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SCROLLSAW Woodworking & CRAFTS

WINTER 2020
ISSUE 81

Woodland Magic

*Birds,
Bears,
Wolves,
& More*

**Classic
Nativity
Scene**

**Easy-Scroll
Christmas Tree**

**Compound Cut
Jewelry & Ornaments**



PLUS
*Spaceship-Themed
Puzzles*

FOX CHAPEL
PUBLICATION

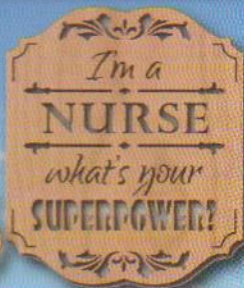
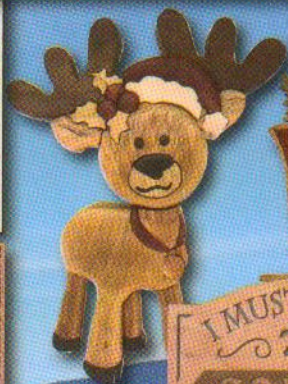
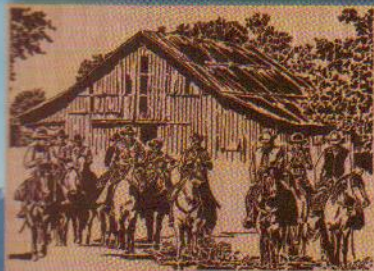
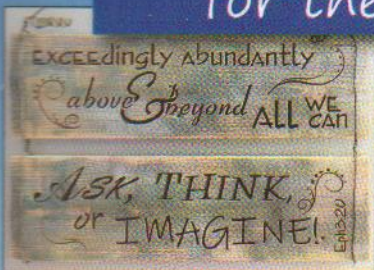


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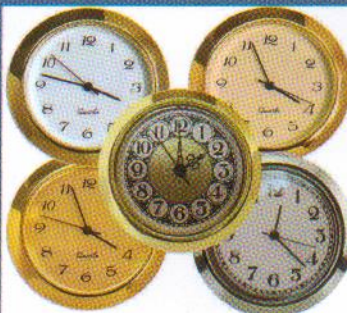
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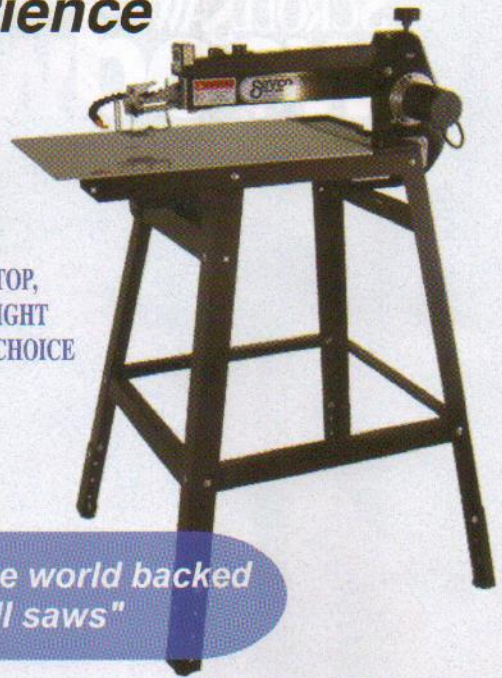
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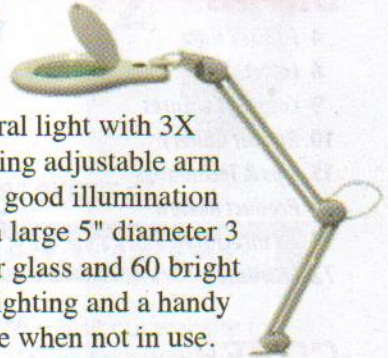
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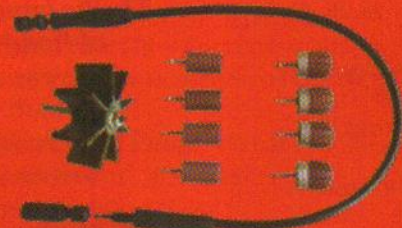
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Find these free extras at

SCROLLSAWER.COM

- **Bonus Pattern** – Visit our website to download the design for a majestic fretwork wolf.
- **Free Projects** – For more wintry projects, visit the How To section on our website.
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To promote scrolling as an artform and an enjoyable pastime—for all ages and all skill levels.

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Keeping the Shop Lights Burning

It seems to be a deep human impulse to meet the darkest weeks of the year with a combination of color, activity, and light. As the days shorten and the air gets colder, we surround ourselves with beautiful things, craft keepsakes for those we love, and leave lamps burning late into the night as a reminder of longer, brighter days ahead.

Woodworkers have a head start on all of this. The strategies the rest of the world uses to ward off the wintry darkness are already part of the scrollsawer's playbook—from collecting exquisitely colored hardwoods, to tirelessly preserving a friend's likeness in fretwork, to leaving the shop lights ablaze long past the rest of the world's bedtime. And even if the end product isn't perfect or the grand gesture doesn't go as planned, we can at least commit to the third and most important act: keeping the lights burning anyway with persistence and hope.

Let the projects in this issue keep your shop alight all winter. Trim the tree with a quartet of timeless geometric ornaments (page 26), cut a glorious layered nativity scene you'll never want to pack away (page 38), or assemble an array of children's toys that will actually last past the first hour of play (page 40 and page 43). Learn to transform angled rings of hardwood into an elegant vessel for your kitchen (or someone else's) (page 52), or even brighten a favorite nook with a fierce intarsia bear bust (page 20).

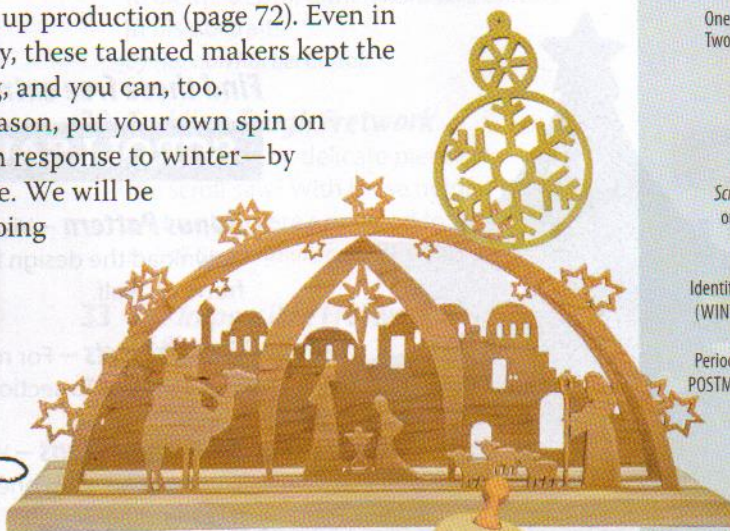
If you have no idea what to make or where to start, we've included not one but three artist features in this issue to guide and inspire. Read about Fiona Kingdon, who creates otherworldly fretwork on a rescued scroll saw in her Northamptonshire garden shed (page 33); follow Leonard Locatis as he constructs "wooden paintings" from reclaimed barn wood on the West Coast (page 12); or get a glimpse into the Long Island father-son team, Par Puzzles, who have turned lockdown lemons into lemonade by buckling down and ramping up production (page 72). Even in times of uncertainty, these talented makers kept the shop lights burning, and you can, too.

This holiday season, put your own spin on that entirely human response to winter—by continuing to create. We will be here in our shop, doing the same.

Happy scrolling!



Kaylee Schofield, Editor
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Note from the Editor: During a complicated and often stressful time, it can be therapeutic to focus your energy on creative pursuits. In that spirit, we asked scrollsawers what they've been working on during the 2020 quarantine. Here are some of their responses.



▲ Don't Rock the Boat

Greatly enjoyed this one. I modified the plans by Dave Van Ess from issue #78. Thanks, SSW&C!

Rafael Restrepo, Suba, Colombia



▲ Tree of Life

The original pattern for this piece, by John Nelson, is much smaller and cut from one piece of ply. I enlarged the design and then made the tree, branches, roots, and frame from two pieces of sapele. I don't remember how many leaves his pattern had, but I made mine with 60. Each leaf is made of a different wood species found around the world to truly make this a tree of life.

Robert Carpentier, West Islip, N.Y.



▲ Light the Way

I cut the lantern's details with Pegas #3 MGT blades. It's one of my many quarantine projects.

Barb Enders, Winnipeg, Manitoba

▼ Tree Frog

I had a lot of fun with Janette Square's project from the summer 2020 issue (#79). The most difficult parts were the mouth and legs.

Marcello Martinelli, Modena, Italy

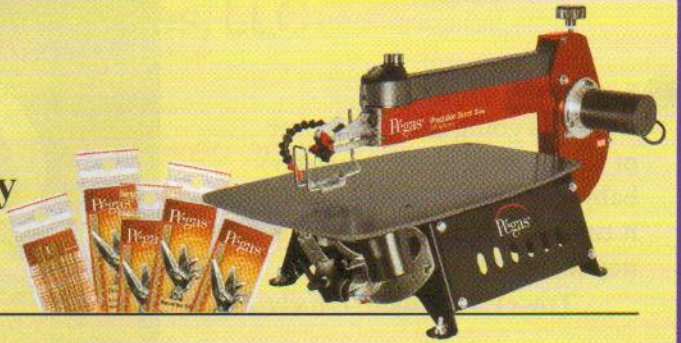


Write to Us! Tell us your thoughts on our projects, ideas for new patterns, scrolling experiences, and woodworking show stories. Write to us at: Letters to the Editor, *Scroll Saw Woodworking & Crafts*, 903 Square Street, Mount Joy, PA 17552 or e-mail editors@scrollsawer.com. You can also send us your letters and photos via Instagram! Tag us [@scrollsawwoodworking](https://www.instagram.com/scrollsawwoodworking).



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► **Surprise**

This was going to be the cover of the guest book for my sister's baby shower, but because of Covid, it turned into a cute sign for my nephew's nursery!

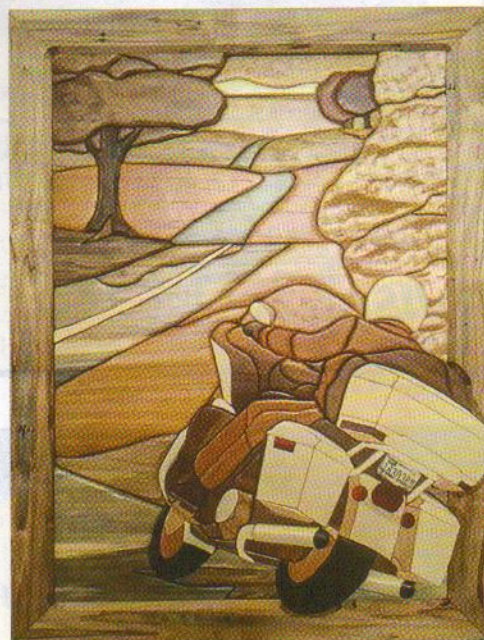
Tracey Jennings, Hudson, N.Y.



▲ **Bountiful Bowls**

I have been making a lot of bowls with my extra free time—the more complicated, the better!

Jerrell Sandling, Plano, Texas



▲ **Ticket to Ride**

I made this during quarantine for my son, who loves to ride his motorcycle on the open roads in Alabama. It's from a Judy Gale Roberts pattern and includes 20 species of wood.

Robert Watts, Stuart, Fla.



▲ **Sun-Kissed**

I made this for a friend during the stay-at-home order. The tray's rails and handles are made of poplar, and the inset is backed with birch ply.

Tim Smith, Middle River, Md.



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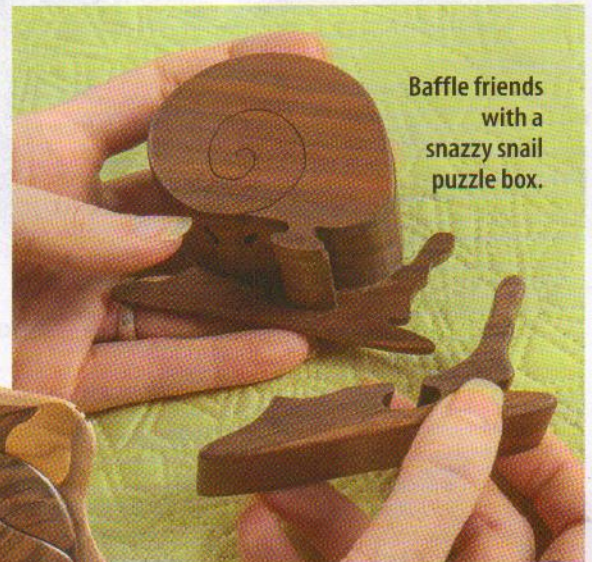
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COMING FEATURES



Take playtime to new heights with hardwood helicopters.



Baffle friends with a snazzy snail puzzle box.

Create a curious kitten intarsia wall hanging.

Look for the Fox Hunt Winners on Page 70!





Alardus van den Bosch *Somerset, England*

Over the years, Alardus van den Bosch has enjoyed discovering how mixed materials, particularly wood inlay, can be used in practical and functional ways. "There is a certain magic to successful design," he said. "It turns an object from something nice into something exceptional." Alardus creates coasters, placemats, coffee tables, and mirrors. See more of his work at alardus.co.uk.



Chris Ruch *Ebony, Va.*

Ever since moving to Virginia in 2011, Chris Ruch said he has been "making a lot of sawdust." He enjoys time-consuming, challenging projects like this morningside grandmother clock. The Dan Wilckens pattern took Chris 107 hours to complete and includes nearly 200 pieces. Email him at lakegastonchris@gmail.com.



Lauren Mollica *Norwalk, Conn.*

When Lauren Mollica first started scrolling, her designs were driven by what would sell. Once her children were in school, she had more time to explore the subjects she was passionate about. She started creating stain blends, experimenting with sanding techniques, and hand-chiseling textures into her designs. "My work has become more of a reflection of my own creative voice," she said. See her work at laurenmollica.com or visit [@laurenmollicawoodworking](https://www.instagram.com/laurenmollicawoodworking) on Instagram and Etsy.



Cassidy Eck *Kreamer, Pa.*

Cassidy Eck admits she was hooked the moment she first tried scrolling. Several years later, she's grown her passion into a full-time sign-making and home decor business. "Being able to do something that I love—something that my soul and mind needs in order to stay sane—while staying home with my son has been incredibly rewarding," she said. Most recently, Cassidy has enjoyed creating ocean-inspired pieces made of resin. "I love being able to switch back and forth between the workshop and my resin studio," she said. See more of her work on Instagram @stonemillandco.

Jo Labre *Racine, Wis.* 

Jo Labre bought her first scroll saw in 2012 and has since developed a knack for intarsia work. "The shaping process is my favorite part," she said. "I enjoy using flat pieces of wood to create alluring, 3D elements like petals or flowing gowns." Jo spent four weeks shaping her rendition of *Poppies*, designed by legendary Ukrainian artist Anatoly Obelets. To see more of Jo's work, email her at jo_labre@yahoo.com.



Barry and Gail Hooper

Somerset, England

Barry and Gail Hooper have been making toys in their garden shed for the last 15 years. The couple's designs are inspired by a love for wildlife, play, and educational art. "We greatly enjoy the process of designing something that is both functional and pleasing to the eye and hand," said Barry. Once the designs are complete, they're handed off to the grandchildren for testing. To see more of Barry and Gail's work, visit thearkman.co.uk.

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*, 903 Square Street, Mount Joy, PA 17552 or e-mail editors@scrollsawer.com.

Wooden Paintings



Leonard captured the austere environment of Cannon Beach in reclaimed wood.



Leonard Locatis at work in his Vancouver, Wash., studio.

Leonard Locatis believes there's a story behind every piece of wood, and he gathers scraps to weave together 'epic tales' depicting the beauty of the Pacific Northwest. His wooden paintings feature animals, people, and notable landscapes—like Mount Hood and Multnomah Falls—that are not only visually stunning but pleasing to touch, blending segmentation and intarsia work to create three-dimensional designs that seem to jump off the canvas.

SSW: How did you get into woodworking?

Leonard: I owned a successful remodeling business for 12 years and it was hard on me, mentally and physically. I knew I couldn't continue living that way, and I began to wonder what I was going to do instead. I had the opportunity to work on a long-term project in Sunriver, Ore., remodeling a house for a friend, and it changed everything. While I was there, I rediscovered my passion for living. I started eating healthy food and got in shape. I spent most of my free time hiking, biking, and exploring the area. I felt like I could finally take on the world.

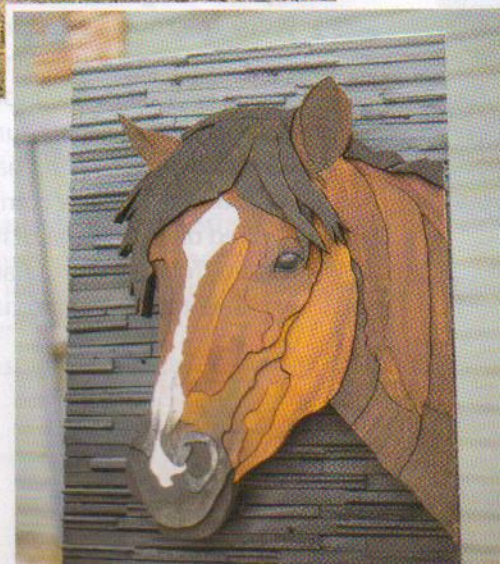
That year, I decided to make my first wooden painting of Mount Hood as a Christmas gift but felt rushed in the process. I decided to give it another try—this time, larger and with more detail. I showed the painting to some friends and they said they thought it belonged on

Leonard's wooden portrait, *Horse*, is fashioned from reclaimed wood.

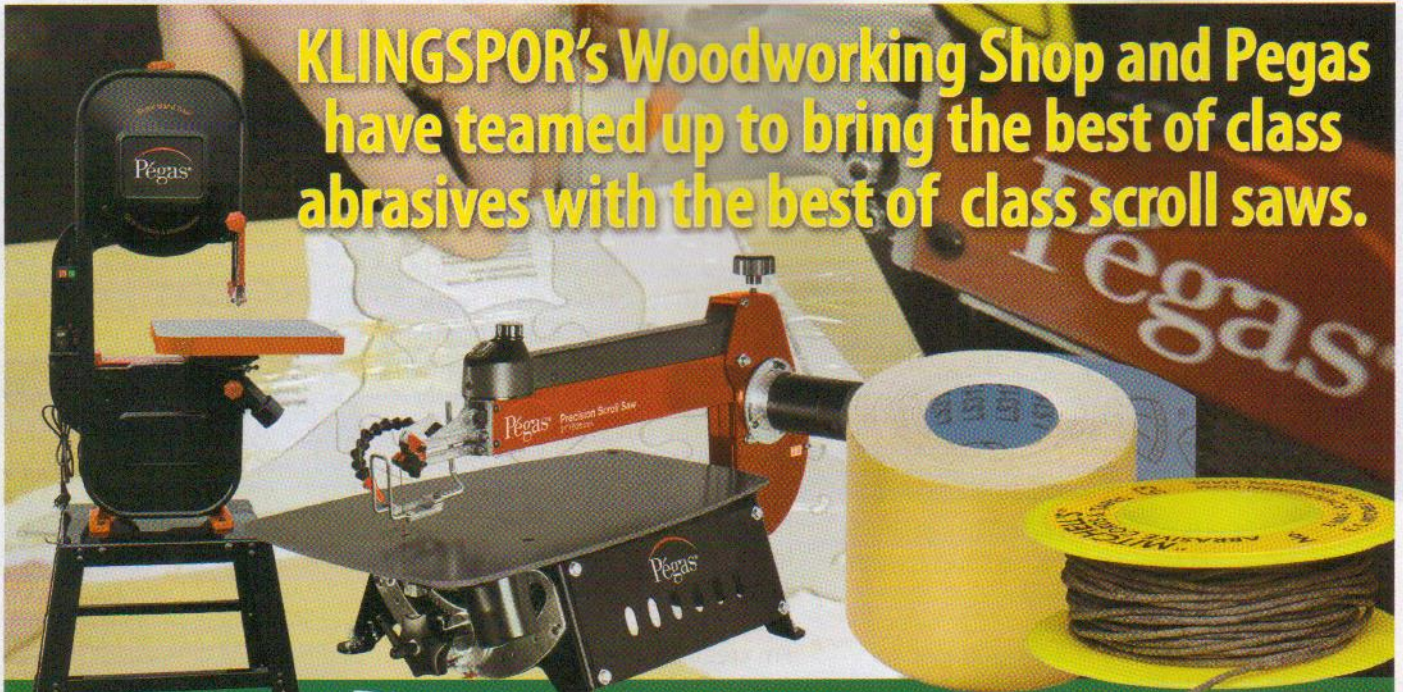
(Continued on page 14)

Leonard Locatis uses reclaimed wood to create depth, dimension, and texture in his portraits

By Hannah Rachel Carroll



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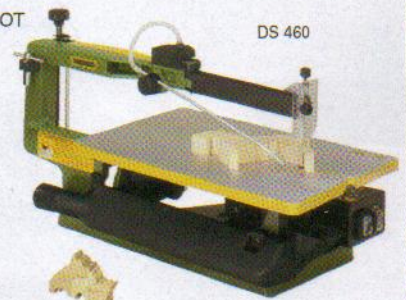
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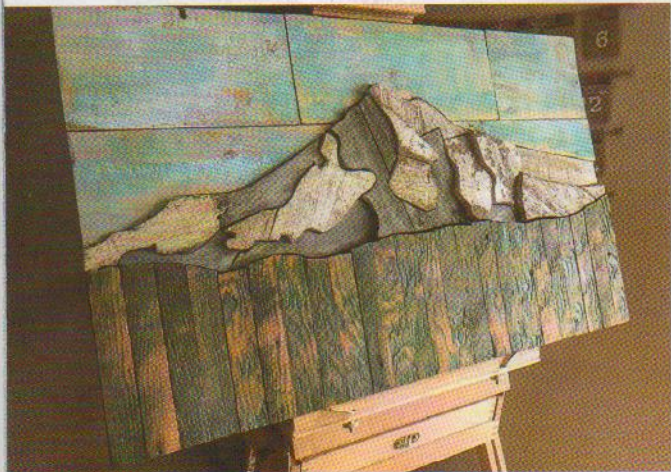


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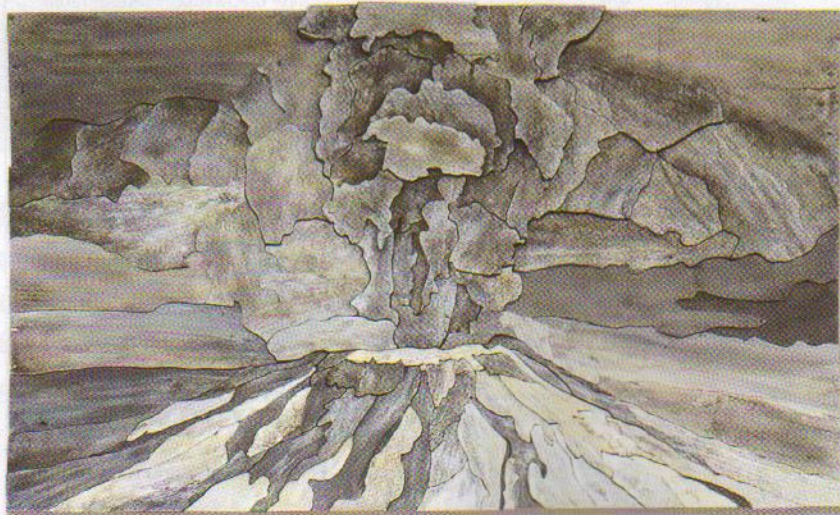


The first of Leonard's wooden paintings of *Mount Hood* was a Christmas gift.

display. The next day, I took it around to local galleries to see if there was any interest. The first gallery I walked into wound up featuring me in their First Friday art walk, and I began my journey of telling stories through wood.

SSW: How would you describe your artistic style?

Leonard: I call my art pieces wooden paintings—not because I am painting on wood (although I am), but more so because I am using wood grain and textures to paint a picture. The idea to make art like this came to me during a bike ride up Lava Butte. I was frustrated that the photos I took of the lava flow didn't look at all like what I was seeing in real life. I thought to myself, *If only I could use a piece of wood to add dimension and detail to the shot.* After that, I started wondering what everything would look like if it were made from wood.



SSW: How has your portfolio evolved?

Leonard: The way I view my art and how I create it has dramatically changed thanks to a remarkable moment that happened last year at an art show. A blind girl and her mom came up to my booth and asked if they could feel my work. The mother guided her daughter over to my painting of Multnomah Falls, which the two had recently visited. The girl's face lit up and she couldn't get over how big it was! It was incredibly moving—the highlight of my art career—and it led me to partner with the Portland Art Museum to plan and host events for the blind. Now, when I'm creating a piece, I'm not just thinking about how it will look but how it will *feel*. This awareness has made the third dimension much more relevant to me and has made my work bolder and more pronounced.



Multnomah Falls is 16" by 48" (1.3' by 4') tall.

SSW: Where do you source your materials?

Leonard: All of the wood I use is reclaimed and has some history—whether it's from the siding off an old barn or the bed rails of a 1950s Chevy pickup. I love the process of cutting and painting, and using wood's imperfections and natural beauty to share my vision with others.

SSW: What would you say to a fellow artist just getting started?

Leonard: I would recommend learning how to document your journey on social media—this has been one of the most rewarding parts for me. Social media has allowed me to connect with other artists and build community, much like I did with customers from my remodeling business. Don't put so much pressure on selling at the start, but rather focus on who you will meet along the way. This mindset has led me to places I could have never imagined.

For more of Leonard's work, visit leonardlocatis.com or find him on Instagram and Facebook @leonardlocatis.

Leonard blends segmentation and intarsia to create three-dimensional designs. At left: *Mt. Saint Helens*, reference photo by the United States Geological Survey.

ASK THE EXPERT:

Shaping Intarsia

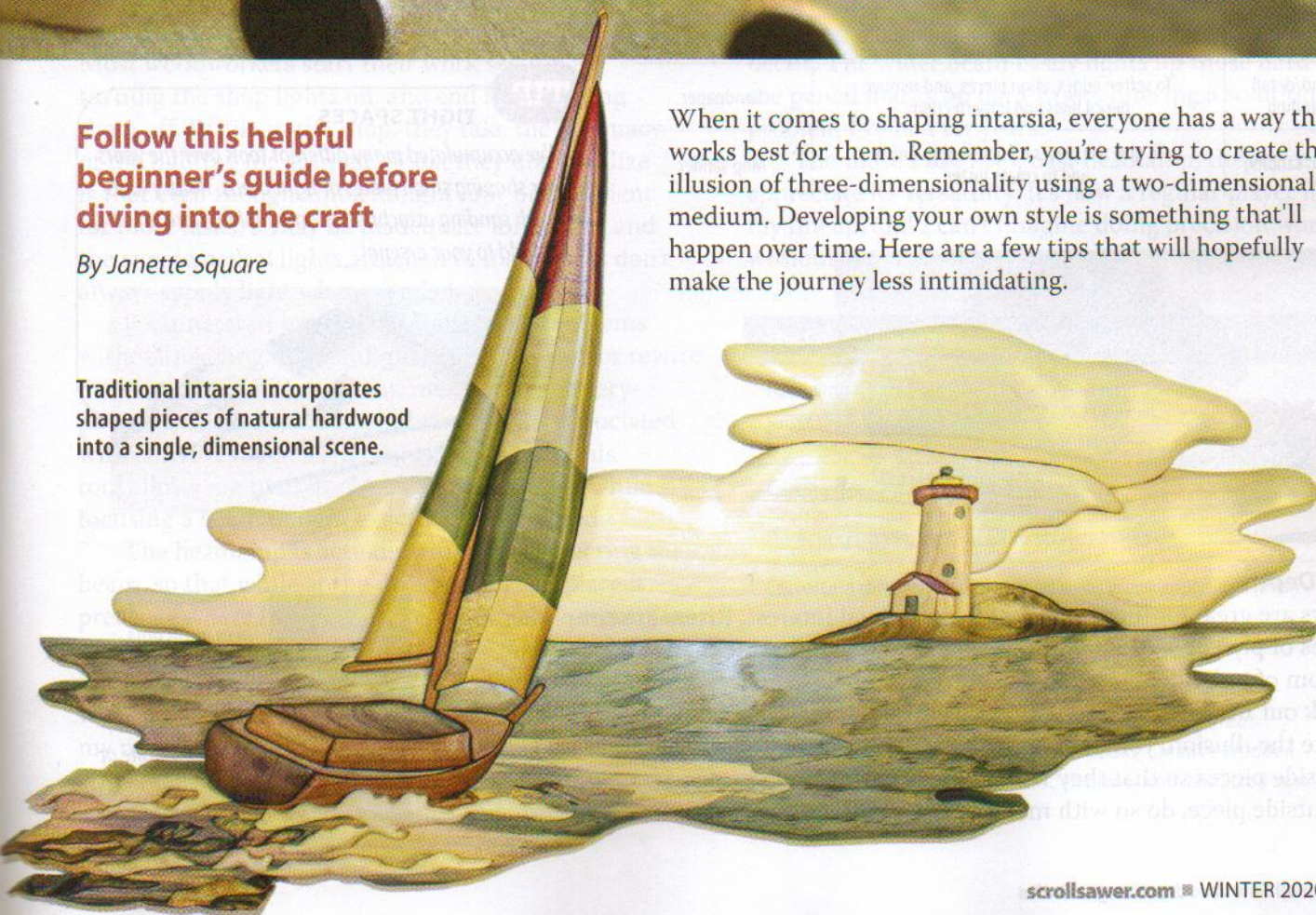


Follow this helpful beginner's guide before diving into the craft

By Janette Square

Traditional intarsia incorporates shaped pieces of natural hardwood into a single, dimensional scene.

When it comes to shaping intarsia, everyone has a way that works best for them. Remember, you're trying to create the illusion of three-dimensionality using a two-dimensional medium. Developing your own style is something that'll happen over time. Here are a few tips that will hopefully make the journey less intimidating.



Plan Your Attack

Before you begin, study your piece and try to envision what you want it to look like. The thickness of the wood helps to determine the perception of the viewer. Elements that you want to appear far away should be thinner and elements closer to the viewer should be thicker. It's best to leave all the pieces their original thickness when cutting. You can thin them later while shaping.

Think of intarsia as sculpting. Some pieces should blend together and be shaped as one piece. In other areas, it might be important to have pieces stand out on their own. It helps to think of what your subject matter looks like in real life. Having reference photos to look at can help. For blending pieces, use a sanding shim, attaching it to the back of the cut pieces with double-sided tape. Assemble the pieces together on the shim and sand them as if they were one piece. You can also glue the pieces together prior to shaping. As you shape each piece, it is important to consider all the pieces and how they relate to each other. This results in a more cohesive look. *Stay tuned for a follow-up article on sanding shims in our next issue!*

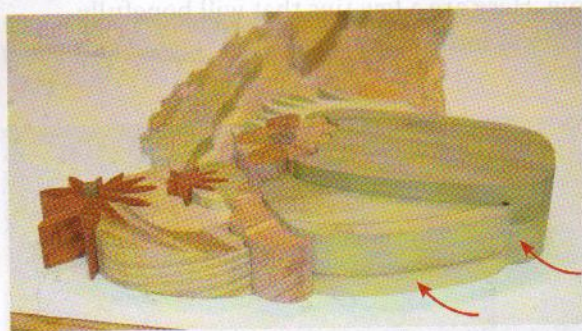


You Don't Need to Round Every Piece

Some pieces benefit from dips and grooves; some are better flat or concave. If you think of contouring as a sculptor would, it's easier to envision what the final project should look like. Look at the gray-and-yellow fish above; its fins and individual face parts are shaped separately, but its stripes are shaped as part of the body, as they would appear in nature.

My Shaping Process

Step	Purpose	Tool(s) Used
Rough shape	To achieve general overall shape	Drum sander; 120-, 180-grit
Smooth shape	To go over each piece, remove scratches, and fine-tune the fit	Drum sander; 220-grit
Hand/detail sanding	To soften edges, align pieces, and remove pencil lines and imperfections	Sandpaper
Finish sanding	To give the pieces a final smooth finish, and to create luster	Mop sander



Add Depth

Risers are great for increasing depth and visual interest. Risers are simply scrap pieces of plywood, usually $\frac{1}{8}$ " (3mm) to $\frac{1}{2}$ " (1.3cm) in thickness, added to the bottom of individual intarsia pieces to raise their height. (For more on risers, check out Brad and Hazel Eklund's bear intarsia on page 20.) To successfully create the illusion, you must make sure that the risers do not show. Limit risers to inside pieces so that they will not be visible from the sides. If you must raise an outside piece, do so with matching wood to make it less noticeable.

TIP

TIGHT SPACES

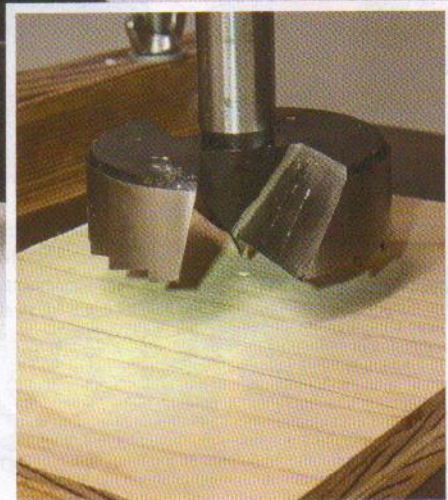
I've accumulated many different tools over the years for shaping small pieces or tight areas. Rotary tools with sanding attachments and mini files are great to add to your arsenal.



Janette Square lives in Yachats, on the Oregon coast. For more of Janette's work, visit her website at square-designs.com.

Coast LED Headlamp

Pricing for this and dozens of other models range from \$10-\$125 on Coastportland.com



For hands-free precision lighting, check out this affordable fixture

By Carole Rothman

The small, lightweight Coast headlamp helps with awkward blade changes and provides supplemental lighting for precision work at the drill press or saw.

Most woodworkers start their work session by turning the shop lights on, and end it by turning them off. While in the shop, they take the adequacy of the lighting for granted. What they don't realize is that even though ambient light may be sufficient for most tasks, it may be inadequate for others, and the supplemental lights attached to many tools don't always supply light where needed.

Fortunately, I was able to solve these problems without needing to reconfigure my work area or rewire my shop; the solution was an inexpensive battery-powered Coast headlamp. While typically associated with activities such as hiking and camping, this tool allows me to use both hands in the shop while focusing a beam of light exactly where needed.

The headlamp is actually hinged for directing the beam, so that while at the drill press, I can place it precisely where I want it on the workpiece—regardless of table height and without shadows. It also has three intensity levels, each of which can adjust from spot to wide flood. At 405 lumens, it is more than adequate for my needs.

The hands-free placement of the headlamp makes it easy to detect and correct finishing problems as they

occur. The wider beam easily lights up those hard-to-see pencil marks on dark wood, offering a solution to a problem I've had for years.

The more I use my Coast headlamp, the more I appreciate its versatility. It's now a regular player in my lineup, and I can't imagine doing precision work without it.

The Coast Headlamp is Useful For...

- Following thin pencil lines drawn on darker woods
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- Cutting detailed fretwork
- Detecting small glue spots and scratch marks on a sanded workpiece
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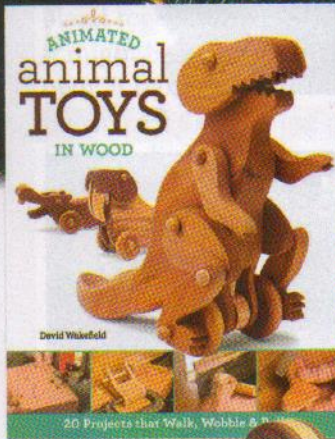
Carole Rothman of Pawling, N.Y., is a scroll saw artist and author specializing in intricate boxes and bowls. Visit Carole online at scrollsawbowls.blogspot.com, or find her books, Creative Wooden Boxes from the Scroll Saw and Wooden Bowls from the Scroll Saw, at foxchapelpublishing.com.

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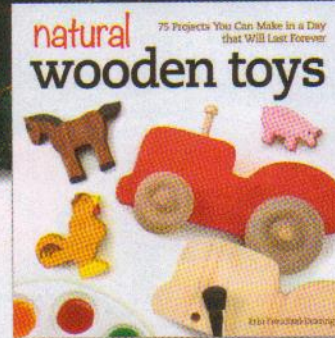


Animated Animal Toys in Wood

20 Projects that Walk, Wobble & Roll
By David Wakefield

Build classic pull and push toys with 20 imaginative projects for making wild and wacky wooden animals that come alive with delightful lifelike motion. Make dinosaurs, kangaroos, sharks, ducks, turtles, wolves, and more. With detailed patterns, concise instructions, and step-by-step color photographs, these charming projects are simple enough for even a beginner to complete in a weekend.

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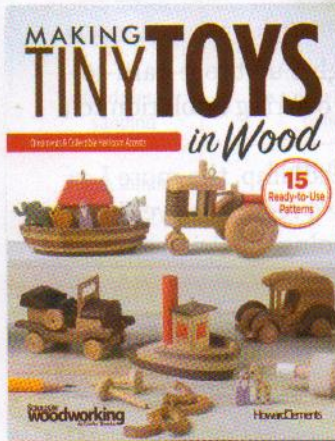


Natural Wooden Toys

75 Projects You Can Make in a Day that Will Last Forever
By Erin Freuchtel-Dearing

Learn how to make 75 simple and charming wooden toys using just a scroll saw and a few simple tools. These toys are so easy to make, your children can help to create and decorate them too! Rounded corners, food-coloring finishes, and natural materials make the toys both safe and eco-friendly.

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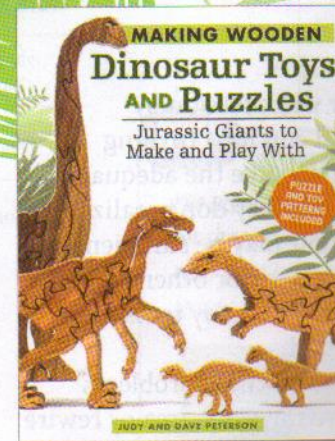


Making Tiny Toys in Wood

Ornaments & Collectible Heirloom Accents
By Howard Clements

Create charming holiday decorations that double as small toys with this easy-to-follow guidebook. Full-size scroll saw patterns and step-by-step instructions are provided for 15 working wooden toys. A great way to reuse and repurpose scrap wood, all scroll saw projects are easy and don't require many tools or materials to accomplish.

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Jurassic Giants to Make and Play With
By Judy and Dave Peterson

Create exciting wooden puzzles and toys of dinosaurs to delight a special child in your life! Thirty-eight original scroll saw patterns cover all of the most popular species, from Velociraptor and Stegosaurus to Triceratops and Tyrannosaurus Rex. Two spectacular puzzle dioramas feature a Maiasaur mama with her babies, and a T. rex on the attack. Patterns are also provided for easy-to-cut wooden toys that are safe for little kids who can't play with small objects.

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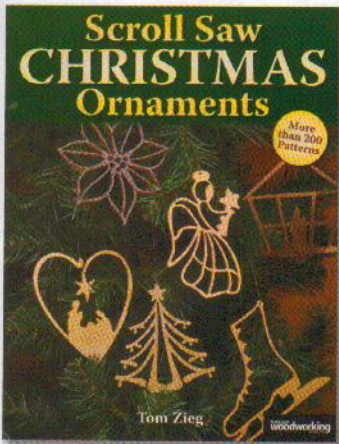
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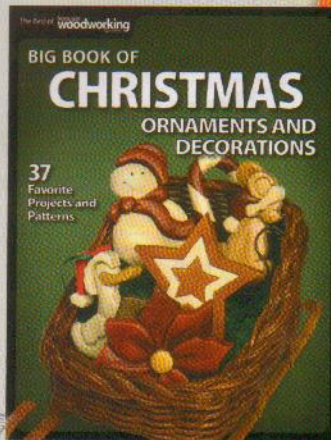
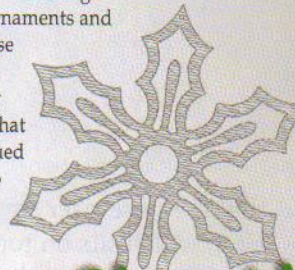
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Scroll Saw Christmas Ornaments

More Than 200 Patterns

By Tom Zieg

From whimsical to classical, discover more than 200 scroll saw projects for Christmas ornaments to make your holiday spirit bright! *Scroll Saw Christmas Ornaments* contains a brief overview on cutting out the ornaments and easy-to-use full-size scroll saw patterns that can be glued right onto the wood to guide your saw.



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Big Book of Christmas Ornaments and Decorations

37 Favorite Projects and Patterns

By Editors of *Scroll Saw Woodworking & Crafts*

Create 37 holiday masterpieces for the home, family and friends with these tried-and-true scroll saw projects and patterns from the archives of *Scroll Saw Woodworking & Crafts*. This collection of holiday favorites features fretwork, compound-cuts, intarsia, and inlay projects for ornaments, wreaths, Santas, portraits, candleholders and more.

Give the Perfect Gift!

Personalized Scroll Saw Shop Journal

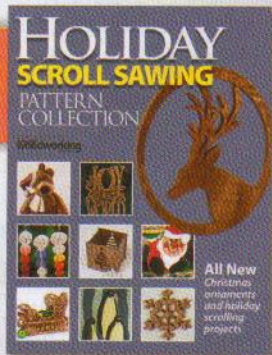
Perfect for the special scroller in your life, this journal is an excellent way for them to keep a record of all their scroll saw projects. Also includes an inside front cover dedication page for the recipient to enjoy a personalized message from you, or a favorite inspirational quote!

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Holiday Scroll Sawing Pattern Collection

By Editors of *Scroll Saw Woodworking & Crafts*

Inside you'll find 14 Christmas ornament and holiday scrolling ideas by leading contributors to the magazine, including Judy Gale Roberts, John A. Nelson, Judy Peterson, Sue Mey, and Paul Meisel. Appropriate for all skill levels, each of their designs features full-size patterns, lists of tools and materials, and color photographs of finished projects. Make memorable holiday gifts and treasures like ornaments, home decor, puzzles, candleholders, centerpieces, and more.



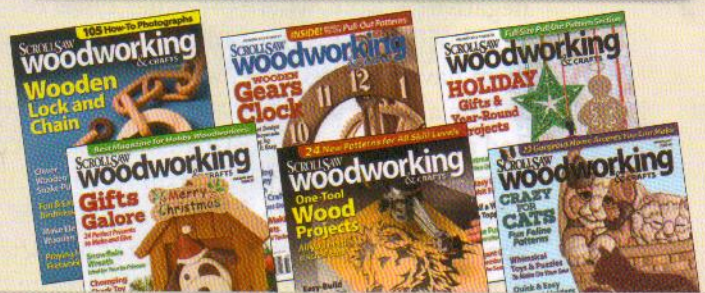
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Grizzly Bear Intarsia

Power carve the fur to add texture to this fierce face of the forest

By Brad and Hazel Eklund

When you think of North American wildlife, what animal first comes to mind? A regal bald eagle? A sly fox? A wise great horned owl? For us, it's a mighty grizzly bear—and so began the process of designing our take on this iconic creature.

While this grizzly is fairly monochromatic, each feature stands out sharply. Contrasting varieties of brown wood, such as walnut, wenge, and monkeypod, create a portrait that's rich in its simplicity. Use of risers accentuates the features, adding depth and interest to the finished piece.

Cutting the Pieces and Adding Risers

Cover the wood with blue painter's tape. Photocopy the patterns and attach them to the tape using spray adhesive. Cut the perimeter lines of each wood type. For example, cut out all of the monkeypod but keep the segments attached to each other. Then cut out the negative sections where the other types of wood will go. This is useful, as it will keep you from having a large number of loose pieces sliding all over the place and makes test-fitting and adjusting easier. Leave all of the segments of monkeypod together until all fitting adjustments are made. Then cut the pieces apart. Repeat this process for the rest of the wood types. Then cut the risers, following the dotted lines on the pattern.

Secure all of the risers on their respective sections with double-sided tape; you'll notice

that the nose riser sits on top of the snout riser, which sits on top of the cheek-and-eye riser. The cheek-and-eye riser then sits on top of the larger face riser. An abundance of risers will add extra dimension and drama to the face.

Shaping and Texturing

Shape the pieces, starting from the outer edges of the fur and working inward toward the nose. We used a 12" (30.5cm)-dia. disc sander with an 80-grit disc to roughly shape the segments. Then we switched to a 6" (15.2cm)-long inflatable drum sander with a 120-grit sleeve to refine and contour the pieces. We moved to a 220-grit sanding mop to remove any remaining sanding marks and burrs. Round the nose, snout, eyelids, ears, and other facial elements, tapering the outer edges of the face down to about half their thickness at the outermost points. Use a 2" (5.1cm)-long inflatable drum sander to give the ears a concave look. Be sure to blend each riser layer into the next.

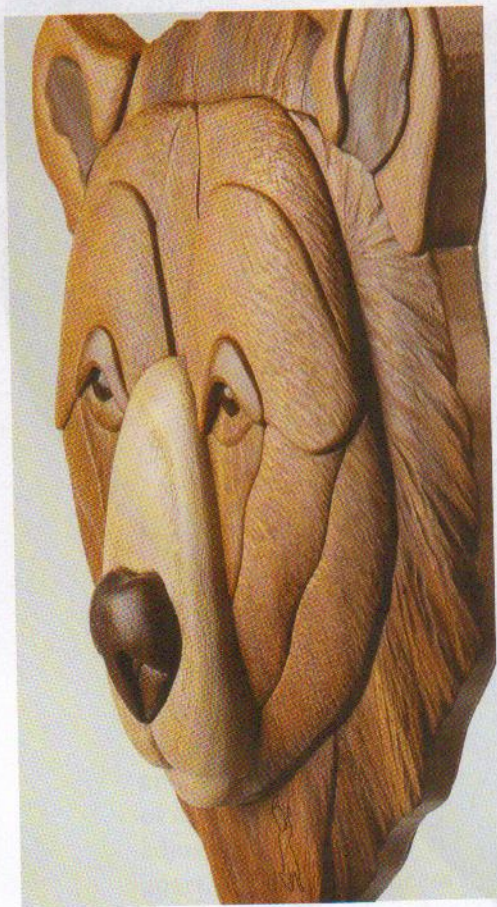
Add texture. Using a ¼" (6mm)-long drum sander attached to a rotary tool, add shallow waves to the outermost layer of fur. Then for the remaining fur, switch to a fine-grit flame-shaped diamond bit and make shallow lines along the forehead and cheeks to give them a fur-like appearance. Keep the grooved lines going in roughly the same direction, following the curves of the face.





Assembling and Finishing

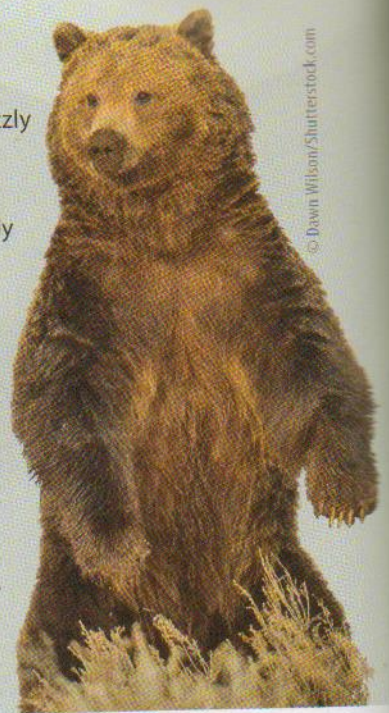
Remove the double-sided tape from the riser sections and glue and clamp all pieces together (including risers), starting from the center and working outward. Be careful not to over-glue; you don't want any excess to squeeze through the cracks. Let dry. Then trace the outline of the assembly onto your backing material with a pencil. Cut out the backing material about $\frac{1}{8}$ " (3mm) in from the traced line and glue and clamp it to the backside of the intarsia piece. Finish as desired; we used several coats of a clear satin spray. Add gloss polyurethane for the eyes, but you could also use epoxy. Display as you prefer; we added a sawtooth hanger to the back.



Pattern for the **GRIZZLY BEAR INTARSIA** is in the pullout section.

Grizzly Bear Facts

- The grizzly population comprises 50,000 animals in North America. There are approximately 100,000 grizzly bears estimated to live in the former Soviet Union.
- Adult grizzly bears can be surprisingly small. On the eastern slopes of the Alberta Rockies, a mature grizzly bear can weigh as little as 250lbs.
- Grizzly front claws can grow up to 4" (10.2cm) in length—almost as long as human fingers!
- The most identifiable trait of a grizzly bear is the large hump on its shoulders. It's a powerful muscle used to help them dig out of winter dens, often in steep and rocky mountain terrain.
- Grizzlies, known to dig more than any other bear species, spend inordinate amounts of time ripping through the earth and rotted logs in search of roots, plant bulbs, insects, rodents, and other grub.
- Grizzly bears can eat up to 90lbs of food each day.



Materials & Tools

Materials

- Dark wood, such as black walnut, $\frac{1}{2}$ " (1.3cm) thick: inner ears, 4" (10.2cm) square
- Very dark brown or black wood, $\frac{1}{2}$ " (1.3cm) thick: nose and eyes, 2" (5.1cm) square
- Medium dark wood, such as afromosia, $\frac{1}{2}$ " (1.3cm) thick: eyelids and under-eye areas, 2" x 6" (5.1cm x 15.2cm)
- Medium light wood, such as ash, $\frac{1}{2}$ " (1.3cm) thick: snout, 3" x 5" (7.6cm x 12.7cm)
- Medium wood, such as monkeypod, $\frac{1}{2}$ " (1.3cm) thick: main face sections, 5" x 22" (12.7cm x 55.9cm)
- Risers, such as tempered hardboard, $\frac{3}{8}$ " (1cm) thick: nose, snout, and face, sized for pattern
- Risers, such as tempered hardboard, $\frac{1}{4}$ " (6mm) thick: cheek and eye area, 6" x 6 $\frac{1}{2}$ " (15.2cm x 16.5cm)
- Backing material, such as tempered hardboard, $\frac{1}{4}$ " (6mm) thick: 10" x 12" (25.4cm x 30.5cm)
- Spray adhesive: repositionable
- Tape: blue painter's, double-sided

- Wood glue, such as Titebond
- Pencil
- Sandpaper: assorted grits
- Finish: clear satin spray
- Epoxy: 5-minute
- Hanger: sawtooth with screws (optional)

Tools

- Scroll saw with blades: #5 reverse-tooth
- Inflatable drum sanders: 2" (5.1cm), 6" (15.2cm), assorted grit sleeves
- Disc sander: 12" (30.5cm)-dia., 80-grit disc
- Sanding mop: 220-grit
- Rotary tool with bits: $\frac{1}{4}$ " (6mm) drum sander, fine-grit flame-shaped diamond
- Clamps

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



Brad and Hazel Eklund have been creating scroll saw art for the last seven years. They have always been fascinated by the beauty and intricacies of wildlife and nature in general. Brad has a degree in horticulture, while Hazel has a degree in wildlife. They live and work next to a nature preserve in coastal North Carolina. Find more of their work on Etsy at [EntwoodDesigns](http://EntwoodDesigns.com).

Two-Piece Tree



Ease your way into fretwork with a festive freestanding design

By the Staff of Scroll Saw Woodworking & Crafts
Design by Ghylenn Descamps
Cut by Joe Pascucci

Bringing evergreen boughs inside during the winter months is not a new practice. Versions of this tradition date back to ancient Egypt, Rome, and other historic cultures around the world. It makes sense, too—when the days are shorter and the garden has gone dormant, we gather what color we can and surround ourselves with it in order to stay cheerful. This holiday season, try your hand at a simple fretwork tree and decorate it any way you wish. Even today, depending on where you are in the world, you might see one adorned with anything from cotton stuffing to flowers or straw.

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9	.053"	.018"	11.5	1 1/2" to 2 1/2" hardwood	\$9.95	\$65.00
12	.062"	.024"	9.5	straight-line cutting	\$9.95	\$65.00
2/0M	.022"	.010"	61	up to 1/16" wood & metal	\$9.95	\$65.00
2M	.028"	.013"	30	up to 1/8" wood & metal	\$9.95	\$65.00
6M	.039"	.020"	20	up to 3/16" wood & metal	\$9.95	\$65.00

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Cutting and Finishing

Cover the wood with blue painter's tape. Photocopy the patterns and attach them to the surface of the tape using spray adhesive. If using a material other than plywood or MDF, make sure the grain runs vertically. *Note: If you've chosen $\frac{1}{4}$ " (6mm) wood, use the $\frac{1}{4}$ " (6mm)-wide slots on the pattern; if you chose $\frac{1}{8}$ " (3mm)-thick wood, use the $\frac{1}{8}$ " (3mm) versions.* Drill the blade-entry holes for the stars, and cut the designs, starting with the interior details. Use a #3 reverse-tooth blade to avoid tear-out.

Remove the patterns and sand the cut pieces with an orbital sander, moving up progressively through the grits until you reach 320. Hand-sand the edges, removing excess sawdust with a tack cloth. We used needle files for the stars. Check the fit of the pieces; if the slots are too small, use sandpaper or the scroll saw to widen them slightly until they fit snugly. If the slots are too wide, you will have to secure the pieces with a small amount of wood glue later. Once you are satisfied with the fit of the slots and base (the tree should stand up on its own), separate the pieces and finish as desired; we used dark green acrylic paint for one tree and left the other one natural, spraying both with semi-gloss lacquer once dry. Let dry again and then attach the pieces. Display as desired.

Materials & Tools

Materials

- Wood, such as Baltic birch plywood, $\frac{1}{8}$ " (3mm) to $\frac{1}{4}$ " (6mm)-thick: 6 1/4" x 7" (15.9cm x 17.8cm), 2 each
- Tape: blue painter's
- Spray adhesive
- Sandpaper: assorted grits up to 320
- Tack cloth
- Wood glue (optional)
- Acrylic paint: dark green or color of choice
- Finish, such as clear semi-gloss spray lacquer

Tools

- Scroll saw with blades: #3 reverse-tooth
- Drill press with bit: $\frac{1}{16}$ " (2mm)-dia.
- Sander: orbital
- Needle files

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

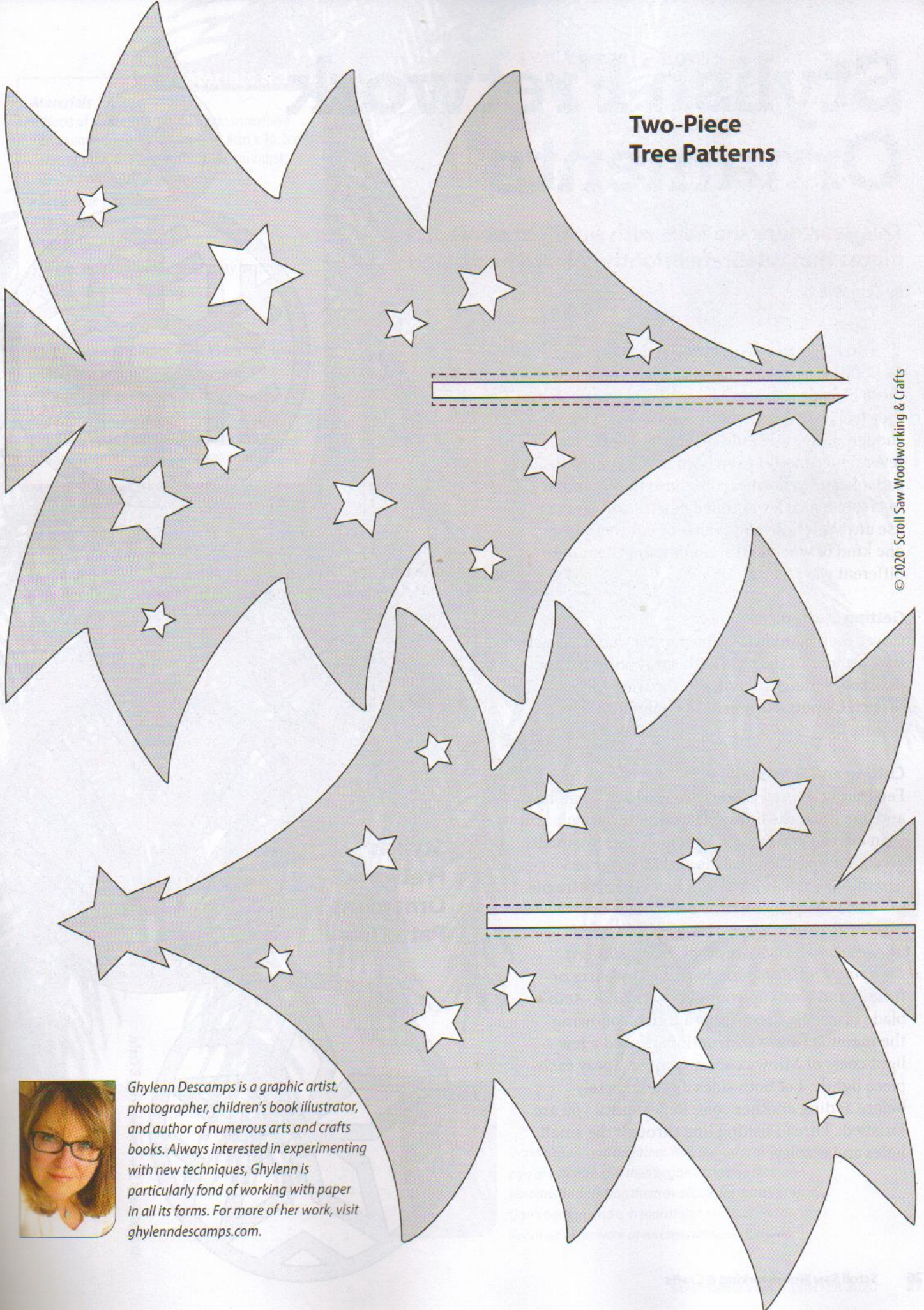
FURTHER READING

Beginner's Guide to Kirigami: 24 Skill-Building Projects Using Origami & Papercrafting Skills
By Ghylenn Descamps

Item 00169. Available for \$14.99 plus S&H (parcel post) from Fox Chapel Publishing, foxchapelpublishing.com, 800-457-9112, or your local retailer.



Two-Piece Tree Patterns



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Ghylenn Descamps is a graphic artist, photographer, children's book illustrator, and author of numerous arts and crafts books. Always interested in experimenting with new techniques, Ghylenn is particularly fond of working with paper in all its forms. For more of her work, visit ghylenndescamps.com.

Stylish Fretwork Ornaments

This year, deck the halls with simple statement pieces that celebrate brightly colored hardwoods

By Dan Wilckens

In an effort to give my tired red-and-green holiday decorations some relief, I designed these little ornaments. Colorful and interesting, they feel festive without overdoing it. (I've had enough glitter and animatronic Santas to last several lifetimes!) I used hard maple, purpleheart, padauk, and yellowheart because they combine to create a nice jewel-toned palette, but you can use any varieties you prefer—or cut them from one kind of wood and stain or paint them four different ways.

Getting Started

Cover each blank with blue painter's tape. Attach the patterns to the tape with spray adhesive and drill the blade-entry holes in the waste areas of each cutout. Then drill the holes for the fishing line.

Cutting and Finishing

Feed the scroll saw blade through each small hole and cut along the lines. Make all interior cuts and then cut the perimeters. When all cuts are made, gently remove the patterns and tape. Be very careful, as some bridges will be extremely fragile.

Sand the pieces with a belt sander or handheld sander. *Note: You can hand-sand in particularly delicate areas, using 100-grit sandpaper until smooth.* Remove any burrs or fuzzies and clean up your cuts with an X-Acto blade or needle files. Apply a finish, following the manufacturer's instructions; I used a few light coats of Minwax spray lacquer. Spray each piece lightly. Let both sides dry completely before adding another coat. Repeat until you are satisfied. Thread fishing line through the small holes and display.



Stylish
Fretwork
Ornament
Patterns

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Materials & Tools

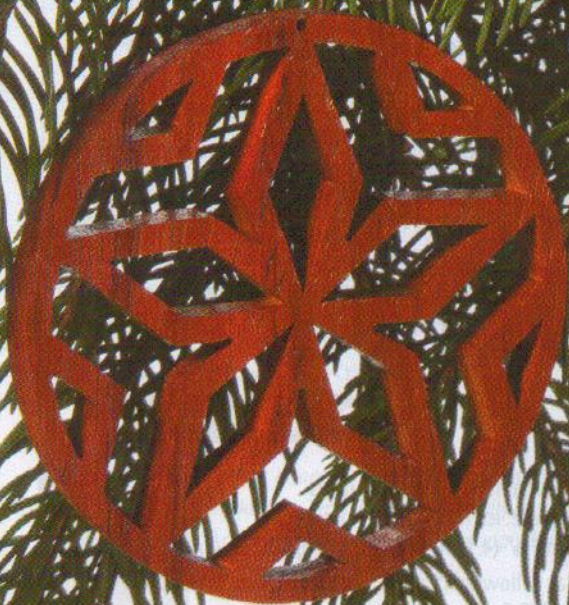
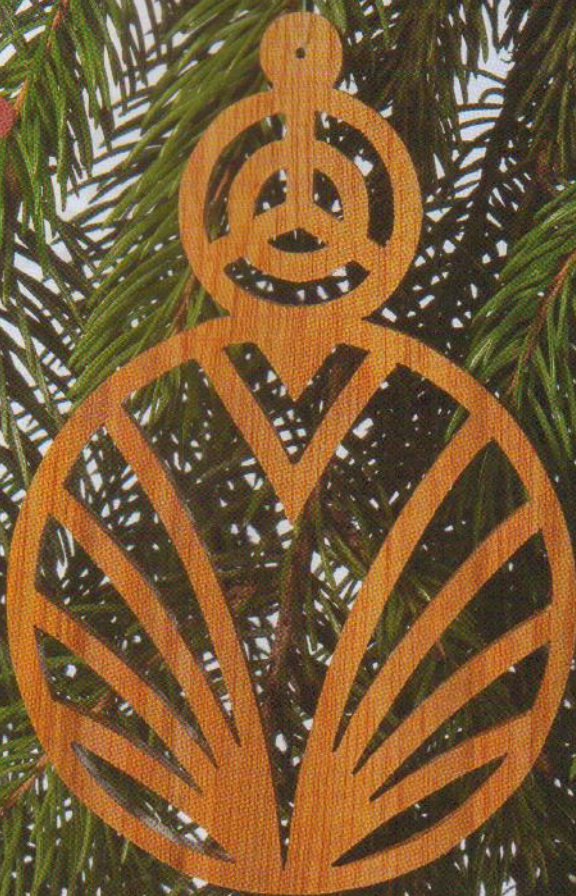
Materials

- Wood of choice, 1/4" (6mm) thick: snowflake and sunrise, approx. 2 1/2" x 4" (6.4cm x 10.2cm); star, approx. 2 5/8" (6.7cm) square; sunburst, 2 1/8" x 3 5/8" (5.4cm x 9.2cm)
- Tape: blue painter's
- Spray adhesive
- Sandpaper: 100-grit
- Finish, such as Minwax clear spray lacquer
- Fine fishing line or string

Tools

- Scroll saw with blades: #2 or #3 reverse-tooth
- Drill press with bit: 1/16" (1mm)-dia.
- X-Acto knife and/or needle files
- Sanders: belt, handheld

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



Dan Wilckens and his father, Ray, started scrolling 25 years ago as a hobby, and then began designing their own patterns and making them available for others to enjoy. Dan's background is in tool design and tool and die work. See more of his work at wilckenswoodworking.net.

COMPOUND-CUT Earrings

Don these decorative baubles and look as snazzy as the Christmas tree

By Dennis Knappen
Design by Sue Mey

In my family, there is no point in owning a piece of jewelry unless it means something to the wearer. These designs are simple to cut, but you can execute them in dozens of different ways, so each one has a personal touch. Layer your hardwood scraps to make a striped blank—or add stain, dye, or paint after cutting to spruce up bland woods. Get creative and take your time; these statement pieces will “hang” around for years to come!

Getting Started

Cut the blanks to size, making sure the stock is square. I used solid maple for one pair and glue-ups of redheart and yellowheart for the other. Cover two adjacent sides of each blank with clear packaging tape. Fold each pattern on the centerline and attach to the tape using spray adhesive. *Note: You could also forego the spray adhesive and print your patterns on label paper.* Cover the patterns with another layer of clear packaging tape and drill the holes for the inside cuts.

Glue up pieces of contrasting hardwood to make a bold statement.

Materials & Tools

Materials

- Wood, such as maple, $\frac{3}{4}$ " (1.9cm) square: icicle design, 2 each $1\frac{1}{8}$ " (4.7cm) long
- Wood, such as yellowheart and/or redheart, 1" (2.5cm) square: pyramid design, $1\frac{1}{8}$ " (4.7cm) long, 2 each
- Wood glue (for glued-up blanks) (optional)
- Tape: clear packaging
- Spray adhesive
- Label paper (optional)
- Sandpaper: assorted grits
- Finish, such as clear shellac
- Findings: wire fishhook

Tools

- Band saw
- Scroll saw with blades, such as Pegas #3R MGT
- Drill with bit: $\frac{1}{16}$ " (2mm)-dia.
- Needle files
- Mac Mop
- Clamps (for glueups) (optional)

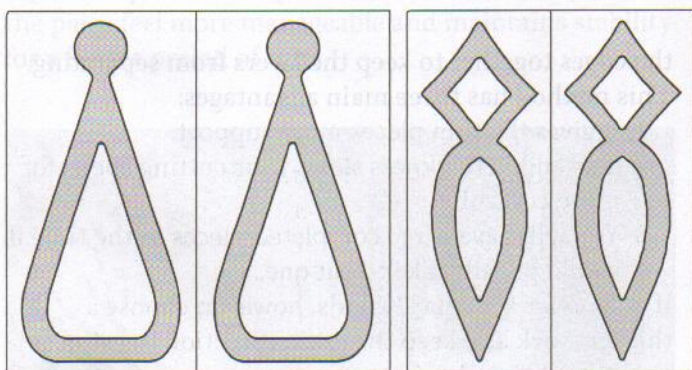
The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Cutting and Finishing

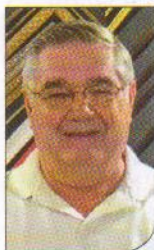
For each blank, make the inside cuts on one side, then turn the workpiece and make the inside cuts on the adjacent side. Drill a hole for the outside cut on one side of the blank; drilling a hole and cutting the outside, rather than cutting in from the edge, helps keep the blank intact and therefore easier to maneuver. Then make the first perimeter cut on the side with the drilled hole. Rotate the blank and tape the waste back in place with clear packaging tape. Then drill an entry hole for the second outside cut and cut the perimeter. Repeat this sequence with the second blank.

Separate the earrings; I like to carefully slice into the sides of the waste for ease of removal. Carefully drill a hole in the knob at the top of the pyramid designs; I secured the earring in the scrap in order to have a flat surface. Sand away any fuzzies with sandpaper and needle files. Take your time and be meticulous. Finish as desired; I dipped each earring in diluted shellac, sanding with a Mac Mop between coats. Add the findings and they're ready to wear!

Compound-Cut Earring Patterns



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Dennis Knappen is a scroll saw artist based in Dayton, Tenn. He and his family have run ArtCrafters, a gallery and art supply business in downtown Dayton, since 2009.

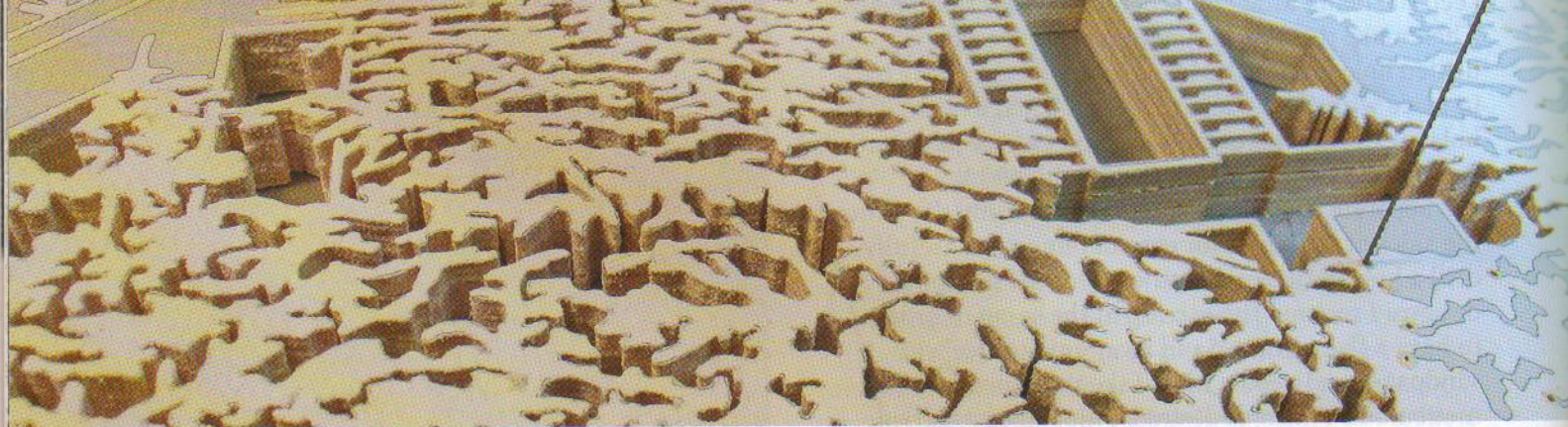


*Sue Mey lives in Pretoria, South Africa. To see more of her work, including a wide variety of patterns and pattern-making tutorials available for purchase, visit scrollsawartist.com. She can be contacted at suem@storage.co.za. Her pattern book, *Lighted Scroll Saw Projects*, is available from schifferbooks.com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

Achieve simple elegance with neutral wood choices.



Tackling Tough Fretwork



**Cutting a crazy-delicate piece on the scroll saw?
With these helpful tips and tricks, there's no need to fret**

By Rolf Beuttenmuller and Charles Hand

Beginners and seasoned scrollers alike often find fretwork intimidating. High-hole-count patterns, such as Buddy the Bird on page 66 or Bread and Cheese on page 36, can seem impossible at first glance—but in reality, they are simply large collections of holes. If you can follow a line, then you can cut a complex fretwork project! That said, here are a few key things to consider before you tackle your first one.



Choose the Right Materials

If you prefer thin stock, plywood is a good choice because the perpendicular grain layers make it more resistant to breakage. We typically stack around three pieces of $\frac{1}{8}$ " (3mm) Baltic birch for one project, taping

the edges together to keep the layers from separating. This method has three main advantages:

1. It gives the thin pieces more support.
2. The added thickness slows your cutting speed for more control.
3. You will have three completed pieces in the time it would usually take to cut one.

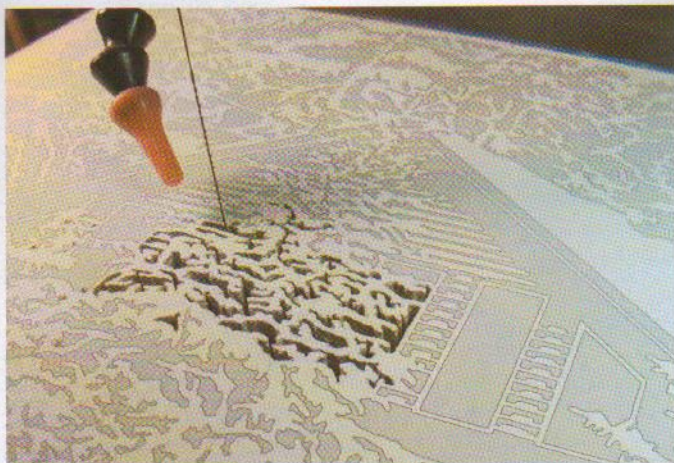
If you prefer solid hardwoods, however, choose a thicker stock and keep the grain direction in mind as you're orienting the pattern.

After selecting your wood, apply the pattern. You can attach it to Con-Tact® brand clear removable shelf paper, as it's easy to remove after cutting. You could also cover the blank with blue painter's tape and attach the pattern to the tape with spray adhesive. The last thing you want is a pattern that won't come off, as this interferes with sanding and finishing and could result in breaks down the road.

Pre-Sand Your Blanks

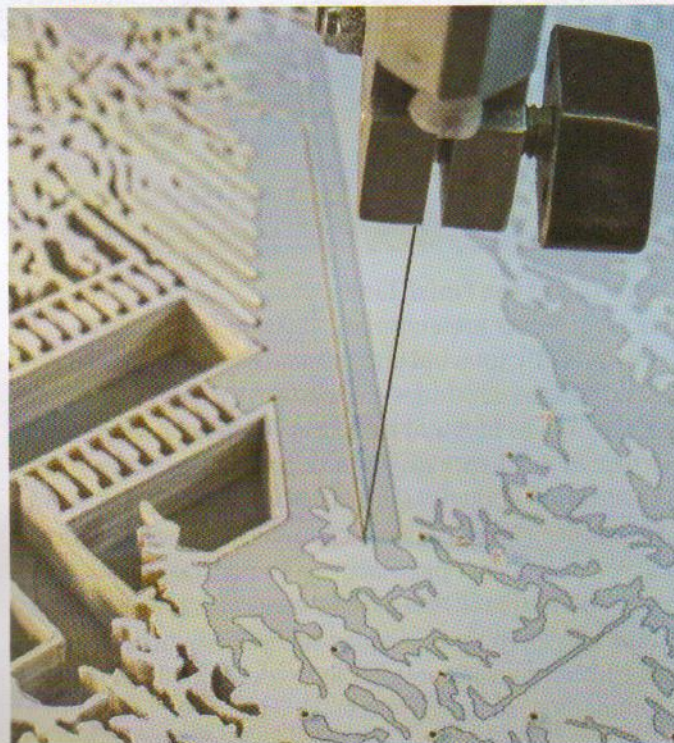
You will have difficulty sanding without damage after the piece is completely cut. So, consider pre-sanding your blanks to 320-grit and then removing sanding dust with a clean tack cloth.





Don't Drill All the Holes at Once

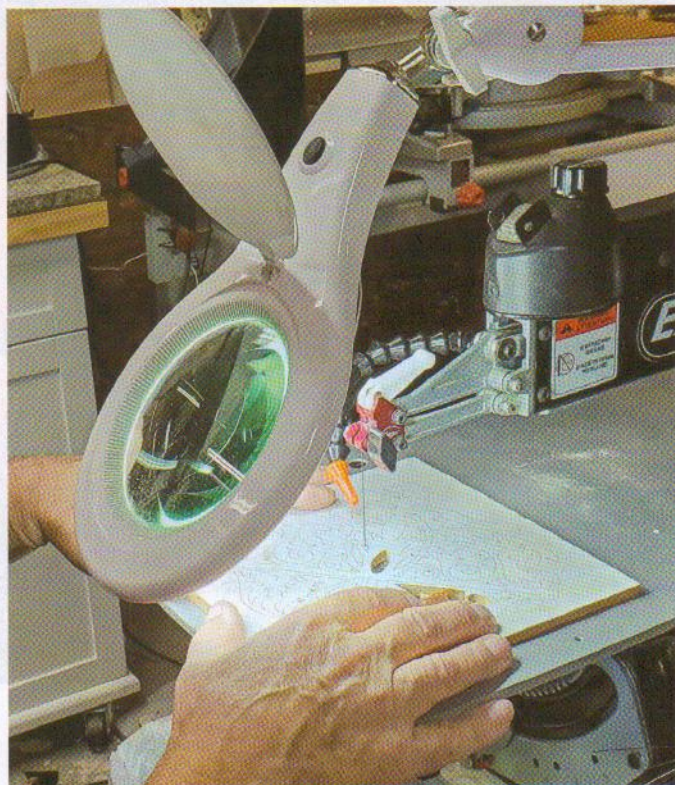
Instead of drilling all the blade-entry holes at once, try drilling holes in approximately 15 to 20 cutouts at a time, starting at the center. Plan each cutting area ahead of time; for example, if you're cutting the "Winter Retreat" design from issue #73 (as shown above), focus on the large pine tree at the center of the piece. Start with the 15 to 20 cuts near the center of the tree, and then progress to the bottom and then to top of the pine. Cutting in this incremental way makes the piece feel more manageable and maintains stability for a longer period of time.



Pick the Right Blade

Use a high-tooth-count blade, such as #2/0 at 28 TPI (teeth per inch), for more precise, controlled cutting. If the piece contains many irregularly shaped holes,

consider using a spiral blade; spiral blades leave a rougher edge and more fuzzies, but can save you time and effort, especially on difficult turns. For long, straight cuts, a straight blade is ideal. *Note: If the design has a mixture of irregular cuts and long, straight cuts, you may need to switch blade types partway through the project. Practice the spiral blade before you commit to using it in a complex piece.*

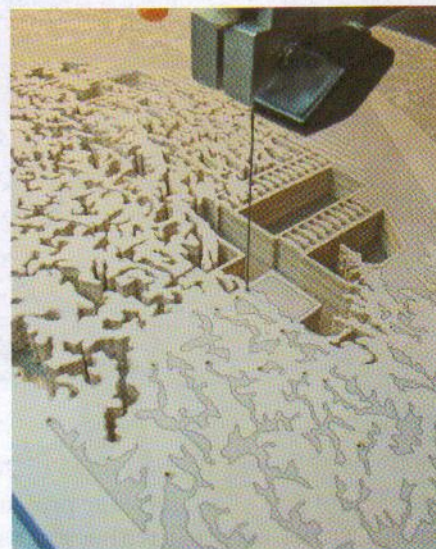


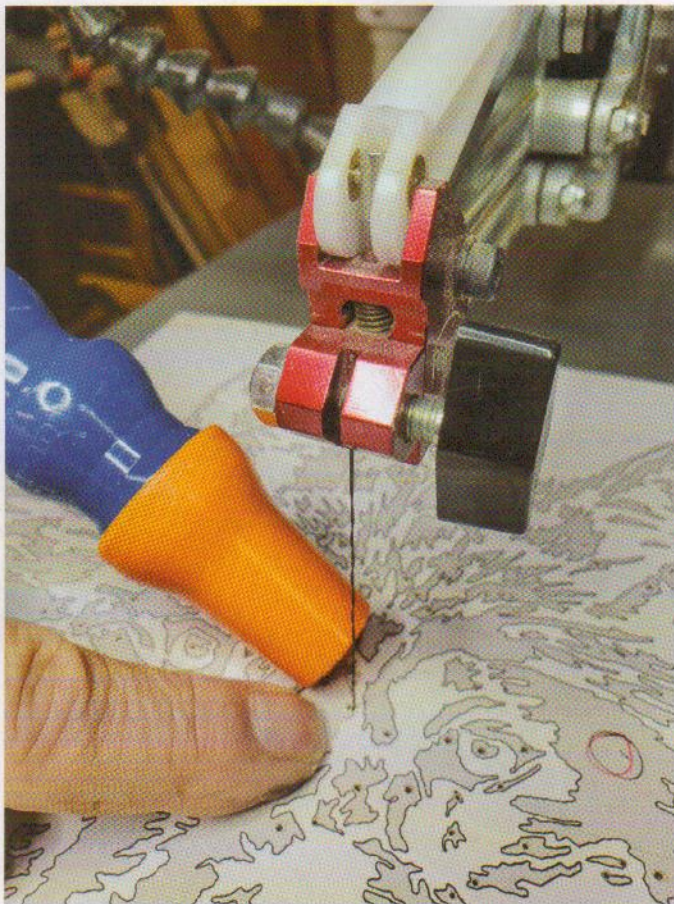
Grab Your Gear

With intricate projects, a magnifier with good lighting can be a huge help. A headlamp can also be useful in fine detail work. *For more on headlamps, see page 17.*

Cut from the Center Out

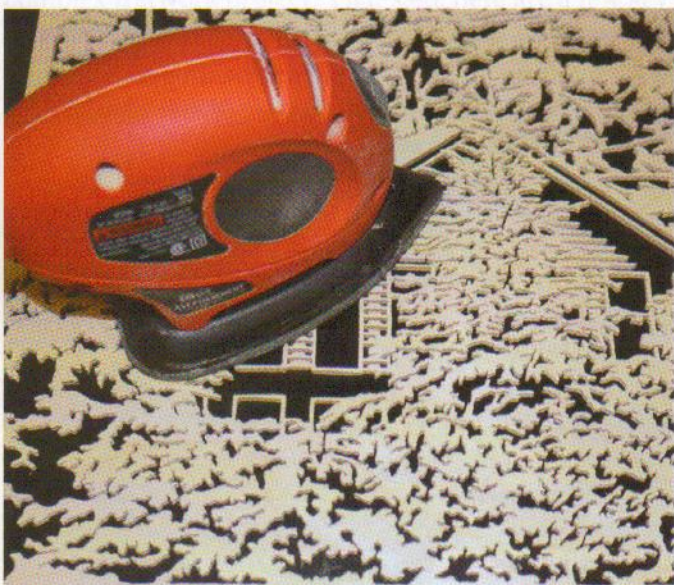
Cutting from the center out adds more stability to the piece; it will also keep the project more centered on your scroll saw table, supporting the most delicate sections and reducing the chance for breakage.





Feed from the Top

If your scroll saw has top-feeding capability, get comfortable with that feature. Your back and neck will thank you!



Sand as You Go

After cutting each section of 15 to 20 cutouts (or less, if it makes sense for your project), flip the piece over. Then sand lightly with a palm sander or sanding


block to remove most fuzzies. Hold the sander as flat as possible so as not to damage the workpiece; little cutouts, like hangnails, are easy to catch and tear. Sanding this way will make for less cleanup after the piece is complete.



Don't Trip at the Finish Line

Once your cuts are complete, remove the pattern very carefully to avoid snapping any pieces. Use a dental pick to get under the pattern and needle files for the insides of small frets; heavy-duty sanders are not welcome at this stage, as they could ruin hours of painstaking work. To minimize wear on the delicate bridges, consider applying a spray finish rather than a brush-on. Clear spray lacquer works well. For a more colorful look, consider a spray paint-and-primer combo. If you plan to display the piece behind glass, a satin finish may be preferable to gloss; if you're leaving it plain, gloss or semigloss work well.

For more from Rolf Beuttenmuller, check out his version of Charlie Dearing's wolf fretwork on scrollsawer.com. For more from Charles Hand, check out his "Buddy the Sparrow" project on page 66.



THE IMPOSSIBLE FRETWORK OF Fiona Kingdon

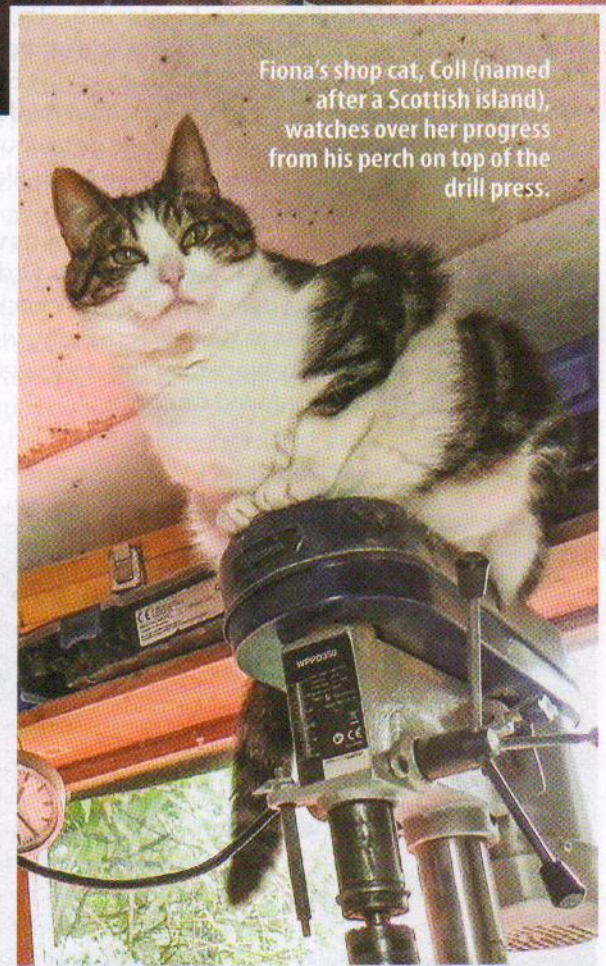
One day, she rescued a scroll saw from the trash. Now, she uses it to make jaw-dropping depictions of nature

By Kaylee Schofield

To do what no one else is doing can be a great risk, as Northamptonshire woodworker Fiona Kingdon knows. For years, she has tinkered with slabs of rescued hardwood on a rescued scroll saw in her garden shed, churning out freeform fretwork pieces as intricate as spiders' webs. Fiona's creations have a spontaneous quality bounded with thoughtfulness, as though she began each one by asking the wood its preferences on subject and form. This insistence on spontaneity—and on hardwood rather than the more predictable ply—can be a risk, but as Fiona knows, sometimes the risk pays off.

SSW: What's your story? How did you get into scrolling?

Fiona: I've always had a need to be making. After a flirtation with a career in industrial design, I studied furniture restoration and craftsmanship, but stopped to bring up my lovely son. Needing work that paid reliably and not having the means to set up a workshop, I began working with young people with behavioral difficulties.



Fiona's shop cat, Coll (named after a Scottish island), watches over her progress from his perch on top of the drill press.

Three Shells and Breakers.



“Sometimes the work is unpredictable, but that’s all part of its appeal. If I wanted perfect but dead, I’d buy a 3D printer.”

One rainy day, I pulled an abandoned Hegner out of a dumpster and after a bit of TLC was pleased to find that it ran like a dream. I found I could indulge my wood habit in a garden shed with minimal materials, without annoying the neighbors.

With illness affecting how I could work, I decided life was too short—and that perhaps it was better to be poorer and bossless, taking a day (or six!) to try to make something beautiful.

SSW: What’s your wood of choice? Where do you get most of your materials?

Fiona: It depends. For silhouettes, I prefer ash, elm, and walnut, as they often offer the best grain and color changes for me to play with. My favorite overall is English oak—not too light and not too dark, beautiful medullary rays, and it’s close-grained enough to take detail but not too hard on blades. Mostly, I like it because it’s available and I know it well.

I enjoy visiting small, independent wood yards where I can rummage for timber that jumps out at me. Ordering online just wouldn’t work; I need to feel it and check out the grain. Also, I pick up bits at the few remaining wood fair events where I show my work over the summers, or rescue old boards out of unloved furniture.

Tern to the Light.



SSW: Many of the cuts you make are tiny, resulting in astonishingly delicate fretwork. What size blade do you typically use, and what tricks have you developed to ensure that the bridges don’t snap?

Fiona: I use Pegas superskip #2 blades for almost everything. They’re fine, but not so fine that they break easily. I can source them reliably and they are not too expensive. Blade specs and machine talk bore me to death—you can spend a lot of time on talk and a lot of money on blades and still end up making something grotesque.

I generally don’t work from patterns but start with a sketch guide that’s more about general composition. I feel free to explore from there, placing the bridges where I think the timber needs them. Like with most things, feel, experience, and practice tell me what I can get away with in any given piece of timber. I’ll leave myself a few options—for example, if I were putting fine whiskers on a cat, I’d give it extra whiskers, knowing I would likely lose a few. Like everyone, I misjudge, get distracted, lose a section, and have to redesign a little. It’s rarely a complete write-off. I am more interested in the general organic flow than perfect renditions that follow a plan.

Thinking ahead is important, too. I try to cut ensuring that the next piece is supported by an uncut section until I get to the ‘frame’. It doesn’t always work out that way, though; sometimes I have to support delicate sections by taping cutouts back into the work to act as support until I’m done. Mostly, success is about taking care and paying attention.

SSW: It seems like you prefer to cut your pieces from thicker hardwoods rather than thin plywood, which is more typical. Why?

Fiona: In the U.K., high-quality plywood that is aesthetically pleasing is expensive and hard to come by. If I am going to spend many hours on a piece of work,

then I'd rather make it out of a beautiful hardwood. A lovely chunk of timber or a bit of ply? There's no contest. For me, weaving the beauty of the wood into my work is what it's all about.

My other issue with plywood (and, heaven forbid, MDF) is that there is some nasty stuff holding timber composites together and it is not something I want in my lungs. I am very careful about dust masks, but even with the best will in the world, you are going to have some exposure. Luckily, British hardwoods are fairly tame.

Thicker timber keeps its strength in its depth; a filament may be fine, but if it's $\frac{3}{4}$ " (1.9cm) deep, it still has substance. I couldn't achieve very fine detail in thin sections—it wouldn't hold together. Also, thicker timber slows down the cutting so the details are easier to control. Sometimes the work is unpredictable, but that's all part of its appeal. If I wanted perfect but dead, I'd buy a 3D printer.

SSW: Many of your designs feature nautical scenes. Is this a conscious choice?

Fiona: I live in a terraced house adjacent to a major road, having grown up in a rural area with frequent access to the sea. I find 'town' quite stressful, so my work reflects the places I have felt happiest or most energized. Sometimes I have woodland or mountain phases; sometimes it's the ocean. I don't make a decision per se. For silhouettes, it's what I see in the timber, rather like seeing pictures in clouds or beer froth—inevitably those images will be influenced by my experiences. That said, wave and mathematical natural forms are a particular favorite of mine! I am always trying and failing to capture the dynamism of the sea.

Mother's Love.



Fish Net's Tight.

SSW: What do you like best about woodworking? Has it taught you anything about yourself?

Fiona: I find wood intoxicating in its beauty, versatility, and sensory gifts. Why on earth would anyone not like woodworking?

I have learned to accept that there are two types of days. There are those when I have a clear head and can take the time to wallow in the work, the concentration leaving no headroom for troubles. On these days, I find a lot of peace in scrolling and my best work comes out. There are also days when I shouldn't work because I'll just screw up, swear, and throw things. People often say that I must have a lot of patience. That's not true—I just have a vision and persistence and am at my best when mostly left to my own devices.

SSW: What advice do you have for woodworkers who are just starting out?

Fiona: I wouldn't presume to give anyone advice. That said, here are a few thoughts.

The work is about exploring ideas, not getting caught up in details. Accept imperfection in expression. You aren't a machine. Don't linger too much on what other folks are doing; if you are going to devote a lot of time to a project, try to make it something beautiful and original. It's much more satisfying.

For more of Fiona's work, visit fionakingdon.com. To try your hand at one of her designs, turn to page 36.

Bread and Cheese

Practice cutting thin bridges in hardwood with this charming avian duo

By Fiona Kingdon

I called this project *Bread and Cheese* because long ago in England, hard-up country folks would snack on new hawthorn leaves and blossoms for nourishment. They referred to this delicacy as ‘bread and cheese,’ presumably because they didn’t have any real bread and cheese on hand! Hawthorn tastes pretty dreadful, but I guess it’s one way of getting your greens.

I used a native hardwood for this piece because I like the rich colors and grain patterns. If you do use a regular hardwood rather than plywood, be sure to choose a piece around $\frac{3}{4}$ " (1.9cm) thick; this should keep the delicate bridges from breaking as you cut.

Cutting and Finishing

Smooth the blank using an orbital sander or your preferred method; I used a hand plane and a cabinet scraper. Photocopy the pattern and apply it to the wood using a repositionable glue stick. Cut out the outer oval on a scroll saw, and round the top edge with a router and $\frac{1}{2}$ " (13mm) roundover bit. Sand the edges smooth with 240-grit sandpaper. *Note: If you don't have a router, you can round over the edges with a pneumatic drum sander.* Drill the blade-entry holes. Cut the small internal details first, and then move on to the inner oval, leaving large areas as support until the end.

When finished, dampen the pattern slightly, carefully remove it with a sharp blade, and let dry. Finish any raised grain carefully with fine-grit sandpaper, smoothing the piece to your desired finish. I gently sand my pieces up through the grits until I reach 1500. Apply a light coat of Danish oil across the surface and into the fine details with a small paintbrush. Let dry for a few days, and then apply a fine coat of spray beeswax polish. Lightly buff the frame if desired.

Materials & Tools

Materials

- Wood, such as English oak, $\frac{3}{4}$ " (1.9cm) thick: 8" x 11" (20.3cm x 27.9cm)
- Glue stick (repositionable)
- Sandpaper: assorted grits up to 1500
- Natural finish, such as Danish oil
- Spray beeswax polish
- Cabinet scraper
- Hand plane
- Router with bit: $\frac{1}{2}$ " (13mm)-dia. roundover
- Sander: orbital, pneumatic drum (optional)
- Paintbrush: small
- Thin knife (for removing pattern)

Tools

- Scroll saw with blades: super-skip #2
- Drill with bit: $\frac{1}{16}$ " (2mm)-dia.

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

Pattern for *BREAD AND CHEESE* is in the pullout section.



Fiona Kingdon studied furniture restoration and craftsmanship, and then worked with children with behavioral difficulties. Eight years ago, with a need to return to working with wood creatively, she began

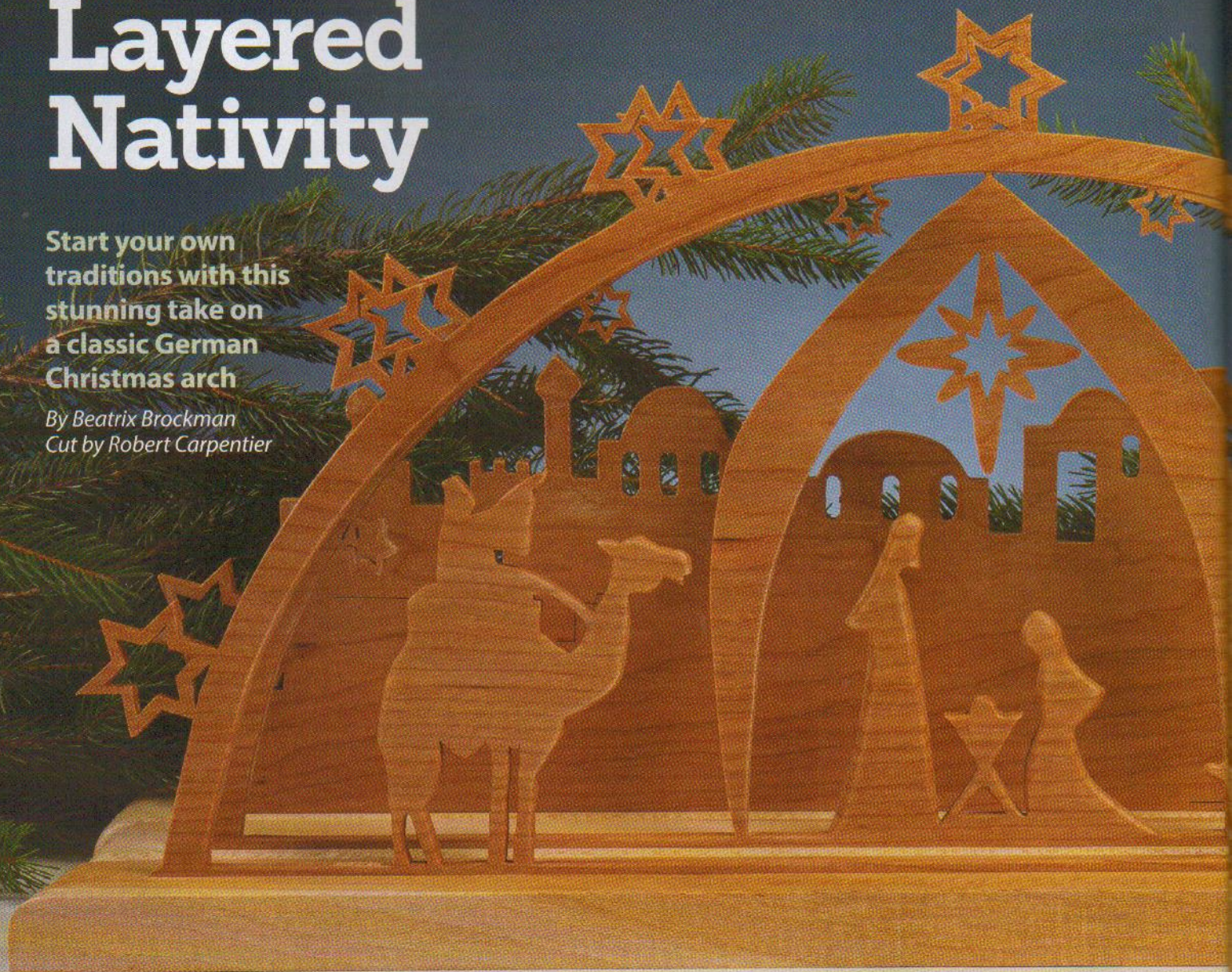
using a scrollsaw to express her artistic side. Fiona shows her work at galleries and events across the U.K. You can find more of her work at fionakingdon.com.



Layered Nativity

Start your own traditions with this stunning take on a classic German Christmas arch

By Beatrix Brockman
Cut by Robert Carpentier



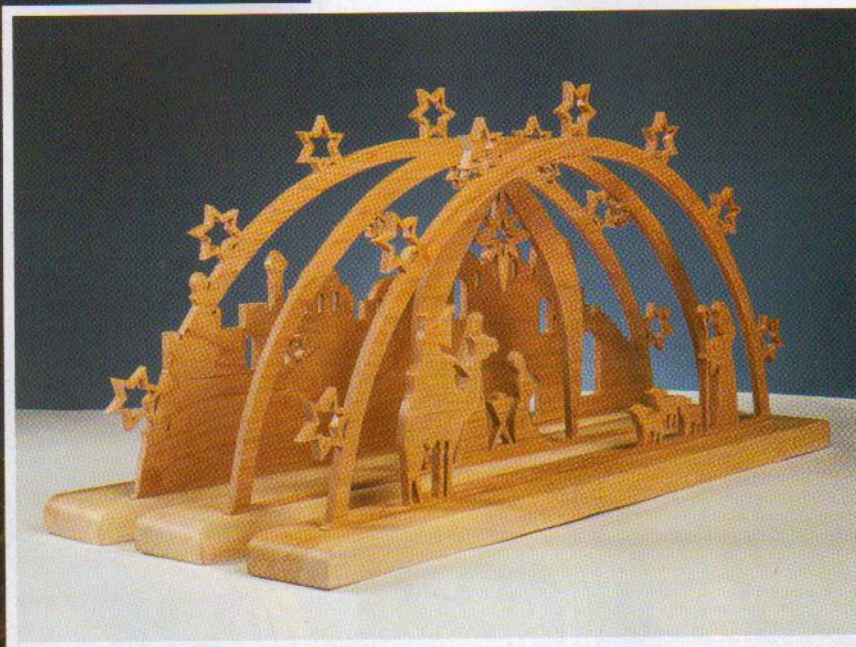
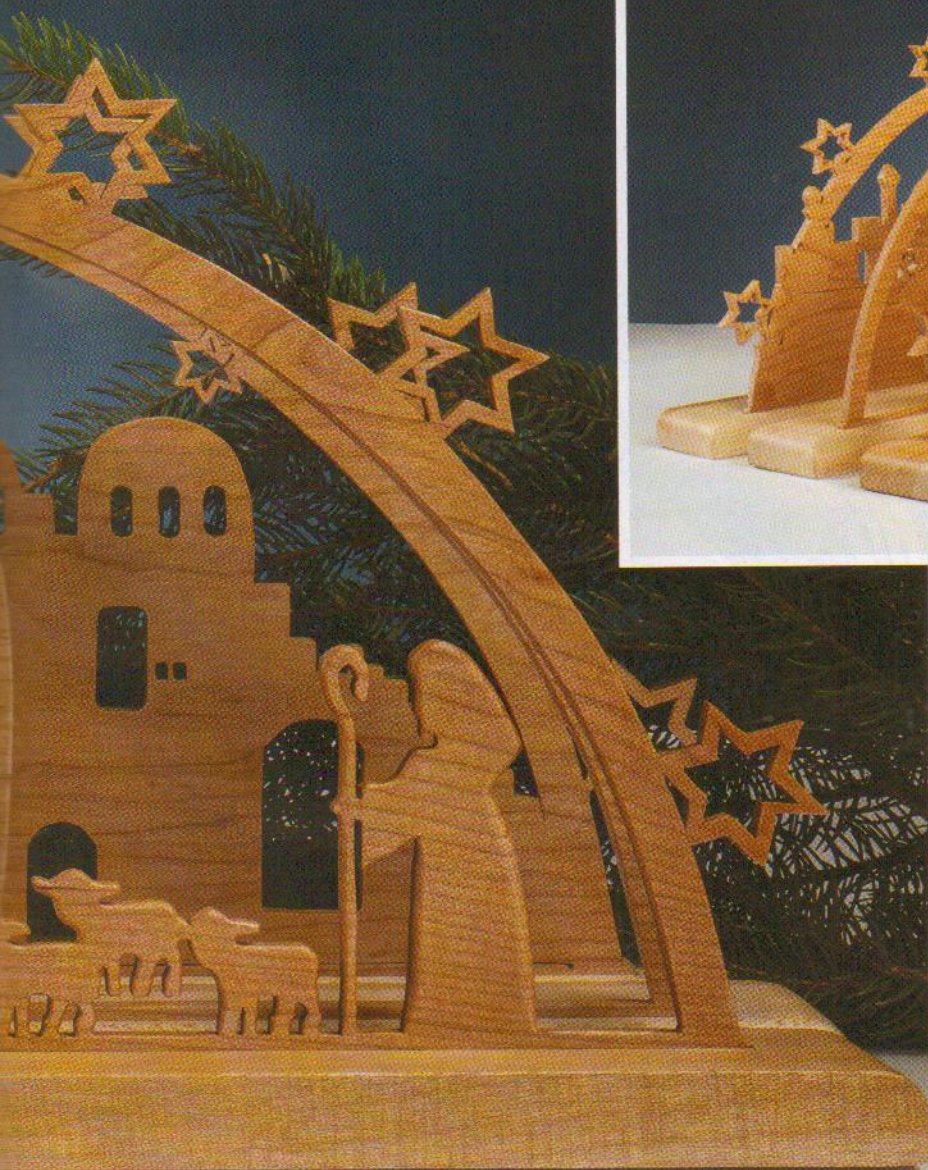
Christmas arches, known as *Schwibbogen*, are beloved traditional decorations. They are most often made by wood artisans in the Erzgebirge region of Eastern Germany. The arches have their origins in mining towns, as the miners spent the winter months almost completely in darkness. They would start their shift before dawn and come home long after sundown. Longing for light, they began inventing unique ways to display candles, often including biblical scenes or fairy-tale elements in their creations.

In the fall of 2015, I desperately wanted my husband to make me a German Christmas arch on his new scroll saw. However, he was quick to respond: “Why don’t you do it yourself?” I have been scrolling ever since.

Cutting and Finishing

Cover the cherry blanks with blue painter’s tape. Attach the patterns to the tape with a repositionable glue stick, and then cover them with clear packaging tape before cutting. Drill the blade entry holes with a drill press and cut the layers, starting with the interior frets. Cut slots through the entire thickness of the base on the scroll saw (refer to the measured drawing on the pullout section). The base can be cut into separate bases, if desired. Gently remove the patterns once everything is cut.

Sand the layers with a sanding mop. Round over the edges of the base pieces with



Materials & Tools

Materials

- Wood, such as cherry, 1/4" (6mm) thick: Layer 1, approx. 11" x 22" (27.9cm x 55.9cm)
- Wood, such as cherry, 1/4" (6mm) thick: Layer 2, approx. 9 1/2" x 20" (24.1cm x 50.8cm)
- Wood, such as cherry, 1/4" (6mm) thick: Layer 3, approx. 11" x 22" (27.9cm x 55.9cm)
- Wood, such as sycamore, 3/4" (1.9cm) thick: base, 7" x 21 1/2" (17.7cm x 54.6cm)
- Tape: blue painter's, clear packaging
- Glue stick: repositionable
- Wood glue
- Clear finish, such as satin spray lacquer (optional)
- Tack cloth
- LED lights: battery-powered, mini (optional)

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

Tools

- Scroll saw with blades, such as #5 MGT
- Drill press with bits: assorted small
- Sanding mop
- Pneumatic drum sander
- Router with bit: 1/4" (6mm)-dia. roundover (optional)

a pneumatic drum sander or a roundover bit in a router, and remove excess dust with a tack cloth. Christmas arches are traditionally left unfinished, but you could spray the layers with a satin lacquer, if desired. Glue the layers in place and adorn the arch as you wish. I sometimes use battery-powered LED mini lights.

Patterns for the **LAYERED NATIVITY** are in the pullout section.

Did You Know?

On their final mining shift before Christmas, workers would light the entrance to the mine with an "arch" of pit lamps. Many historians believe it is this practice that started the Christmas arch tradition.



Beatrix Brockman works as a professor of German language in Tennessee. She enjoys designing and making intarsia pieces and word art (as well as puzzles and decorative items) on her scroll saw. She has won several prizes at the Riverfest Juried Art Show in Clarksville, Tenn. See more of her work on Instagram @carpentarbea.

Toy Race Car



This fun weekend build can be made entirely from scraps

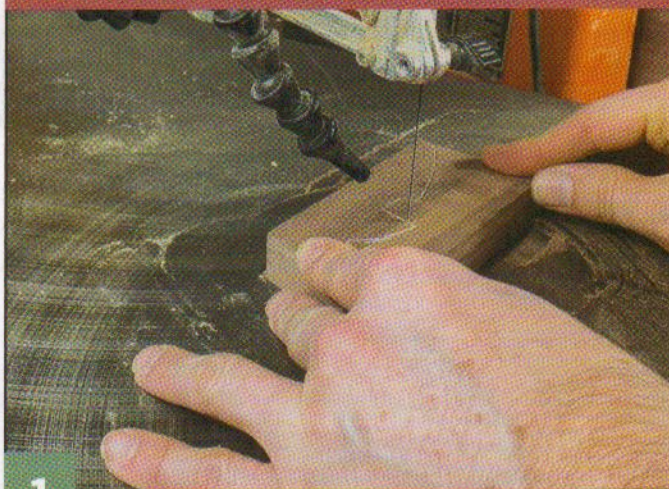
By Brad Anderson

Nothing beats the thrill of racing around corners at top speeds, trying to pass or out maneuver other drivers. Whether down a ramp or flat on the ground, this toy is great for speeding around the racetrack toward that famous checkered flag. I made this design so that kids could paint their own cars and then attach the wheels to race. You can build just one or enough for every kid on the block.

Getting Started

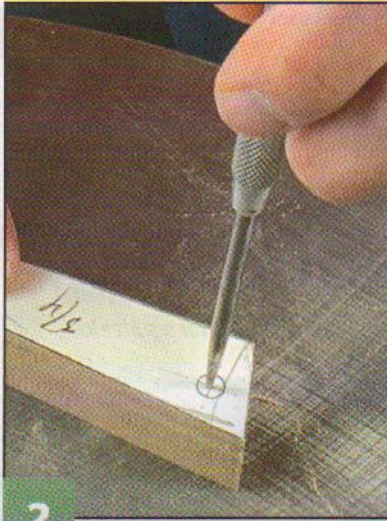
Choose a kind of wood; I prefer domestic hardwoods, such as cherry and walnut, because they're durable and relatively easy to source. Draw the pattern profiles directly on the wood or attach them with repositionable spray adhesive.

CUTTING AND ASSEMBLING

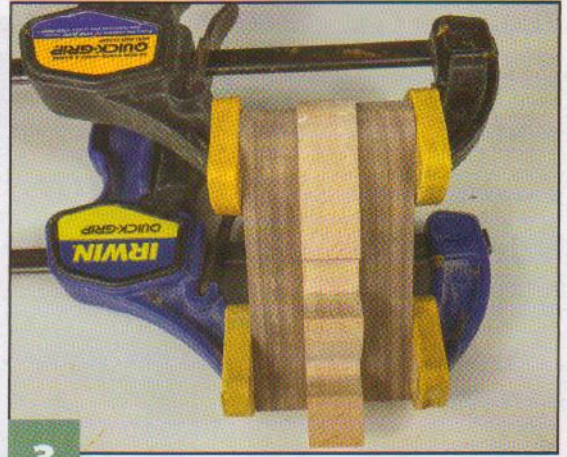
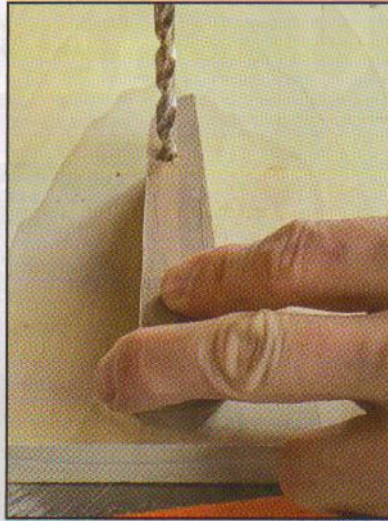


1

Cut all parts on a scroll saw.



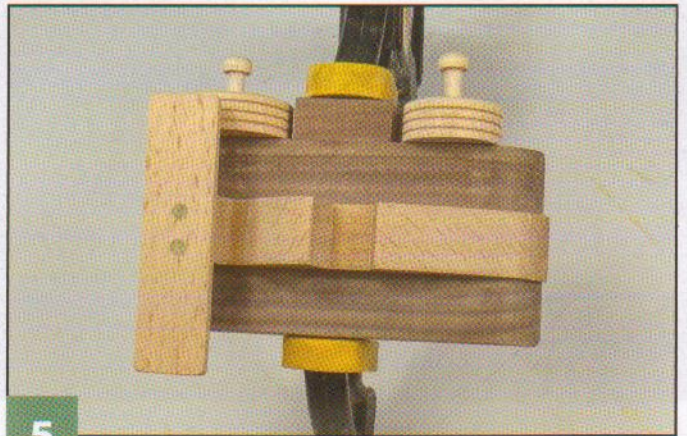
2 **Mark the holes for the wheels on the side body pieces.** Drill a hole in each location with a $\frac{7}{32}$ " (5.6mm)-dia. drill bit in a drill press.



3 **Glue and clamp the three body pieces together.** Once dry, sand the bottom and back flush using a belt sander. Round all sharp edges and corners with 150-grit sandpaper.



4 **Cut the tail wing to size.** Mark two $\frac{3}{16}$ " (5mm) holes in the center of the wing, where it will sit on the body of the car. Then glue and clamp the wing to the back of the race car assembly. Drill the holes in the marked areas; I do this by wrapping blue painter's tape around the bit about $\frac{5}{8}$ " (1.6cm) up from the tip. This is so I don't drill down farther than what is necessary. Cut the dowels to size and insert them into the holes with a hammer, sanding until they are flush with the surface.

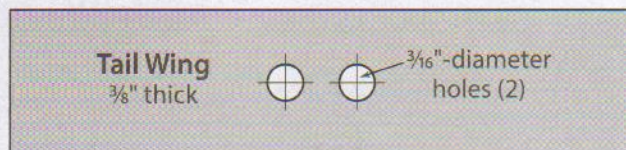
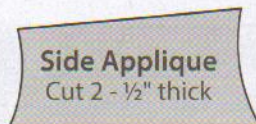
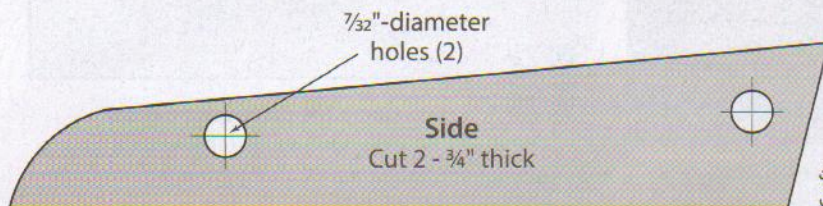
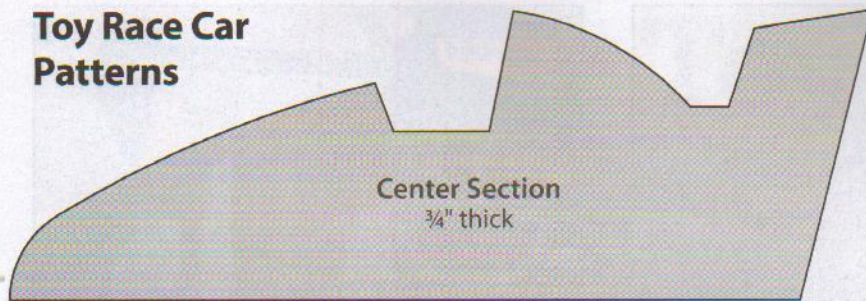


5 **Temporarily attach the wheels, so you have a sense of where to place the appliques.** Glue and clamp the appliques to the sides. Remove the wheels and sand all surfaces with 150-grit sandpaper. Sand progressively up through the grits until you reach 320.



6 **Finish using a child-safe finish or leave the surface natural.** Attach the wheels with axle pegs, cutting them down to size if necessary.

Toy Race Car Patterns



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TIP

FOR A DIFFERENT LOOK

Round over the top of the appliques with a router or a pneumatic drum sander and sand a bevel on the wing for a softer look.



Materials & Tools

Materials

- Wood, such as walnut, 1/2" (1.3cm) thick: side appliques, 2 each approx. 3/4" x 1 1/2" (1.9cm x 3.8cm)
- Wood, such as walnut or cherry, 3/4" (1.9cm) thick: center and sides, approx. 3 1/2" x 4 3/4" (8.9cm x 12.1cm)
- Wood, such as cherry, 3/8" (1cm) thick: tail wing, 3/4" x 3 1/4" (1.9cm x 8.3cm)
- Wood dowel, 3/16" (5mm)-dia.: 3" (7.6cm) long
- Wooden axle pegs, 7/32" (5.6mm)-dia.: 4 each
- Wheels, 1 1/2" (3.8cm)-dia.: 2 each
- Wheels, 1 1/4" (3.2cm)-dia.: 2 each
- Child-safe finish, such as clear shellac
- Spray adhesive: repositionable
- Wood glue
- Sandpaper: assorted grits up to 320

Tools

- Scroll saw with blades: #5 skip-tooth
- Awl
- Drill press with bits: 3/16" (5mm)-dia., 7/32" (5.6mm)-dia.
- Router with bit: 1/4" (6mm)-dia. roundover (optional)
- Sanders: belt, pneumatic drum
- Hammer
- Clamps

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



Brad Anderson has been a hobbyist woodworker for about 20 years. He started designing and building furniture but quickly ran out of places to put it. After the birth of his first child, he discovered a love for toymaking and has been designing them ever since. He donates many of his creations to local toy drives. Contact Brad at sawdustsplinters.blogspot.com or see more of his work on Etsy at AllNaturalToyPlans.

Rocket and UFO Puzzles



Scroll two out-of-this-world designs for your little future astronaut

By Sarah Lyn Chamberlain

These stylized puzzles are perfect gifts for adventurous kids—especially around the holidays. I designed the tabs on the interlocking pieces to function as design elements, such as windows and tongues of flame, in addition to their practical purposes. This suggestion of certain details gives the puzzles a simplified form, requiring fewer drill holes and cuts overall. *Note: For very young children, woodburn along the lines of the smallest pieces instead of cutting them.*

Cutting and Finishing

Choose a kind of wood; I prefer $\frac{3}{4}$ " (1.9cm) pine. Sand the blanks with 80-grit sandpaper and cover the surfaces with blue painter's tape. Photocopy the patterns, and then use spray adhesive to secure them to the tape. The grain on the rocket should

flow vertically; the grain on the UFO should flow horizontally. Drill the holes for the windows on both.

Cut the outside shape of each puzzle, and then work through the rest of the cuts. It helps to start with unwieldy areas, like the rocket antenna and the UFO legs; this way, you can set them aside early on and maneuver the remaining stock more easily. When cut, remove the patterns, reassemble the puzzles, and use an orbital sander on the fronts and backs. Sand the edges by hand, moving up progressively through the grits until you reach 320. Stain as desired; when I stain, I usually tackle all of the light-colored pieces first and move through the stains color by color. Let the pieces dry for 24 hours and then spray with several coats of clear gloss finish.

Materials & Tools

Materials

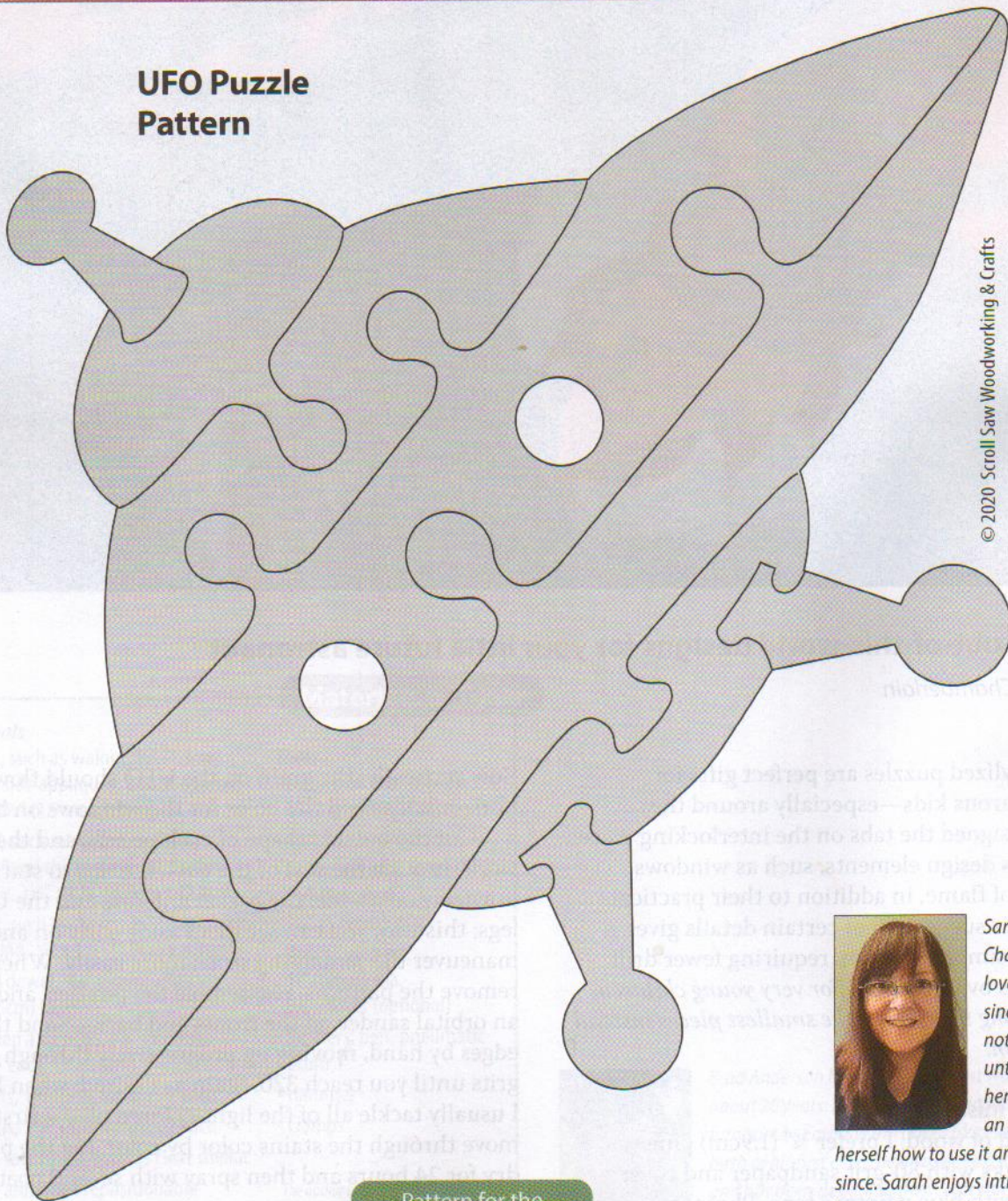
- Pine, $\frac{3}{4}$ " (1.9cm) thick: UFO, $6\frac{1}{4}$ " x 9" (15.9cm x 22.9cm); rocket, 5" x $9\frac{1}{4}$ " (12.7cm x 23.5cm)
- Tape: blue painter's
- Sandpaper: assorted grits up to 320
- Spray adhesive
- Assorted stains, such as Minwax: dark walnut, gunstock, red oak
- Finish: clear spray, such as Rust-Oleum 2X Gloss

Tools

- Scroll saw with blades: #5 or #7 reverse-tooth
- Drill with bits: $\frac{1}{4}$ " (6mm)-dia., $\frac{1}{2}$ " (13mm)-dia.
- Sander: orbital
- Woodburner with nib: writing (optional)

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

UFO Puzzle Pattern



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Pattern for the
ROCKET PUZZLE is in
the pullout section.



Sarah Lyn Chamberlain has loved woodworking since age five but did not start scrolling until she purchased her first scroll saw as an adult. She taught

herself how to use it and hasn't stopped since. Sarah enjoys intricate projects, but her favorite thing to create is playful puzzle designs. For more of Sarah's work, visit her website at creativestuff.ca.

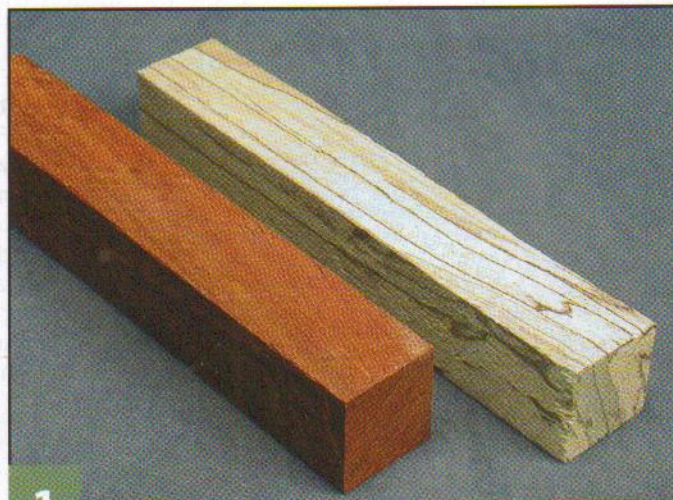


Making Turning Blanks ON THE SCROLL SAW

Spruce up conventional pen designs with a multitude of accent stripes

By Barry Gross

Did you ever see a unique wooden pen and wonder, *How did they do that?* Well, this article offers some suggestions to get you started making your own custom pen blanks—with stripes, wiggles, and more. The best part is that you can make them on the scroll saw! All you'll need is a standard pen turning kit to begin.



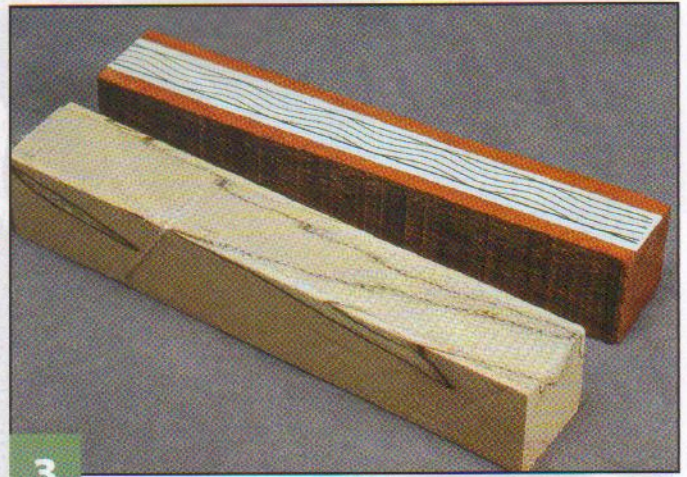
1

Gather your materials. Start out with two contrasting, identically sized pen blanks, such as maple and padauk or any other combination of light and dark. The more contrasting the material, the better your pen will look.

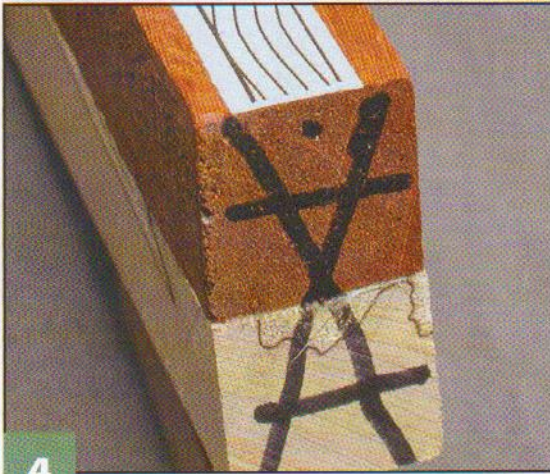
ADDING WOODEN ACCENT STRIPES



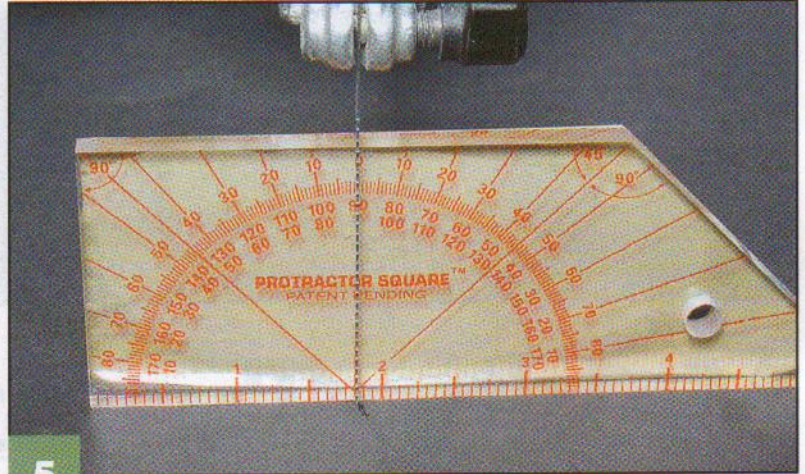
- 2** Secure the pattern to one of the blanks. Use repositionable spray adhesive.



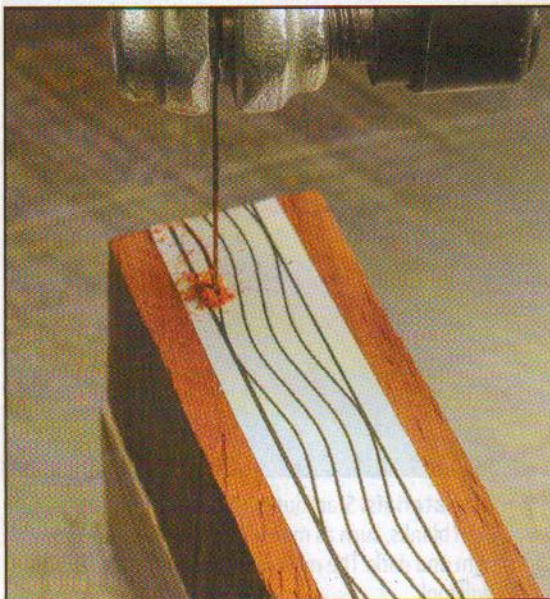
- 3** Stack the blanks. Place double-sided turner's tape on top of the bottom pen blank, and then secure the pattern blank on top of it.



- 4** Mark the ends of the pen blank. This way, you will be able to distinguish one end from the other for correct order and grain orientation after you cut it into pieces.



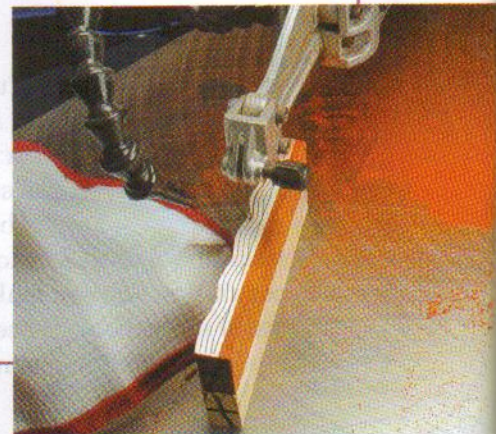
- 5** Make sure that your table is square. Use a protractor square to ensure that your blade is square to the saw table. This will guarantee a square cut from the top of the blank to the bottom.

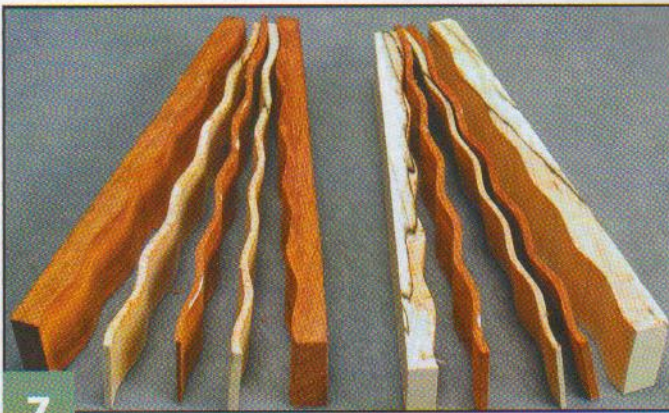


- 6** Cut the stripes. Follow the lines with slow, even pressure to ensure a clean and accurate perpendicular cut from top to bottom.

TIP DUST CONTROL

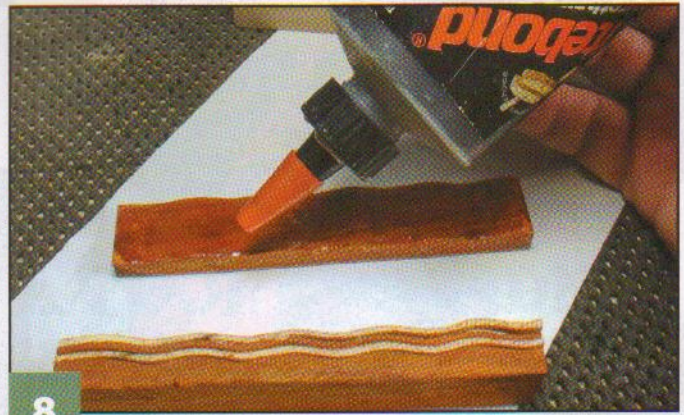
Dust control is a must, especially for exotic hardwoods like padauk. Beginners and experienced scrollers alike should always use adequate ventilation, a dust collection system, and a dust mask when scrolling.





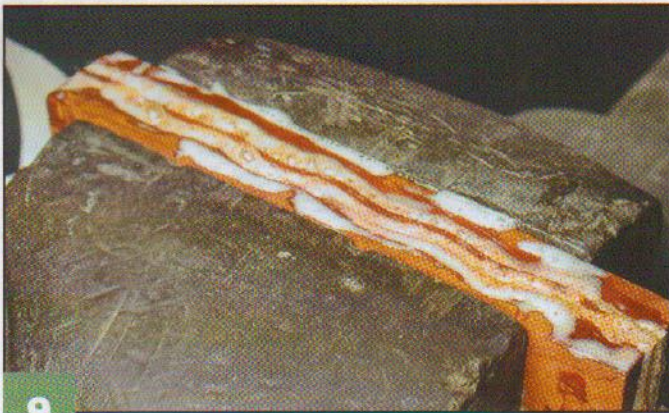
7

Arrange the stripes. Separate the cut padauk and maple pieces and arrange them as shown, replacing one of the padauk pieces with one of the maple pieces and vice versa until you get an alternating pattern of padauk, maple, padauk, maple, and padauk. The second pen blank follows the style of the first, except the colors are reversed.



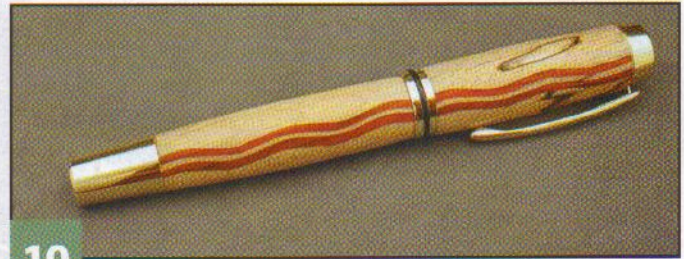
8

Glue the blanks together. Use urethane glue or wood glue.



9

Clamp the project. Use a vise or clamps to tightly squeeze the blank together, and allow it to dry thoroughly. I use a vise because unlike clamps, just one does the trick. *Note: Do not overtighten the clamps or the vise. Applying too much pressure will starve the blank of the amount of glue needed to create a tight joint.*



10

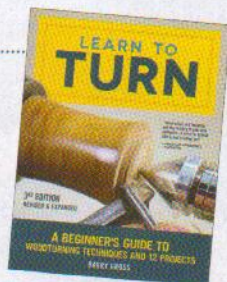
Add the hardware and turn the pens. Each version should have two attractive stripes running the length of the piece.

FURTHER READING

Learn to Turn, 3rd Edition Revised and Expanded

By Barry Gross

Item 9289. Available for \$19.99 + S&H (parcel post) from Fox Chapel Publishing, 800-457-9112, FoxChapelPublishing.com, or your local retailer.



Barry Gross owns Arizona Silhouette, which is located in Bensalem, Pa. He has been making pens for over 25 years and has authored six books on turning and pen making. Barry is a nationally known pen instructor and offers free seminars on pen making, finishing, and casting at TheWoodworkingShows.com.

Materials & Tools

Materials

- Pen kit of choice (including hardware)
- Pen blanks of choice (preferably contrasting colors, such as padauk and spalted maple)
- Plastic accent strips, such as Pen Enhancers Kit (see Special Sources)
- Glue: urethane; wood, such as Titebond
- Tape: double-sided turner's
- Spray adhesive: repositionable

Tools

- Midi lathe with assorted turning tools
- Scroll saw with blades: #5 skip-tooth
- Protractor square
- Clamps (or vise)

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

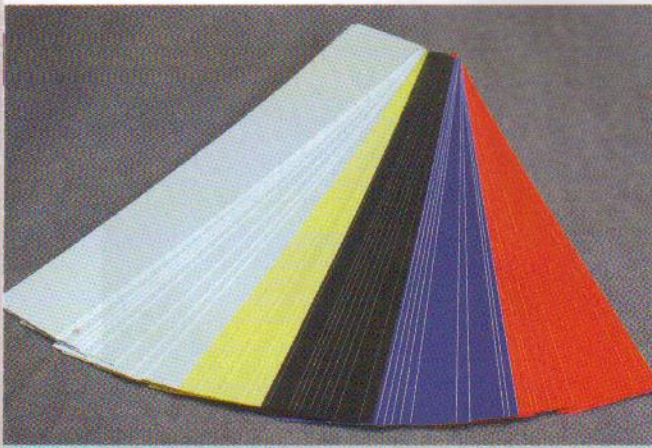
SPECIAL SOURCES

Pen kits and pen blanks are available from numerous sources, such as Arizona Silhouette (888-717-4202), Penn State Industries (800-377-7297), and Woodcraft Supply (304-422-5412).

The Pen Enhancers Kit is available at Arizona Silhouette in Bensalem, Pa. Call toll-free 888-717-4202 or visit arizonasilhouette.com for more information.

Alternate Designs

This technique is versatile and simple enough to allow for almost endless variation. See a few of my alternate designs below:



Plastic Pen Enhancers

You can also add accents to your pen blanks (or other turnings) by sandwiching thin plastic sheets between the scrolled pieces. I use the Pen Enhancers Kit, which contains 50 sheets in five different colors (see Special Sources). Cut your pen blank apart, as in Steps 1-7. Then separate the pieces and glue one or more sheets back into the pen blank with wood or urethane glue. Turn as you would the other blanks.

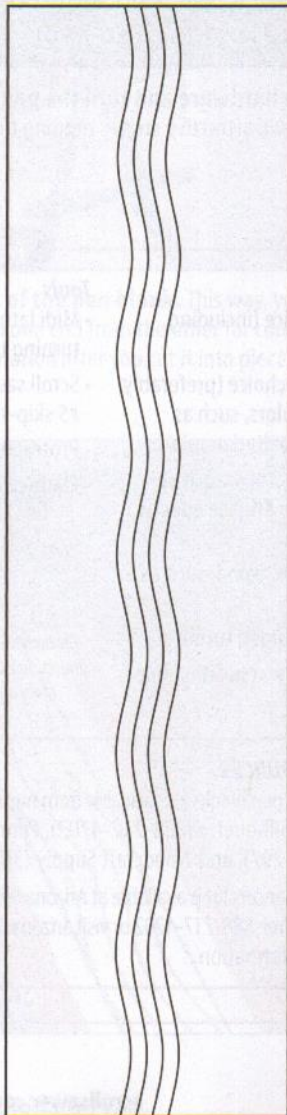
Patriotic: I glued red, white, and blue pieces together, cut them straight and on a diagonal, and assembled the blanks.



Cigar-Style: I cut the wavy stripes on the scroll saw as shown in Steps 1-7, and then glued in the individual pieces of plastic between them.



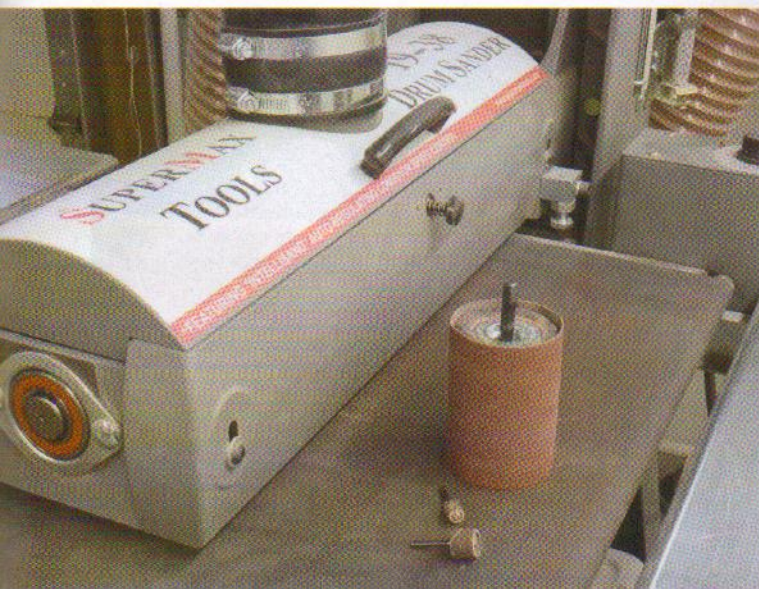
Wavy Pen Blank Pattern



Tricolor: I glued together three colors and then placed them diagonally in both the upper and lower barrels.



With a little imagination, you can make a variety of striking pens that your friends, family, and customers will admire!



The Drum Sander:

A TOOL YOU DIDN'T KNOW YOU NEEDED

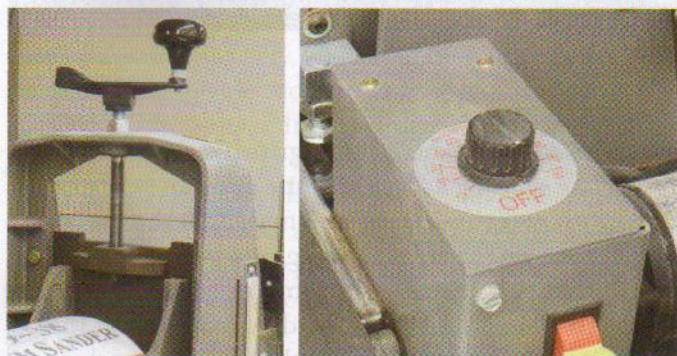
Pre-sand blanks or refine scrolled projects without breaking a sweat

By Carole Rothman

When you consider how many different types of sanders have the word “drum” in their name, you can appreciate how confusing the terminology can be, for both novice and experienced woodworkers. Even if you know this tool well, the ways in which it translates to scrolling might not be immediately clear. In this article, I’ll break down the basics: what a drum sander is, how to use it, and what to look for if you choose to add one to your shop.

first step of the sanding process. I do this by setting the drum slightly higher than the stock’s thickness. I start the conveyor and begin feeding the stock. As soon as it starts passing under the drum, I turn the handle until the drum barely touches the surface. I complete the pass at that height and then repeat it. From that point, I lower the drum between $\frac{1}{8}$ and $\frac{1}{4}$ turn per pass. Had I lowered it too much—causing it to catch on the stock and risking damage to the wood or motor—an auto-adjusting feature, now standard on most quality sanders, would have slowed the conveyor, permitting successful completion of the pass. (You may wonder, *Why not raise the drum?* The reason is that under pressure to act quickly, you may turn the handle the wrong way, which is why this automatic feature is so important.)

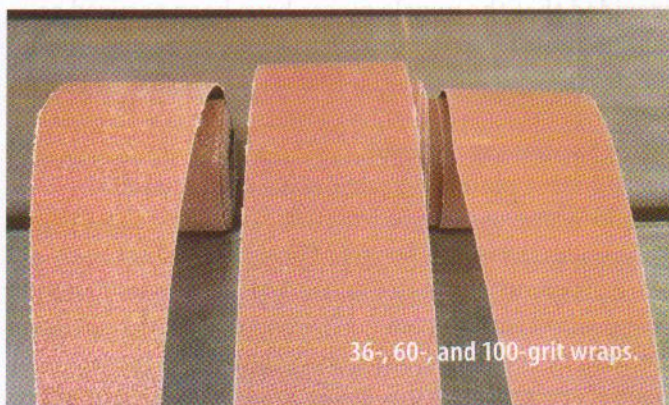
If one face of the stock is uneven, as may occur in blanks with glued-in components (see Step 3 of the Polka-Dot bowl on page 52), that face should be sanded first. Sanding is complete when you reach the desired thickness, and both surfaces are parallel, smooth, and free of irregularities.



What is a Drum Sander?

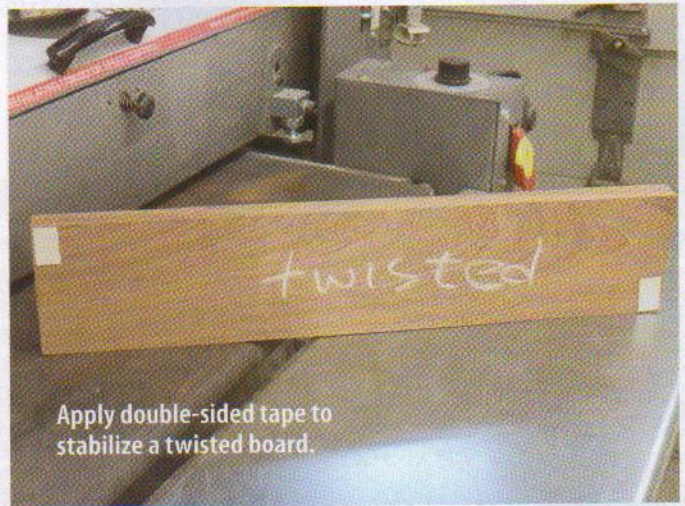
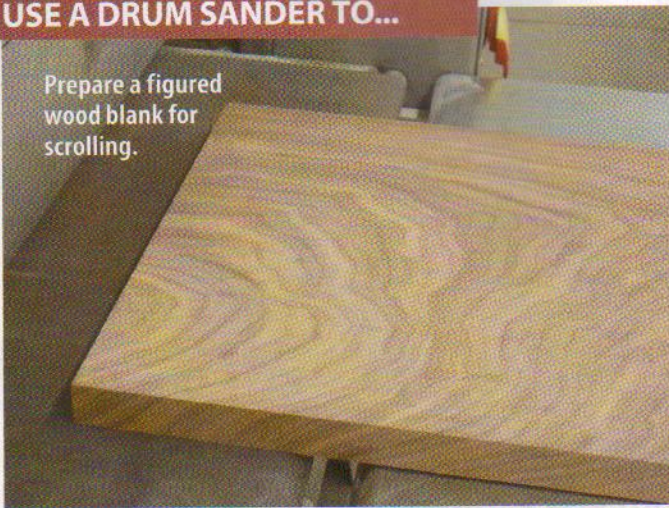
The drum sander I’m referring to is a large, stationary power tool. It consists of an abrasive-wrapped drum, positioned above a flat conveyor. The gap between the drum and the conveyor belt below it is usually controlled by a handle on the side that rotates to raise or lower the drum; a few sanders raise or lower the conveyor belt. The drum spins at a constant speed, whereas the conveyor has a variable speed control. For rapid wood removal, I use a faster conveyor speed to reduce the duration of each pass. To refine the surface, I use a slower conveyor speed, which increases the number of rotations of the drum as the stock passes through, creating a smoother surface.

Determining the starting height of the drum is the

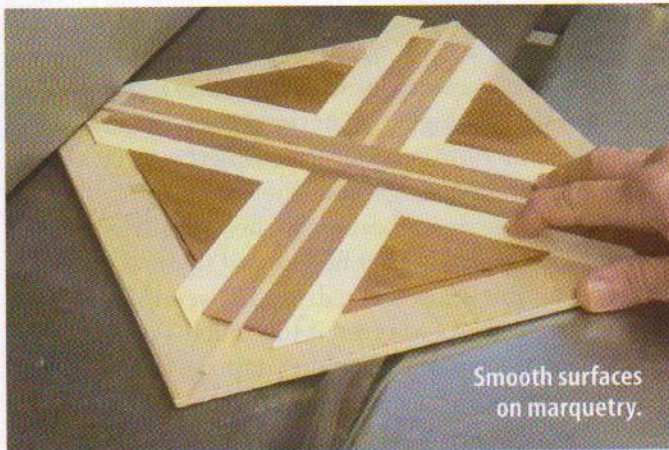


USE A DRUM SANDER TO...

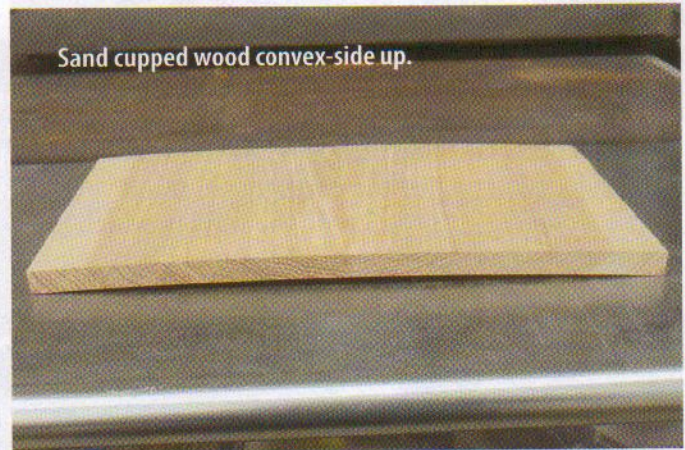
Prepare a figured wood blank for scrolling.



Apply double-sided tape to stabilize a twisted board.



Smooth surfaces on marquetry.



Sand cupped wood convex-side up.

Uses in Scrolling

Drum sanders are typically used for stock preparation, and not for finishing work. However, by using a higher grit wrap such as 220, you can easily and efficiently create a finished surface on your wood before it is cut. This is especially useful for delicate fretwork projects, whose thin bridges are vulnerable to breakage, and also for large blanks that are to be cut into smaller pieces. You can also use the drum sander to level the surface of an inlay, or give a smooth finish to a puzzle, provided that the puzzle pieces have been secured so that no movement occurs when they are passed under the drum.

Drum Sanders vs. Planers

If you have a planer, do you need a drum sander? Despite some overlap in function, there are significant differences between the two. Planers reduce stock more efficiently than drum sanders. However, damage to the wood, such as tear-out, can occur if the cutters are dull, or if the wood is highly figured or planed against the grain. Drum sanders remove stock at a

slower pace, even when coarse grits like 36 or 60 are used. The sanding action is gentle and can safely be done with or against the grain, making it the tool of choice for wood with irregular grain patterns and fragile items like thin wood or marquetry.

Both planers and drum sanders require that the workpiece sit flat when passed through the machine; any deviations will be transferred to the parallel upper face. This creates problems if the wood is twisted, cupped, or bowed. While you can use a jointer or hand plane to flatten the bottom face, the conveyor belt of the drum sander permits a simpler solution. For twisted wood, I attach pieces of thick double-sided tape under the raised corners to create a stable base. I then sand the wood, tape-side-down, as I would any other board.

The early passes remove only the high spots; the sanding sound is intermittent and distinctive. This sound becomes more regular as the high areas are removed and more of the upper surface can be sanded. A continuous sound throughout the pass signals that sanding is at or near completion. When the sanded

surface is flat, I remove the tape, and repeat the process for the remaining face. Cupped or bowed wood thick enough to resist the drum's downward pressure can be passed through the sander with the convex side up, with tape added to the bottom corners to correct any twist. The finished, flattened stock will be thinner than before, but is no longer firewood!



Open-end drum sander.

Choosing a Drum Sander

Like all tools, drum sanders vary in price, quality, and ease of use. Fortunately, a number of quality drum sanders are available today to choose from.

Before choosing a drum sander, it's important to identify which features are most important to you, and which sander is most likely to meet your present and future needs. A quality sander isn't cheap. However, this is likely a one-time purchase, and nobody can afford an inexpensive tool that brings grief whenever you use it.

Drum sanders appropriate for the home shop come in a variety of sizes and configurations, from 10" (25.4cm) tabletop models to 19" (48.3cm) floor-mounted units. Drums, made of aluminum, are usually 5" (127mm) in diameter.

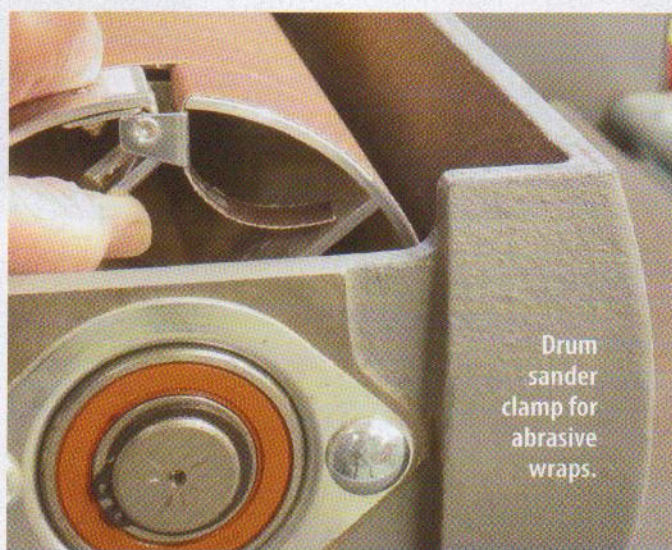


Adjustment lever for sanding wider boards.

Most sanders are open at the outer end, which doubles the maximum width of stock that can be sanded; better quality sanders have an adjustment that lowers the outboard edge just enough to prevent ridges when the second pass is made. Open-end

sanders are identified by two numbers, such as 16-32. The first number is the length of the drum, reflecting the maximum width that can be sanded in a single pass; the second is the maximum width that can be sanded in two successive passes, one for each half of the workpiece.

Drum sanders also vary in the maximum stock thickness they can handle; 3" (7.6cm) and 4" (10.2cm) limits are typical. Most can sand stock down to 1/32" (1mm), perfect for making veneer from resawn wood, and most can pass pieces as short as 2 3/8" (6cm) through the drum. Infeed and outfeed tables, available as options, facilitate the feeding of long boards and help prevent gouging at their ends. If shop space is limited, look for models with tables that fold down when not in use.



Drum sander clamp for abrasive wraps.

If you're likely to sand both thick and thin wood, a sander with a quick-adjust lever that rapidly raises or lowers the height of the drum can be a real time and wrist saver; if precision is critical, consider a model with an integrated digital readout. And, if you anticipate sanding with several different grits, be sure that the clamps that secure the ends of the wrap are easy to use. This makes changing the wrap quick and easy for hands of every size and strength level.

A well-designed sander should be easy to maintain, with components that are accessible if adjustment or repair is needed. Tech support staff should be knowledgeable and replacement parts readily available.

Conclusion

My experience with the less satisfactory drum sanders of the past has helped me appreciate the quality of those currently available. Aside from my scroll saw, my drum sander is among the most valuable and frequently used tools in my shop.

Polka-Dot Bowl

Stack and sand colorful rings to create a one-of-a-kind addition to your kitchen

By Carole Rothman



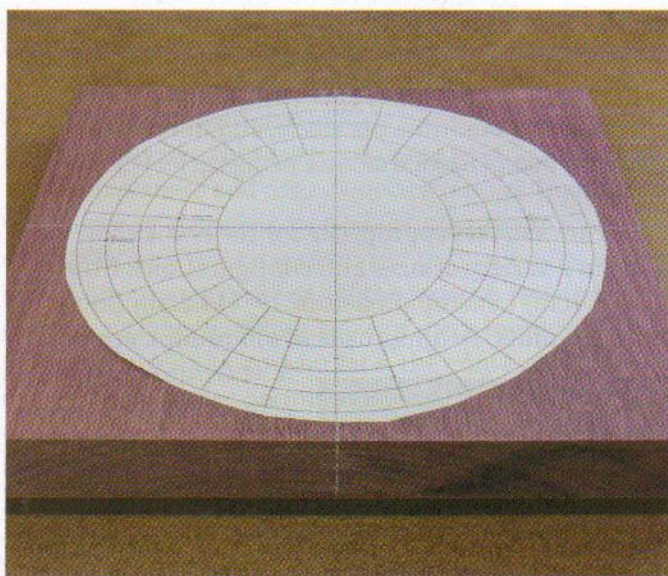
If you've ever made a stacked ring bowl, you've likely discovered how unpredictable the outcome can be. Straight strips can turn into swags, and ordinary grain can become quite spectacular. In the spirit of adventure, I decided to glue pieces of dowel into bowl blanks to see what they'd look like once rings were cut, and what would happen when the sides were sanded. Having learned what would and would not work, I designed this oval-shaped bowl, adorned with dots created by dowels that varied in size and color.

While not difficult, the project requires precise placement of two copies of the same pattern. The first copy is used for marking the drilling points for the dowel holes; the second, attached after the dowels have been inserted, is used to locate the blade entry holes and to cut the rings. The generous $\frac{7}{8}$ " (2.2cm) thickness of the starting blank ensures that it can be sanded to an even $\frac{3}{4}$ " (1.9cm) after the 30 dowels have been glued into place. I chose purpleheart for its vibrant color, but walnut is a good alternative if you'd prefer a wood less challenging to cut and sand.

Getting Started

Draw perpendicular registration lines across the blank at the midpoints. Use a white lead fabric pencil for visibility and precision. Extend the ends of the registration lines down the sides of the wood so you can redraw the lines after sanding the blank. Transfer the top mark to the adjacent side so you can

preserve the original orientation. Attach the pattern with temporary bond spray adhesive, aligning the tops of the pattern and the blank, and matching their registration lines precisely. Use an awl to mark the center point on the pattern and the end points of the registration lines.

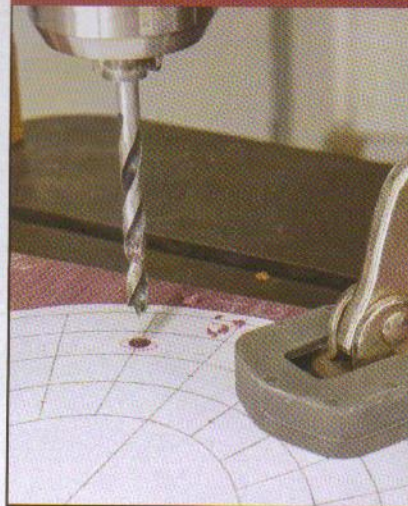


Drill test holes to determine the best bit to use for each dowel. Use the corner waste areas of the blank. Each 10" (25.4cm) piece of dowel should slide through its matching hole with little resistance; if too tight, hand-sand the piece evenly until it fits.

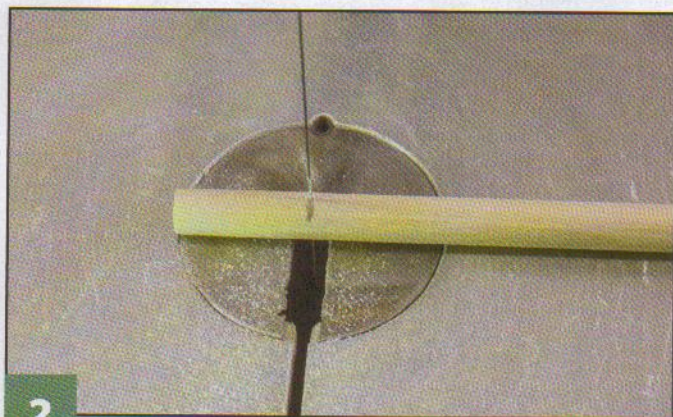


TIP**SPECIAL TOOLS**

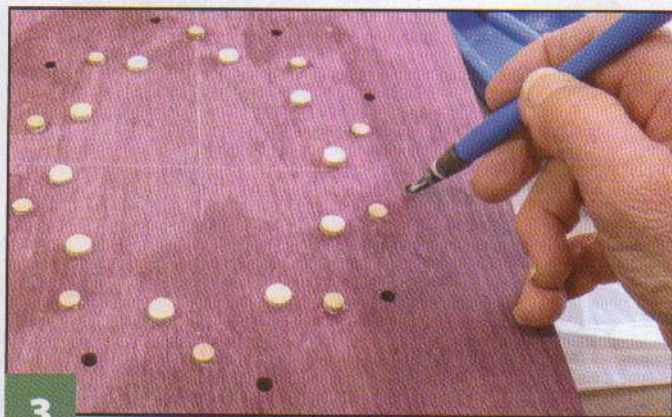
Consider adding to your tool array a headlamp for spotlighting, and a white lead fabric pencil for drawing precise lines on dark wood.

**CREATING THE RINGS****1**

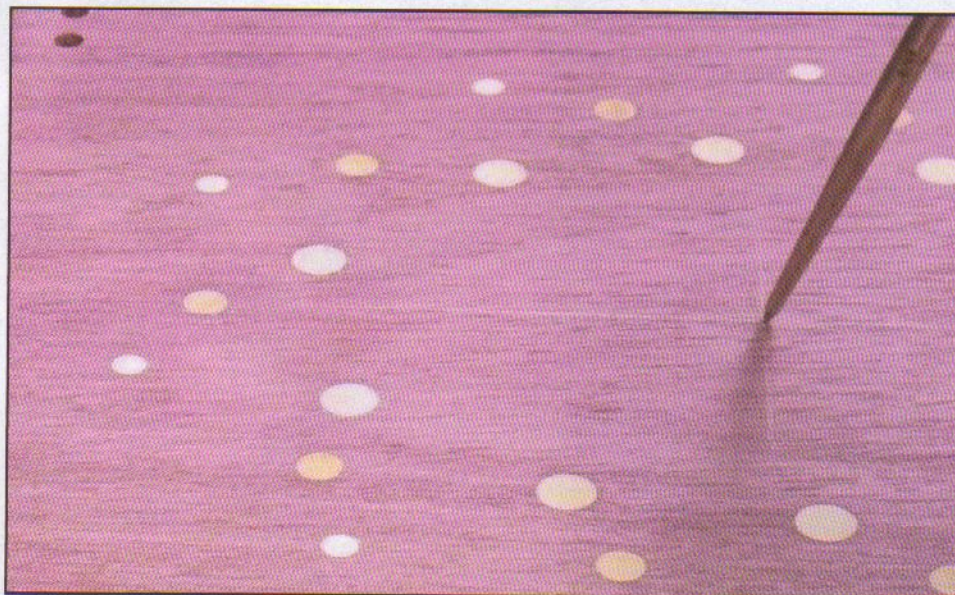
Drill the dowel holes in the blank. Ring one has no dowel holes. Rings two, three, and four contain 10 each. Within each ring, all dowels are the same size: $\frac{3}{16}$ " (5mm) for ring two, $\frac{1}{4}$ " (6mm) for ring three, and $\frac{5}{16}$ " (8mm) for ring four. Start by circling all of the dowel drilling points in ring two with a red pencil. Drill a hole at each point for the $\frac{3}{16}$ " (5mm) dowels; make sure each hole is backed by sound wood to prevent tear-out. For accurate placement of the hole, check the drill bit's position from the front and side, secure the blank with a drill press clamp, recheck the bit's position, and check again as you start to drill. A headlamp can improve visibility (learn more about using headlamps on page 17). Repeat the entire process for rings three and four, using a drill bit of appropriate size. Check the sides of the blank to be sure all lines are visible, and then remove the pattern.

**2**

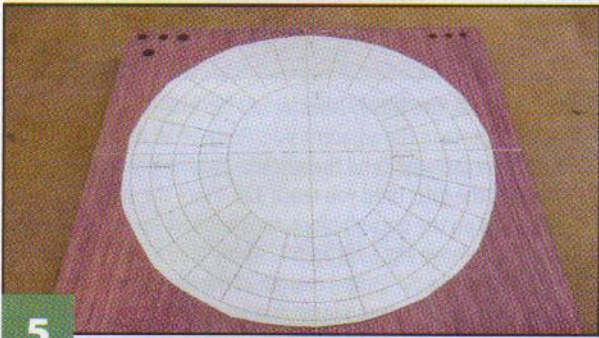
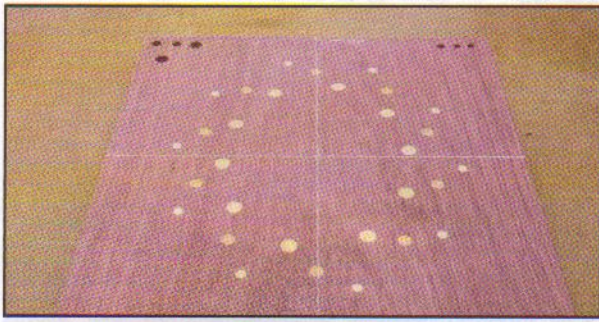
Prepare the dowel segments. Mark $\frac{7}{8}$ " (2.2cm) from one end of each 10" (25.4cm) piece of dowel. For each piece, cut straight across at that point with a #3 blade to make the first segment. Use that segment as a template for cutting the remaining nine segments. Sand the ends of the segments to remove any fuzzies.

**3**

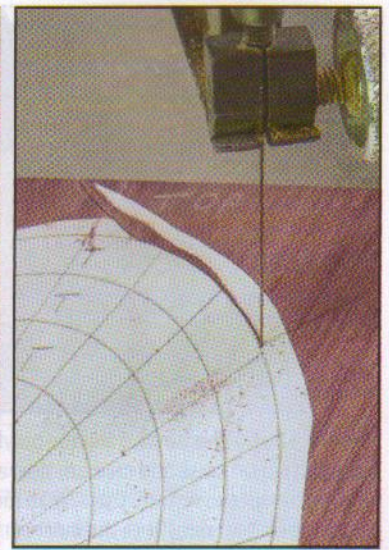
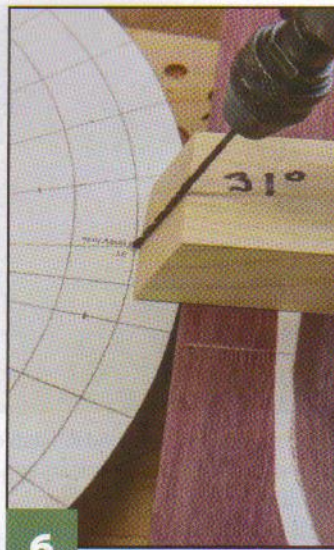
Add the dowel segments to the holes. Apply glue to the inside of each hole, working three or four holes at a time. Push the dowels into place and tap them lightly with a wooden mallet and wood block. Remove excess glue from both faces of the blank. When all dowels are glued, let the blank dry completely.

**4****Sand the blank smooth.**

Check visibility of the top mark and registration lines on the sides of the blank. Darken as needed and deepen the awl marks made in Getting Started. Sand down any dowels that protrude from the lower face, using a Sand-Flee or orbital sander to create a flat surface. Next, pass the blank, bottom-face down, through a drum sander (learn more about drum sanders on page 49), and sand until the upper face is flat. Continue sanding, alternating faces, until the blank is $\frac{3}{4}$ " (1.9cm) thick, deepening the awl marks periodically so they remain visible.

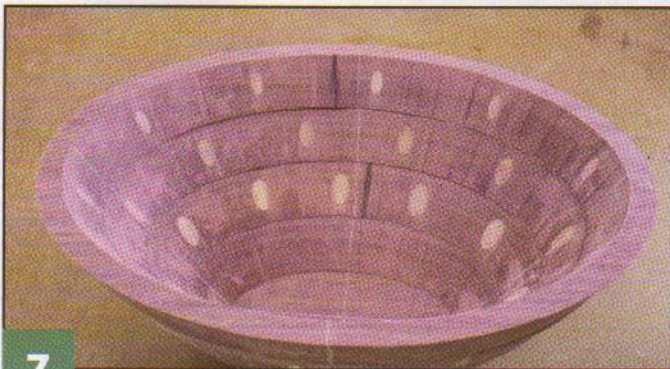
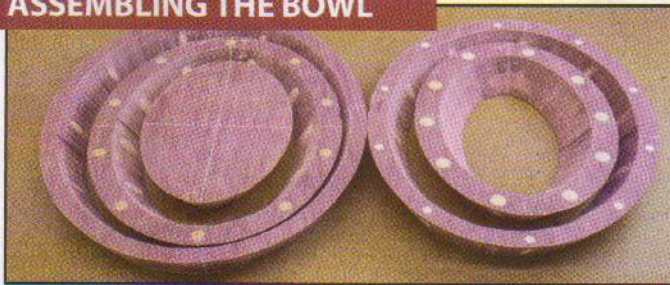


5 Prepare the blank. Transfer the top mark from the side to the upper face. Use the five awl marks and four side marks to restore the original registration lines. Attach a second copy of the pattern in the same way as the first. The center point and registration lines of the pattern and blank must line up exactly or the dowels will not be centered within their rings.

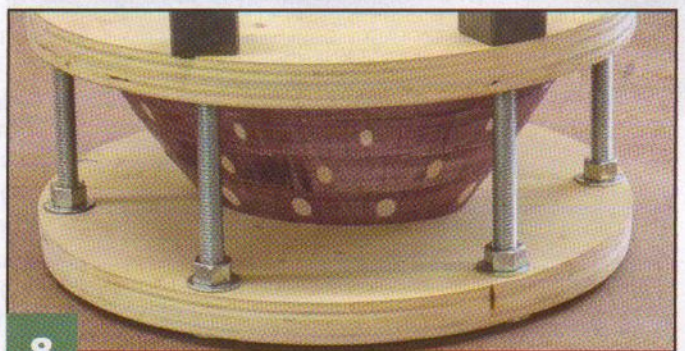
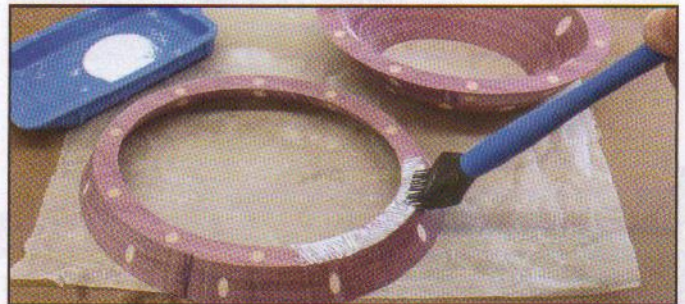


6 Begin cutting the rings. Tilt the left side of a saw table down to 27°. Use a #7 blade to cut along the outer circumference in a clockwise direction. Using a #56 wire size drill bit, drill a 31° blade-entry hole where indicated on the second cutting line, drilling directly toward the center of the pattern. Tilt the left side of the saw table down to 31°. Insert the blade through the blade entry hole and cut clockwise to complete the first ring. Remove the pattern from the ring and mark the top. Repeat the drilling and cutting sequence for the remaining three rings. Use a 34° angle for the second ring and a 37° angle for the third and fourth. The remaining piece is the bowl bottom. Remove its pattern and mark the top.

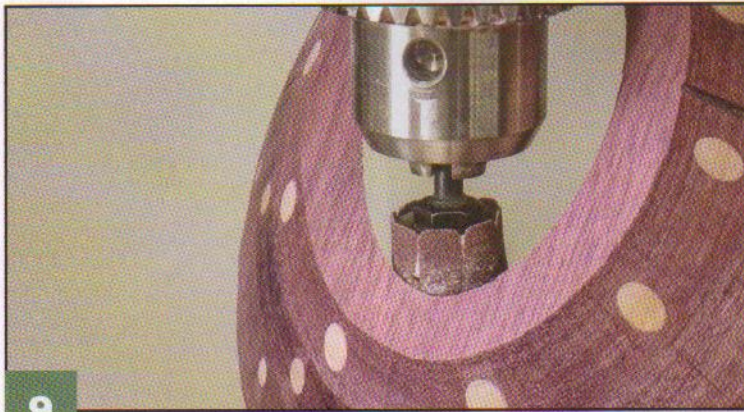
ASSEMBLING THE BOWL



7 Prepare the rings. Transfer top marks to the inner and outer faces of the rings. Extend the registration lines down both the inner and outer faces. Remove marks from all gluing surfaces and fuzzies from the lower edges. Stack the rings, matching top marks and registration lines, and check for spaces. Eliminate them by rubbing the high areas of adjacent rings on a sanding tile until the rings lie flat against each other. *Note: Omitting this step is likely to result in glue lines on the sides of your bowl.*



8 Glue the rings. Place the smallest ring faceup on waxed paper. Apply glue to the underside of the next ring. Use the top marks, the visible dowels on the smallest ring, and the registration lines on the sides to align the rings, then press down to secure the bond. Add the remaining two rings in the same manner, place the unit in a press, apply clamping pressure, and allow the glue to dry thoroughly.



9

Shape the bowl. Sand the bowl's interior with a large round inflatable sander. Use coarse and medium sleeves to remove blade and drill marks and to even out the surface. Use a small round inflatable to sand the end curves of the bottom ring. Once the inner surface is smooth, invert the rings and check the shape of the bottom edge—it should look like a smooth oval. If there are irregularities, mark them with a pencil on the underside of the ring, then transfer the marks to the inner surface. Start the correction with the rings inverted; be careful to keep the edge sharp as you remove excess wood. Complete the correction with the rings upright. Check for small, shiny glue spots between the rings and sand them away with the medium sleeve. Sand the entire interior with fine and extra fine sleeves.



10

Attach the base. Transfer the top mark on the bottom piece to the adjacent side. Remove all marks from the upper face and sand the surface, moving progressively through the grits until you reach 320. Place the ring assembly on the bottom piece, tops aligned, and check for spaces. Remove any as in Step 7. Apply glue to the bottom ring, keeping a $\frac{1}{8}$ " (3mm) margin at the inner edge to minimize squeeze-out. Clamp and let set for five minutes. Unclamp to check for and remove squeeze-out. Re-clamp and let the glue dry thoroughly.

SANDING & FINISHING



11

Smooth the profile. Sand the exterior with a 2" (5.1cm) standard density flexible pad sander. Start with 80-grit to even out the surface and remove blade and drill marks; then sand progressively through the grits until you reach 320. The top rim should be of uniform width. Use a 3" (7.6cm) flexible pad sander, soft density, to remove swirl marks without affecting the bowl's profile.

Making a "Holey" Bowl

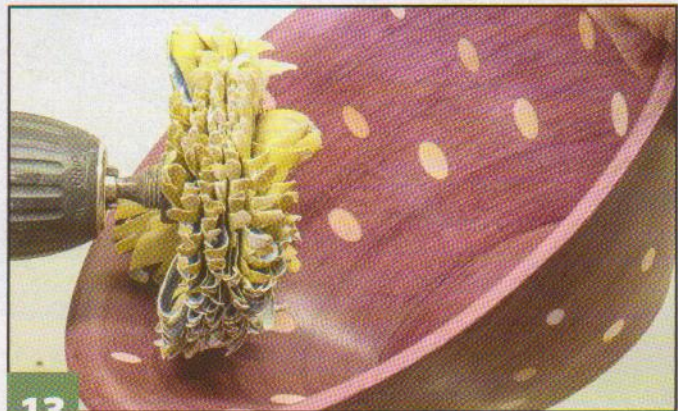
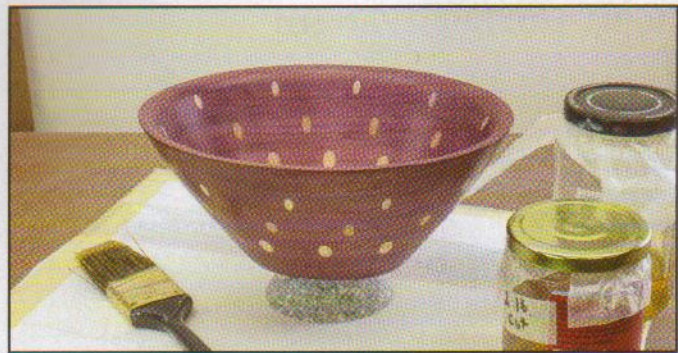
For a slightly different look, you could make the bowl in the usual way but leave the dowels out. Aligning the rings of the bowl is easy, since you can see the matching holes of adjacent rings, but once glued up, the bowl is a challenge to sand. The sleeve openings at the bottom of the large round inflatable sander tend to snag on the holes and tear, particular at higher grits. This makes it important to sand with the upper area of the sleeve, and to use the small round sander for areas that the larger one cannot access. Sanding the exterior can be done with the pad sander; avoid using scalloped discs, which can snag on the holes.





12

Continue shaping the bowl. Sand an outward flare into the upper edge. Use a small pneumatic drum with a coarse sleeve; angle the drum to keep from gouging the bowl's interior. Soften the outside of the flared edge and the lower edge of the bowl with the coarse sleeve, then refine the edges with medium and fine grit sleeves. Use the round inflatable sander with a medium-grit sleeve to smooth the flared surface and blend it into the sides, followed by the fine and extra fine sleeves. Sand the top outer edge by hand—it should feel smooth to the touch. When sanding is complete, carefully check the entire surface for irregularities. Correct them before applying finish.



13

Finish the bowl. Apply a sealer coat of shellac. Smooth the surface with 320-grit sandpaper or buff with a 320-grit sanding mop. Apply several finishing coats of shellac. A headlamp can help catch missed spots, drips, or sags. Buff between coats or rub with 0000 steel wool as needed.

Materials

- Purpleheart, $\frac{7}{8}$ " (2.2cm) thick; 8" x 9 $\frac{1}{2}$ " (20.3cm x 24.1cm)
- Dowels: birch, $\frac{3}{16}$ " (5mm)-dia., $\frac{5}{16}$ " (8mm)-dia.; cherry, $\frac{1}{4}$ " (6mm)-dia; 10" (25.4 cm) in length each
- Pencil: red, white lead fabric
- Wood glue, such as Weldbond
- Spray adhesive: temporary-bond
- Sandpaper: assorted grits to 320
- Shellac: spray or regular; 1lb-cut for sealer, 2lb-cut for finishing

- Steel wool: 0000 (optional)
- Waxed paper

Tools

- Awl
- Drill with bits: #56 wire size, $\frac{3}{16}$ " (5mm)-dia., $\frac{1}{4}$ " (6mm)-dia., $\frac{5}{16}$ " (8mm)-dia.
- Headlamp (optional)
- Drill press clamp
- Wooden mallet and block
- Bowl press, or clamps and boards
- Scroll saw with blades: #3 reverse tooth, #7 skip tooth

Materials & Tools

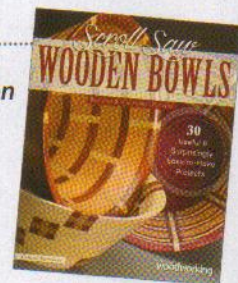
- Sanding tile: 150-grit shop-made
- Sanders: drum, orbital, Sand-Flee
- Round inflatable sanders: regular and small, assorted grit sleeves
- Pneumatic drum: small, assorted grit sleeves
- Flexible pad sander: 2" (5.1cm) standard density, 3" (7.6cm) soft density, assorted grit discs
- Sanding mop: 320-grit (optional)

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

FURTHER READING

Scroll Saw Wooden Bowls, Revised & Expanded Edition
By Carole Rothman

Item 9616. Available for \$19.99 plus S&H (parcel post) from Fox Chapel Publishing, 800-457-9112, FoxChapelPublishing.com, or your local retailer.



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 scrollsawbowls.blogspot.com. You'll find her books, Creative Wooden Boxes from the Scroll Saw and Scroll Saw Wooden Bowls: Revised & Expanded Edition, at foxchapelpublishing.com.

Polka-Dot Bowl Pattern

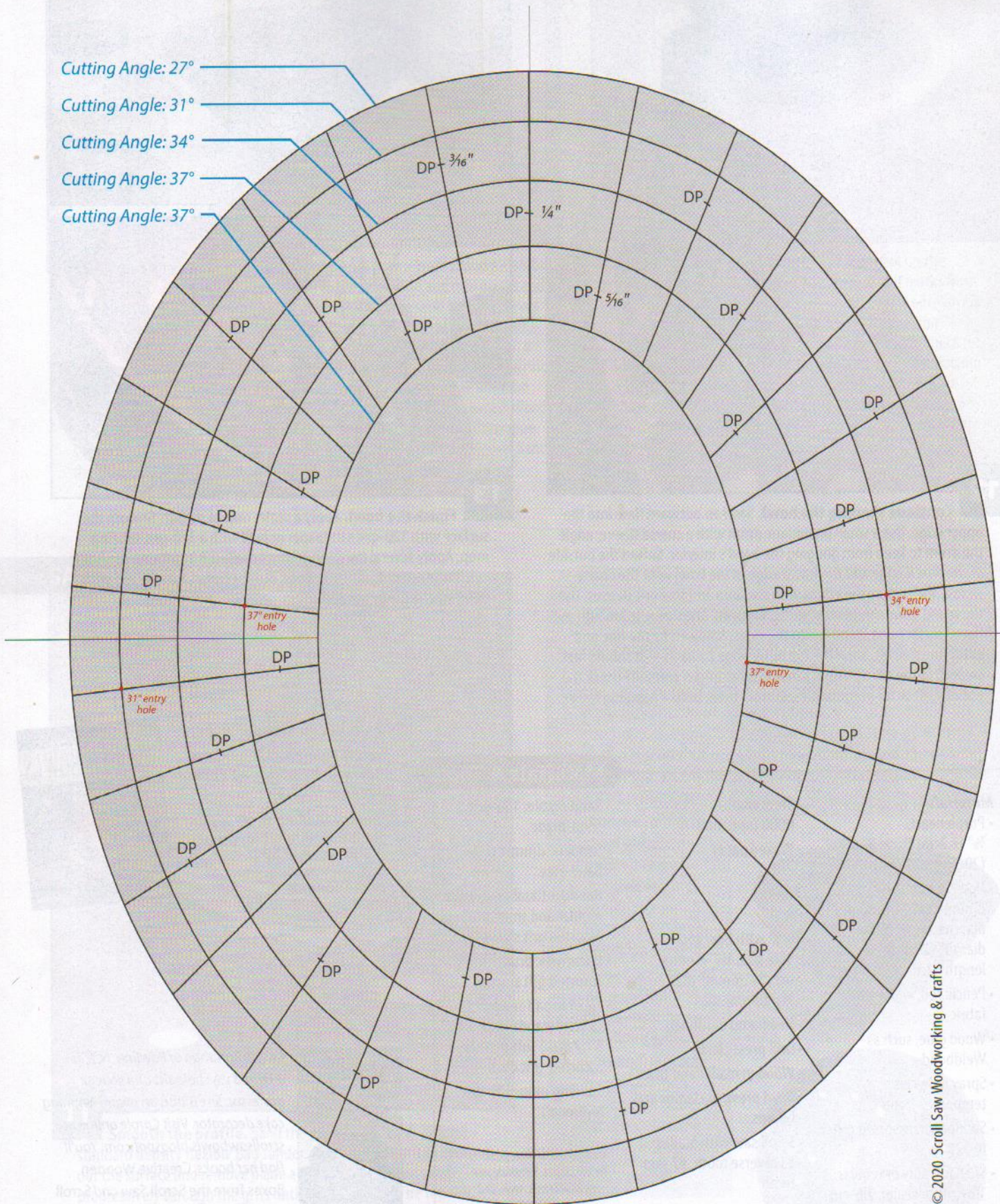
Cutting Angle: 27°

Cutting Angle: 31°

Cutting Angle: 34°

Cutting Angle: 37°

Cutting Angle: 37°



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1940s Jeep

This intricate WWII-era vehicle is a win for extreme puzzlers

By Eric Van Malderen

The Willys MA (short for “Military Model A”) was the prototype of the well-known MB, used widely by the Allied forces in WWII. And while my puzzle version is certainly tough to cut, it’s distinctive for its delicacy rather than its bulkiness. Allow yourself plenty of time on areas such as the tires and spare; the more equidistant your cuts, the cleaner the finished piece will look. *Note: This puzzle is not recommended for small children.*



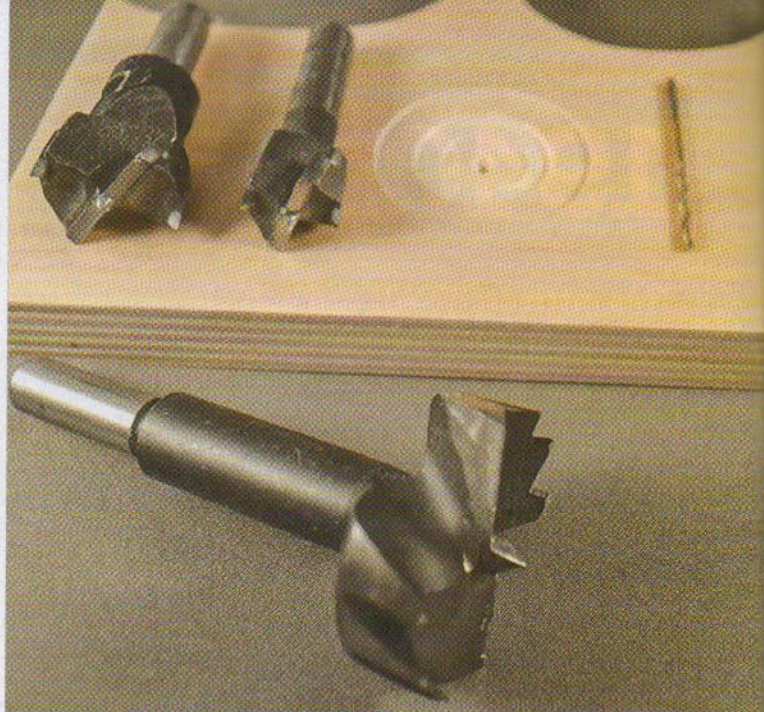
Prepping and Cutting

Choose a variety of wood; I used MDF or Baltic birch plywood with a thickness of at least $1\frac{1}{16}$ " (1.8cm) to provide some support for the delicate areas on the puzzle. Sand the blank with 180-grit sandpaper and attach the pattern with repositionable spray adhesive. Cover the pattern with clear packaging tape to lubricate your blades and to reduce the risk of scorching the wood.

Before cutting the jeep, follow the instructions in the sidebar (Add Dimension with Forstner Bits) to establish levels in the tires. Then drill a $\frac{1}{16}$ " (2mm)-dia. hole in the back window. Cut the back window with a #5 skip reverse or reverse-tooth blade. Then cut the rest of the pieces, changing out blades as necessary to prevent breakage. Remove the pattern and gently hand-sand the pieces smooth, starting with 180-grit sandpaper and moving up to 220.

Painting and Finishing

You can finish the puzzle in a number of ways. For a natural look, finish with clear Danish oil, letting the pieces sit for around 15 minutes and then wiping off the excess. Let dry overnight before assembling. Alternately, you could finish the puzzle with slightly thinned acrylic paints. As this jeep is a military vehicle, I chose dark, earthy tones to give mine an authentic look. For an added touch, you can paint on military numbers, mud, or stars depending on your preference.



Add Dimension with Forstner Bits

To give the puzzle extra dimension, drill the rims out with several sizes of Forstner bits. I recommend practicing on scrap wood first so you can experiment and play with depth. Make sure to use the drilling speed appropriate for each Forstner bit.

1 Clamp the blank securely. Start by drilling a $\frac{1}{16}$ " (2mm)-dia. hole through the blank. There are two reasons why I drill this hole. First of all, it gives me the exact center of the rim for all the Forstner bits I will use. The second, more important reason is that it also shows the "invisible" center of the tire on the other side of the blank, which will be of use later.

2 Peel back the pattern so the tire area is accessible. Put the point of the 1" (25mm)-dia. Forstner bit in the center of your first drilled hole and reduce the drilling speed. Drill about $\frac{1}{8}$ " (3mm) down into the wood. Then put the point of the $1\frac{1}{16}$ " (18mm)-dia. Forstner bit in the center of the tire and drill down about $\frac{1}{16}$ " (2mm) further than you did with the last hole.

3 Switch to the $1\frac{1}{16}$ " (40mm)-dia. Forstner bit. Place the point in the center again, and drill down approximately $\frac{1}{32}$ " (1mm). This way, the outer levels form little stair steps down into the center of the tire. Do this for each wheel on both sides of the puzzle. Then fill the small center hole with wood filler if desired. Replace the pattern and return to the Prepping and Cutting section to begin making cuts on the scroll saw.

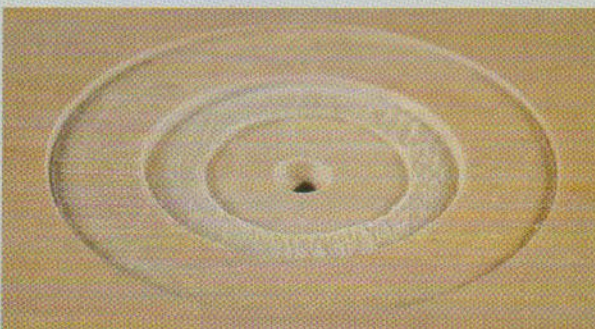


Image source: U.S. Army Signal Corps.

Why the Willys MA?

As Europe was the battlefield of WWII, large parts of Flanders (the Dutch-speaking northern portion of Belgium) were demolished. In 2019, several parades were organized throughout my country to celebrate the liberation of our cities and of Europe, about seventy years ago. Large crowds gathered to see the original war trucks, cars, and hundreds of living historians marching through the streets in old uniforms. As a way of honoring and remembering those who fought for our freedom, I designed this puzzle.

Materials & Tools

Materials

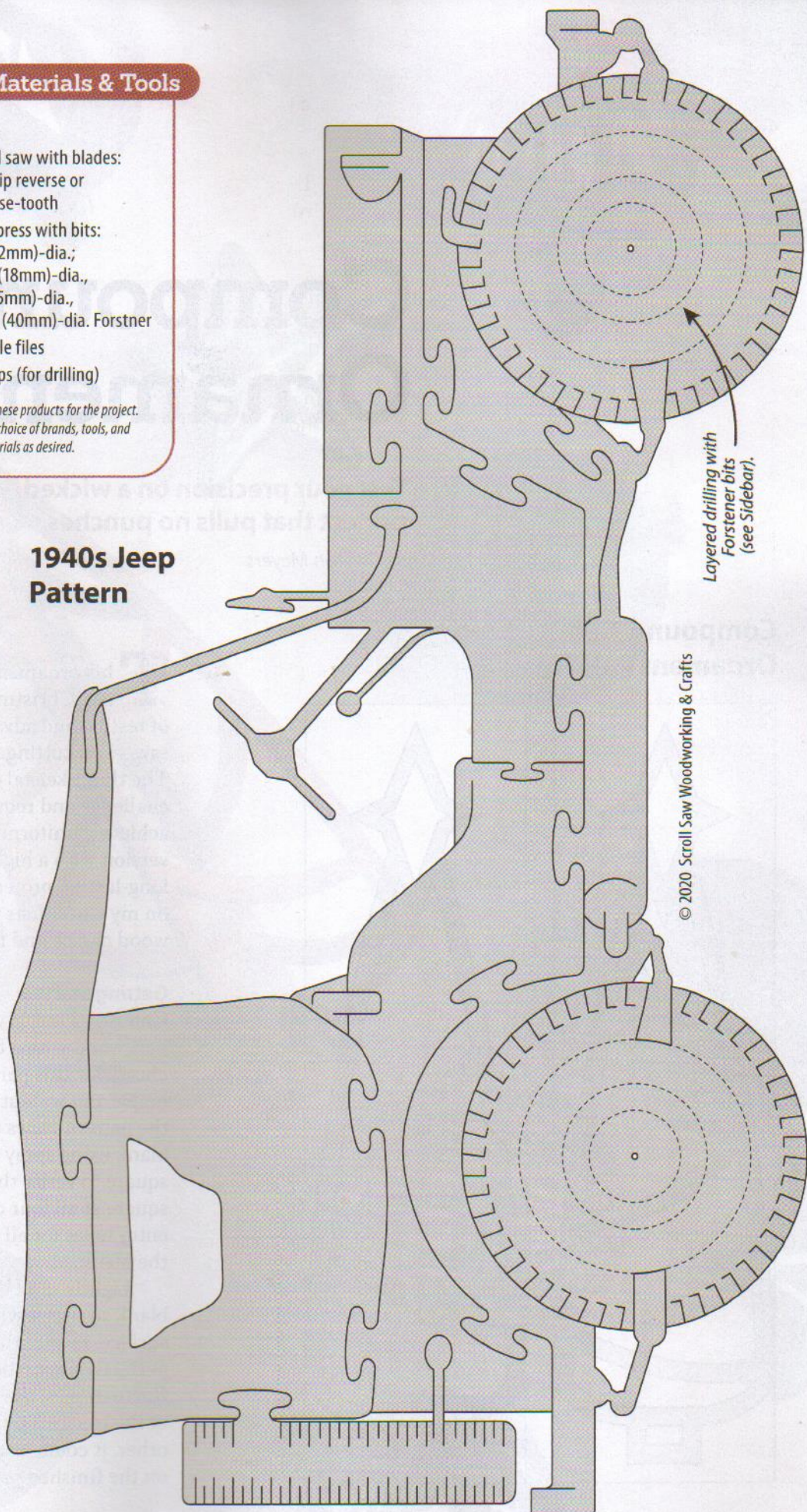
- Wood, such as Baltic birch or MDF, 1/4" (1.8cm) thick: 5 1/2" x 10" (14cm x 25.4cm)
- Tape: clear packaging
- Spray adhesive: repositionable
- Sandpaper: 180-, 220-grit
- Wood filler (optional)
- Danish oil: natural
- Acrylic paints, such as Aleene's: black, stormy gray; such as Decorfin: deep olive

Tools

- Scroll saw with blades: #5 skip reverse or reverse-tooth
- Drill press with bits: 1/16" (2mm)-dia.; 1/8" (18mm)-dia.; 1" (25mm)-dia.; 1 1/8" (40mm)-dia. Forstner
- Needle files
- Clamps (for drilling)

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

1940s Jeep Pattern



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Eric Van Malderen lives in Dendermonde, Belgium, with his lovely wife, Rita, and awesome daughters, Mieke and Sarah. Eric works at the

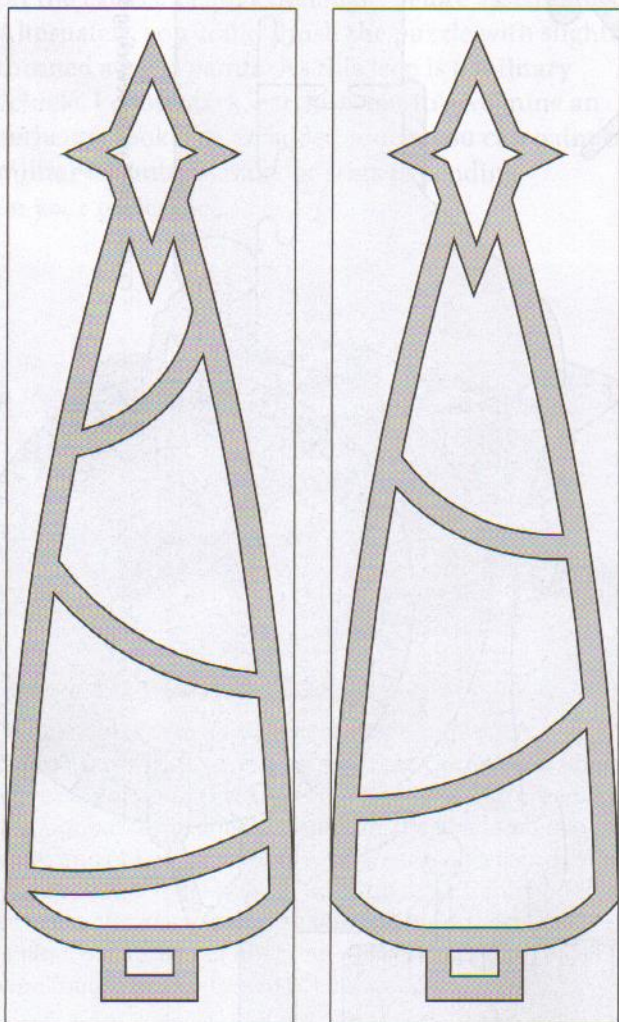
Belgium railways in Brussels as a G.I.S. designer. He received his Hegner scroll saw in 2002 as a 40th birthday present from his wife. Contact him at vanmalderen-quintelier@skynet.be.

Compound-Cut Ornament

Test your precision on a wicked, wire-thin project that pulls no punches

By Clayton Meyers

Compound-Cut Ornament Patterns



© 2020 Scroll Saw Woodworking & Crafts

This ornament is a beautiful addition to any Christmas tree. I designed it as a way of testing and advancing my skills on the scroll saw—and cutting it will do the same for you. The thin, skeletal design presents a particular challenge and requires precision and accuracy to achieve a uniform look. I finished this hardwood version with a high-gloss polyurethane for a long-lasting protection that will reflect the lights on my Christmas tree, but you can modify the wood choice and finishing method as desired.

Getting Started

Choose a kind of wood. I recommend a hardwood with a tight grain structure; I used cherry for this particular piece but find that maple and walnut work nicely, as well. Attach the pattern views to two adjacent sides of the blank using spray adhesive. Use a combination square to verify that the wood blank is perfectly square at all four corners. Drill the blade-entry holes for all interior cuts on both sides of the blank.

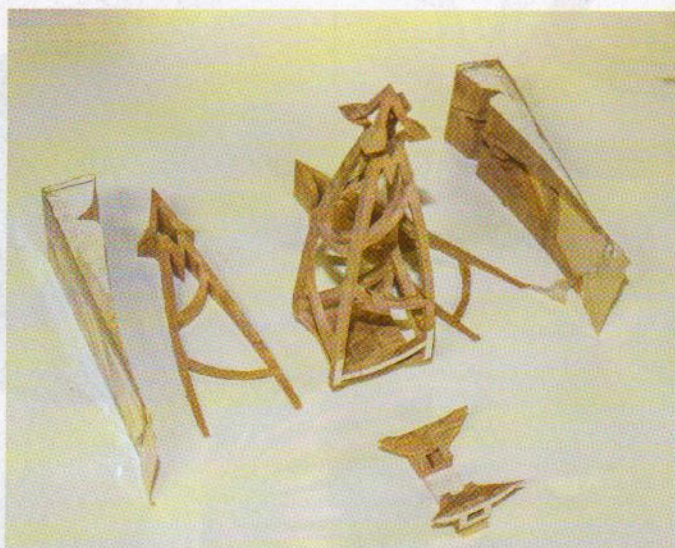
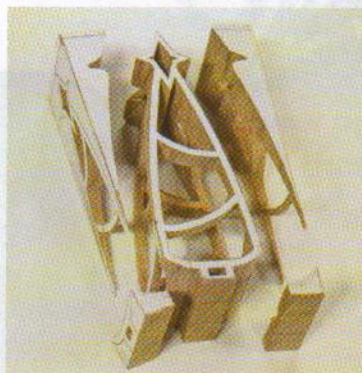
Lightly sand the pattern-free sides of the blank so that it will sit flush on your cutting surface. Ensure that your scroll saw blade is perfectly plumb before you start cutting, as any fluctuation of the blade will cause the wire frame of the tree to look thinner on one side than the other. It could also lead to a very weak structure on the finished product.





Cutting and Finishing

Make all of the interior cuts on one side of the blank. Then, rotate the blank 90° and make all the interior cuts on the second side. Using the same type of blade, begin the outside cuts. Make all outside cuts in one pass and save the scrap pieces. Stay as close to the pattern line as possible, cut slowly, and use a sharp blade. You should now have four pieces of exterior scrap removed from the first side.



Using clear packaging tape, tape the scrap pieces back onto the piece exactly as they were before. Rotate the ornament 90° and make the outside cuts on the final side. Remove all of the scrap to reveal the Christmas tree. Sand and finish the final piece to your liking; I used sandpaper and jeweler's files, and sprayed the piece with a high-gloss polyurethane. Add a ribbon or hook to display it on your holiday tree.

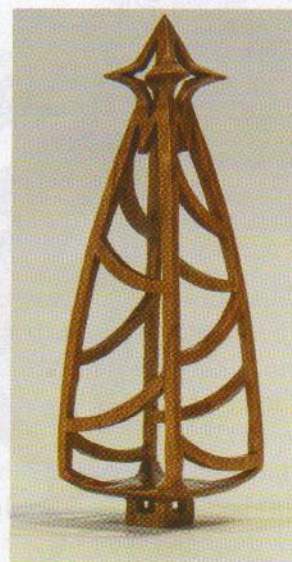
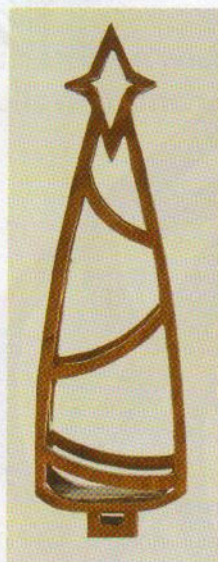
TIPS

CHANGING BLADES

Cut slowly and change blades often. When you're cutting through thick hardwoods on a scroll saw, the first sign of a dull blade is that the wood begins to burn. You may not notice this right away, so pay close attention to the area you're cutting in order to avoid harming the project with skewed cuts.

USING FORCE

In compound-cutting projects, the thickness of the wood you cut through changes dramatically as you move through the project. Be sure to constantly adjust the amount of force used to avoid over-cutting.



Materials & Tools

Materials

- Wood, such as cherry, 1½" (3.8cm) square; 5¼" (13.3cm) long
- Spray adhesive
- Sandpaper: assorted grits
- Tape: clear packaging
- Clear spray finish, such as high-gloss polyurethane
- Ribbon or hook (for hanging)

Tools

- Scroll saw with blades: #5 skip-tooth
- Drill press with bit: ⅛" (3mm)-dia.
- Jeweler's files
- Combination square

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



Clayton Meyers has been using a scroll saw since he was six and got into compound scrolling about 15 years ago. He currently works as a product development engineer in Northern Indiana and is married with two kids. Find more of his work on Etsy at ClaytonsPatterns.com.

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"Wood Duck Decoy"
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Oil on Tupelo
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Buddy the Sparrow Fretwork

**What this winter bird lacks in size,
he makes up for in personality**

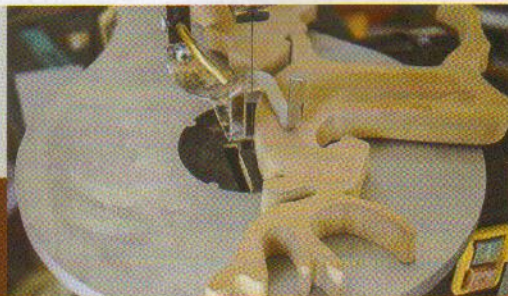
By Charles Hand

Each day when I wake, the sound of many birds fills the air. While my wife prepares treats for these winged visitors, I watch the sparrows gather in our garden and on the porch. One particular male sparrow, the bravest of them all, appears to respond when my wife calls out, "Here, Buddy." This charming little bird is always the first to land, hopping nearest to her for his morning nibbles.

These little sparrows are such a big part of our life that I can't imagine not hearing the chirping sounds that they make each day, especially brave Buddy.

(Continued on page 68)

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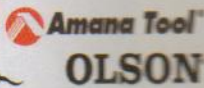
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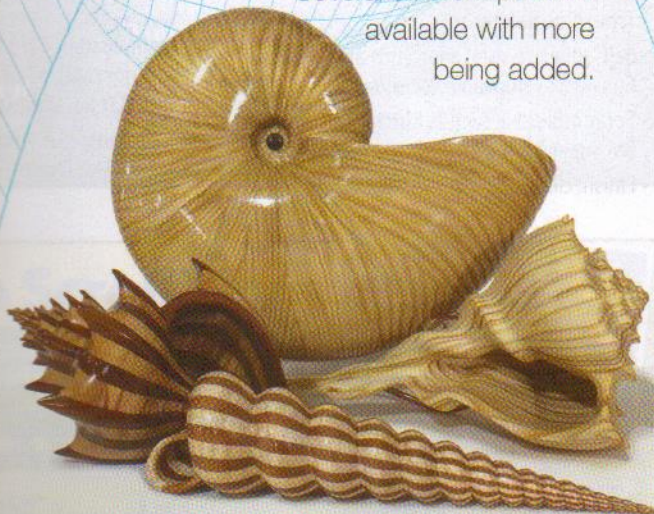
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Prepping and Cutting

Sand the front and back of the blank thoroughly. Blow off the dust or remove it with a tack cloth. Attach removable Con-Tact® creative covering paper to the top of one blank. Apply spray adhesive to the back of the pattern. Let the adhesive set for two to three minutes, and then press the pattern down onto the paper, eliminating any air bubbles.

Stack the portrait blanks with the pattern on top. Hold the wood flat and the stack securely while you wrap blue painter's tape around the perimeter. Drill blade-entry holes and cut the frets. Since I use spiral blades, I sand the bottom of the stack every 10 cuts to remove the fuzzies.

Sanding and Finishing

Remove the tape from the perimeter and peel off the Con-Tact® paper. Sand the portraits carefully. For large, open areas, such as those to the bird's left

and right, insert the cutout pieces before sanding to protect the delicate bridges. Use needle files to clean up tight areas.

Remove the sander dust with compressed air. Apply a clear spray finish if you don't plan to use a picture frame with glass. Attach black felt to the back of the portrait with blue painter's tape. Remove the backing board and mat from the picture frame and line up the portrait to the back side of the mat opening. Replace the backing board and secure the portrait in the frame.

Framing Notes

A standard 11" by 14" (27.9cm by 35.6cm) mat opening is normally 10½" by 13½" (26.7cm by 34.3cm), so I designed my patterns to suit that size. Take a tape measure when shopping for a picture frame, and make sure the mat opening is exactly 10½" by 13½" (26.7cm by 34.3cm).

Materials

- Baltic birch plywood, ½" (3mm) thick: 11" x 14" (27.9cm x 35.6cm), 2 or 3 each
- Sandpaper: 180- to 220-grit
- Tack cloth
- Tape: blue painter's
- Self-adhesive shelf liner, such as Con-Tact® removable covering
- Spray adhesive, such as Elmer's or 3M Super 77
- Finish: clear spray lacquer

- Felt backing, black: 11" x 14" (27.9cm x 35.6cm) (optional)

- Photo frame, matted: standard 11" x 14" (27.9cm x 35.6cm) (optional)

Tools

- Scroll saw with blades: #2/0 to #1 spiral (interior cuts), #3 or #5 reverse-tooth flat (straight cuts)
- Drill press with bits: ⅜" (1mm)-dia. or #56 wire size, ¼" (2mm)-dia. or #53 wire size

Materials & Tools

- Palm sander: fine-grit
- Needle files (optional)
- Air compressor (optional)

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

Pattern for **BUDDY THE SPARROW FRETWORK** is in the pullout section.



Charles Hand is retired from a career in electrical/mechanical design, graphic arts, and senior project management. He enjoys intarsia, fretwork, segmentation, inlay, and just about everything there is to cut with a scroll saw. Charles has won best of show and several other awards for his work and designs at local craft and

woodworking shows. For more information and a tutorial on Charles' Con-Tact® paper method and framing technique, or for more of his patterns, visit scrollsawart4u.weebly.com.

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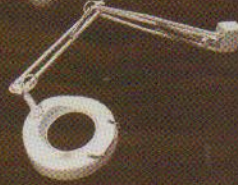
Chair legs



Accessory table



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Mag light



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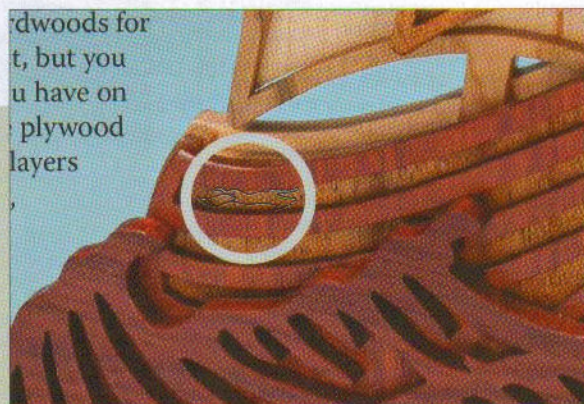
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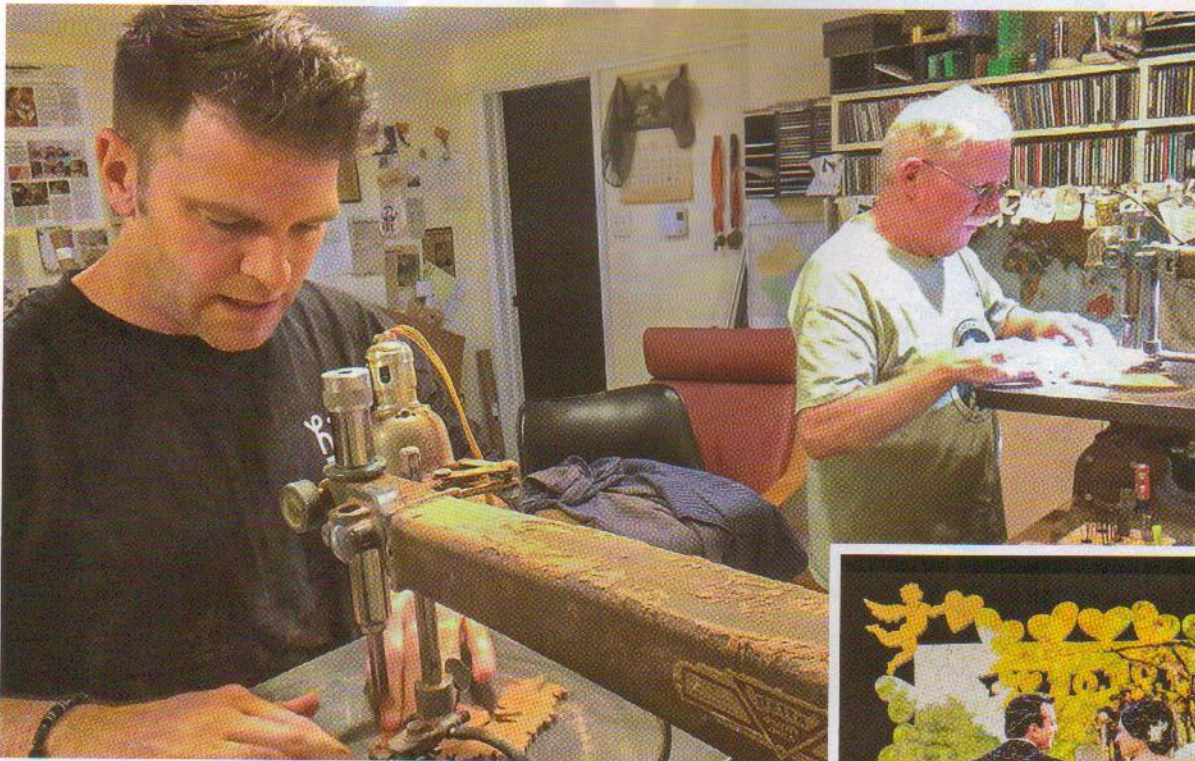


Fox Hunt

Betsi Packwood of Sun City, Ariz., and Donald Hysell of South Solon, Ohio, were randomly drawn from the participants who located the fox in our last issue (Fall 2020, Issue #80). The fox was a stowaway aboard Alex Fox's Hardwood Sailing Ship on page 51.

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 November 15, 2020, 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, 903 Square Street, Mount Joy, PA 17552 or enter online at scrollsawer.com.



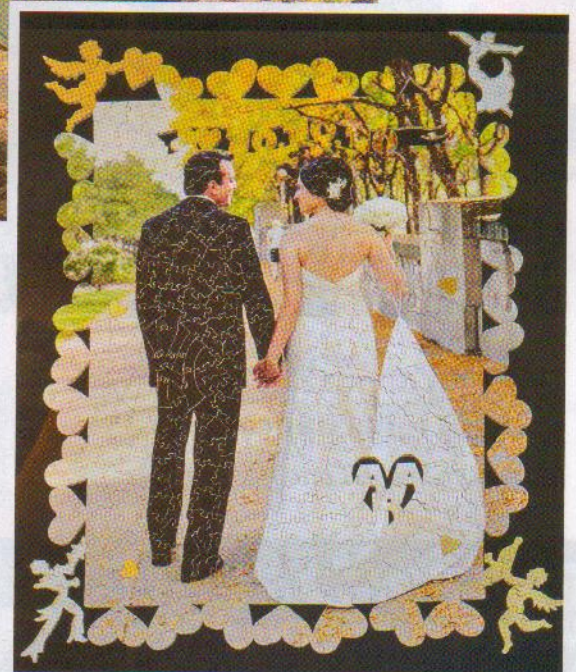
John Madden and his son Justin work side by side producing one-of-a-kind puzzles.

“When we design a puzzle, we think outside the box,” he said. “We get creative with the edges and utilize blank space, always striving to create something no one saw coming.”

The images are printed on matte poster paper and adhered to the wood using 3M General Purpose spray adhesive. After the image is set, the design phase begins. Designing the puzzles can take several hours, and another four or five days are dedicated to cutting the pieces on two old Delta scroll saws from the 1930s. Each puzzle is cut free-form, without any shapes drawn in advance. If John or Justin make a mistake, they have to start over. It’s the way Par has done puzzles from the beginning. While daunting, the process guarantees that no two puzzles are alike. It’s also why the price of one is so steep; a Par puzzle can cost as much as \$4,500.

John and Justin might make close to a hundred puzzles in a year. However, that number has tripled during the pandemic. Thanks to a recent feature in the *New York Times*, the Maddens anticipate the wave will continue well past the holiday season. As they hustle to fulfill the influx of new orders, they can’t help but wonder what’s next for Par. “We’re trying to keep something alive that’s 100 years in the making,” said John. “We create one-of-a-kind items in a mass-produced world. And we love what we do. We hope to make Par more accessible to the working class, not just the elite, as we continue to craft pieces of art for puzzle-lovers to enjoy for many generations to come.”

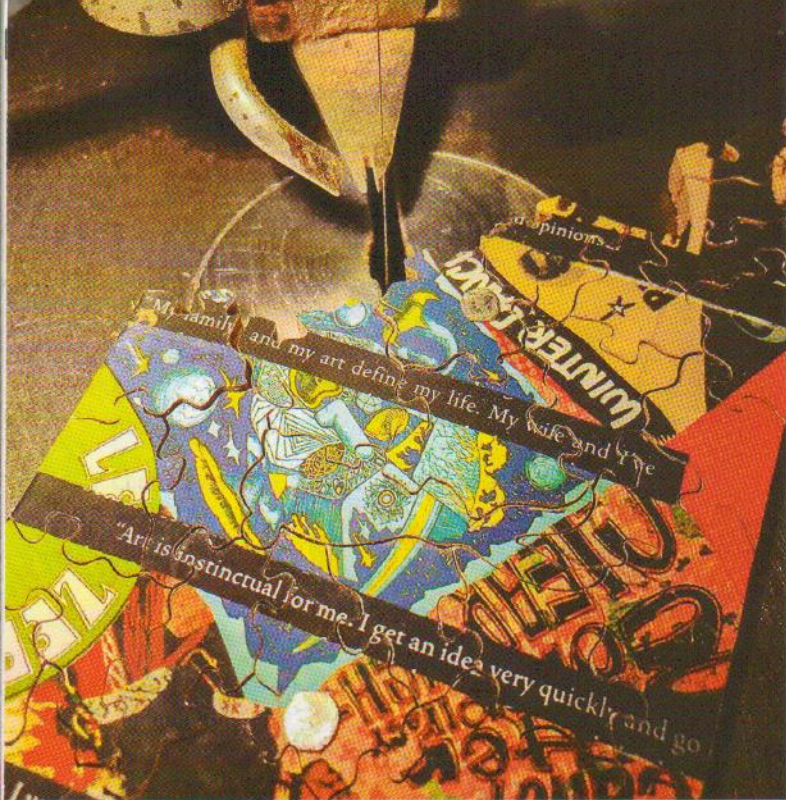
To learn more about Par Puzzles, visit parpuzzles.com or @Par_puzzles on Instagram.



Customers have a say in the design as well. Many will ask for a particular theme or a phrase, such as “Happy Anniversary,” to be included within the pieces.



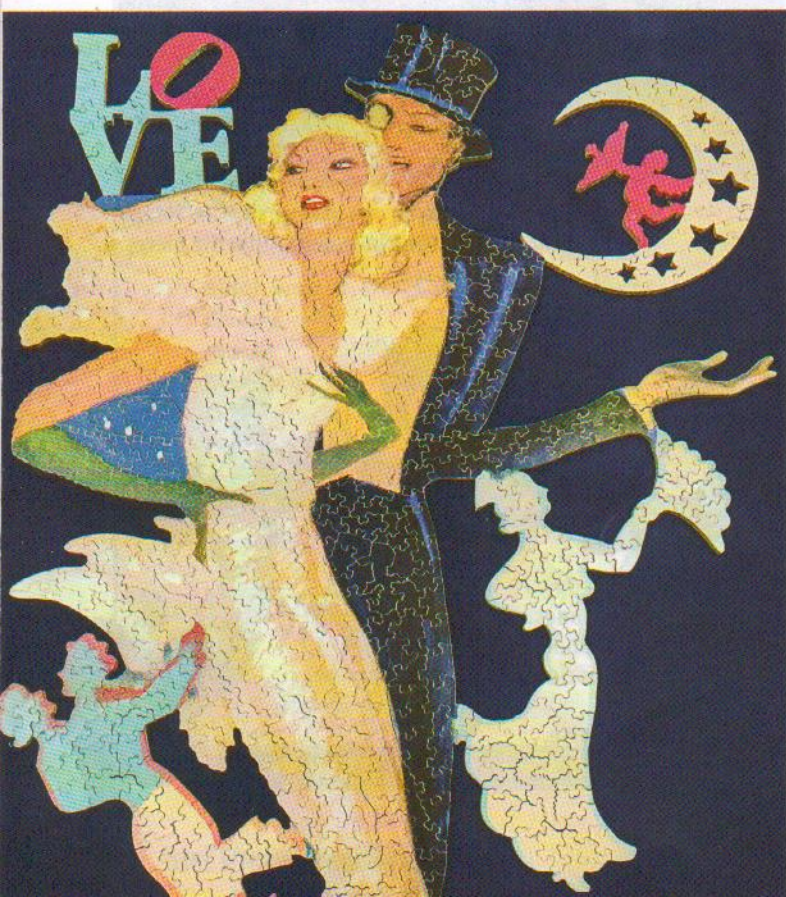
Each puzzle includes hundreds of silhouettes unique to Par, including the company’s signature seahorse.



Par Puzzles

The king of puzzles relishes a recent renaissance

By Hannah Rachel Carroll



Par Puzzles, currently run by a father-son team in Long Island, has sold mysteries in a box for nearly a century. Each puzzle includes about 1,000 oddly shaped pieces, cut on ¼" (6mm)-thick mahogany-backed plywood. The puzzles arrive in an unassuming black package—no picture of the finished product is provided, and thanks to Par's famous irregular edges, most people hardly know where to begin. "We get a great deal of pleasure from stumping our customers," said owner John Madden.

John, a third generation apprentice and wallpaper hanger, inherited the quizzical company in the 1980s. His wallpaper skills translated well to puzzle-making. "I knew how to work with paper so it wouldn't curl or bubble, which came in handy for laying patterns," John said. "Learning the scroll saw took some time, but pretty soon, I was confident there too."

John taught his son, Justin, the art of puzzle-making after the 2008 recession hit. Justin, then 26, had lost his job in finance and needed a hobby. He began making puzzles in his L.A. studio apartment as his father offered guidance over the phone. "We'd ship projects back and forth, he'd critique my work, and we'd bounce ideas off one another," Justin said. "It was a blast." After Justin moved back to Long Island, he teamed up with his father to continue Par's legacy full-time.

The company's origins were humble: it was 1932, the start of the Great Depression. Founders Francis Ware and John Henriques looked for a way to keep busy as the economy flatlined. They decided to give jigsaw puzzles a try.

At first, the pair made puzzles for their own amusement. As the unemployment rate soared and America's need for entertainment intensified, Francis and John decided to turn their hobby into a business. While the competition chased mass production, they built Par's reputation on unique personalized creations, using tricky cutting, artistic prints, and high-quality materials. Pretty soon, they caught the attention of clientele who could afford their handiwork—including the likes of Humphrey Bogart, Bing Crosby, Charles M. Schwab, the Rockefeller family, and Dwight D. Eisenhower.

Much like Par's founders, Justin draws inspiration from vintage posters and brochures from theatres, circuses, tattoo conventions, and album tours with vibrant color blocks and monochromatic repetitions.

(Continued on page 71)

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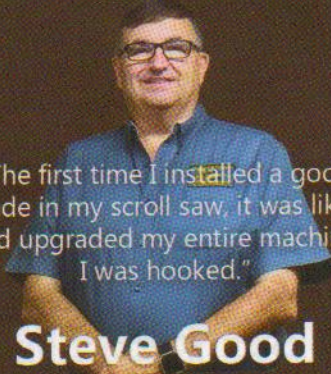
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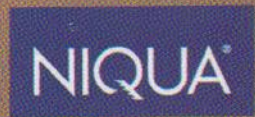
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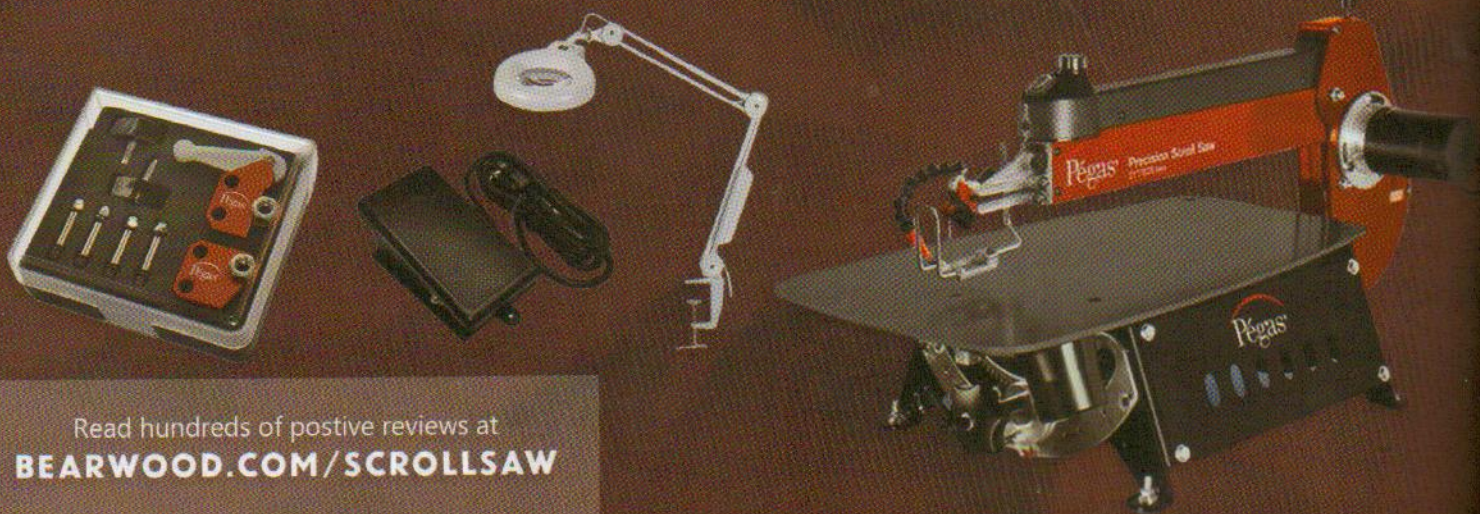

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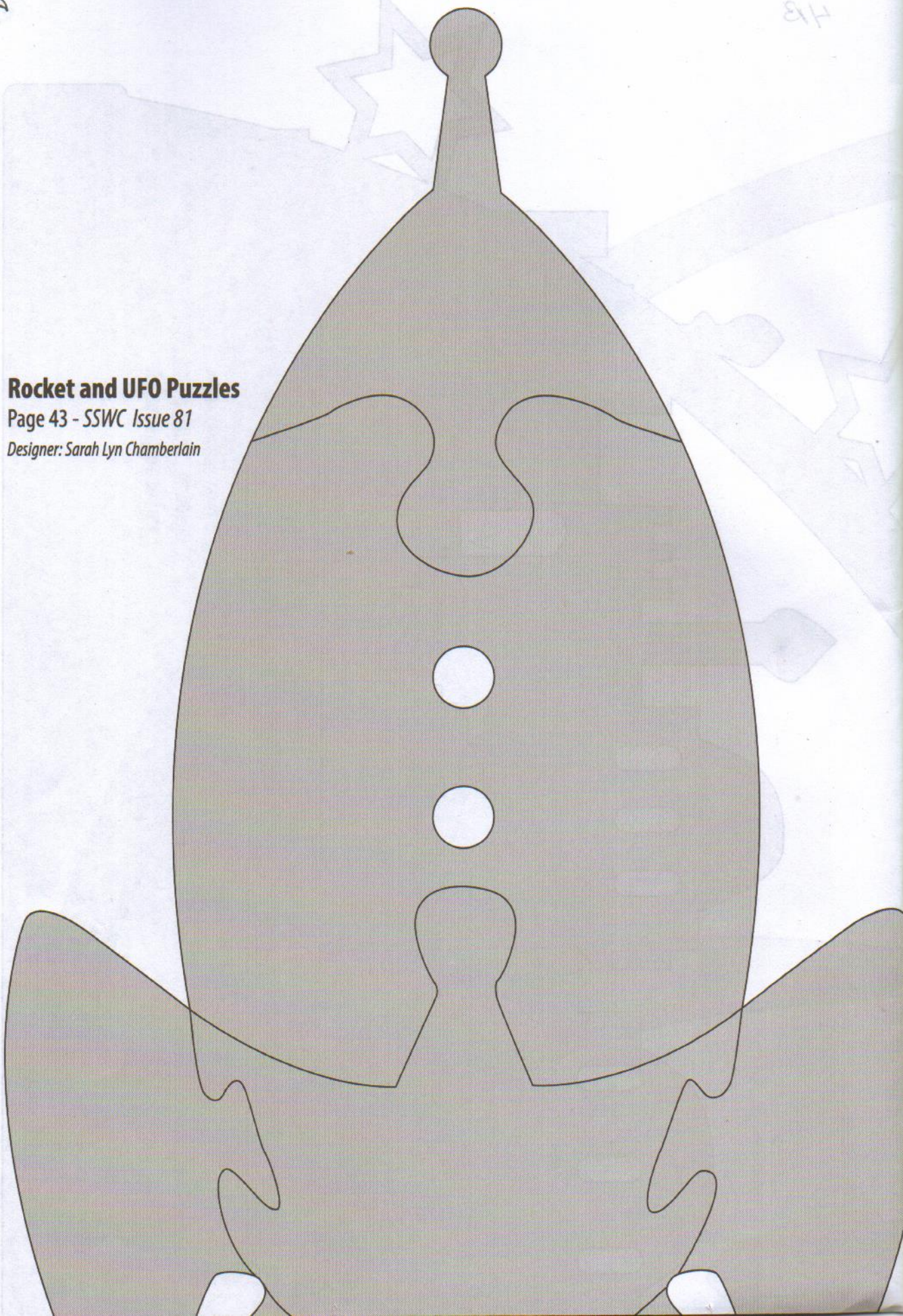
1A

84

Rocket and UFO Puzzles

Page 43 - SSWC Issue 81

Designer: Sarah Lyn Chamberlain



2A

Notice these photographing patterns
some of the patterns and how they can
be used when you put them making
them right off to or straightly the inside
the first of the pattern and the
when using the pattern and hold the
photocopy of the pattern used for
check for
attention

One inch



3B

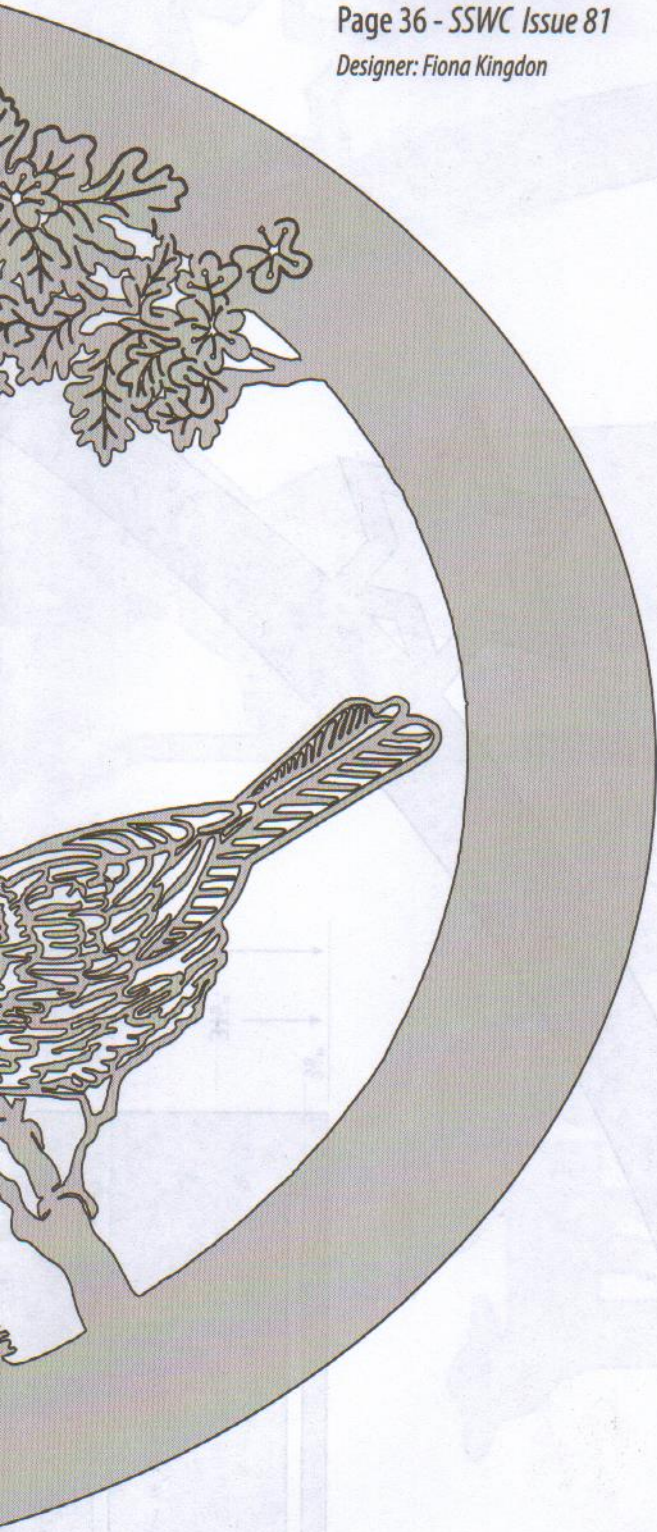


3A

Bread and Cheese

Page 36 - SSWC Issue 81

Designer: Fiona Kingdon



Buddy the Sparrow Fretwork

Page 66 - SSWC Issue 81

Designer: Charles Hand

Most of the best photocopying patterns
Some of the best photocopying patterns
can be found in the SSWC Issue 81
magazine. You can find them by
looking for the 'Buddy the Sparrow'
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popular pattern and is often used
to check the quality of the
photocopying process.

4A

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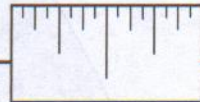
All patterns on this pullout section: © 2020 Scroll Saw Woodworking & Crafts

Grizzly Bear Intarsia	20	Rocket and UFO Puzzles	43
Bread and Cheese	36	Buddy the Sparrow Fretwork	66
Layered Nativity	38		

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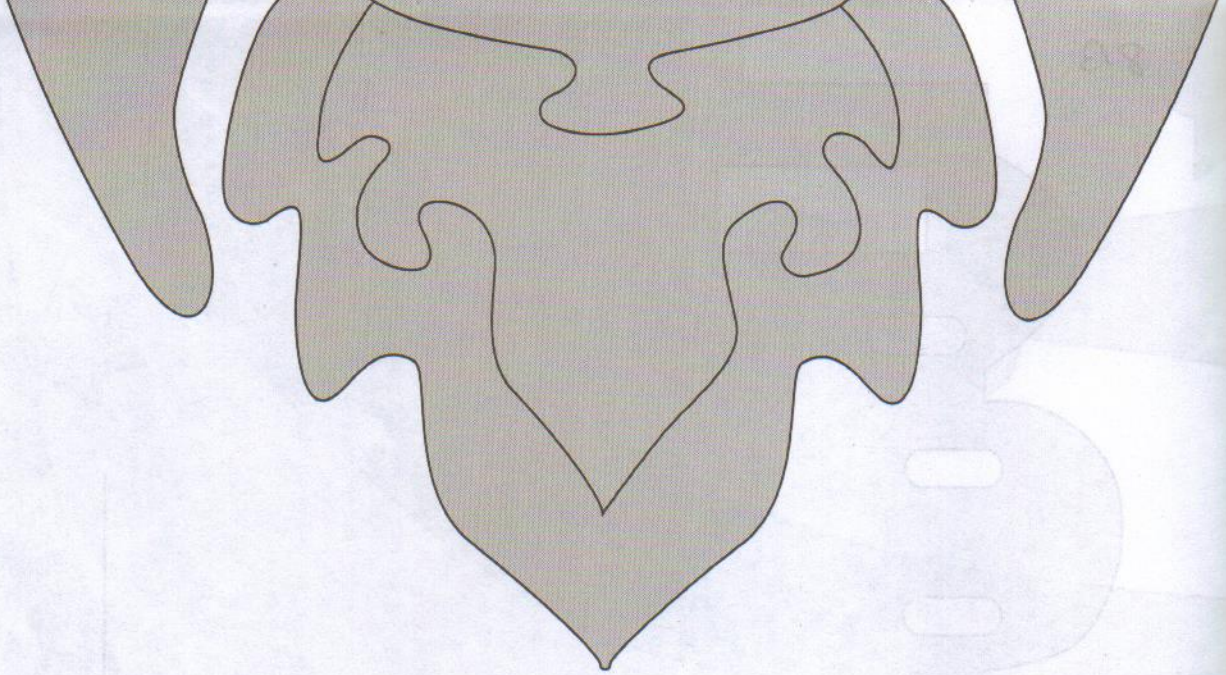
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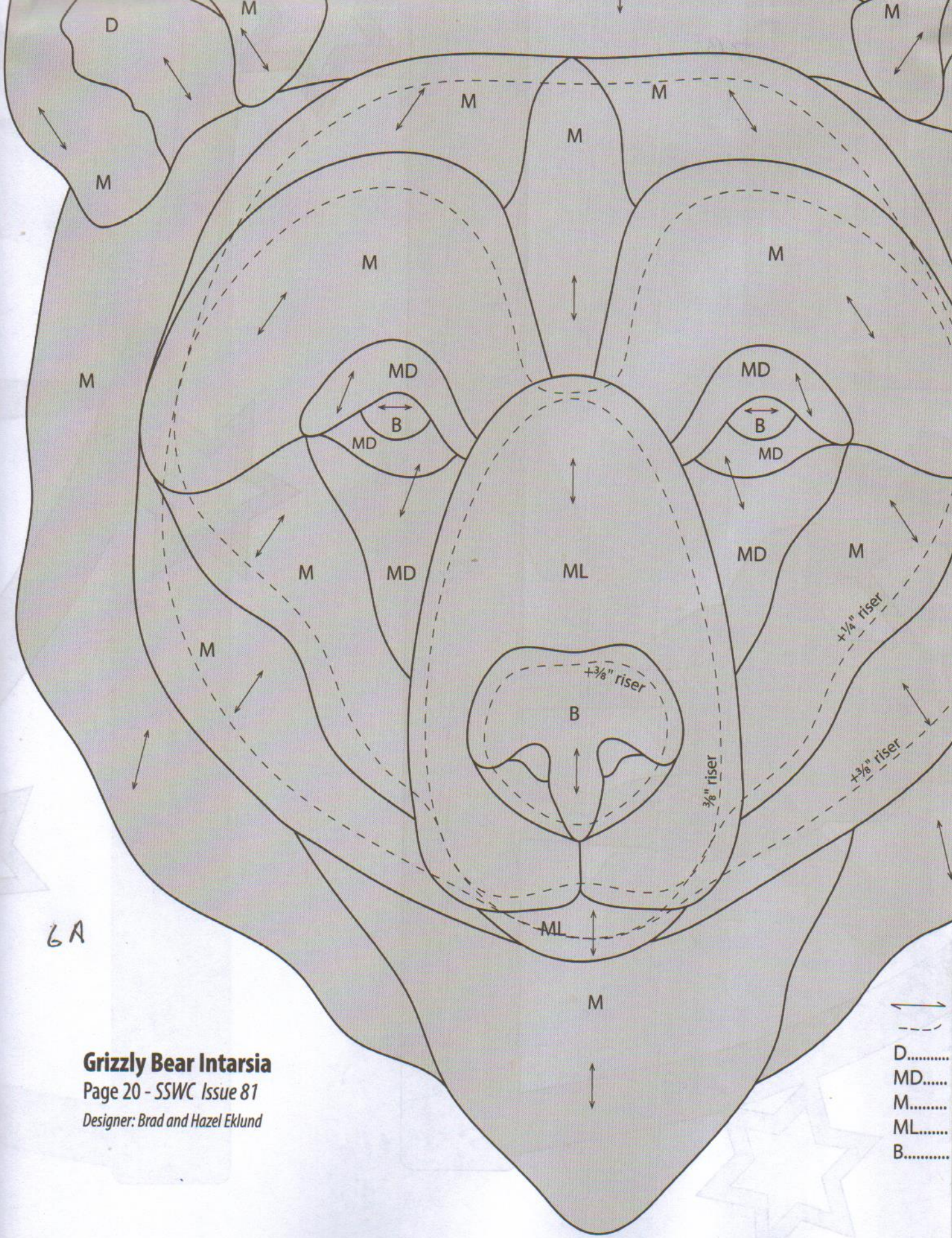


One inch



5A





6A

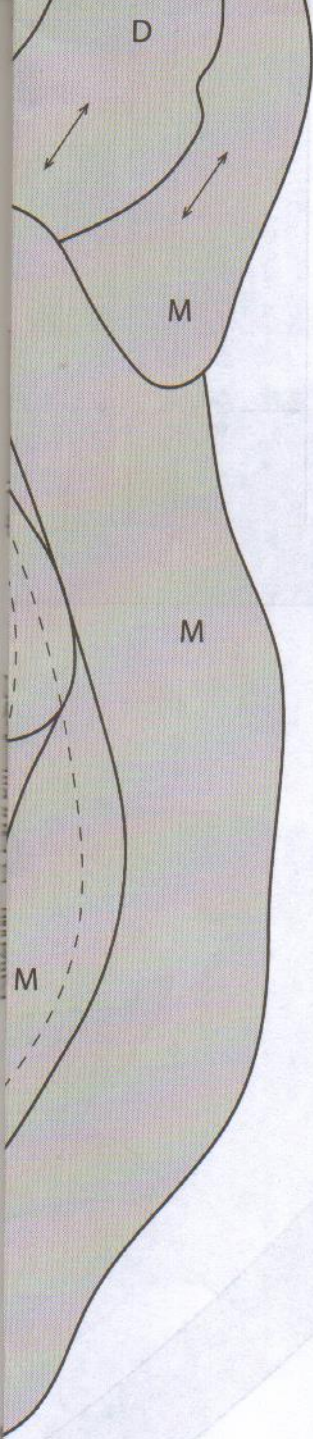
Grizzly Bear Intarsia

Page 20 - SSWC Issue 81

Designer: Brad and Hazel Eklund

- ↔.....
- - - - -
- D.....
- MD.....
- M.....
- ML.....
- B.....

7A



Legend

Grain Direction

Riser

Dark Shade of Wood, such as Black Walnut

Medium Dark Shade of Wood, such as Afromosia

Medium Shade of Wood, such as Monkeypod

Medium Light Shade of Wood, such as Ash

Black Shade of Wood, such as Wenge



8A



LB

LR

Winter 2020 - Issue 81

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43	Green Bear Intarsia
43	Hockey and UFO Puzzles
66	Buddy the Sparrow Finwork
78	Nativity

Layered Nativity
 Page 38 - SSWC Issue 81
 Designer: Beatrix Brockman

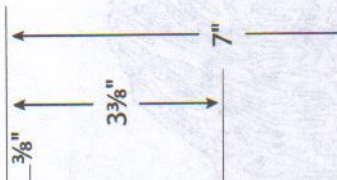
about photographing patterns
 styles and home projects can
 when you print them, making
 use of a ruler to check the sizes
 listed below will help you
 get the most out of the pattern.



2B

Bread and Cheese
Page 36 - 22WC Issue 81

3A



Activity Base
3/4" thick

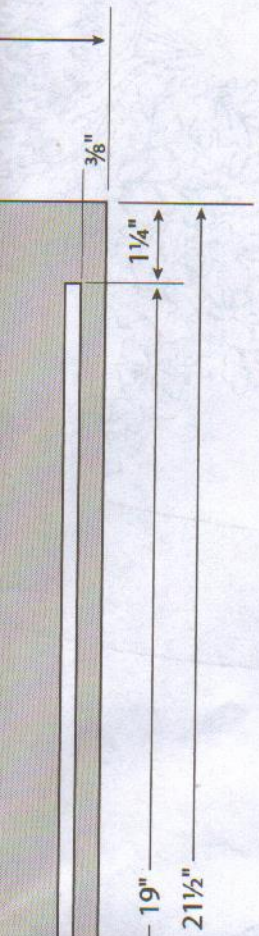
1/4"-wide slots (3)

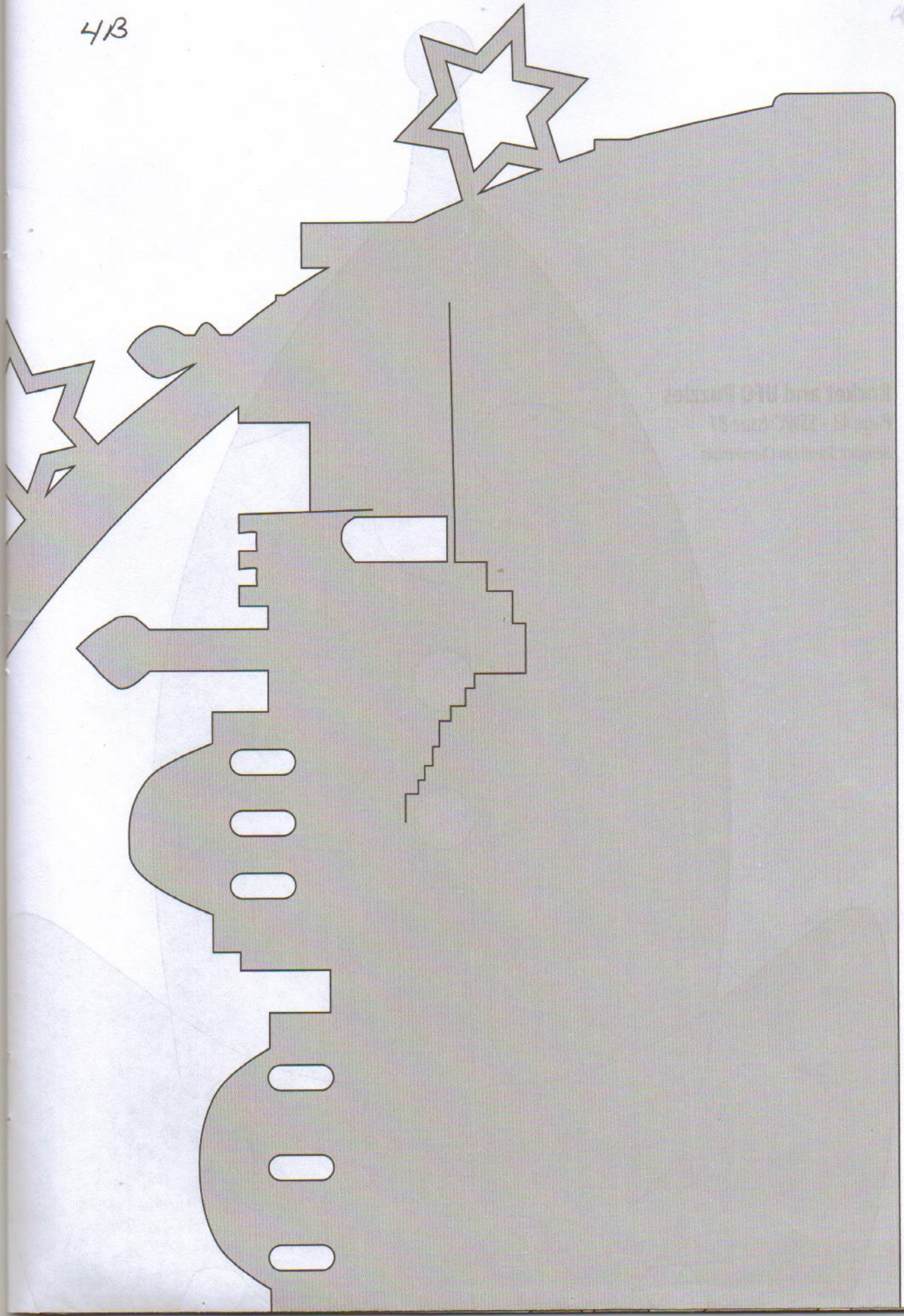
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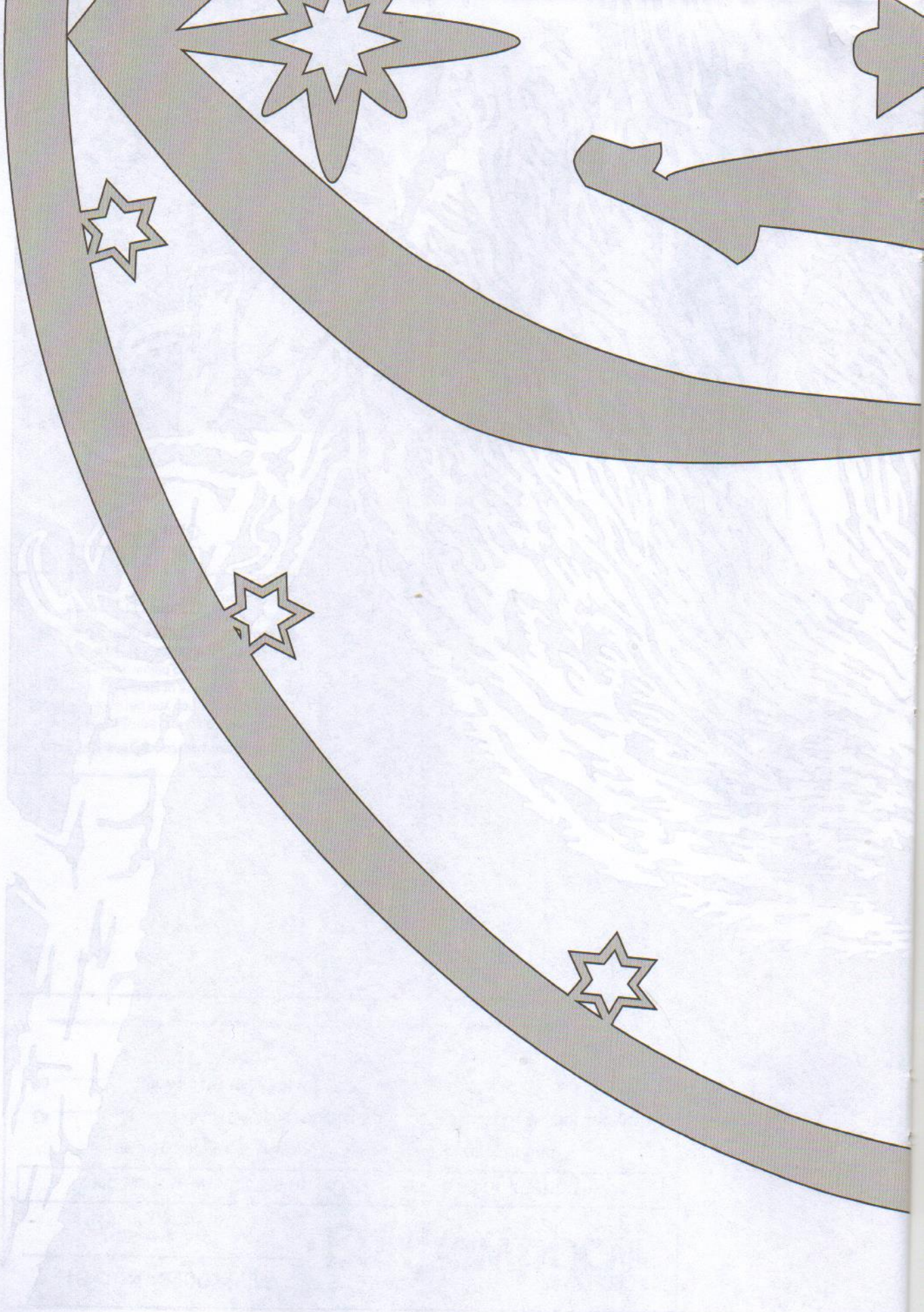
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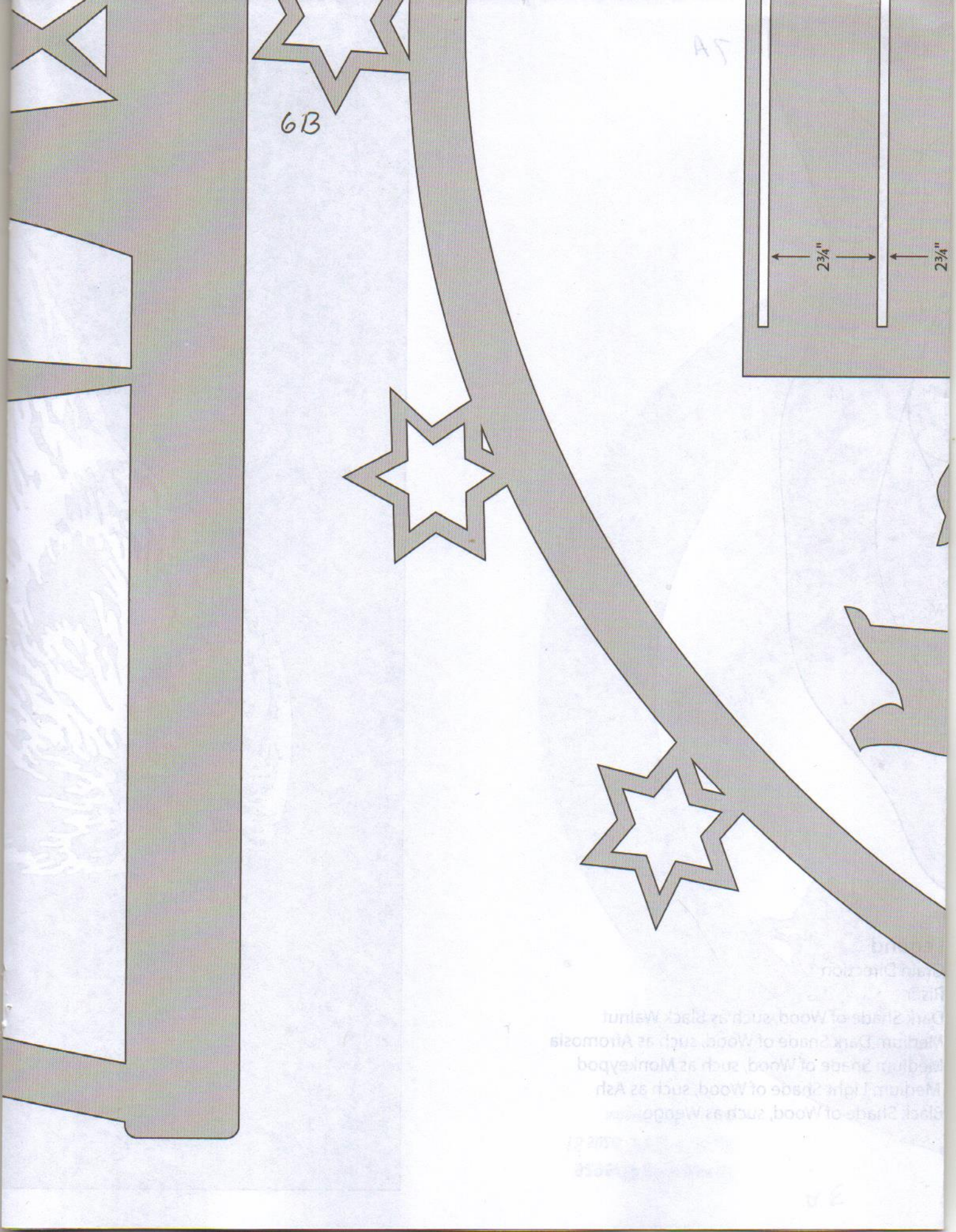


One inch









6B

A7

$2\frac{3}{4}$ "

$2\frac{3}{4}$ "

Dark shade of wood such as black walnut
Medium-Dark shade of wood such as Amomosis
Light shade of wood such as Monkeypod
Medium-Light shade of wood such as Ash
Black shade of wood, such as Wenge

30

7B

1 1/4"



Chazy Bear Intarsia
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813

