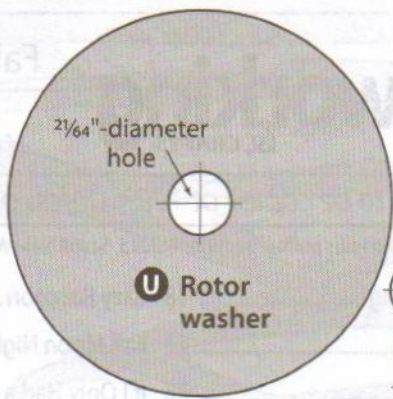
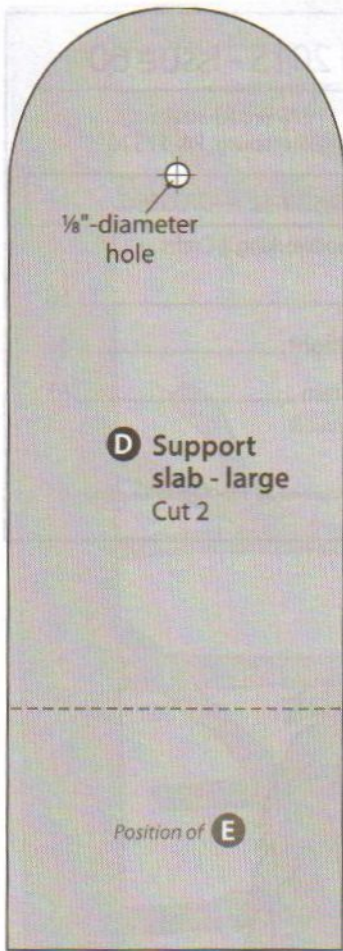
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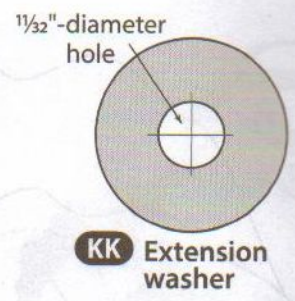
Designer: Janette Square

Legend

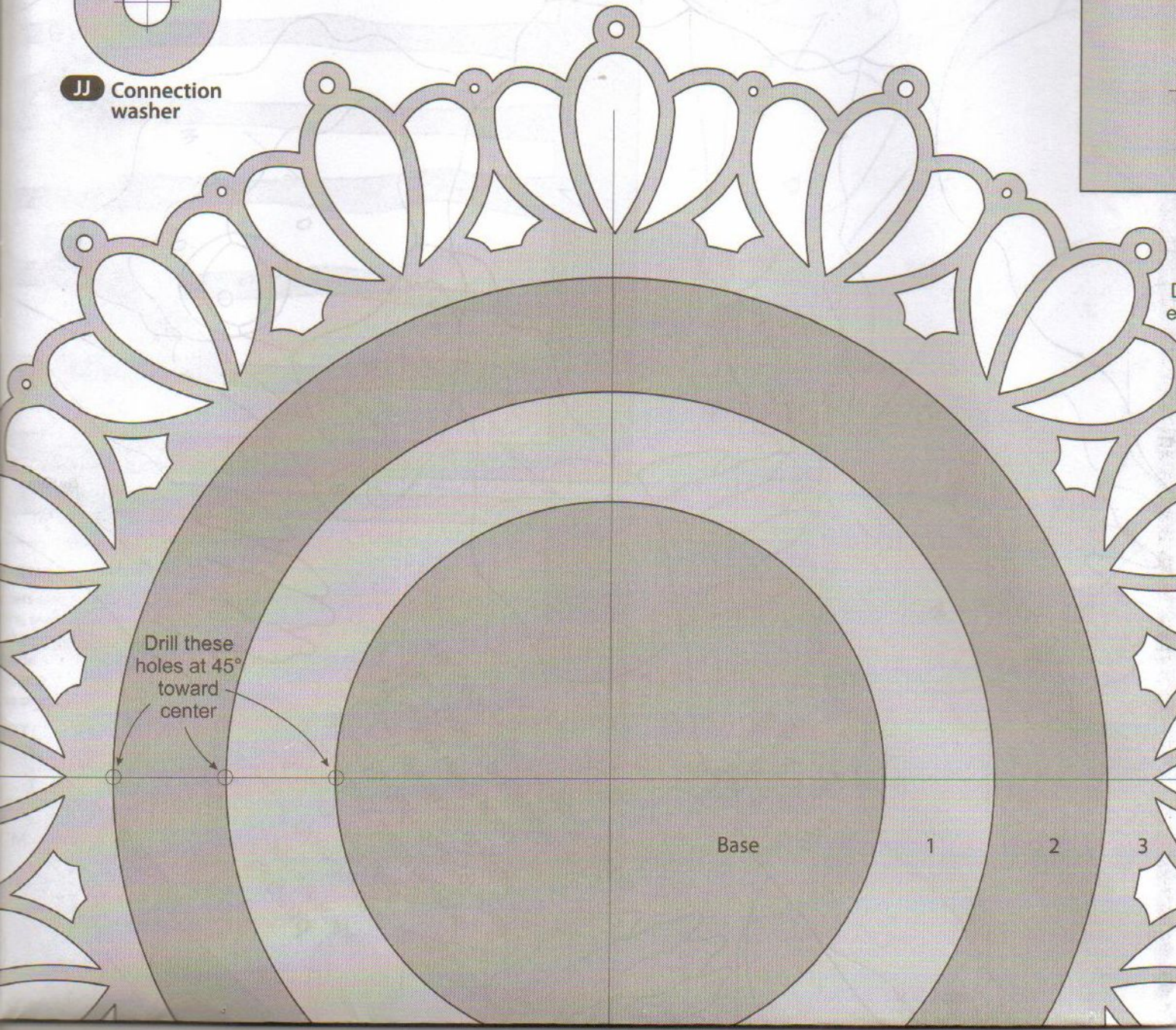
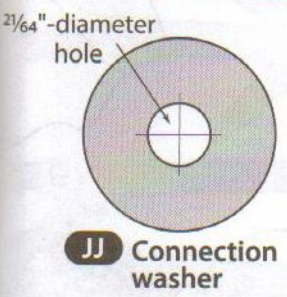
- ↔ Grain direction
- ML..... Medium light (sycamore)
- D..... Dark (Peruvian walnut)
- DF..... Dark figured (figured Peruvian walnut)
- MD... Medium dark (claro walnut)
- W..... White (aspen)
- DG... Dark gray (buckeye burl)
- G..... Gray (blue pine)
- Y..... Yellow
- B..... Black
- S.... Spalted

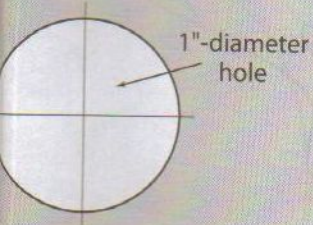
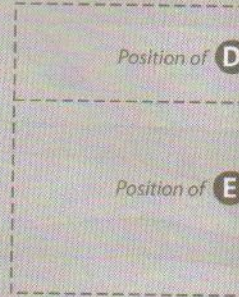
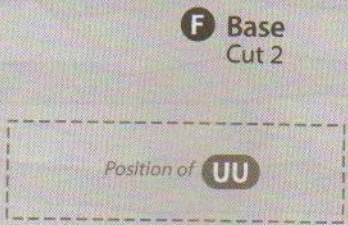




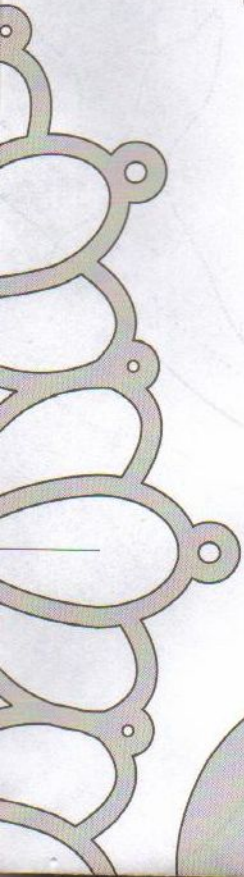
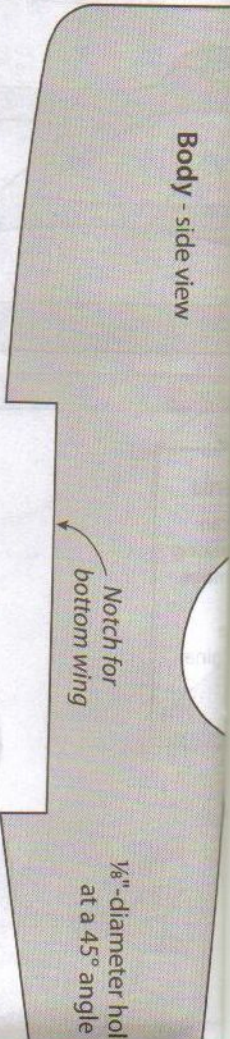
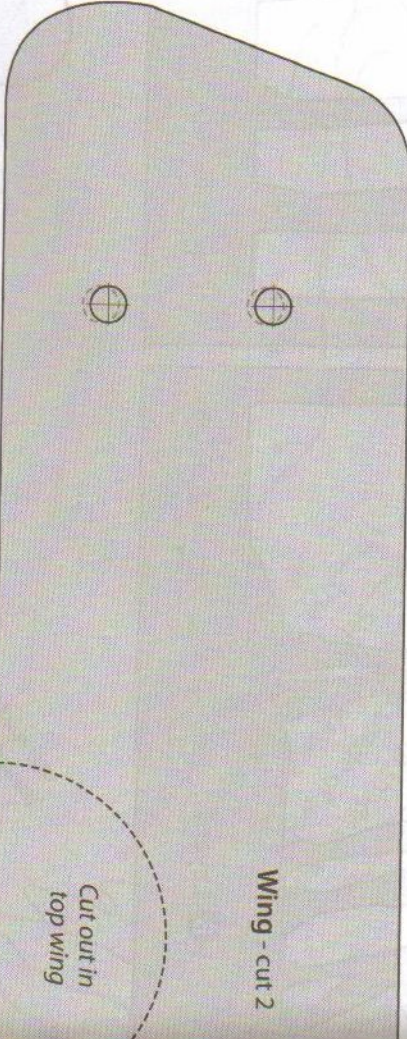
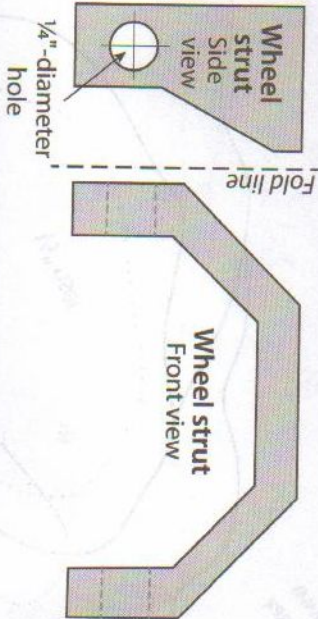


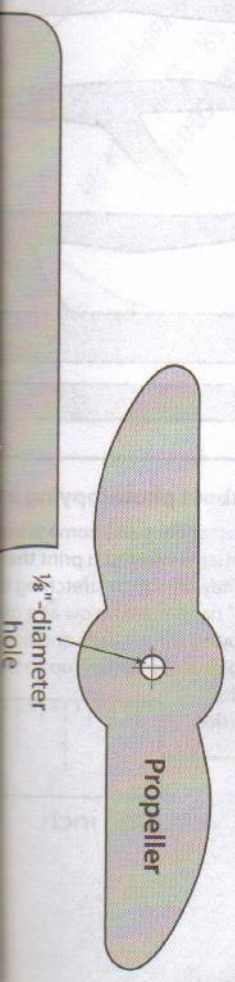
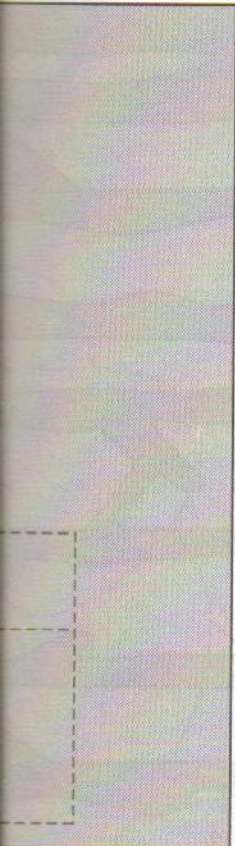
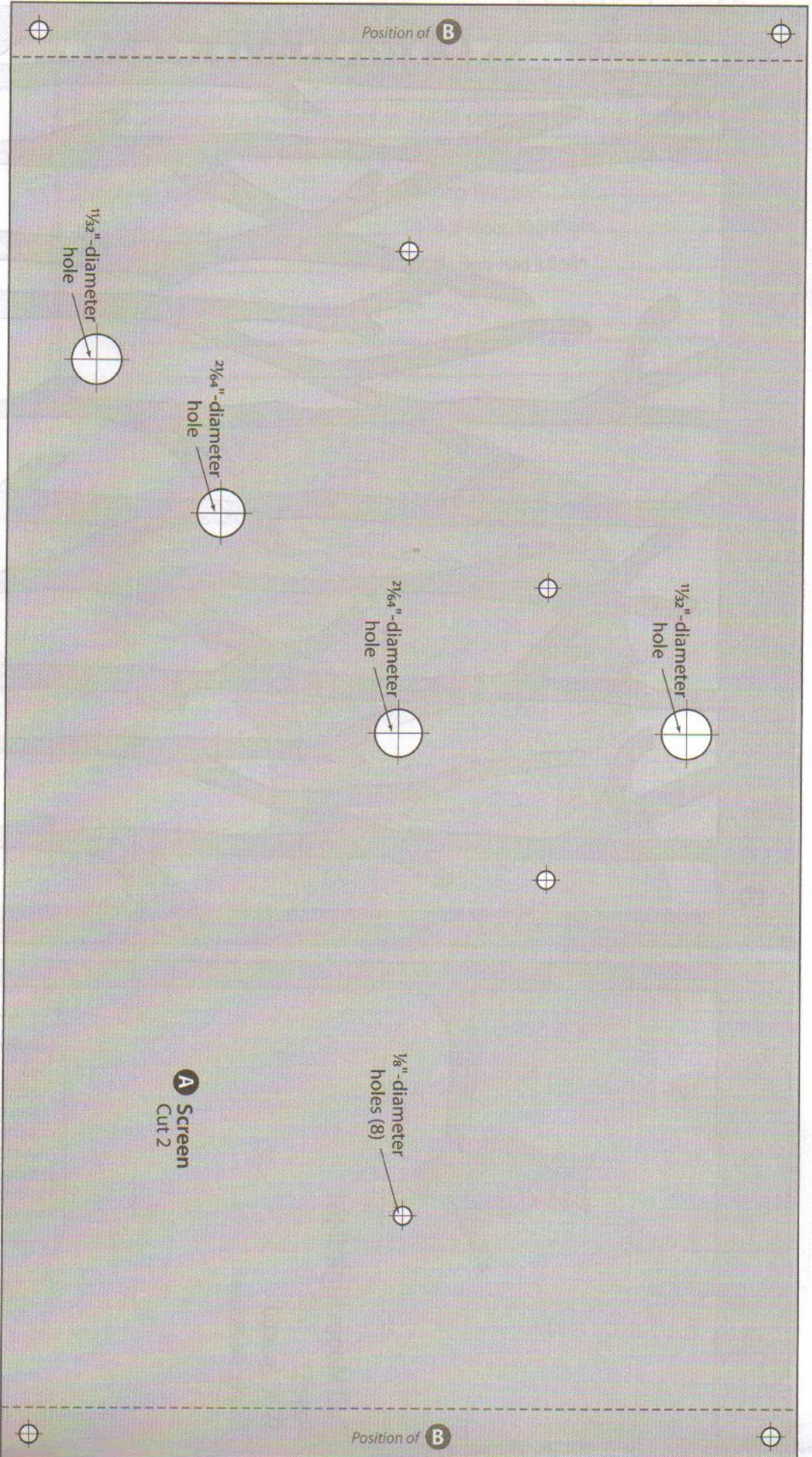
If I Only Had a Brain
 Page 65 - SSWC Issue 60
 Designer: John Hutchinson





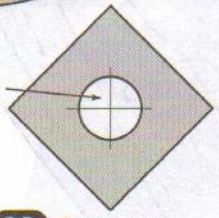
Drill all fretwork
tryholes at 90°



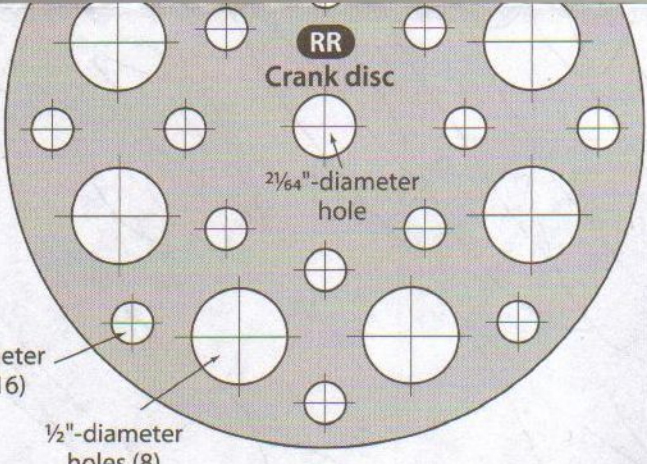


50

$2\frac{1}{64}$ "-diameter hole



BB Geneva washer



RR Crank disc

$2\frac{1}{64}$ "-diameter hole

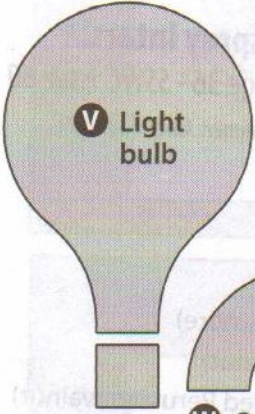
$\frac{7}{32}$ "-diameter holes (16)

$\frac{1}{2}$ "-diameter holes (8)

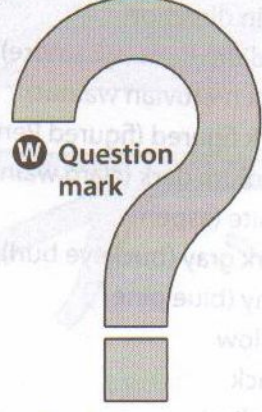
Lace-Edged Bowl

Page 23
SSWC Issue 60

Designer: Jay Hammer



V Light bulb

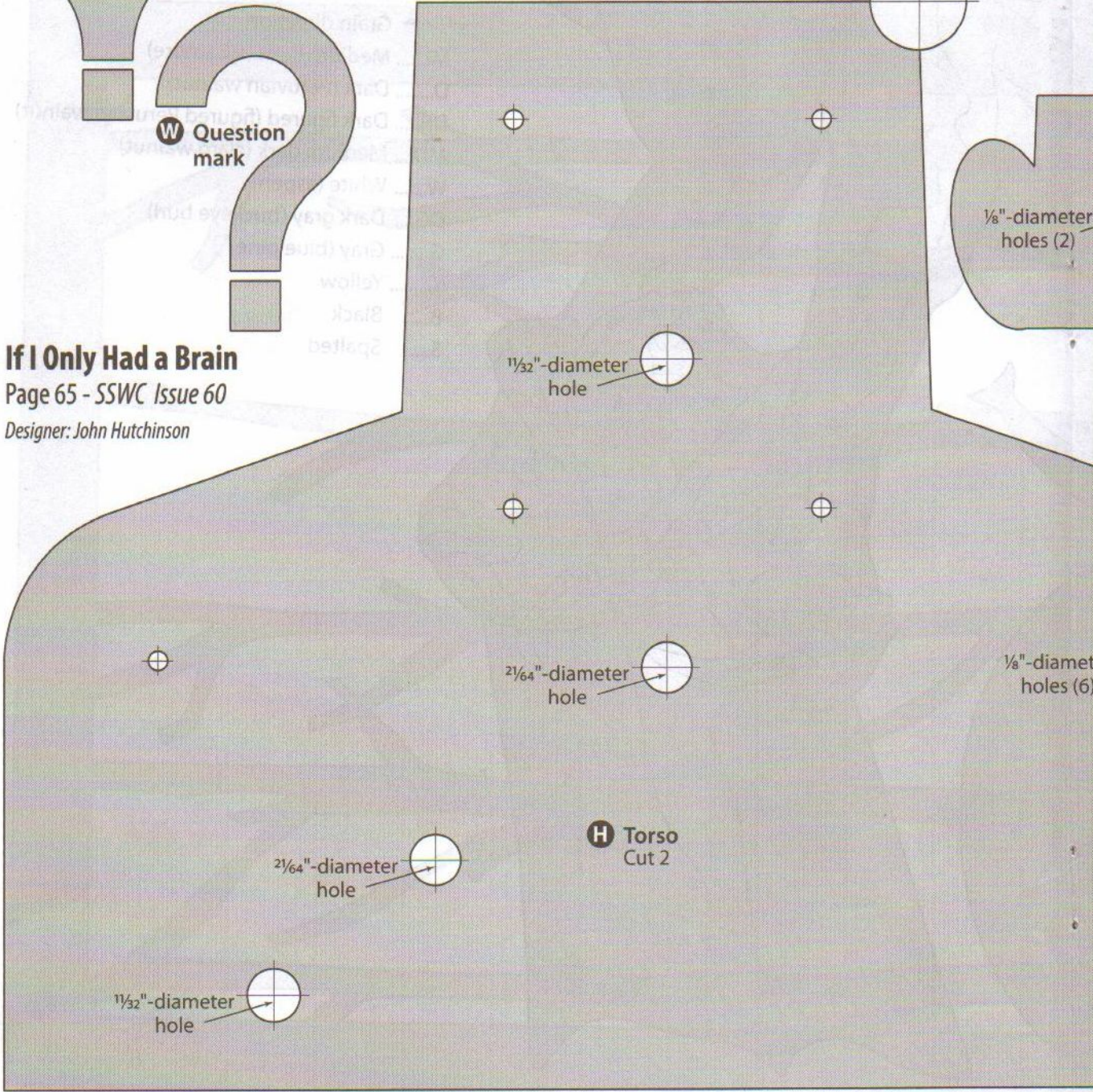


W Question mark

If I Only Had a Brain

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Designer: John Hutchinson



$\frac{5}{8}$ "-diameter hole

$\frac{1}{32}$ "-diameter hole

$\frac{1}{8}$ "-diameter holes (2)

$2\frac{1}{64}$ "-diameter hole

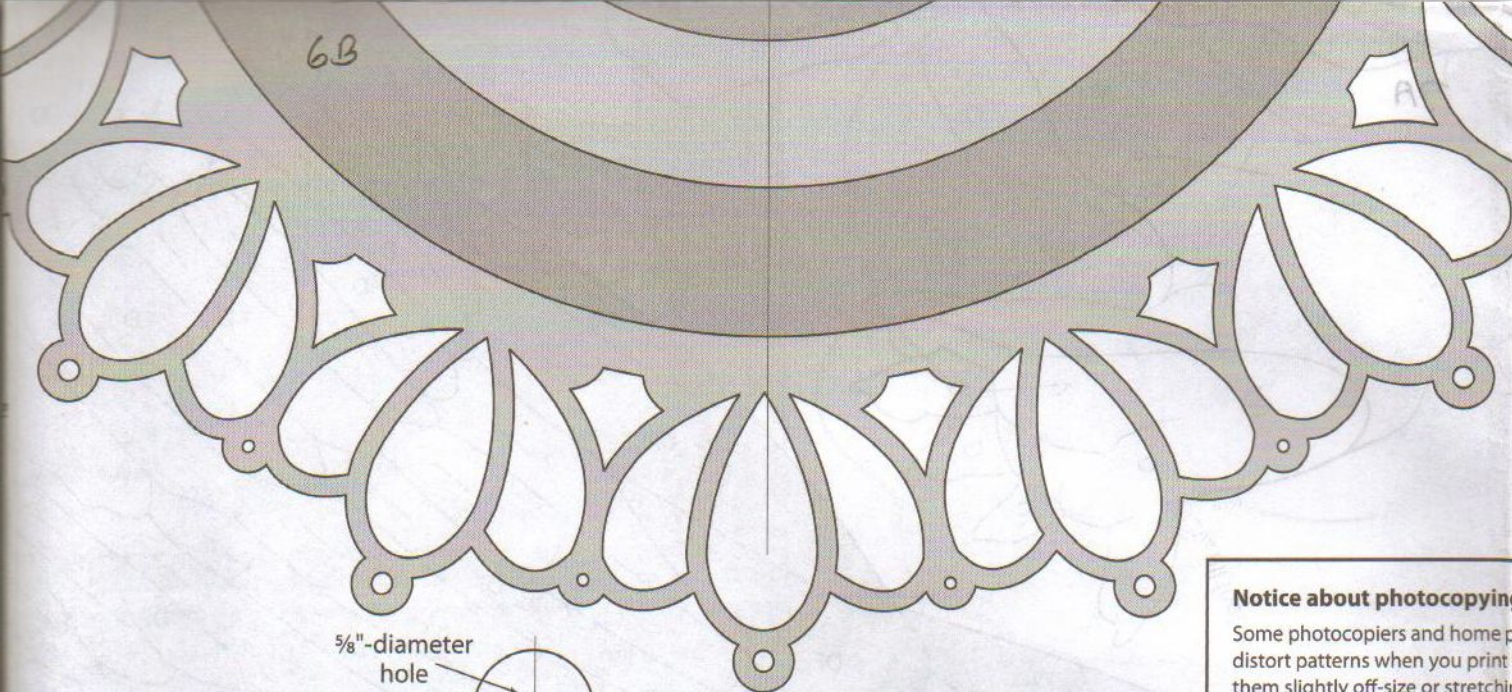
$\frac{1}{8}$ "-diameter holes (6)

$2\frac{1}{64}$ "-diameter hole

H Torso Cut 2

$\frac{1}{32}$ "-diameter hole

6B



3/8"-diameter hole



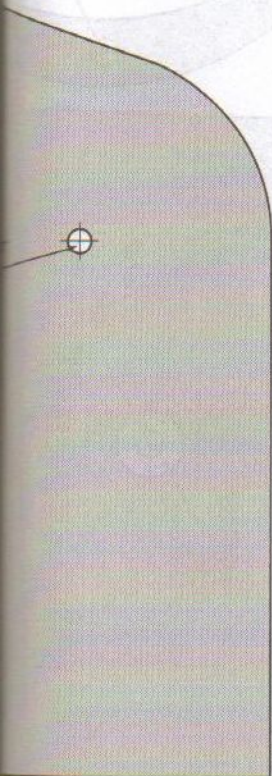
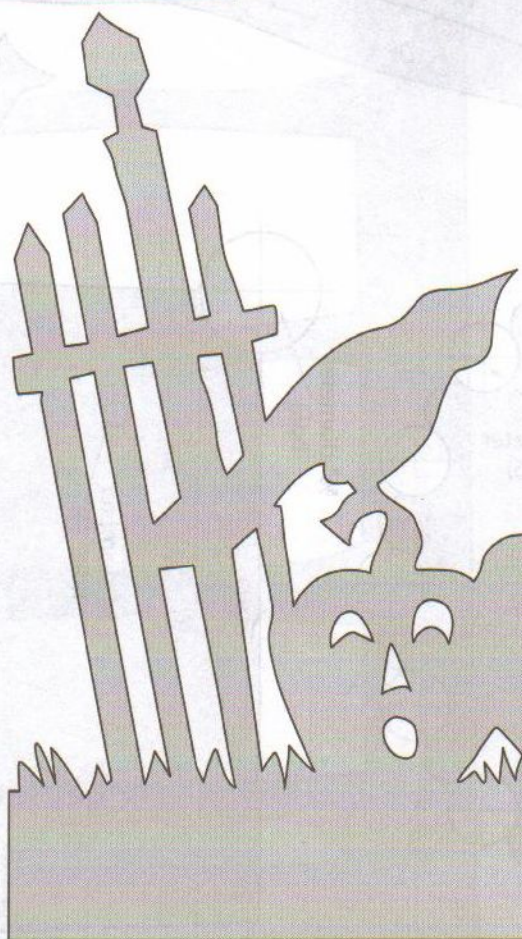
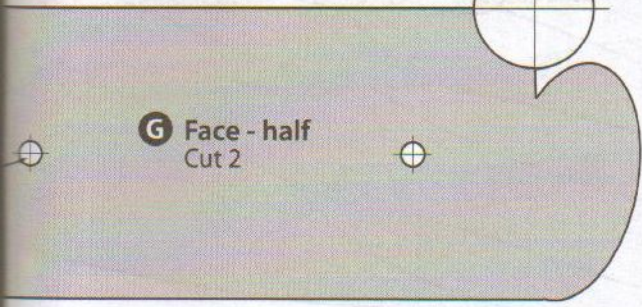
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One inch

G Face - half
Cut 2



Notch for elevator

Fold line

Notch for rudder

1/16"-diameter holes (4)
first, then
3/16"-diameter
at a 20° angle

Elevator

7B

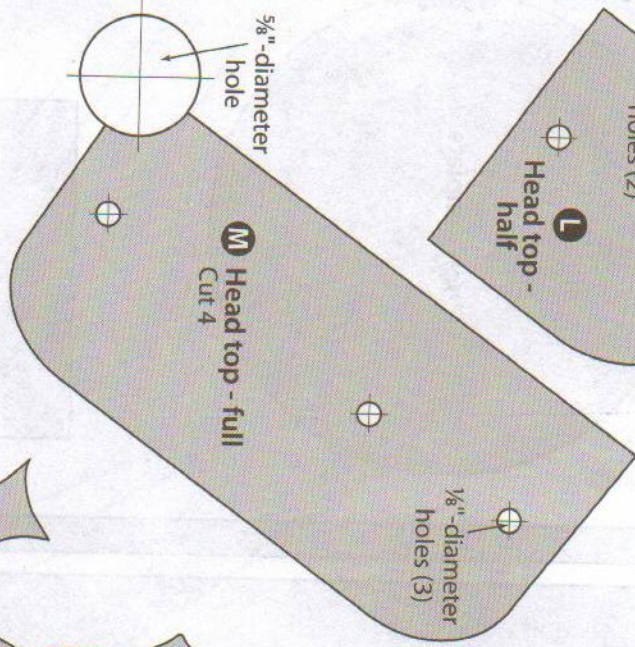
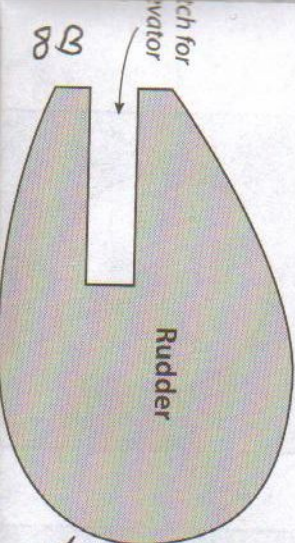
Barnstorming Biplane Toy

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Designer: John A. Nelson

patterns
Users can
them, making
g the image.
guide
old the
the original





If I Only Had a Brain
Page 65 - SSWC Issue 60
Designer: John Hutchinson



Halloween Wall Hanging
Page 18 - SSWC Issue 60
Designer: Gloria Cosgrove