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FALL 2023 ■ ISSUE 92

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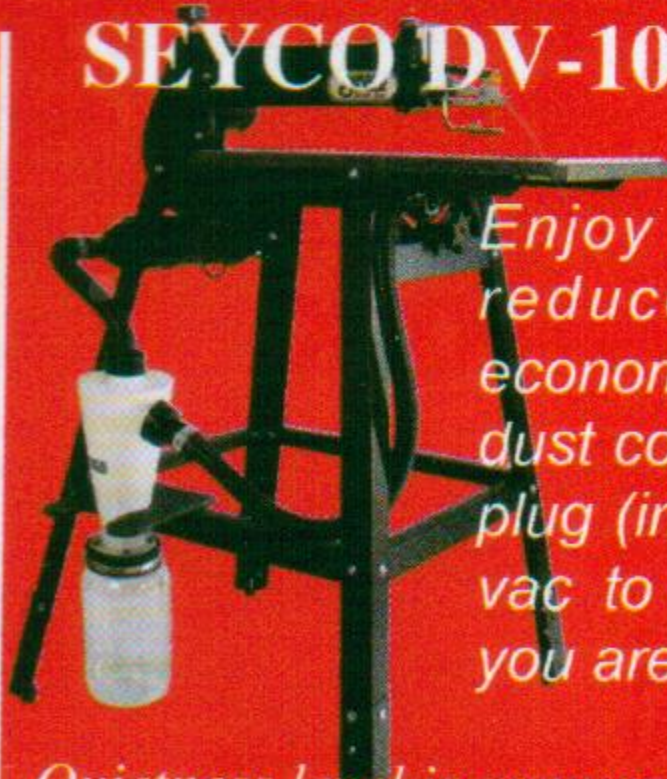
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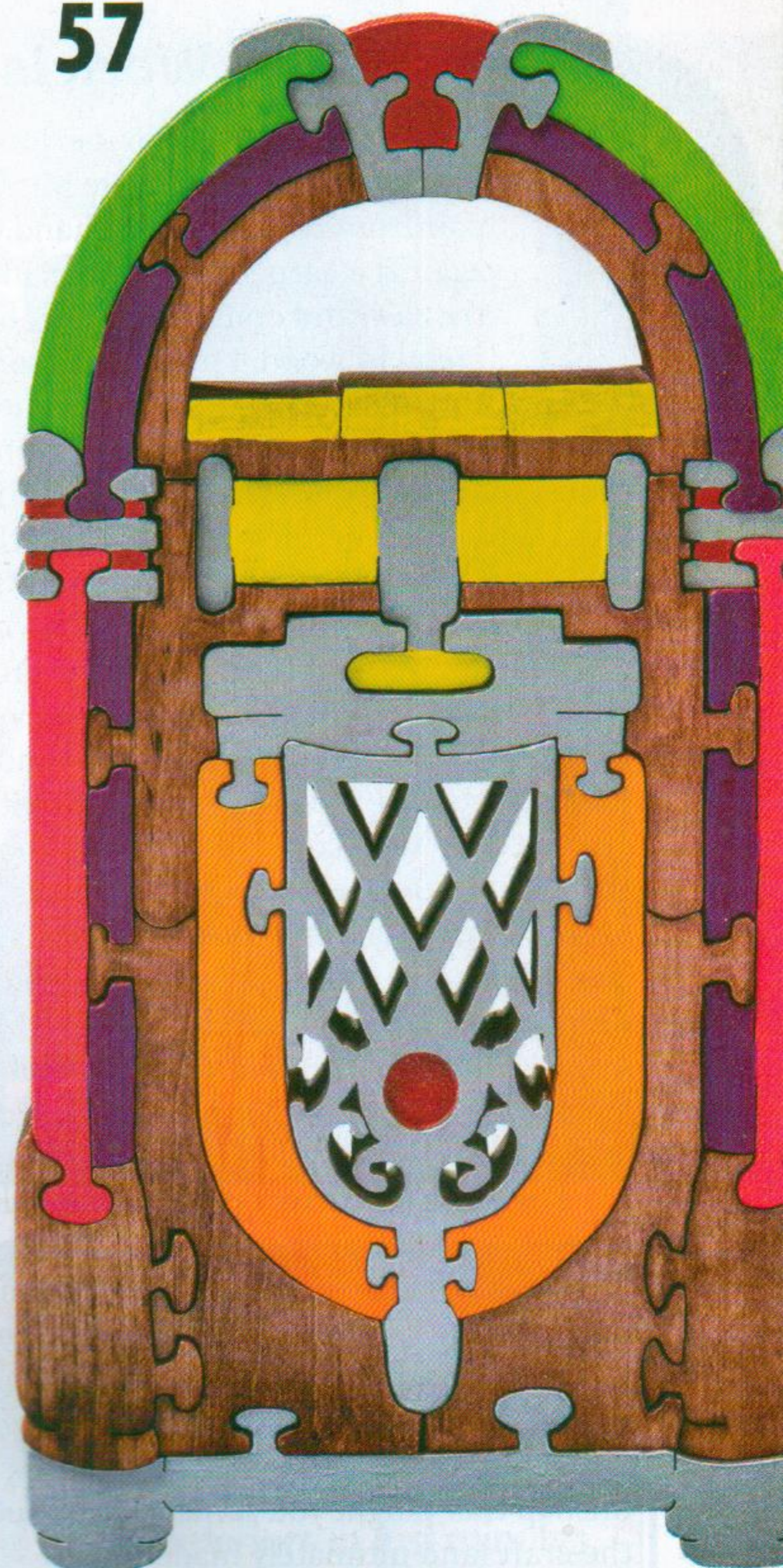
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Find these free extras at

**SCROLLSAWER.COM**

**Free Project** – Want more toys? Scroll a colorful wheely rooster by Cony Zwahlen!

**Bonus Pattern** – Celebrate the holiday season early with Rita Cels' Christmas tree wall safe.



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## The Prep Work is the Project

While preparing this issue, Jon—our fearless art director—and I made Sue Mey's compound-cut giraffe pair from page 47. Beforehand, I checked the blank against a carpenter's square, installed a fresh blade in the saw, and donned my PPE, but in my haste to put metal to wood, I forgot to do one very important thing: square the table. Check out the result. Because the saw table had tilted just a hair to one side, my giraffe was practically dead on arrival, sporting a comically thin neck and legs that I will generously call "wonky." But you know what? It was a great reminder that the preparation stage of a project is just as crucial as everything that follows.

The same goes for the rest of the projects here. With intarsia pieces like Janette Square's superb corgi from our cover (page 16), choosing the right wood—and the most striking features from each board—are an essential step in the process. For fretwork with small bridges, like those in Daria Alyoshkina's stylized owl or Wayne and Jacob Fowler's autumn leaves (pages 50 and 23), presanding the workpiece is key, as you'll never be able to apply the same force after the shape is cut. And for puzzles like Al Baggetta's Bats and Moon (page 31), you'll want to do just what I didn't: check that blade and table form a perfect 90° angle, so the pieces can slide in and out on both sides once scrolled.

For more on correct project prep (plus general tips that'll take your work from so-so to showstopper), read through Carole Rothman's article on page 9. Then, learn why a benchtop planer might just be your next new shop toy, perfect for adjusting workpiece thickness, creating squared blanks, and smoothing rough surfaces all before the scrolling starts (page 12).

Do you have a giraffe-level scrolling mishap that taught you something about the craft (and ultimately made you a better scroller)? We'd love to hear it! Drop us a line at [editors@scrollsawer.com](mailto:editors@scrollsawer.com); your note might just appear in a future Letters.

Happy scrolling!

Kaylee Schofield, Editor  
[schofield@foxchapelpublishing.com](mailto:schofield@foxchapelpublishing.com)

Note the difference an errant tilt of 3° can make—between the full-bodied giraffe at right and his scrawny predecessor.



### Our Mission

*To promote scrolling as an artform and an enjoyable pastime—for all ages and all skill levels.*

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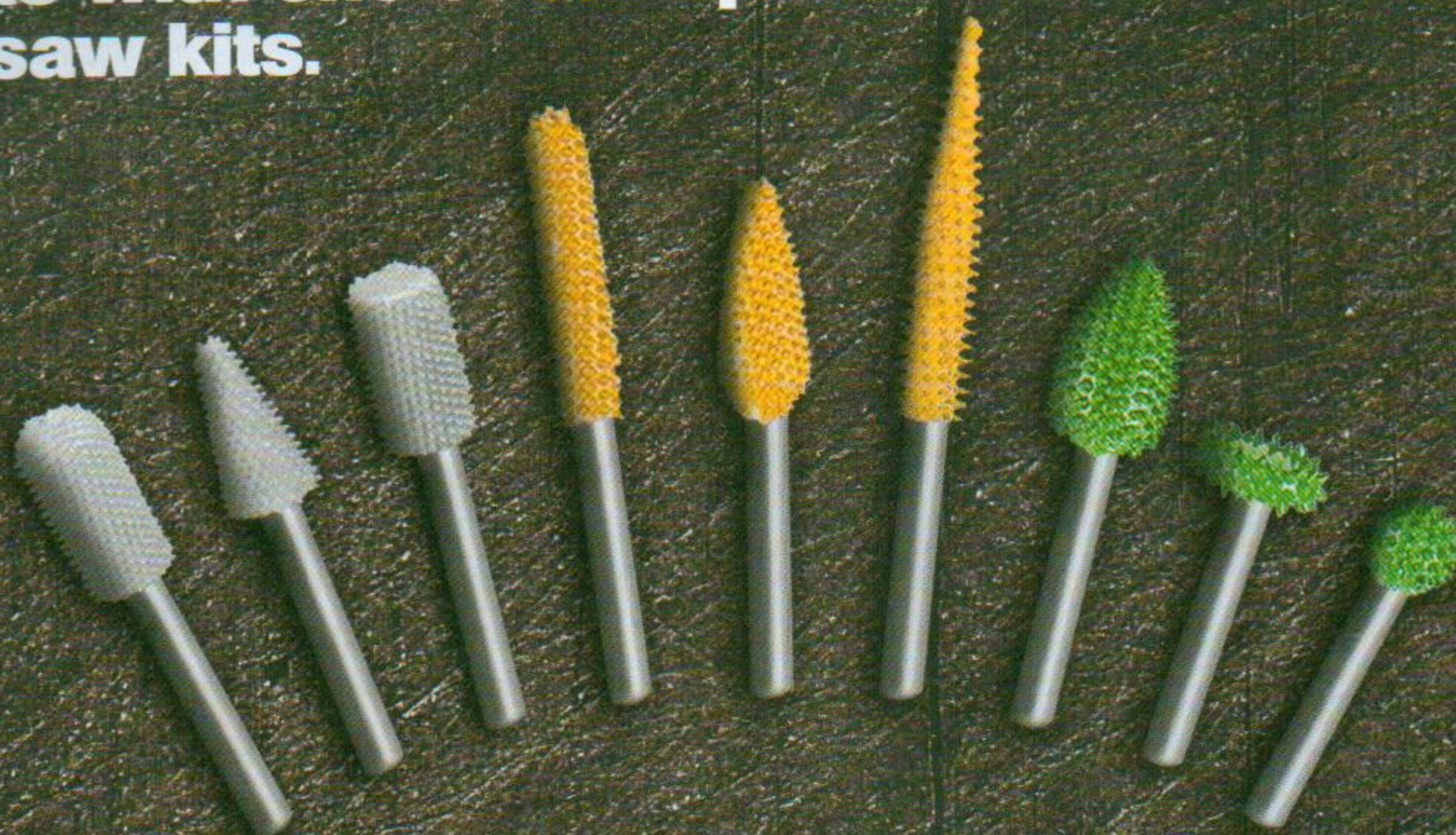
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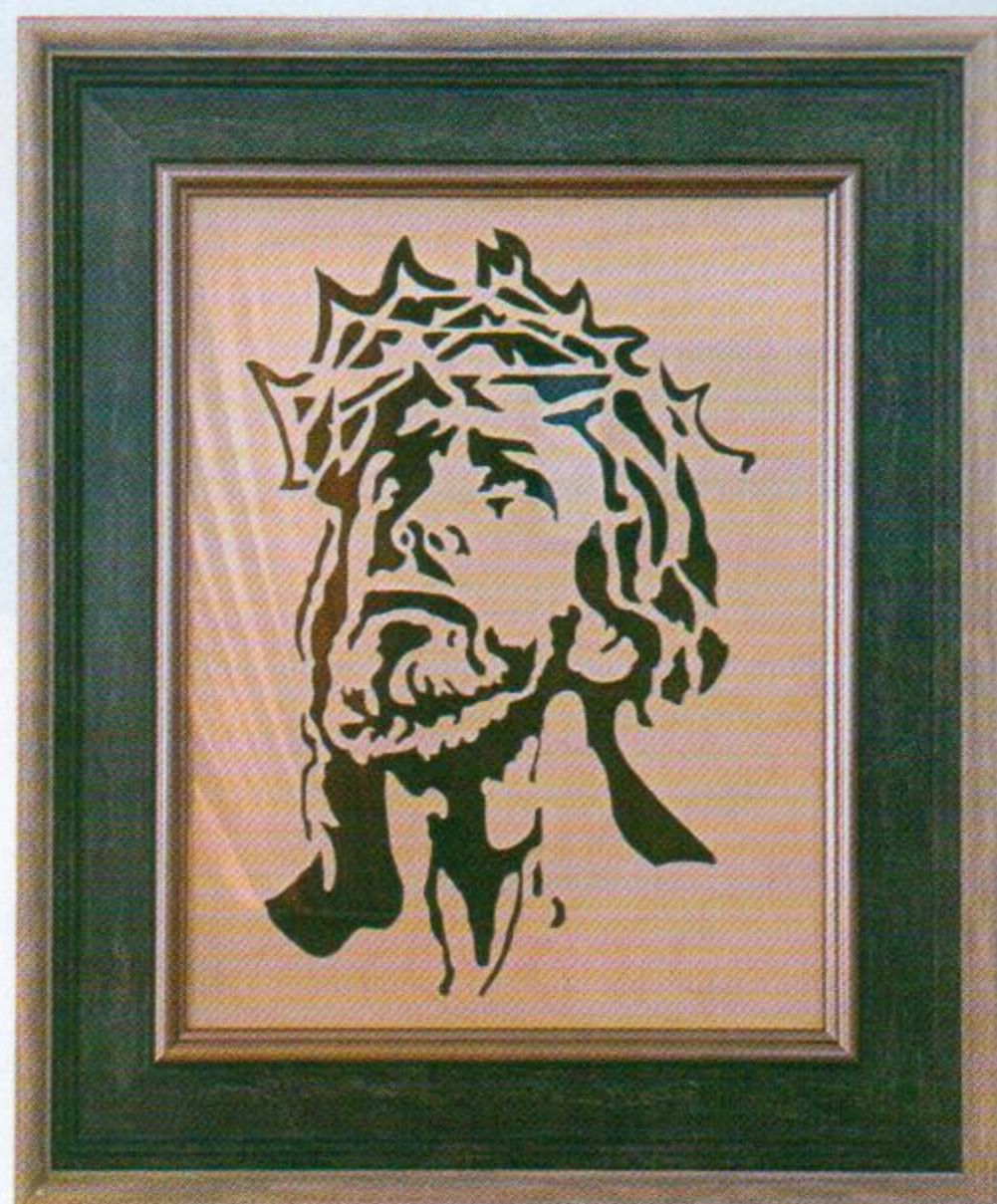
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### Divine Intervention

I came across Jay Hammerle's "Crown of Thorns Portrait" in the 2014 *Ultimate Scroll Saw Patterns* book and decided to try out the fretwork pattern. The light streaks on the picture frame occurred by happenstance.

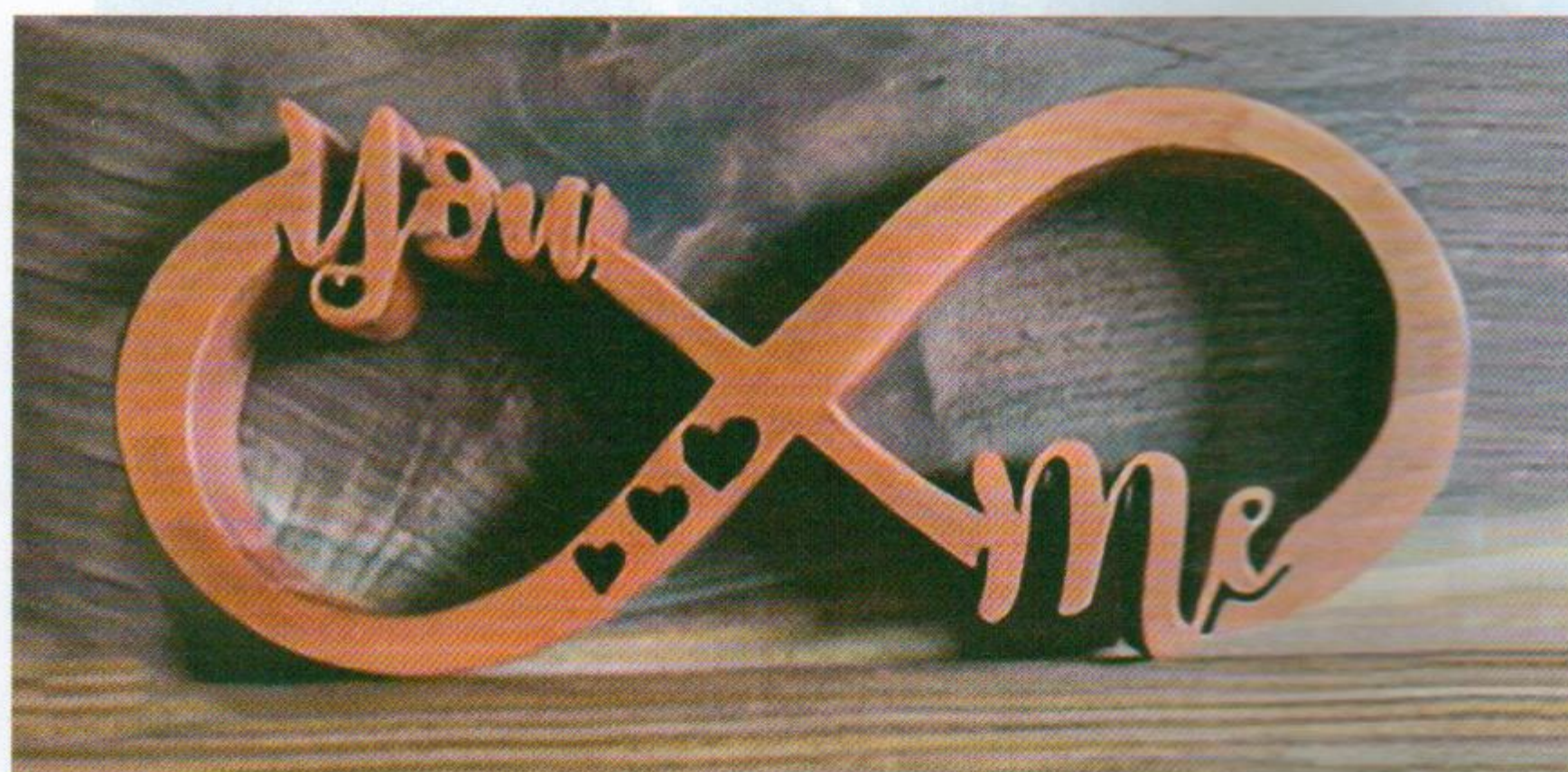
Elsa Apetz  
Johnstown, Pa.



### Winged Marvel

Judy Gale Roberts' "Kindhearted Dragon" from issue #76 was such fun to make. It is cut from mahogany, aspen, wenge, bloodwood, spalted tamarind, and ambrosia maple.

Humphrey Dunn Nolen, Tenn.



### Infinite Challenges

When I saw Jessica Boehm's "Infinity Knot" from issue #86, I knew it would challenge me with the letters and small spaces in the design. It turned out better than expected, and I'm now hooked on scrolling more challenging pieces. It has also inspired me to scroll interesting designs into my own projects!

Micheleine Ball High River, Alberta

**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 email [editors@scrollsawer.com](mailto:editors@scrollsawer.com). You can also send us your letters and photos via Instagram! Tag us @scrollsawwoodworking.

### Setting Sail

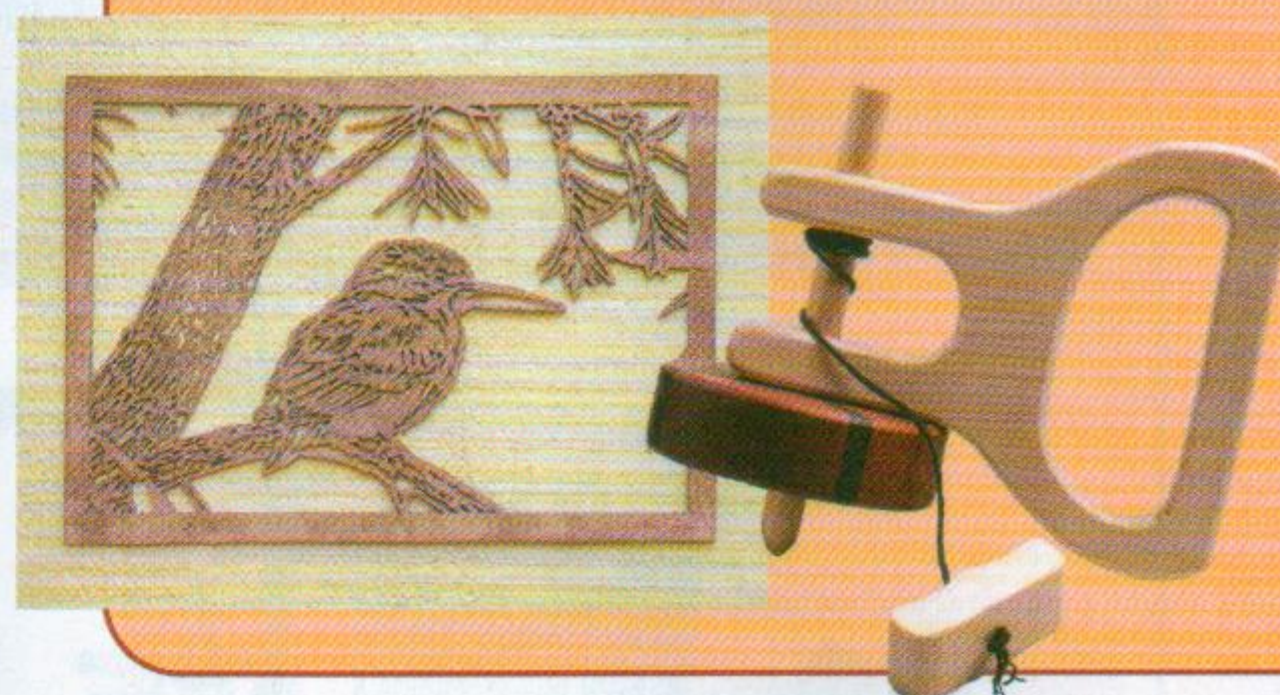
I saw Fiona Kingdon's "Any Port in a Storm" from issue #82 and decided to make it out of white and red oak. Although Fiona's patterns can be challenging, I love seeing and making her work.

Ron Starkey  
Ravenswood, W. Va.



### SET IT STRAIGHT

The patterns published for Charlie Dearing's "Kingfisher Fretwork" and Rita Cels' "Old-Timey Tops" from the summer issue (#91) differ from the measurements listed in the Materials & Tools sections in the articles. For revised patterns on both projects, visit the Fall 2023 (#92) landing page on [scrollsawer.com](http://scrollsawer.com). We apologize for the errors.







### Passion-Driven

I made Brad Anderson's "Easy City Cars" from issue #86 for fun and gave them all away. Although I usually sell my projects, I like making toys to give to families who are down on their luck.

**Steve Romero** *Orem, Utah*

### Busy Bee

As soon as I saw Daniel D. Brown's "Enhancing Scroll Sawn Work with Resin" from issue #83, I knew I had to try it. The project challenged me in many ways and encouraged me to try different products and techniques that I had never used before. The end result inspires deep interest and questions from my friends and relatives when they see it on a picture ledge in my living room.

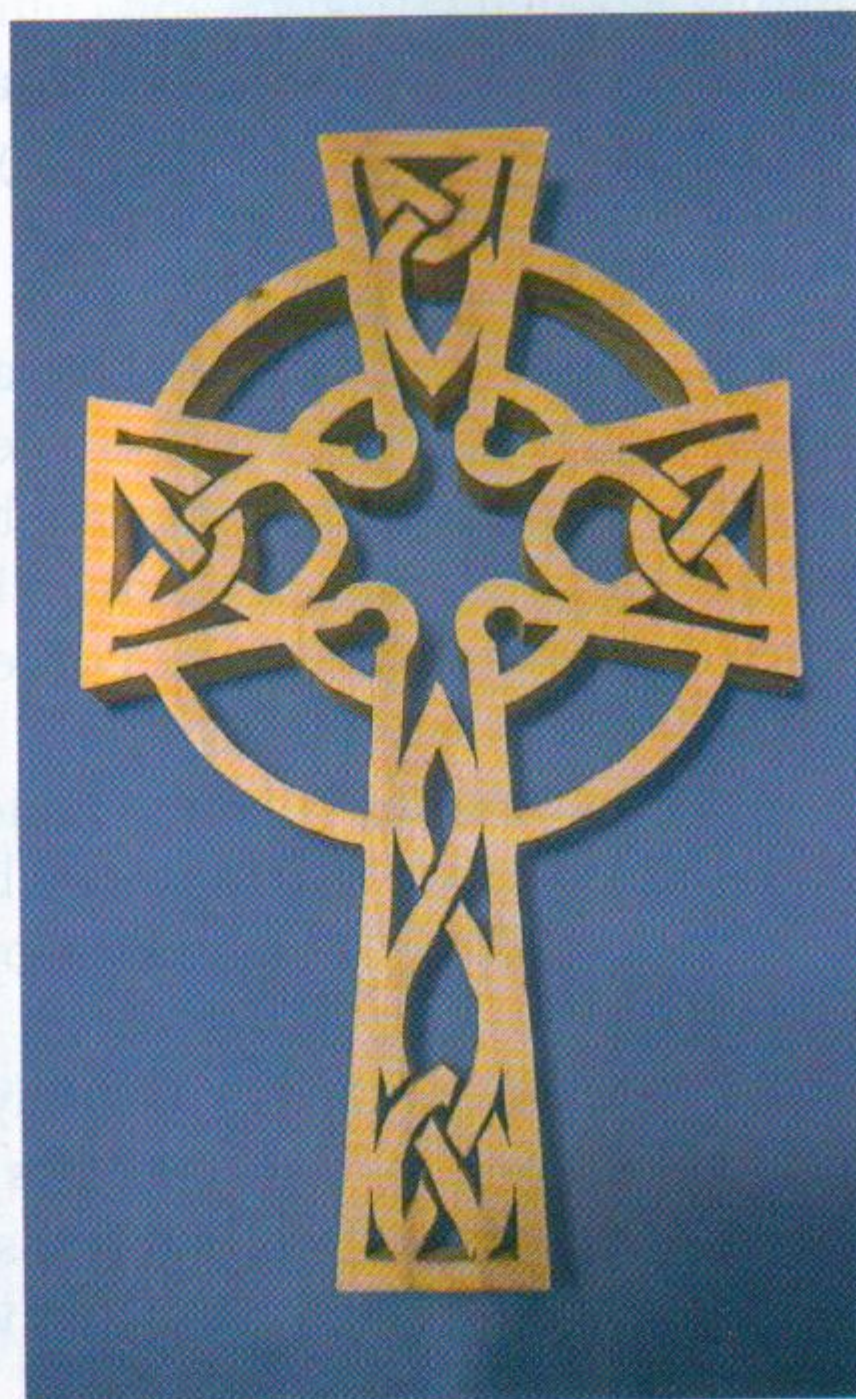
**Richard Weik** *Middletown, Pa.*



### For Two-Spot

I always find interesting and neat-looking projects in every issue and decided to scroll Clayton Meyers' "Celtic Knot Fretwork" and Jean-Bernard Germe's "Man's Best Friend" from issue #86. The latter project was chosen to celebrate the unconditional love between owner and pet and to honor my own dog, Two-Spot.

**Barbara-Lynn Smith**  
*Brooklet, Ga.*



### Feeling Lucky

I made a trip to Ireland 20 years ago and was intrigued by Clayton Meyers' "Celtic Knot Fretwork" in issue #86. I knew that I had to cut it!

**Tom Lay** *Tickfaw, La.*

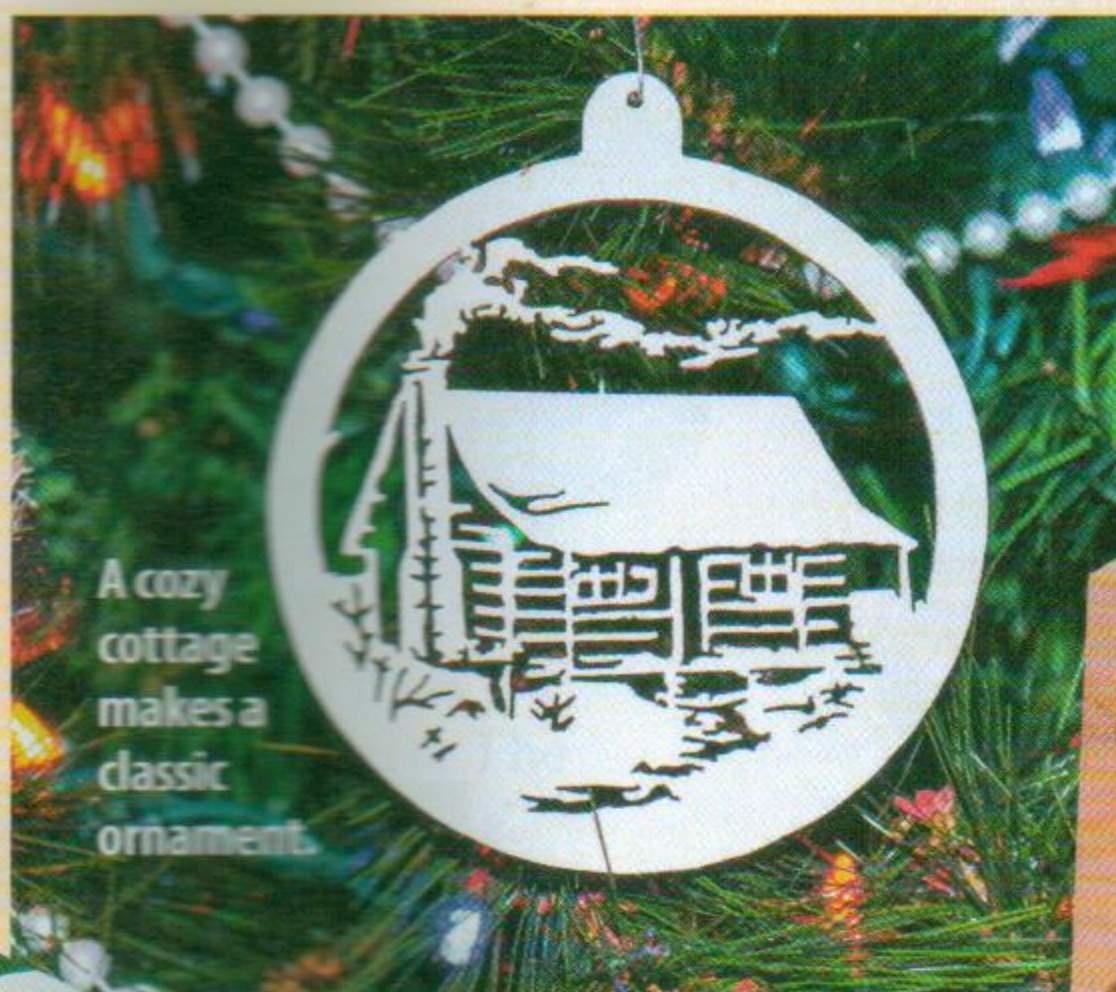


## COMING FEATURES

Look for these projects in an upcoming issue!



A cozy cottage makes a classic ornament.



Dangly-legged creatures will sit or hang from your tree.

Create a tiny tyke's tool tote.



Find the Fox Hunt Winners on Page 71!



## BOOKSHELF by Staff of Scroll Saw Woodworking &amp; Crafts

## Woodworking with Resin: Tips, Techniques, and Projects

By Clayton Meyers Fox Chapel Publishing

\$14.99 + S&H ISBN: 978-1-4971-0299-6

You may have seen resin coating wooden tabletops and counters at your local eateries, but the technique also lends itself to smaller home woodworking projects. Resin can add interesting effects to your crafts, mimicking the look of glass and Bakelite, as well as natural materials like water or butterfly wings.

Clayton Meyers, a lifelong woodworker, has assembled a book of 13 resin-based projects that progress in difficulty and are designed for beginner-to-intermediate woodworkers. Most projects can be completed using a scroll saw, with a few lathe-friendly designs thrown in for good measure. The projects require relatively small amounts of resin, which is great for people who are new to the technique.

Some of the items you can create include charming holiday ornaments, handsome writing pens, a decorative bowl, a stylish bangle bracelet, and an ocean plaque. All projects are clearly defined with step-by-step directions and accompanying photographs. You'll also find patterns for all 13 items, as well as suggestions for switching up each design. Readers will surely find inspiration in Clayton's gallery of finished work—as well as his expert tips on materials and tools, color mixing, application techniques, troubleshooting, and safety considerations.

*Woodworking with Resin* is a valuable how-to book that will add a colorful shimmer to your next DIY project!

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# Why Does My Saw....?

Learn about six common scrolling dilemmas and how to solve them

By Carole Rothman

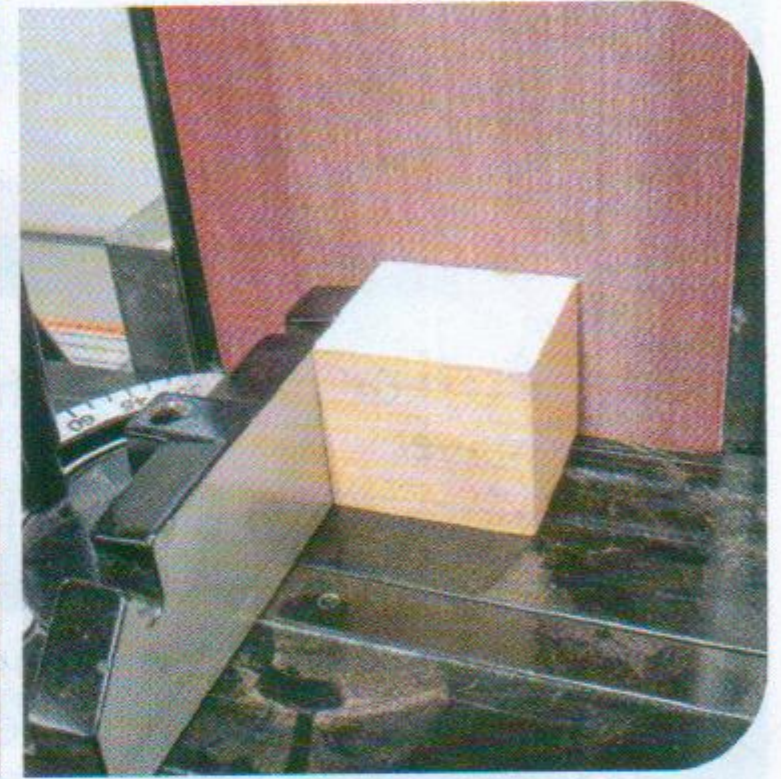
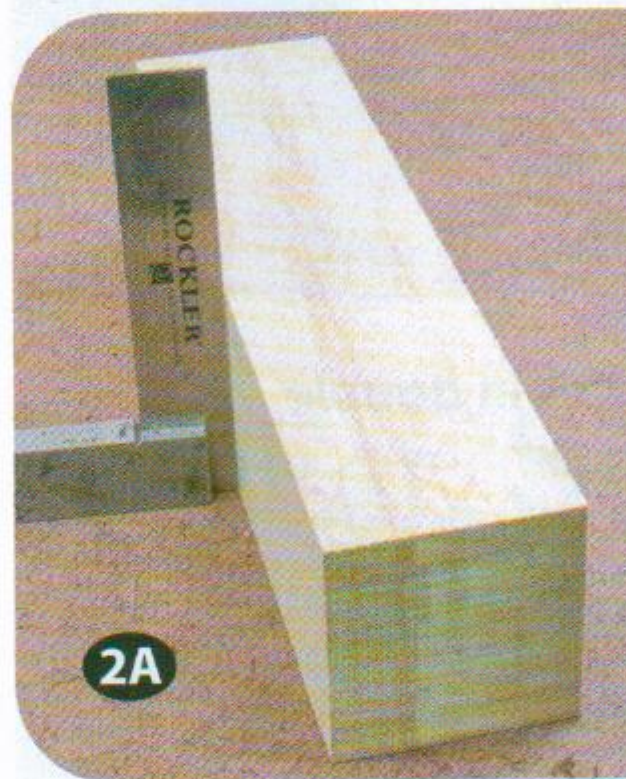
**W**hether a longtime scroller or a relatively new one, you're likely to run into problems from time to time. Some may reflect flaws in technique (user issues); others may involve the saw and its operation (saw issues). While some solutions are straightforward, others may be complex, even controversial. This article focuses on issues that frequently arise and solutions that are likely to help.

## USER ISSUES

### 1. Why do I get burn marks on my workpiece?

Burning occurs when a blade overheats. While certain species, like cherry, are especially vulnerable, any wood can burn if the conditions are right. To prevent burning:

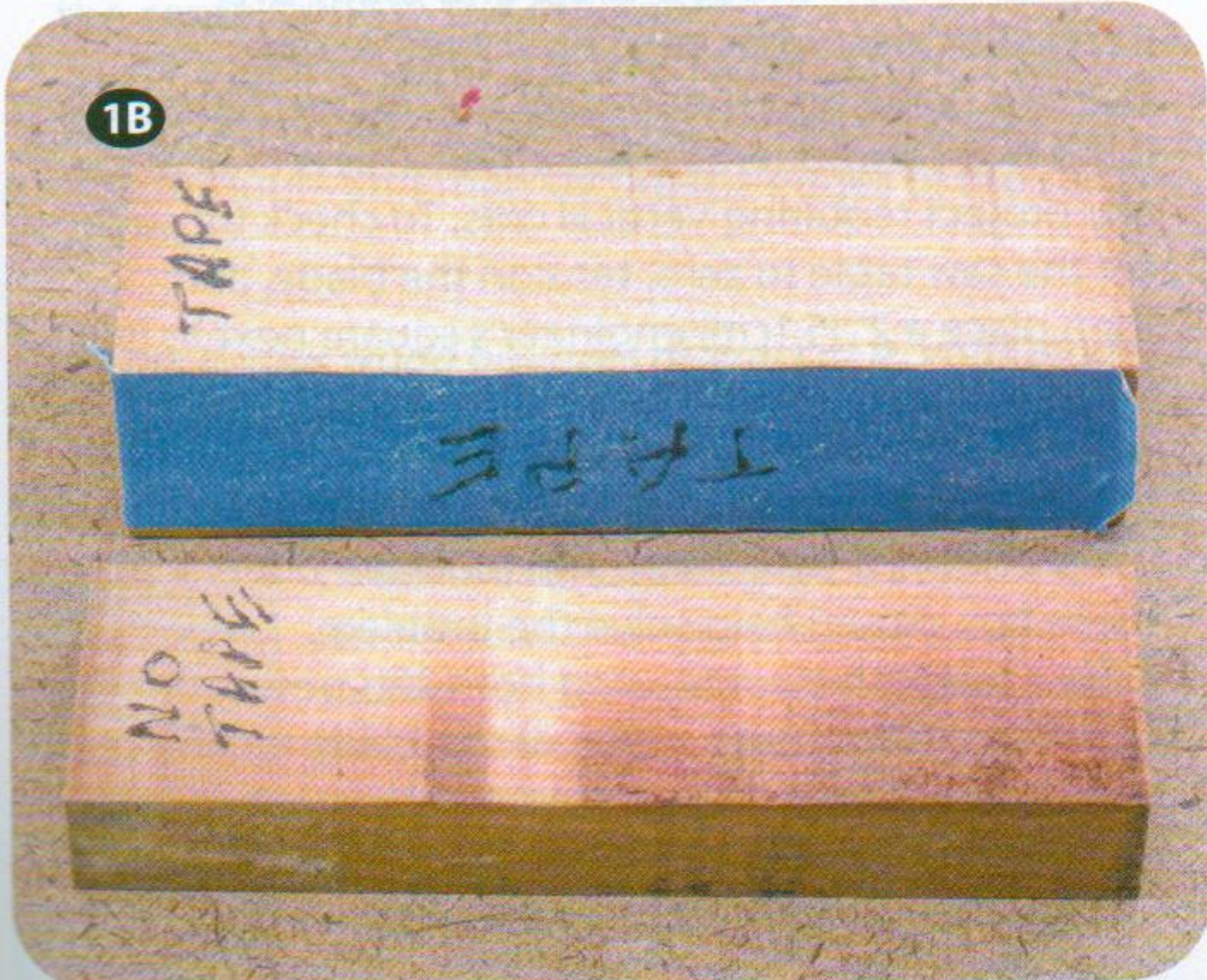
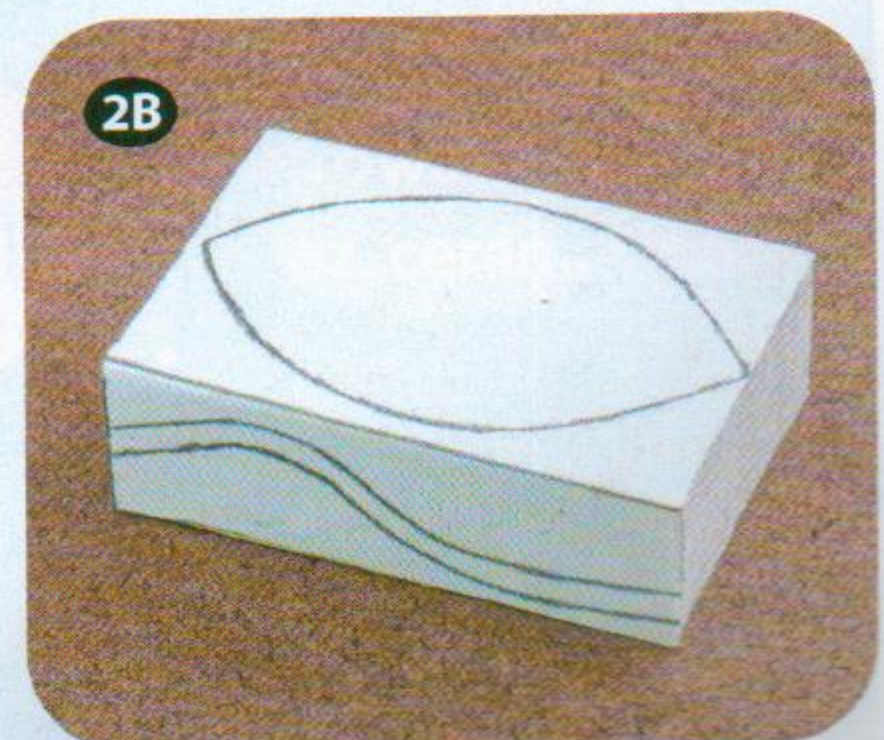
- Use a sharp blade. Dull blades cut more slowly; the increased friction heats the blade.
- Apply tape (clear packaging or blue painter's) to the wood. The release coating on the back of the tape melts during cutting, which coats the blade and reduces friction.
- Use a blade with fewer teeth per inch (tpi). This decreases the surface area of the blade that contacts the wood, generating less heat.



### 2. Why is my compound-cut project lopsided?

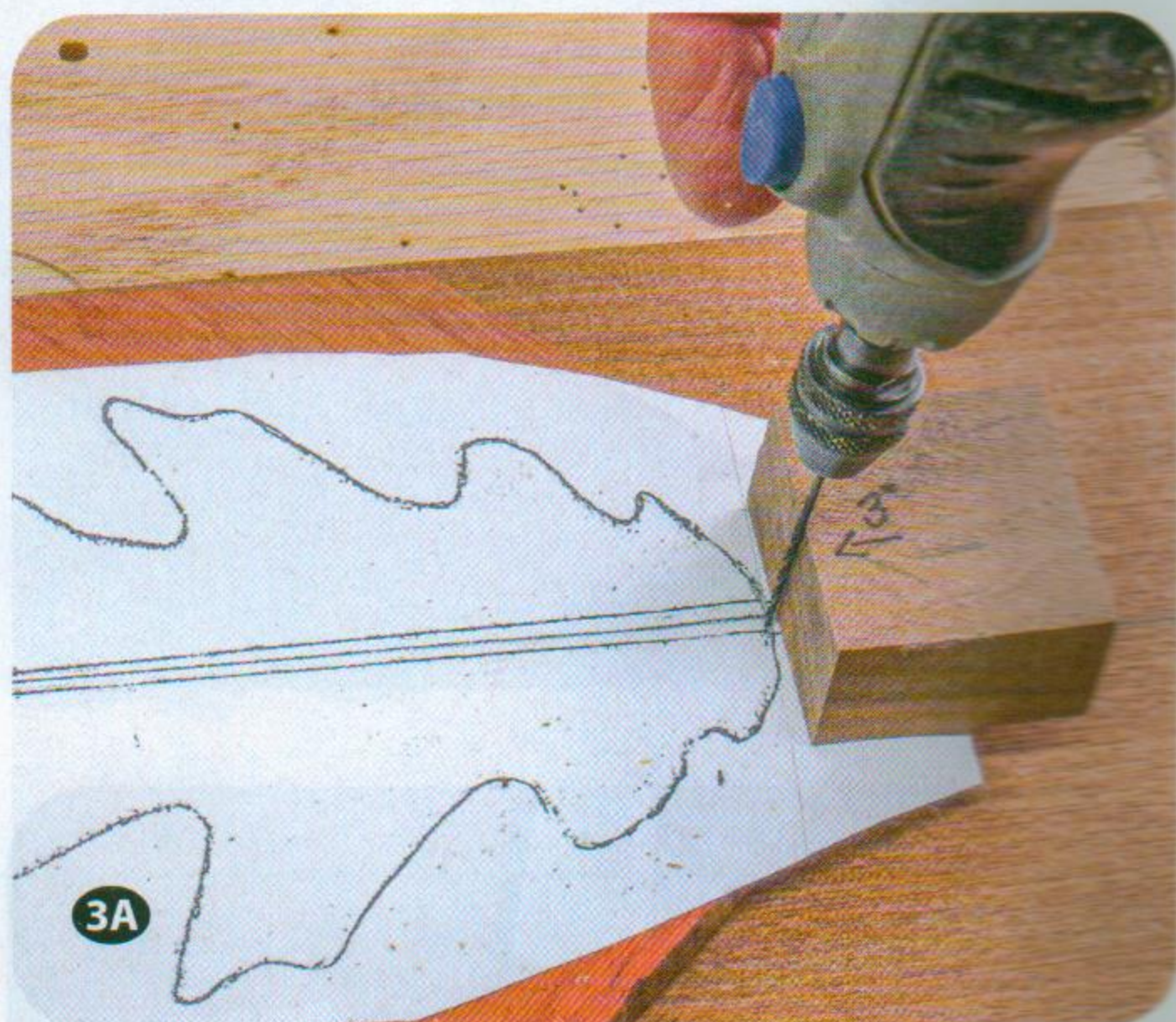
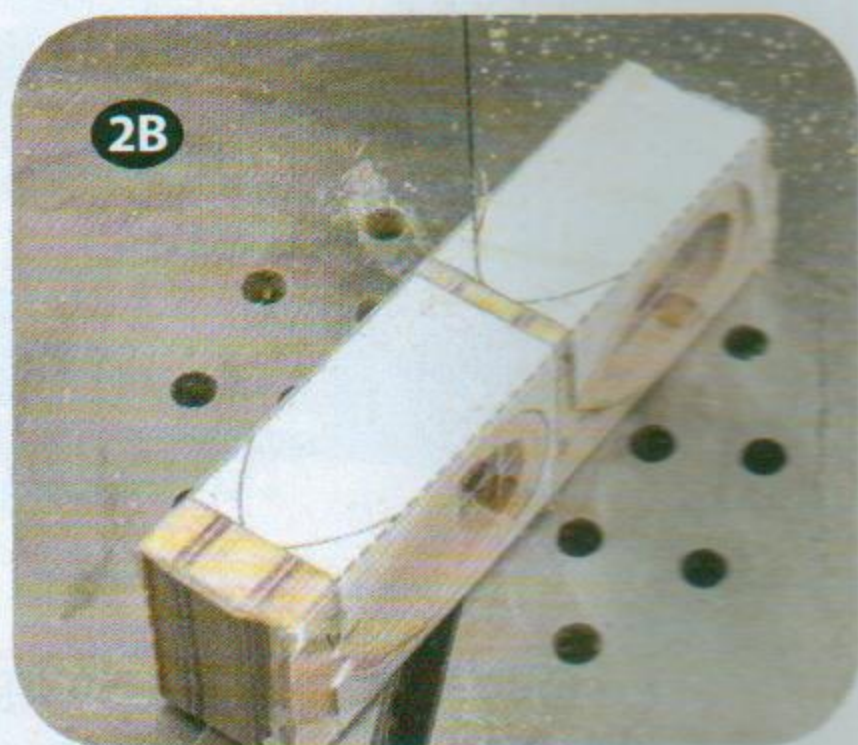
Compound-cut projects require a blank with faces that are square to each other; a saw blade that's vertical; and a pattern that's placed accurately. To ensure a successful result:

- Use an engineer's square to check all faces of the blank. If not square, you may be able to correct this with a belt sander and miter gauge.
- Crease the pattern sharply on the fold line; place the fold line precisely at the wood's edge.





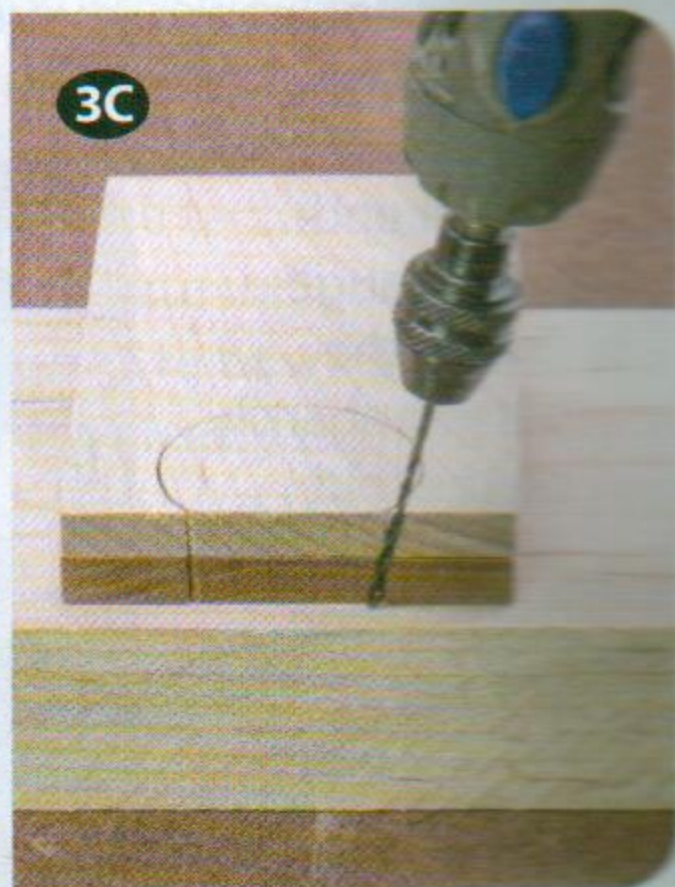
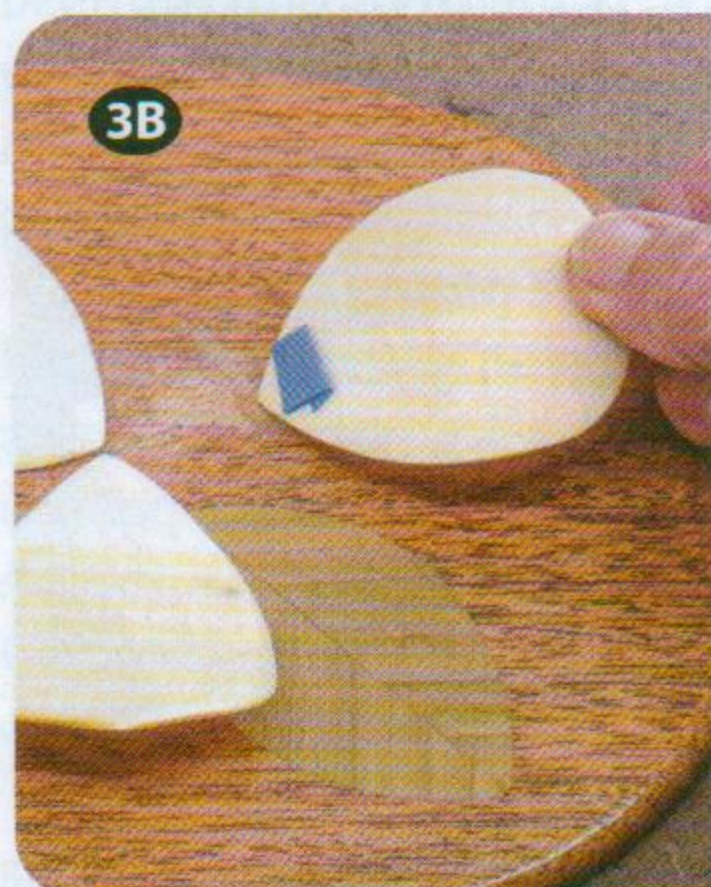
- c. Cover the blanks with tape and use a blade large enough to cut the wood easily. These will make you less likely to force the blade and distort the cut.



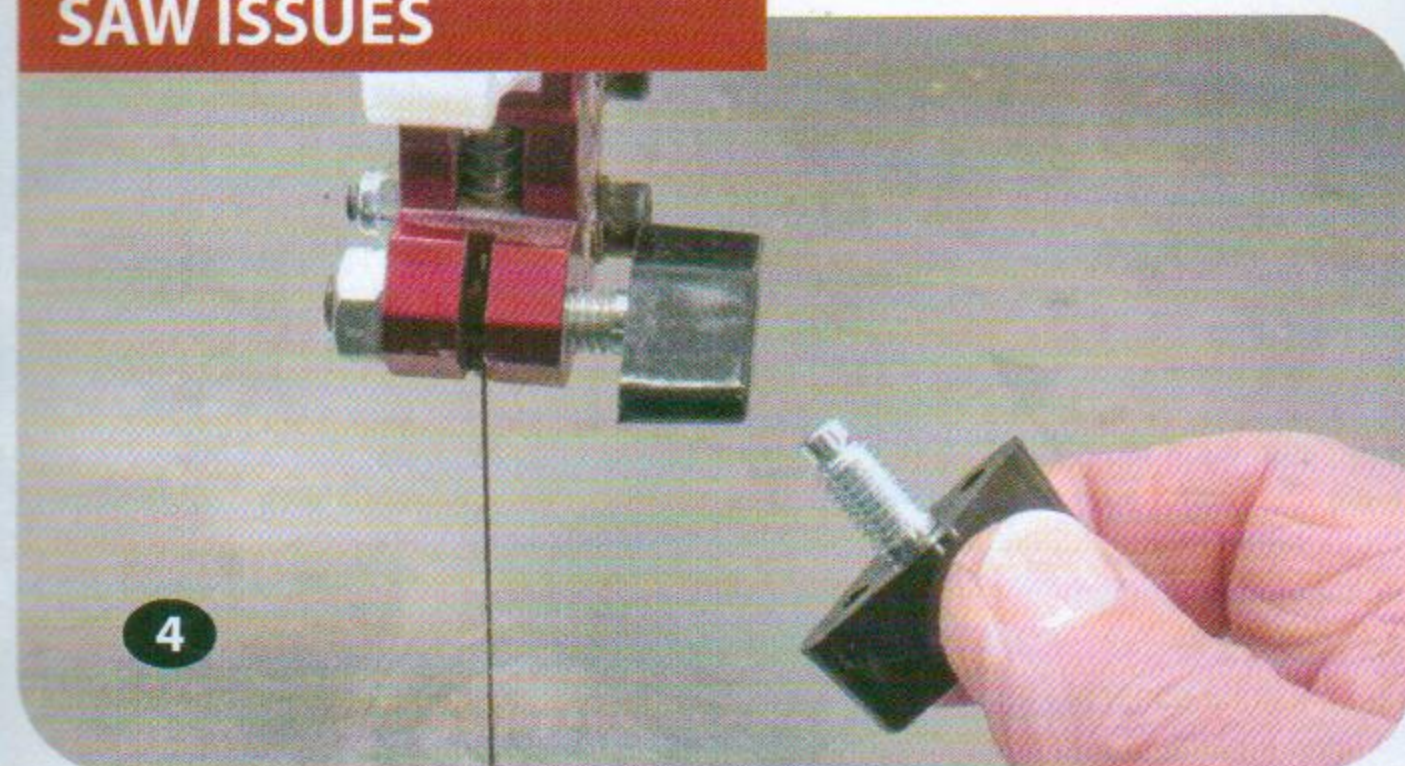
### 3. How can I hide blade entry holes in double bevel inlay?

Highly visible blade entry holes mar the appearance of a well-cut inlay. Here are some tips that can help:

- Drill your entry hole in an area that will be removed by an overlapping inlaid piece or covered by another decorative element.
- If you can't hide the hole, disguise it using a paste made with sawdust from the surrounding area and wood glue. Sand the area smooth when dry.
- Drill the entry hole at an angle that allows the bit to pass through the waste area of both pieces of wood.



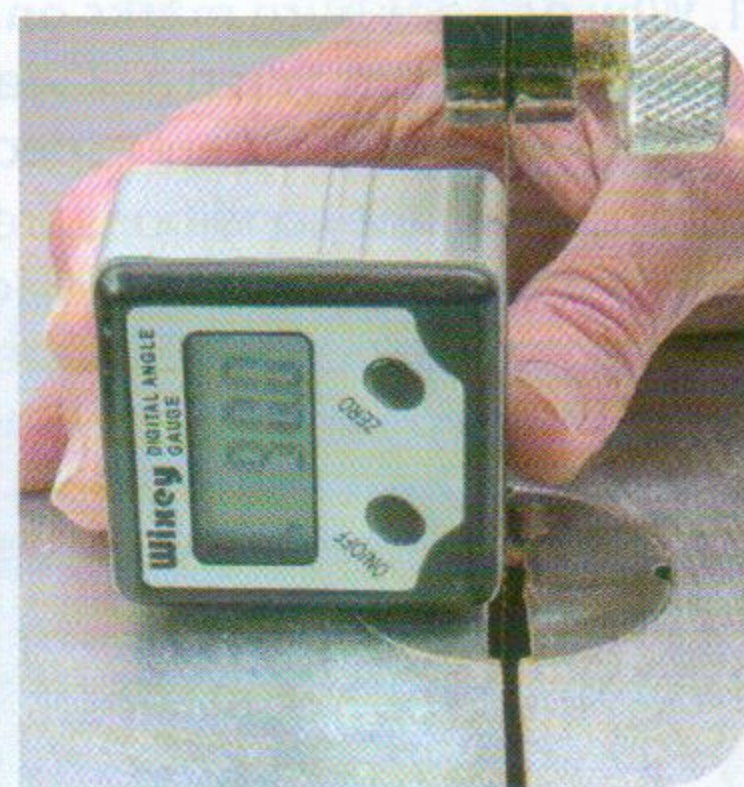
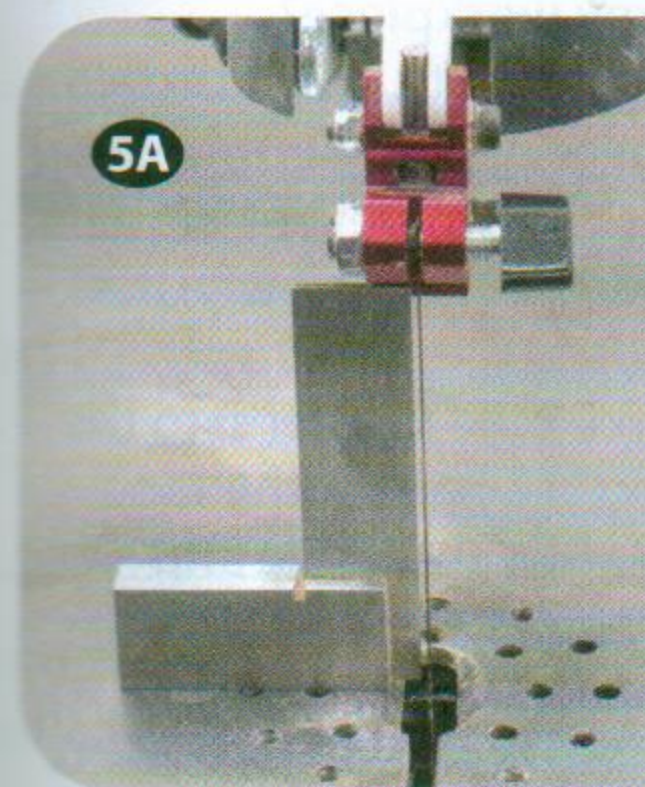
## SAW ISSUES



### 4. Why is my blade slipping out of the clamps?

Clamping systems vary, but all have some mechanism, such as a thumbscrew, to secure the blade. When this is not tightened sufficiently, the blade can slip out. If hand strength is a problem, you can make an auxiliary piece to fit over the thumbscrew; be careful not to over-tighten or you may damage the clamp.

If your clamping system uses both setscrews and thumbscrews, slippage may occur if the tips of either accumulate residue or become worn with use. Sanding lightly to clean and smooth the tip's surface may solve the problem. If not, replacement parts are inexpensive and readily available.

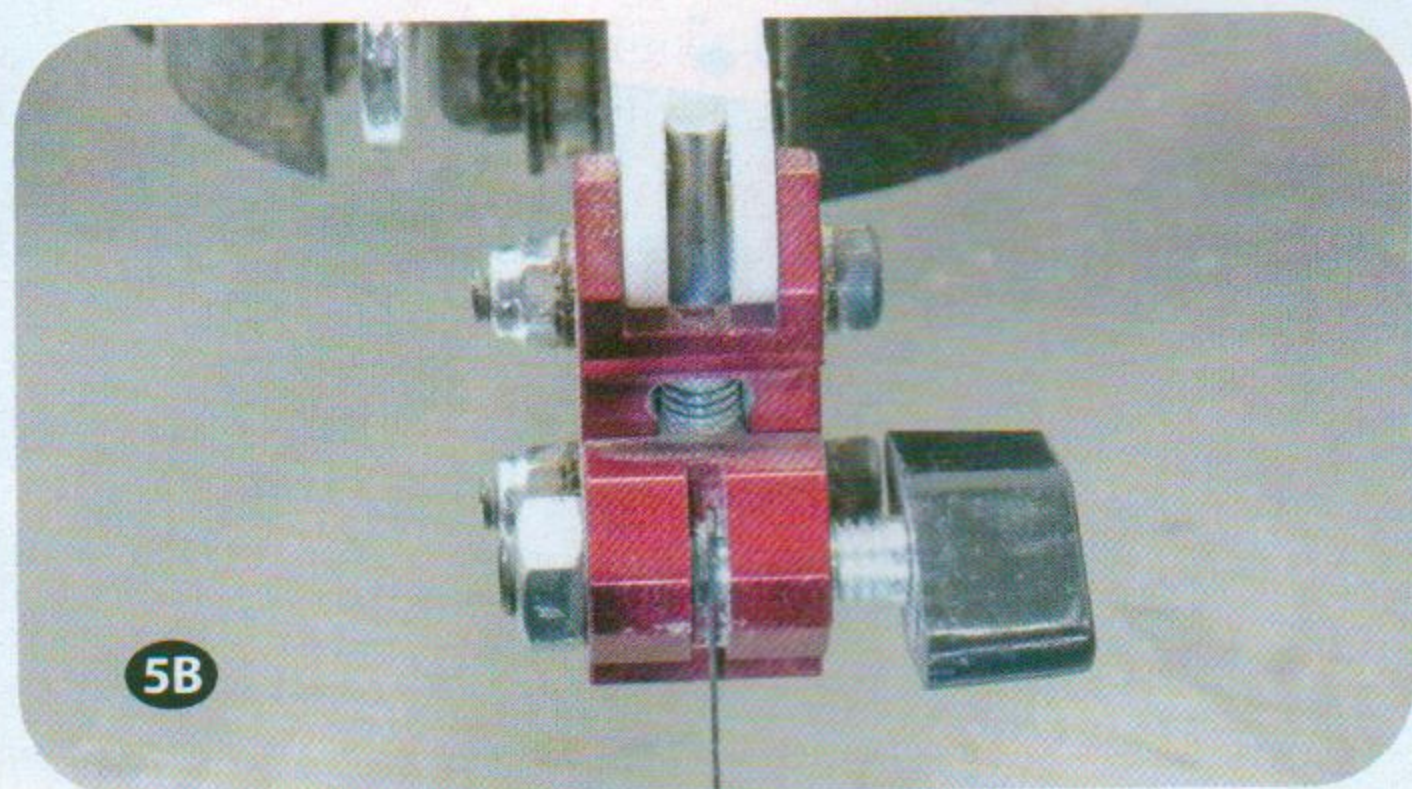


### 5. How can I tell if the saw table and blade are perpendicular; what can I do if they're not?

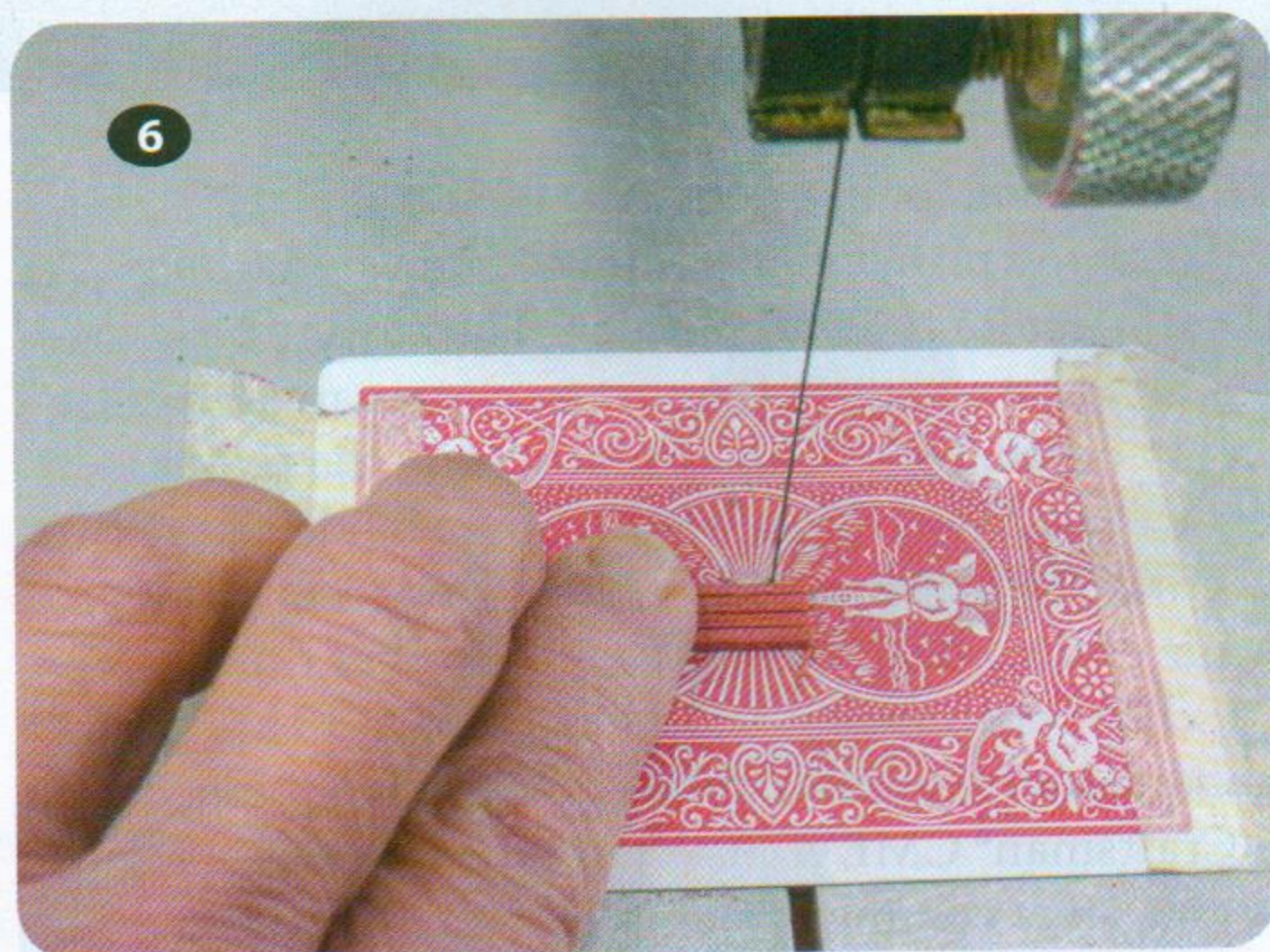
The saw blade is perpendicular or "square to the table" if the two components meet at 90°. This is critical for any project requiring vertical cuts. To check for square, set the saw table to zero, tension the blade, and then place a 2" (5.1cm) engineer's square next to it. If perpendicular, the blade and square will be parallel. You can also use a digital angle gauge. Zero it out on the saw table, and then place it against the blade to see if it reads 90°. If your blade and table are out of square, these tips should help solve the problem:

- For saws with clamps using both setscrews and thumbscrews, make sure that the blade is centered in both upper and lower clamps. Vibration can cause a setscrew to loosen. When the thumbscrew is tightened to compensate, the blade is pushed out of square.





- b. For saws with tilting tables, check frequently to ensure that the knob that secures the table's position is tight. If not, vibration or pressure on one side can put the table out of square.
- c. For saws with tilting arms, normal use may cause the arm to move out of alignment over time. See the saw's manual for instructions on moving the arm to realign the blade so it sits square to the table.



**6. How can I keep small pieces from falling through the center hole in the saw table?**

Create a zero-clearance insert from a playing card. Make a small hole in the center so the blade can pass through, and then secure the edges of the card with tape.

**Final tip: If your wood bounces as you cut it, your blade is probably upside down!**



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](http://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](http://foxchapelpublishing.com).

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# Should You Add a Planer To Your Shop?



## Discover a versatile tool that defines wood preparation

By Jon Deck

I was introduced to the planer a little over 20 years ago while working at a father/son cabinet shop in Emmitsburg, Md.,\* (a vital bridge in my career shift from ad agency to magazine art director). Although I had some woodworking skills, I was truly a novice in a commercial woodshop and had to learn to use different machines.

My initial responsibility was wood preparation. The shop had racks of rough hardwood lumber that had to be planed to nominal thicknesses to produce rails, stiles, drawer fronts, and door panels. Other machines would follow, but the planer was always the first step in the process of building cabinetry.

### The Anatomy of a Planer

A planer's function is to shave off a bit of the surface of a board. Rollers feed the wood through the machine while a cylindrical cutting head removes the material. The cutting head is raised and lowered to control the depth of cut. Smaller machines have knives that run the length of the cutting head, while larger machines utilize rows of cutting teeth. A glance at the photo above tells you that it's fairly essential to have dust collection. Planing even a short stack of boards will literally cover the floor around the machine.

### What to Look for in a Benchtop Planer

A benchtop planer can accommodate wood from ¼" to 6" (6mm to 15.2cm) thick. The cutting head should have adequate support to ensure an even cut at any depth, and the motor must have the power to cut through tough hardwoods. Some models have two cutting knives while others may have three. A three-knife cutting head will produce smoother finishes.

The benchtop planers listed on page 13 are good candidates for a small shop. Our shop is equipped with a Craftsman® CMEW 30. Having only prior experience with a large commercial planer, I was significantly impressed by the performance of this benchtop model.

### Small Shop Milling

The advantage a planer gives you is control. This starts with the quality and cost of materials. You can save money if you purchase raw lumber and plane it yourself. Most of us obtain pre-milled wood from a commercial store, where the choices in wood thickness and quality are slim. Purchased wood may have surface blemishes too deep to sand out that can be removed by planing. Cupped or twisted boards can be planed level and true, making them useful for projects.

There are many reasons why you would want to control the thickness of scrolling blanks. Portrait cutters often prefer wood thinner than ¾" (1.9cm). For compound cutting, a planer will produce accurately squared blanks. Intarsia artists can produce varying



thicknesses of project pieces to eliminate the need for risers or shims.

Downsizing a pattern for projects such as toys or boxes changes the length and width of a project. A planer lets you downsize thickness, as well.

*Note: The planer can only run longer pieces of wood (minimum 12" [30.5cm]) as the rollers must make contact to convey the stock through the machine. Determining the thicknesses of wood before cutting project pieces is essential.*

For rough wood prep, glued-up panels of narrow boards can be planed to an even level. And if you resaw lumber on a band saw, planks can be planed flat, removing any variations produced by saw cuts.

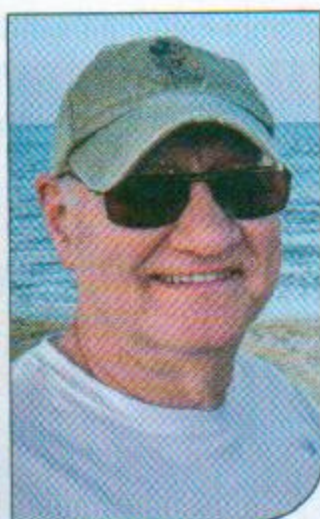
### Conclusion

Using a planer to expand wood preparation can broaden the scope of your projects; increase the accuracy of project components; make poorer quality lumber usable; and save money over time in material costs. A benchtop planer would be a wise and welcome addition to any home shop.

This planer depth adjustment crank is marked in  $\frac{1}{64}$ " increments.



Planers create profuse amounts of chips and dust, so dust collection is a necessity.



A lifelong designer and woodcrafter, Jon Deck has been the art director of *Scroll Saw Woodworking* and *Crafts* magazine for 20 years. Contact him at [jon@foxchapelpublishing.com](mailto:jon@foxchapelpublishing.com).

\* A shout-out to Ed and Brian Reaver of Reaver's Woodworking, whose tutelage and patience gave "shop-cred" to this humble designer.

## SMALL SHOP BENCHTOP PLANERS

### WEN PL1252

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### Craftsman

#### CMEW 30

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### Delta 22-555

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### DeWalt DW734

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3-knife cutting head  
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### Grizzly G0939

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This is a step up from the box we made earlier in this book. It's a bit larger and has more intricate details. I used purpleheart, canarywood, padouk, and birch. Use whatever you'd like! I tend to pick woods with interesting wood grain patterns, and occasional interesting colors.

| Rank | University | Specialization | City | Year |
|------|------------|----------------|------|------|
| 1    | 2          | Law            | 1997 | 1997 |
| 2    | 3          | Law            | 1997 | 1997 |
| 3    | 4          | Law            | 1997 | 1997 |
| 4    | 5          | Law            | 1997 | 1997 |
| 5    | 6          | Law            | 1997 | 1997 |
| 6    | 7          | Law            | 1997 | 1997 |
| 7    | 8          | Law            | 1997 | 1997 |
| 8    | 9          | Law            | 1997 | 1997 |
| 9    | 10         | Law            | 1997 | 1997 |

### TOOLS & MATERIAL

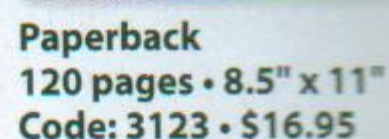
- Woods of shikho
- Table saw or equivalent
- Band saw or equivalent
- Plane
- Green sander
- Belt sander
- Scroll saw
- Orbital sander
- Wax paper
- Rubbing alcohol

- Masking tape
- Spray adhesive
- Wood glue
- Wood finish (I use Minwax® spray lacquer)
- Scroll saw blades (I used #2, #3, and #5)
- Sandpaper, various grits
- Craft knife
- Clasp boards
- Spacers/clamps
- Pinch clamps
- C-clamps
- Spacer blocks
- Clamp boards
- Side clamps
- Pinch clamps
- 120- to 360-grit sandpaper



PATTERN  
ON PAGE  
177

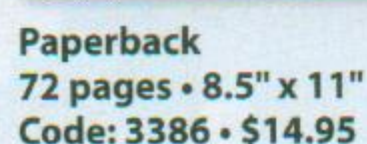
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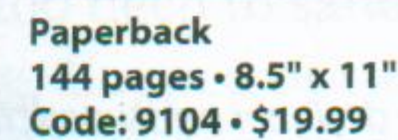
- Has over 50 scroll saw patterns of adorable baby animals found in zoos, forests, jungles, and oceans
- Perfect for decorating a child's room, creating puzzles or giving as a gift
- Written by award-winning woodworking designer, Judy Peterson



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- Written by the incredibly popular designer and internationally acclaimed artist, Lora S. Irish
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- Great for beginners! Includes a section on blades, cutting, safety, wood choice and more



- Learn to make beautiful 3D wooden animals
- Written by Judy Gale Roberts, the woman who was the driving force behind the resurgence of intarsia as an art form
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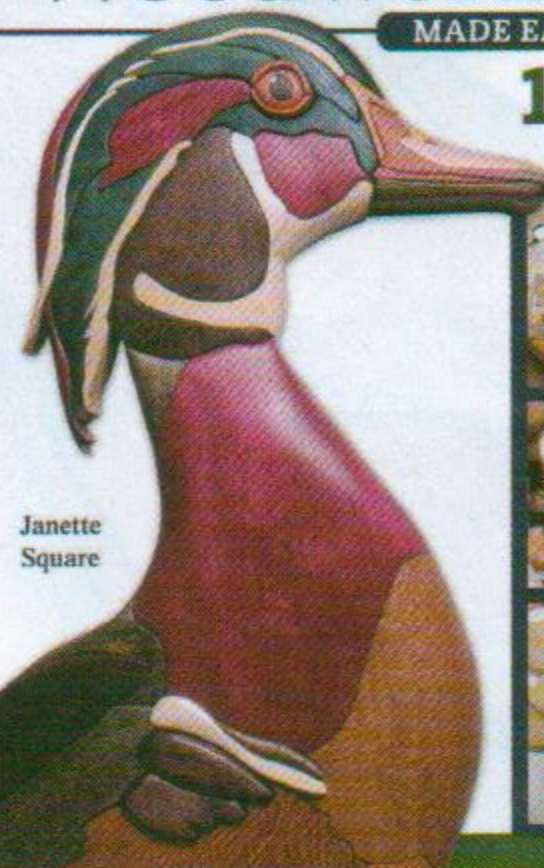


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Janette Square

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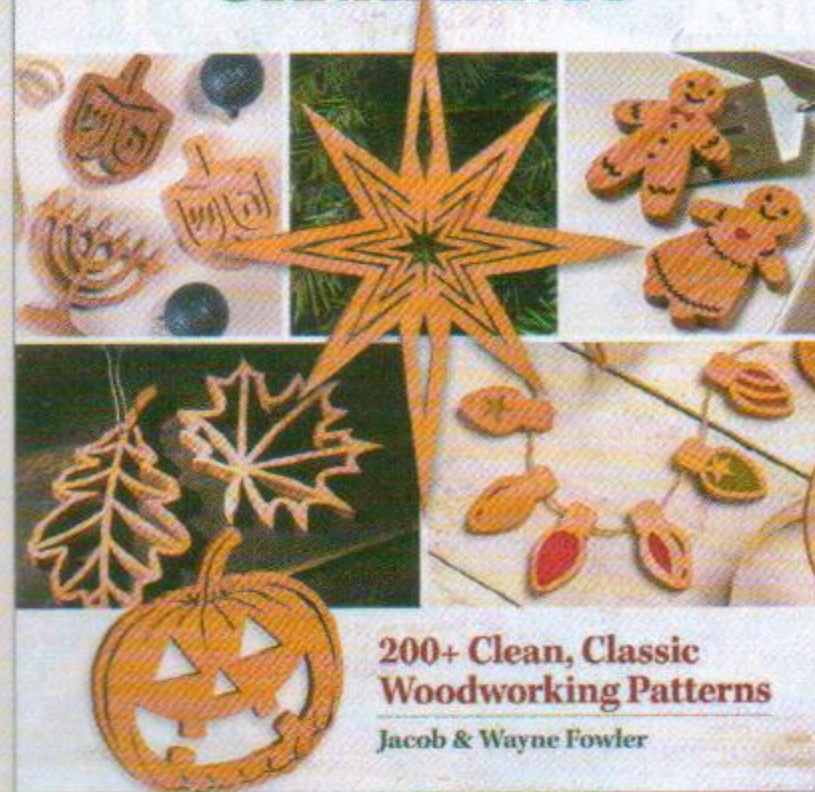
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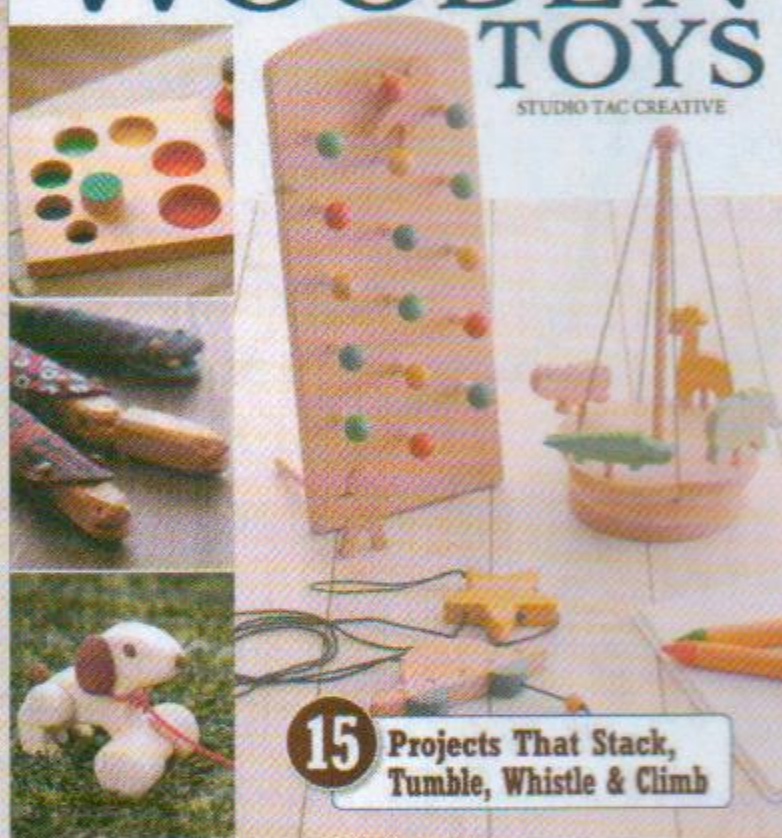
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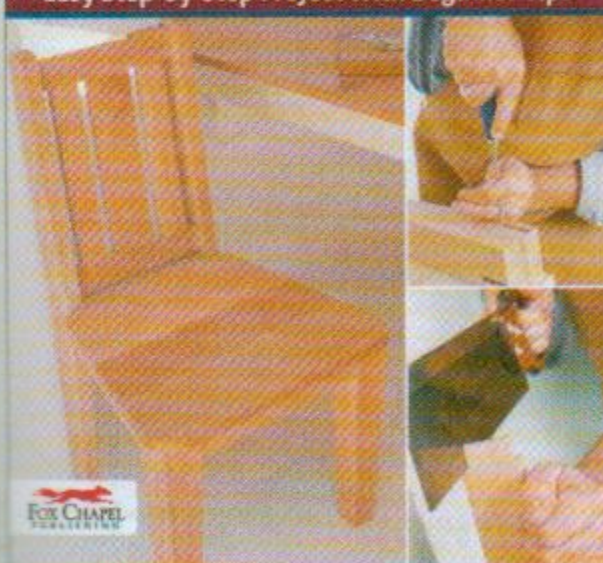
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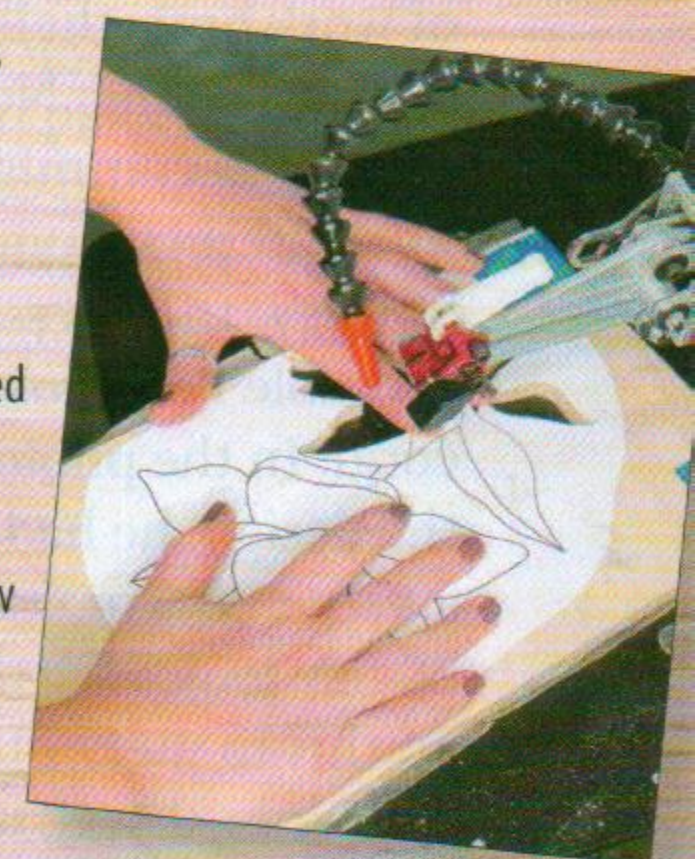
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# Expressive Corgi Portrait



**Apply these techniques to any intarsia pet design**

*By Janette Square*

**I** love creating custom pet portraits for my clients. I find this type of work both challenging and rewarding. Not long ago, I was commissioned to create a custom portrait of Riley, an expressive and adorable Pembroke Welsh corgi. In the photo I used for the design, he had just had a bath and wore that forlorn doggie look of, "How could you do this to me?" The recipient, my client's husband, was thrilled with the finished piece! Typically, my custom designs are meant to be one-of-a-kind works of art. With my client's blessing, I reimagined and simplified the design to share with you. I hope you enjoy making a corgi of your own!

This project has a few challenges, but with patience, you will be rewarded with a beautiful intarsia corgi. It is not difficult to cut. The shaping and dimension are what bring this project to life.

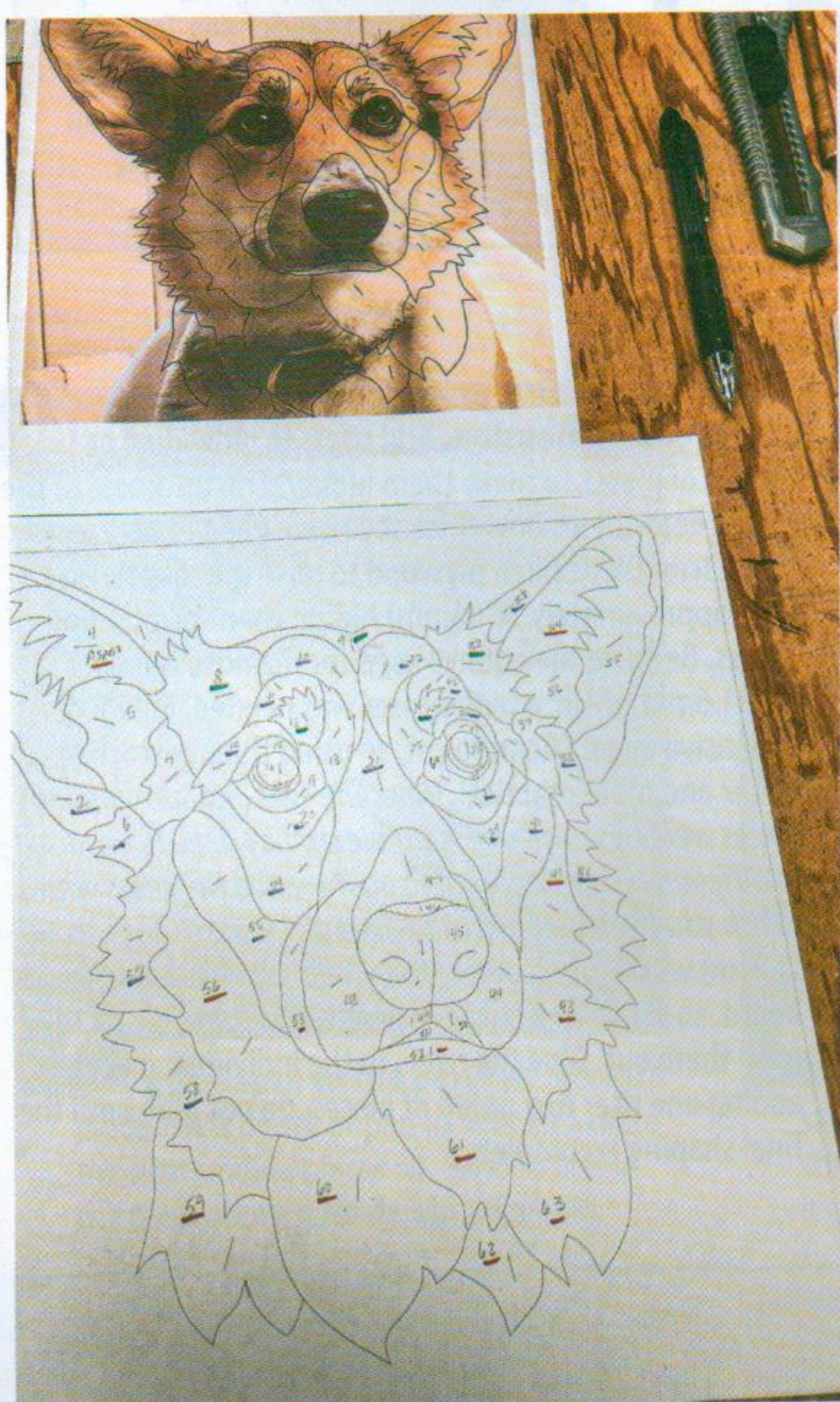
Pattern for the **EXPRESSIVE CORGI PORTRAIT** is in the pullout section.





## Did You Know?

Originally a herding dog, corgis today are valued for their loyalty and intelligence. The breed has been around since the time of the Vikings, and started to become popular in the 1950s when Queen Elizabeth II shared her love of the breed. Throughout much of the Queen's adult life, her corgis were a common sight in and around Buckingham Palace.



## Getting Started

Begin by making at least four copies of the pattern plus a master copy. The actual amount needed will depend on how you number the pieces. It's better to have too many than not enough. Number the pieces on the master copy. Transfer the numbers to the copies that will be cut out. If desired, highlight the outer edges of pieces that will be cut out. In these areas, you can relax your cutting a bit.

Cut out all the individual pattern pieces with a pair of scissors and sort them into piles for each color, shade, or type of wood. Select the wood for the pieces based on the desired color and grain. Don't worry too much about the wood thickness for the interior pieces, as you can add risers to increase the thickness (if needed) later. Make sure that all outer pieces are a minimum of  $\frac{3}{4}$ " (1.9cm).

Apply clear packing tape to the wood. Lay out the pattern pieces on the wood to determine best placement. The lines on the pattern suggest the best grain orientation. Apply a light coat of spray adhesive to the back of the pattern pieces and attach to wood blanks. Then cut the boards into manageable-sized pieces that will easily fit on the table of your scroll saw. Make sure that the bottoms of the pieces are flat so that your cuts remain square.

## TIP

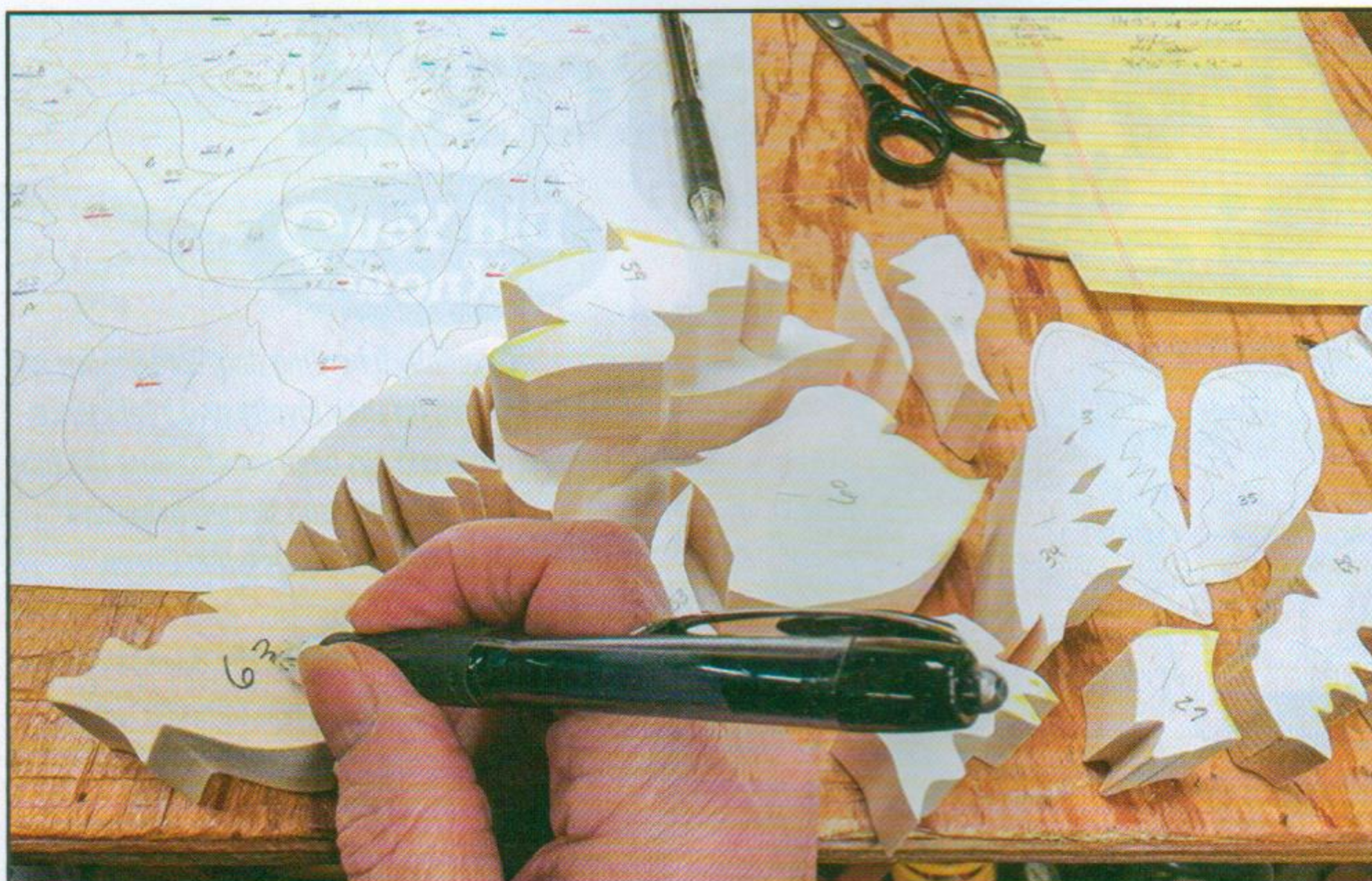
### CONTROLLING COLOR

When using different shades of the same wood or to help keep colors straight, I find it helpful to color-code the master pattern. This makes it easier to determine which pieces should be what colors. For a portrait such as this, it will look more uniform if the corresponding pieces on either side of the face are from the same piece of wood and the pattern pieces are placed near each other on the board to cut out.

## Rules of Thumb

- Always begin a project with a new blade.
- Ensure the blade is square to the table so the pieces will fit well.
- Take your time cutting to ensure accuracy and never force the blade.
- Never attempt to turn the piece sharply when cutting intarsia pieces. This will cause the blade to flex and cause fit issues.

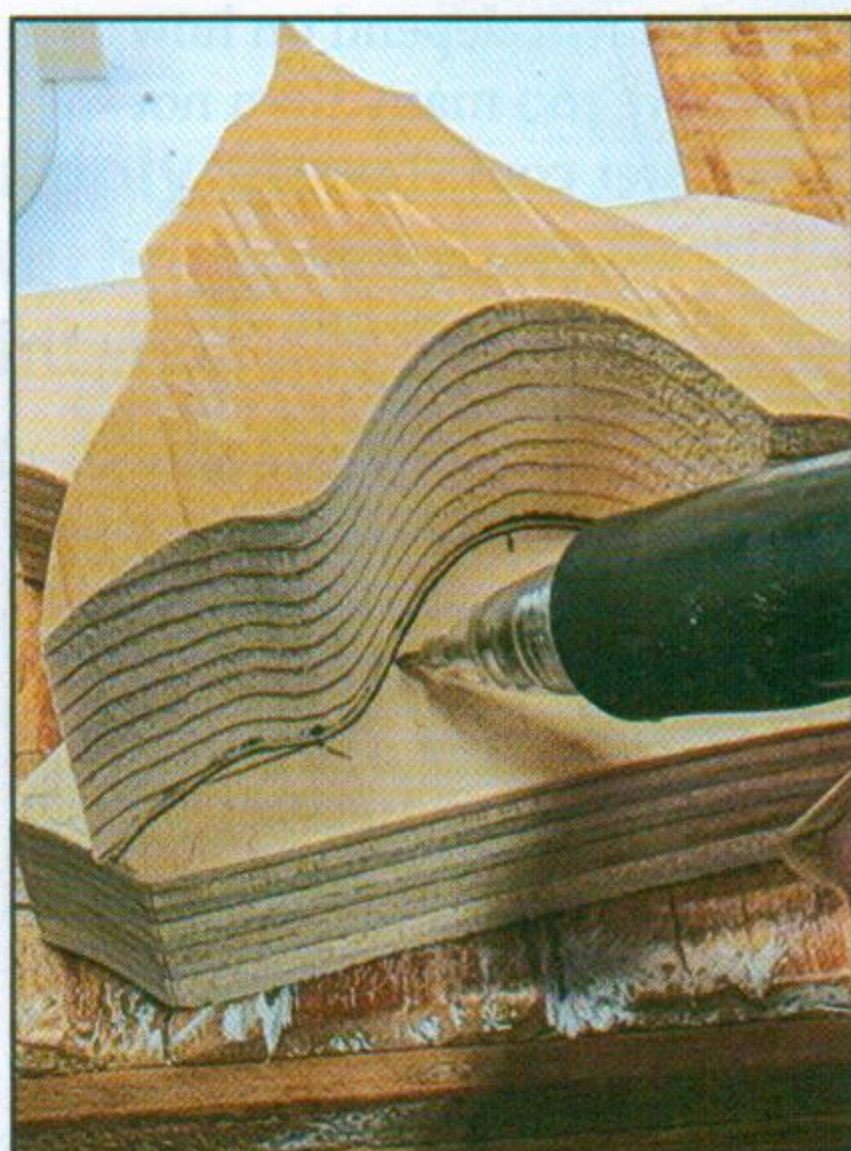




1

### Cut the pieces on a scroll saw.

This project has quite a few sharp "V" sections to cut out. Whenever possible, cut down one side of the point and then the other, creating a crisp point where they meet. When starting a new line, cut past the first line, back up the blade, and cut out a little half-moon shape. Use this space to reposition the blade to cut the next line. This little space allows the blade to remain straight. Once all the pieces are cut out, sand the fuzzies off the bottom of each piece. A mop sander works great for this, or you can sand by hand with 220-grit sandpaper. Transfer the piece number to the bottom of each piece, and then remove the pattern and tape from the surface. Assemble the pieces on the master pattern.



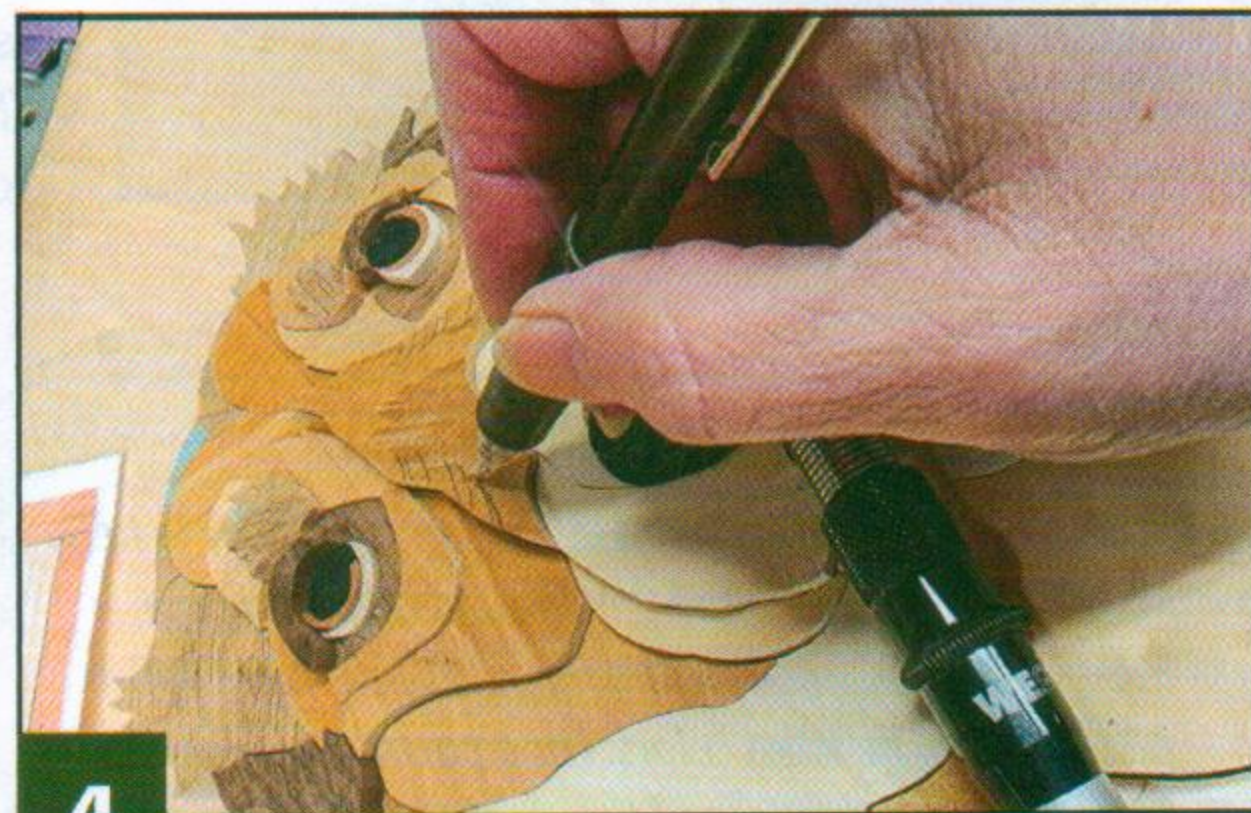
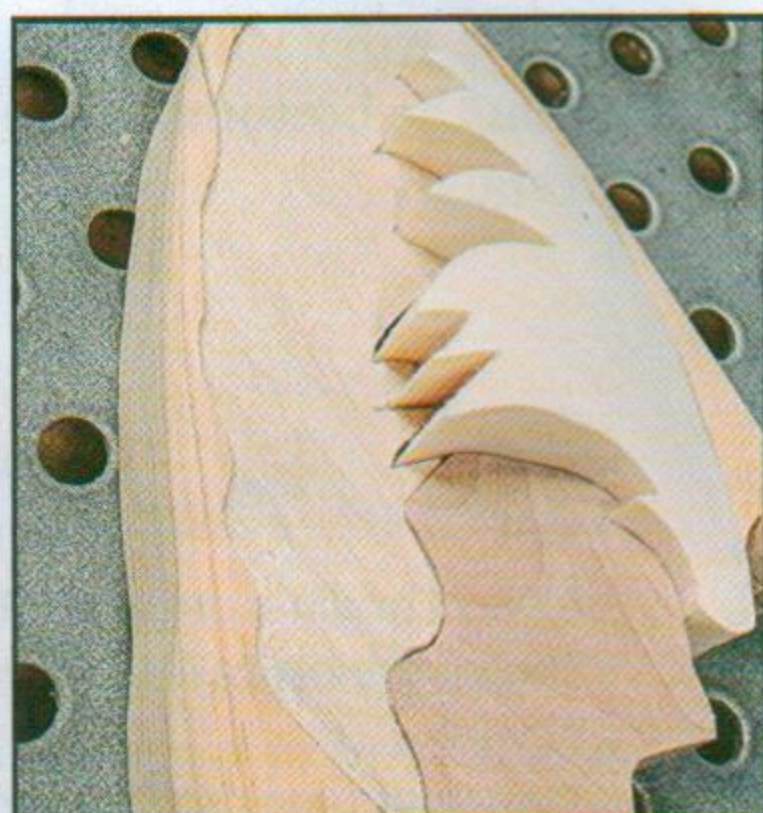
2

**Create dimension.** Add risers to individual or groups of pieces to make them higher. The thickness of the pieces determines how thick the risers need to be. I used  $\frac{1}{2}$ " (1.3cm) Baltic birch plywood to raise the muzzle and nose approximately  $\frac{1}{4}$ " (6mm) higher than surrounding pieces. Because the ebony I used for the nose is only  $\frac{5}{8}$ " (1.6mm) thick, a higher riser was needed. Ebony is expensive and difficult to cut, so using thinner stock is easier and more practical. *Note: The eyes and surrounding pieces were raised as well. Your pieces may need to be raised to different heights depending on the wood thickness with which you started.* Much of this project was made with  $\frac{3}{4}$ " (1.9cm) western red cedar. The white aspen is a thicker board, so some areas were thinned, and some raised to even them out. Glue the risers to the individual pieces. If adding one riser to a group of pieces, do not glue until the final shaping is complete.



3

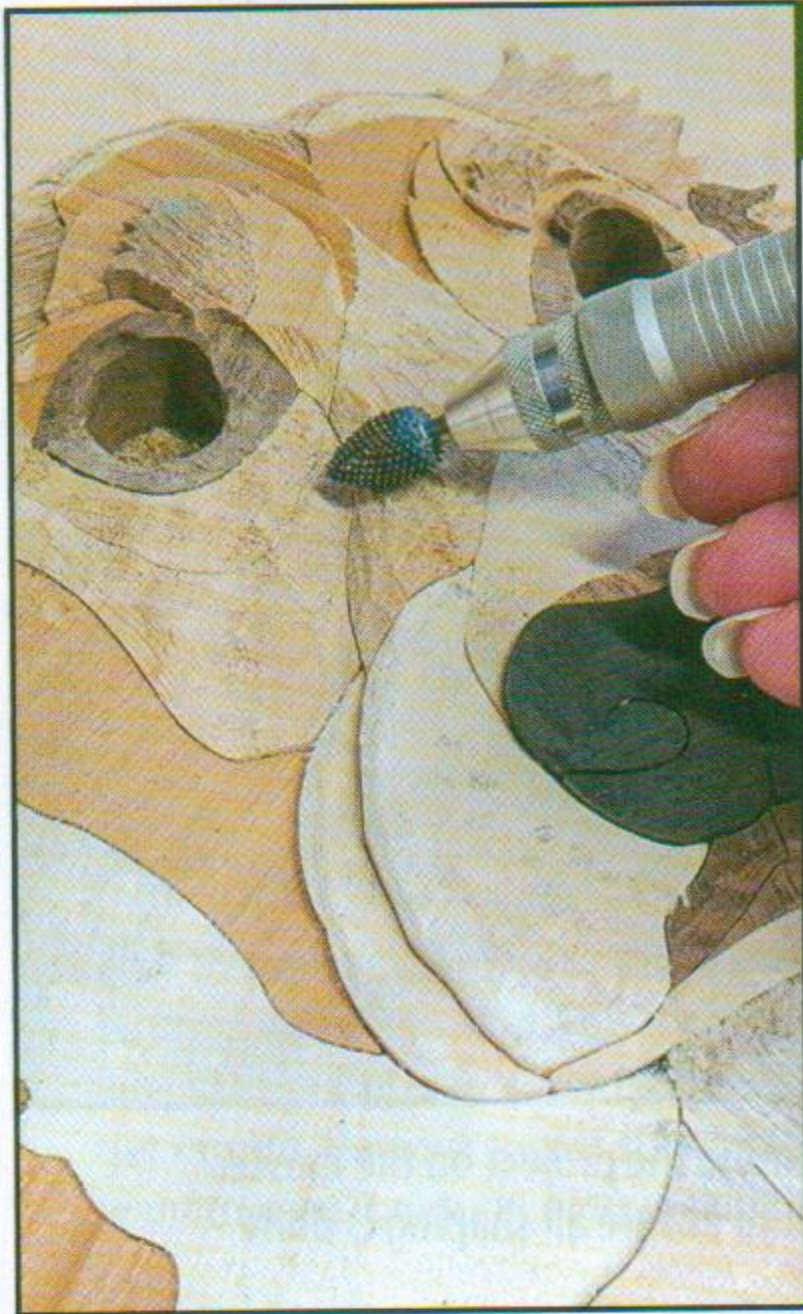
**Rough shape the ears.** An oscillating spindle sander works well for creating the concave portion of the ears. You can also do this with a flex drum sander. The outer rim of the ears should be slightly higher than the inside. The two inner pieces are concave, and the white ear "fluff" piece is much higher and gently curves down toward the outer ear pieces at the tips.



4

**Add the sanding shims.** These will allow you to shape multiple pieces as one. Attach the face pieces onto a piece of flat  $\frac{1}{2}$ " (1.3cm) or  $\frac{3}{4}$ " (1.9cm) plywood with two-sided pressure-sensitive turner's tape or double-sided carpet tape. If desired, draw lines to indicate where you want to shape.





5

#### Contour the pieces for the face.

Use a flame typhoon burr and rotary tool to roughly contour the pieces. Use the main article photo and the angled shots of the finished piece for reference as you carve out the rough shape of the face, slowly adding dimension as you go. Work slowly and reexamine your work often until you get the desired shape. The muzzle should contour down to the cheeks. The cheeks under the eyes are slightly contoured to suggest cheekbones. The eyebrows (curved pieces) over the eyes should remain slightly higher. The nose curves slightly down to meet the muzzle. The eyes should be inset slightly.

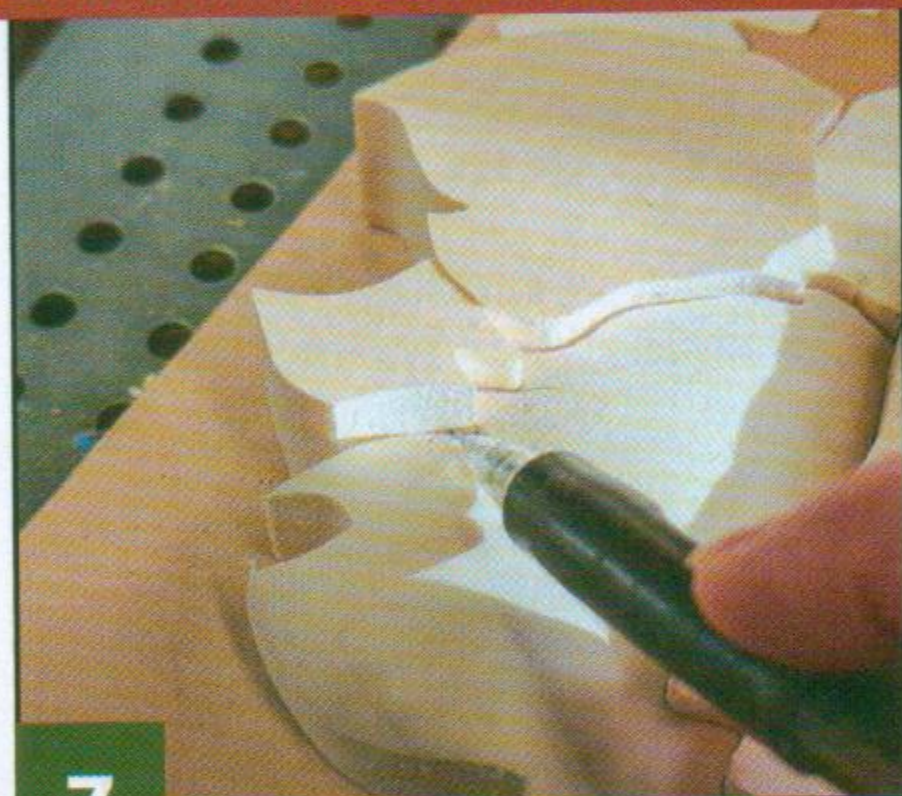


6

#### Add the chest pieces. Keep the face pieces attached.

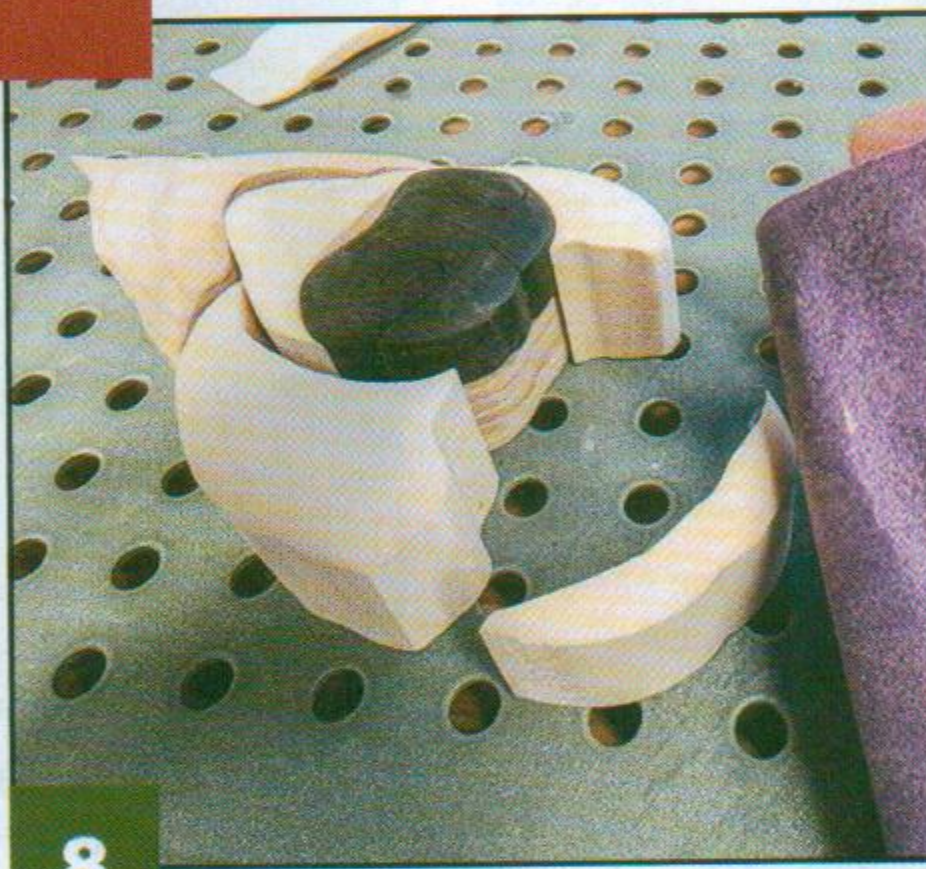
Use a 180-grit flex drum or inflatable drum sander to lower the top of the ruff pieces where they meet the mouth and chin so they sit at least  $\frac{1}{4}$ " (6mm) below the muzzle. Shape the ruff pieces so each one is lower at the top and higher at the bottom to add fluffiness and dimension. Contour the pieces by adding dips and rounding over edges. The bottom points should sit above the pieces below.

## SANDING & ASSEMBLING



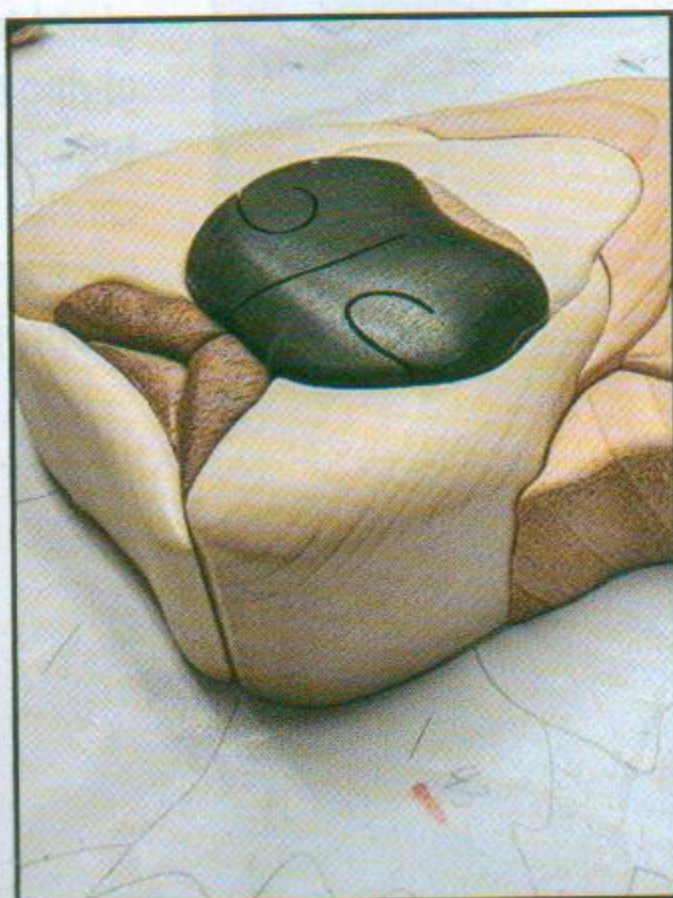
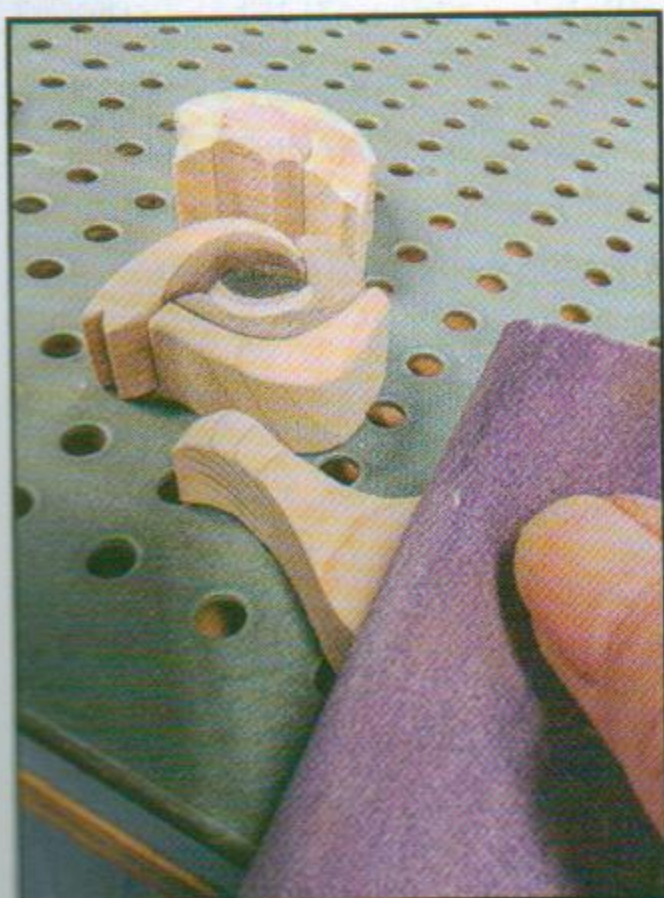
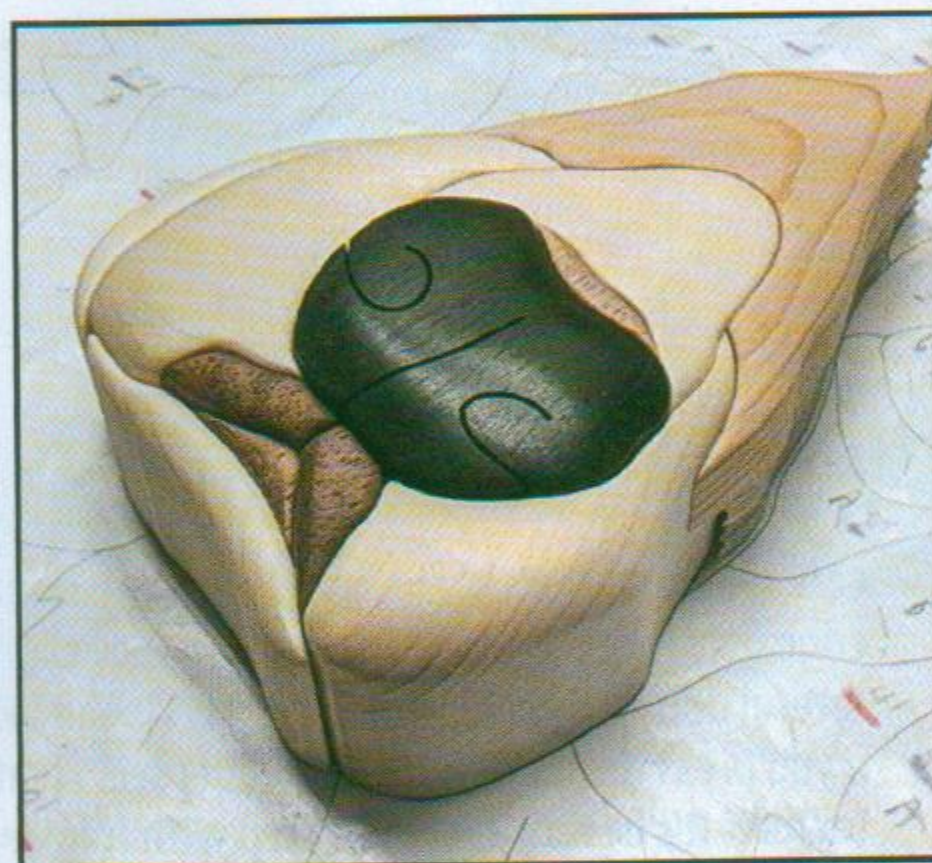
7

**Add depth to the portrait.** For each piece, use a pencil or pen to indicate where the surrounding pieces sit. Sand to below the piece above it for depth. Adjoining pieces on the left and right should align more closely.



8

**Create the snout.** Remove the face pieces and sand them with a 180-grit flex drum sander to remove scratches made by the burr. Smooth out these pieces and refine the shape so that they align well with surrounding pieces. Reassemble the project and examine it to make any adjustments before the final sanding. Sand each piece with a 220-grit flex drum sander. Check to ensure all scratches have been removed and make any minor alignment adjustments.



9

#### Continue building the dog's face.

Hand-sand each piece with 220-grit sandpaper to soften the edges and make any final adjustments so the pieces smoothly blend together. Erase any pencil lines at this time, as well. Working from the middle, complete the muzzle working your way outward, softening the edges of each piece and making sure they align with surrounding pieces. Soften the edges of the outer head and chest pieces. Round over the bottom edge pieces for a finished look.





10

**Go over each piece with the mop sander.** Go around each edge gently and finish off by buffing the surface with the grain. Be careful during this step with very soft wood like western red cedar. If you press too hard, the mop sander will create a corduroy-type texture. It's best to avoid this step with fragile pieces like the outer ears, because they can easily break.



11

**Do a final check.** Assemble the project on the master copy and carefully examine it to ensure all shaping is done to your satisfaction.



12

**Paint realistic eyes.** Using a wooden skewer, apply a dot of antique white acrylic paint to highlight the eyes. This brings them to life. Allow the paint to dry thoroughly before finishing.

## ASSEMBLING & FINISHING



13

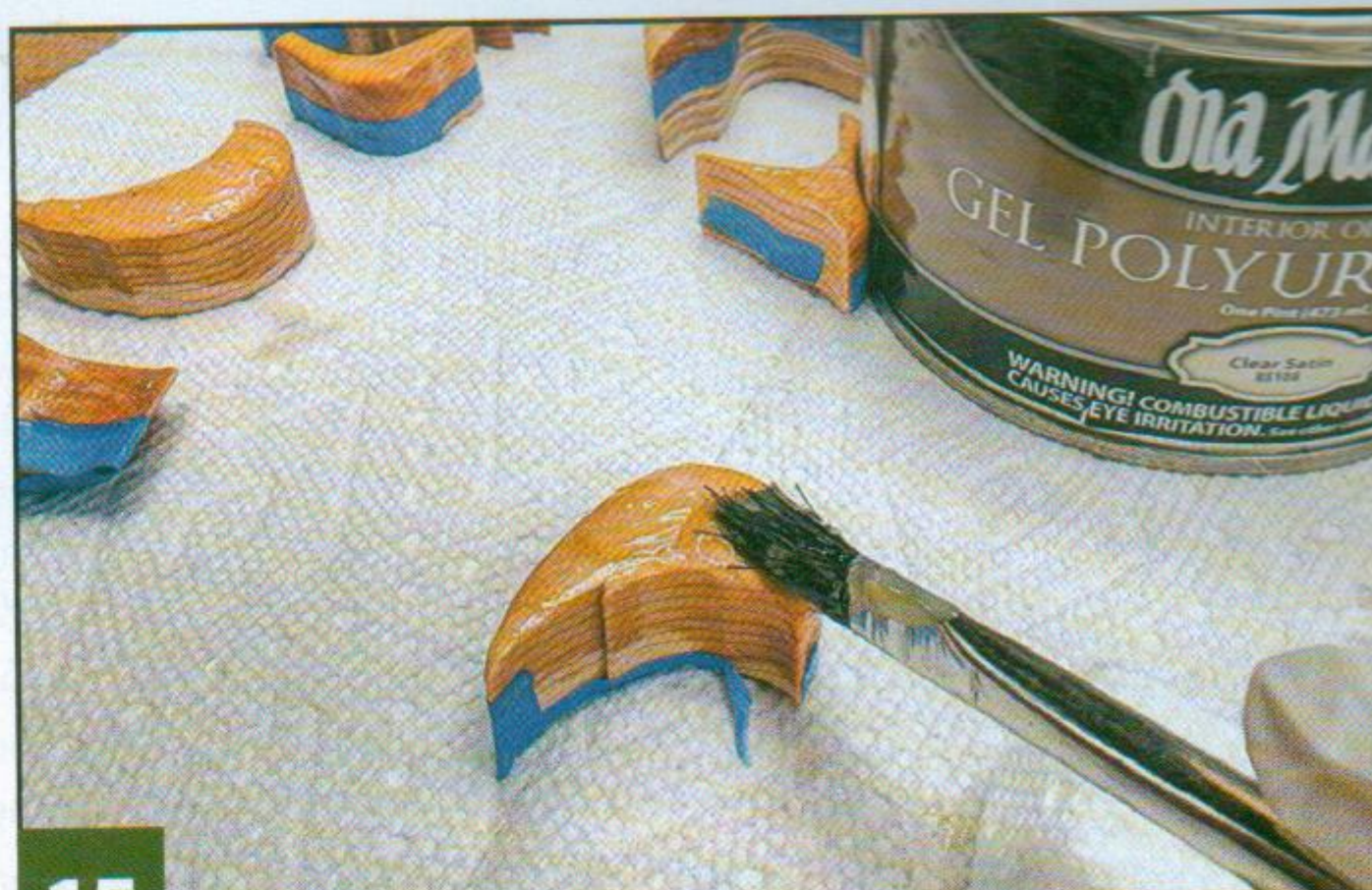
**Prepare the pieces for finish.**

Apply a thin strip of painter's tape to the inside edges of the pieces that will be glued to adjoining pieces. This keeps the gluing surfaces clean until they are glued together, ensuring a better bond. Be careful not to accidentally tape an outer edge or anywhere that will show once the project is assembled.





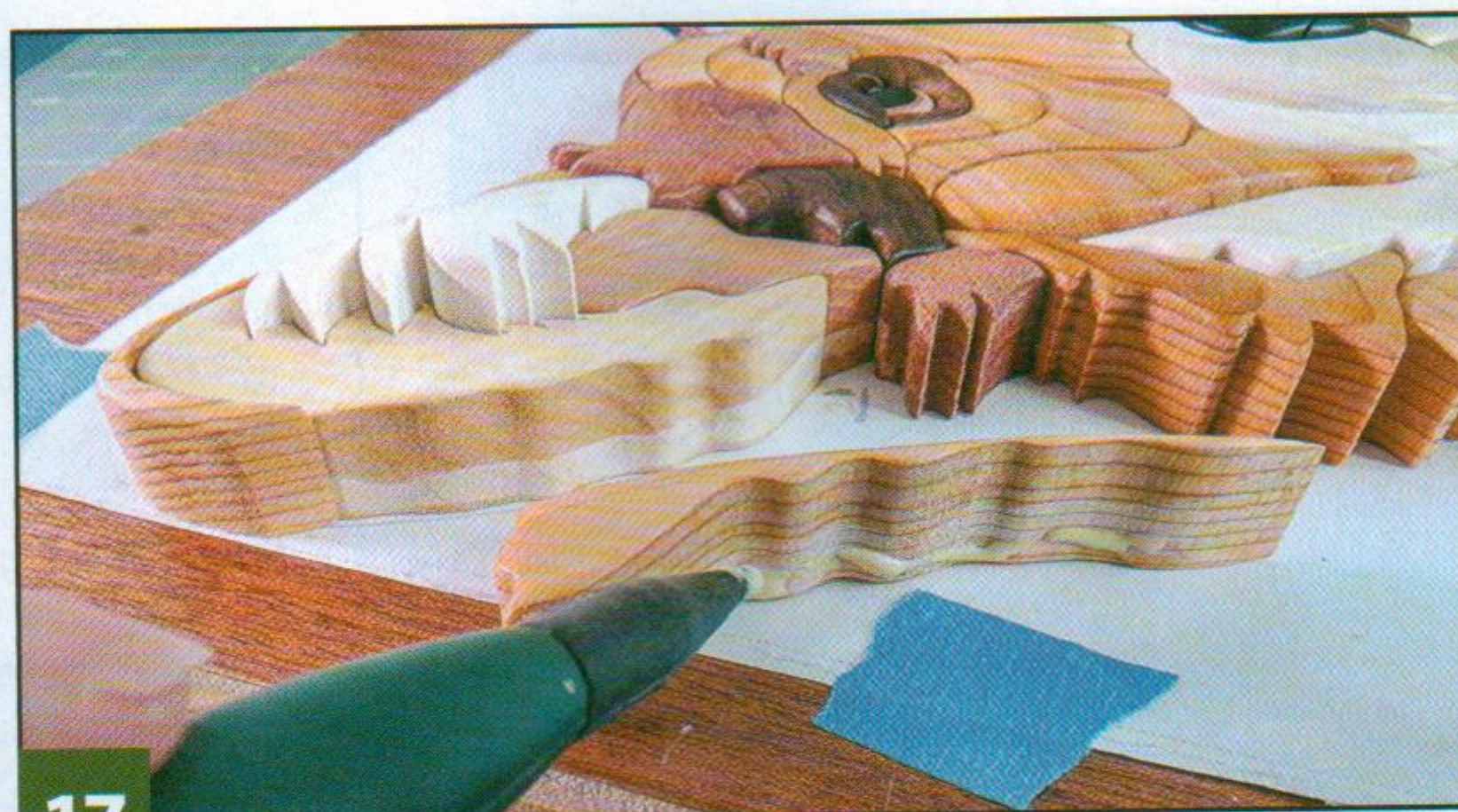
**14** **Separate the white pieces from the rest.** Apply a coat of pickling white gel stain. This is an optional step. The white stain keeps the white pieces from yellowing over time when you use a gel varnish. Remove excess stain with clean paper towels. If you want to keep it natural, simply skip this step.



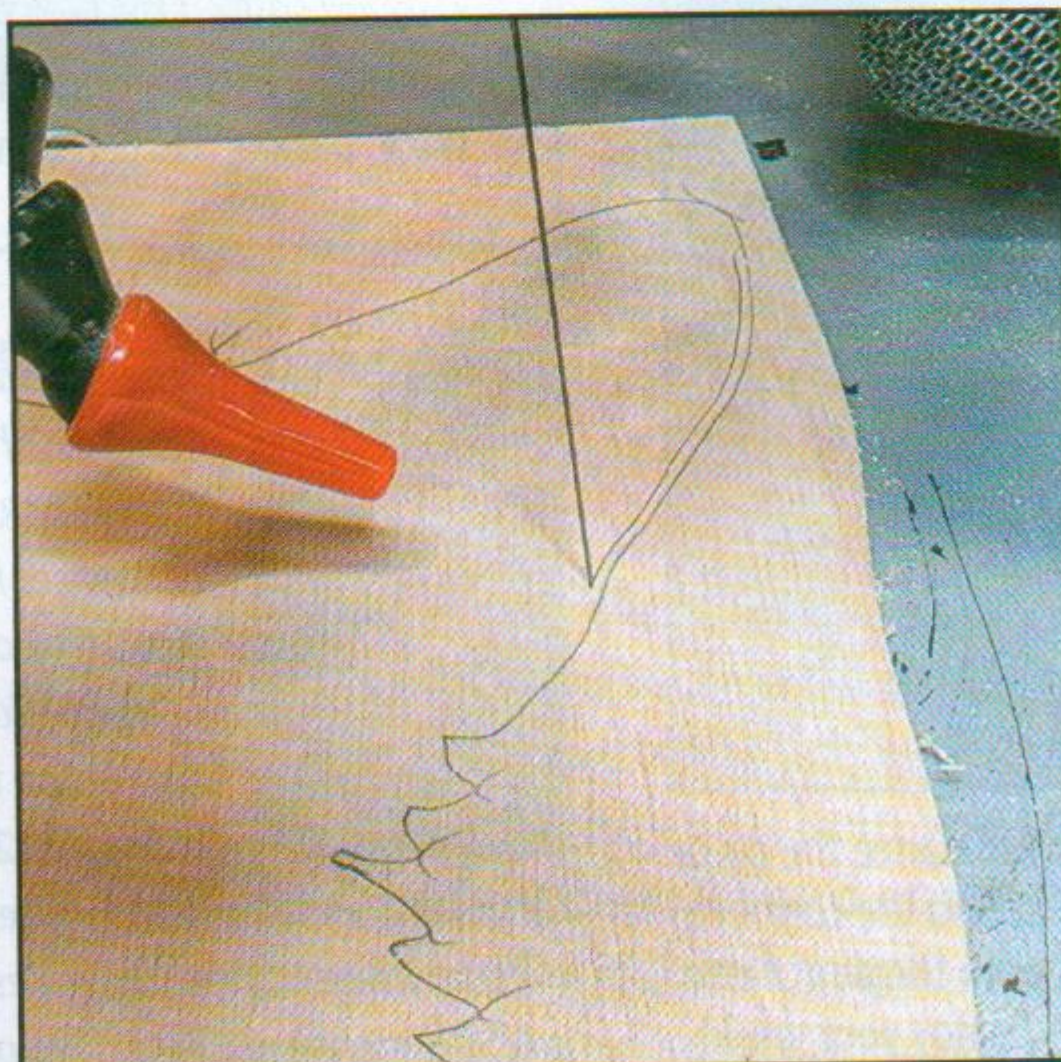
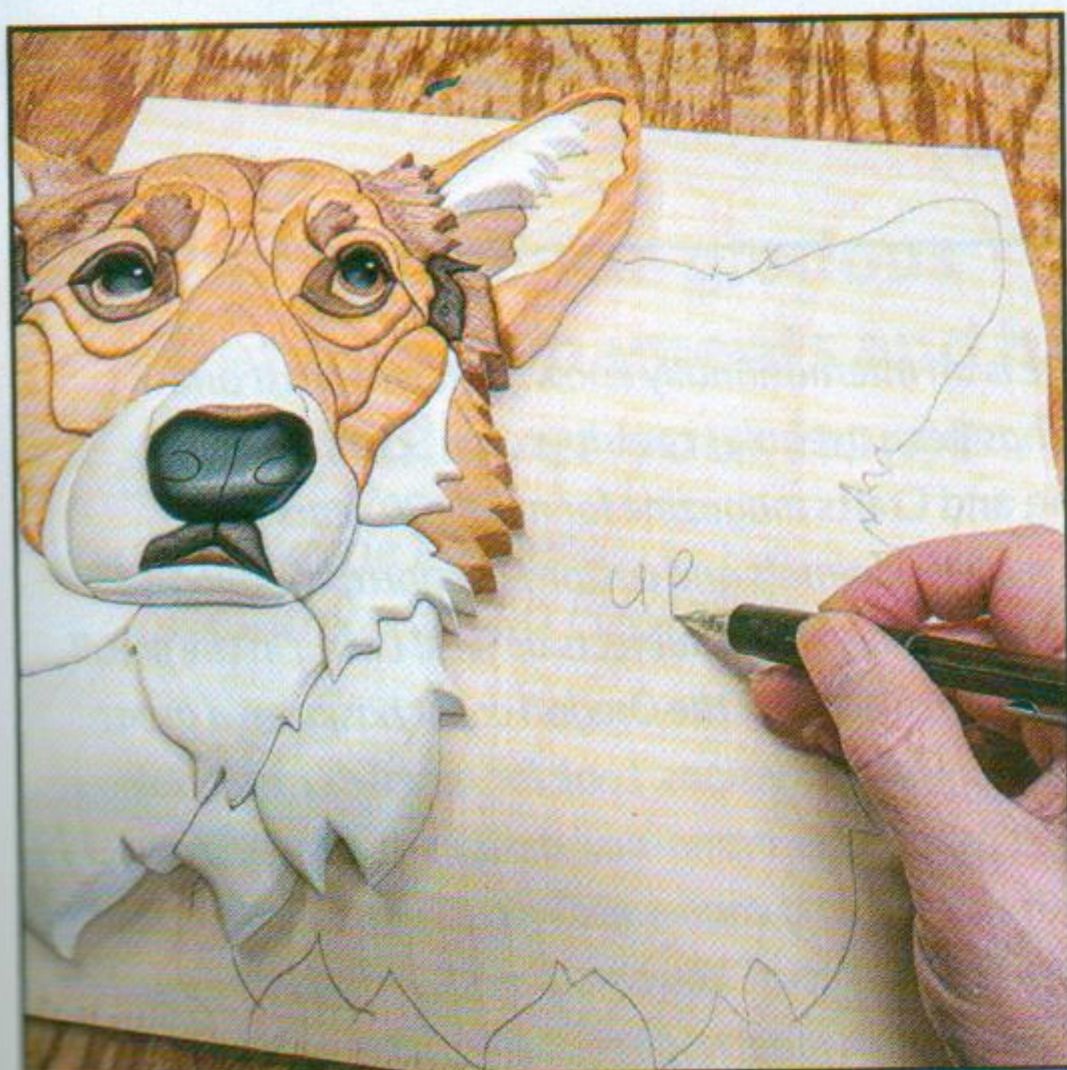
**15** **Apply clear gel varnish to the rest of the pieces.** With a clean brush, apply to several pieces at a time, and then remove excess with paper towels. Repeat the process until all pieces have been finished. Allow to dry overnight. Apply a second clear coat to all pieces, including the white ones. If desired, add a third coat.



**16** **Assemble the pieces.** Once dry, remove the painter's tape from the edges of all pieces. Put a piece of waxed paper over the master pattern and assemble the finished pieces on the waxed paper.



**17** **Glue the dog together.** Glue the pieces by applying wood glue along the bottom edge of the pieces with a skewer or applicator of choice. Continually reassemble the entire project to ensure that the pieces remain correctly aligned with each other and that there is no distortion. Once all pieces are glued, recheck the fit one last time and allow to dry thoroughly.



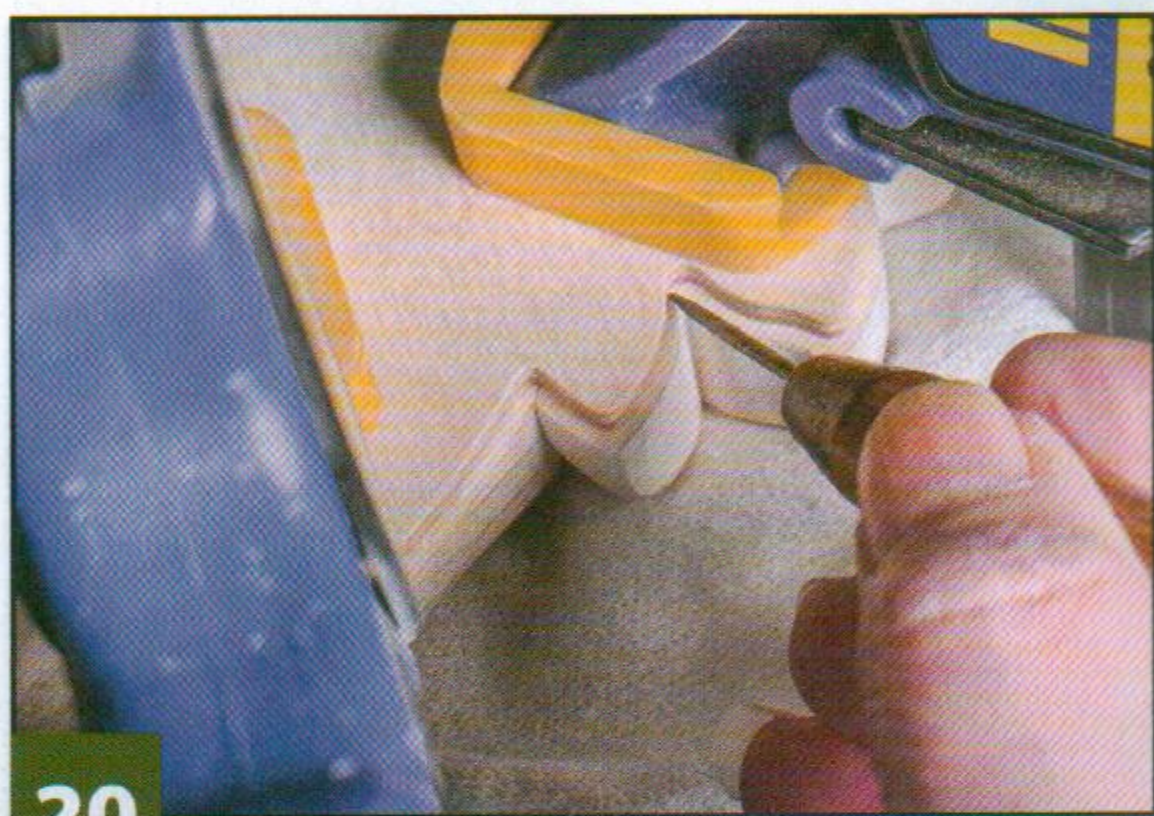
**18** **Make the backer.** Trace the project onto 1/8" (3mm) Baltic birch plywood or your preferred backer material. I always mark the "up" side to avoid accidentally gluing the wrong side. Cut out the backer piece with a #2 or finer blade of your choice. Stay approximately 1/8" (3mm) inside the lines. Soften the edges and sand the back with a mop sander or by hand with 220-grit sandpaper.





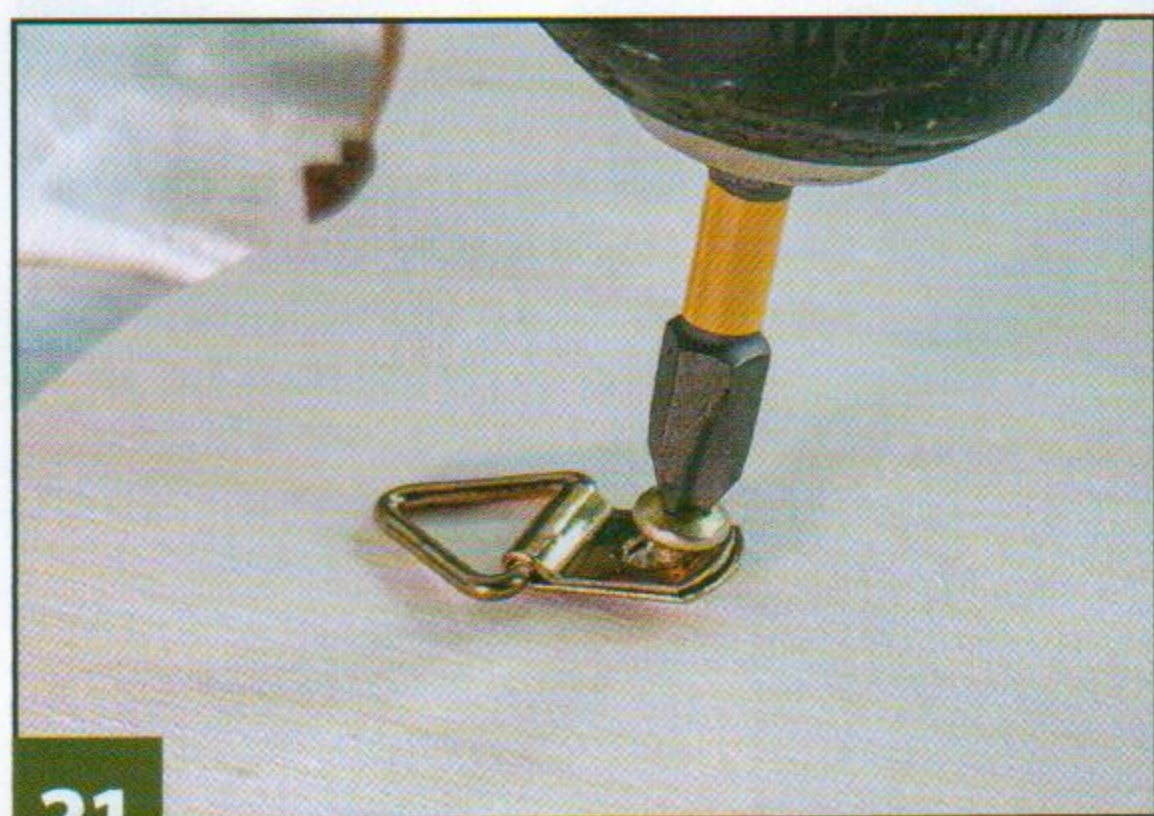
19

**Glue on the backer.** Place the project face down, protecting the front with a soft cloth. I save old socks for this purpose. Test-fit the backer, ensuring that no part of it is visible from the front. Apply a light coat of wood glue to the "up" side of the backer, covering the entire surface. Place it onto the project and wiggle it around to get good glue contact.



20

**Clamp around the perimeter until the glue has dried.** Protect the face of the project from the clamps with a clean, soft cloth. Don't clamp too tightly, as soft wood like western red cedar is easily damaged. Use an awl to remove any excess glue that squeezes out around the edges. Allow to dry thoroughly and remove the clamps.



21

**Attach your hanger of choice.** Balance the piece between your thumb and forefinger to find the correct balance point for the hanger. Mark it with the pencil and screw the hanger into place. Hang and enjoy your work!

### Materials

*Note: sizes are approximate and can vary depending on the orientation of the pattern pieces. It's always better to have a larger piece of wood to give you more options for pattern placement based on the grain.*

- Wood, such as aspen, 1 1/4" (3.2cm) thick: ears and muzzle, 4" x 6" (10.2cm x 15.2cm) (alternately, 1/4" risers can be added to 1" [2.5cm]-thick wood)
- Wood, such as aspen, 3/4" (1.9cm) thick: other white areas, 6" x 7" (15.2cm x 17.8cm)
- Wood, such as medium shade of western red cedar, 3/4" (1.9cm) thick: 4" x 6" (10.2cm x 15.2cm)
- Wood, such as light shade of western red cedar, 3/4" (1.9cm) thick: 4" x 6" (10.2cm x 15.2cm) (you can also just use one shade for all cedar areas)
- Wood, such as birch, 3/4" (1.9cm) thick: inner ears, 3" x 7" (7.6cm x 17.8cm)
- Wood, such as pink dogwood, 3/4" (1.9cm) thick: inner ears, 2" x 4" (5.1cm x 10.2cm)
- Wood, such as ebony, 5/8" (1.6cm) thick: nose, 2" (5.1cm) square
- Wood, such as ebony, 1/2" (1.3cm) or thicker: pupils, 1" x 2" (2.5cm x 5.1cm)
- Wood, such as walnut or Peruvian walnut, 3/4" (1.9cm) thick: dark areas, 3" x 5" (7.6cm x 12.7cm)
- Wood, such as light walnut, 3/4" (1.9cm) thick: around eyes and mouth, 2" x 3" (5.1cm x 7.6cm)
- Wood, such as mahogany, 3/4" (1.9cm) thick: medium dark areas adjoining ears and eyebrows, 4" x 6" (10.2cm x 15.2cm)
- Wood, such as hard maple, 3/4" (1.9cm) thick: white part of eyes, 1" x 3" (2.5cm x 7.6cm)
- Wood, such as cherry, 3/4" (1.9cm) thick: eye color, 1" x 2" (2.5cm x 5.1cm)
- Birch plywood, 1/2" (1.3cm) thick: risers, 8" (20.3cm) square
- Birch plywood, 1/2" (1.2cm) or 3/4" (1.9cm) thick: sanding shim, 11" (27.9cm) square
- Wood, such as Baltic birch plywood, 1/8" (3mm) thick: backer, 11" (27.9cm) square

- Spray adhesive
- Pencil
- Pencil eraser
- Sandpaper: 220-grit
- Glue: wood
- Wooden skewer
- Disposable brushes
- Acrylic paint: antique white
- Clear satin gel varnish
- Gel stain: pickling white (optional for white areas)
- Soft cloth
- Paper towels
- Tape: clear packing, painter's, and double-sided pressure sensitive turner's or carpet
- Waxed paper
- Hanger

### Tools

- Scroll saw with blades: #7 reverse tooth, #2 or finer
- Flex drum or inflatable drum sander: 120, 180, and 220-grits
- Oscillating spindle sander (optional)
- Mop sander
- Clamps
- Rotary tool with burr: typhoon flame
- Awl

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



Janette Square is an internationally known intarsia artist and designer. She has been a regular contributor to Scroll Saw Woodworking and Crafts magazine for nearly 20 years. She specializes in realistic animals and custom pet portraits, but also designs and creates many other subjects as well. Living in the small village of Yachats (Ya-Hots) on the Oregon coast has been a great inspiration for many of her designs. Look for Janette's new book out in **June 2023**. It contains **11** brand-new designs at all skill levels.

Detailed instructions and in-depth skill building challenges will guide you to becoming a better intarsia artist regardless of your skill level. You can contact Janette through her website, [square-designs.com](http://square-designs.com), or email her at [janettesquare@gmail.com](mailto:janettesquare@gmail.com).





# Autumn Leaves

**Stack cut these glorious fretwork ornaments and hang them all over your home**

*By Wayne Fowler  
Design by Jacob Fowler*

**S**easonal changes bring a dramatic shift to many of our backyard trees—but did you know why leaves change color? As the days get shorter, a tree's rate of chlorophyll production slows, reducing the amount of green in the landscape and letting other pigments direct the show.

Whether you're an avid leaf-peeper or not, these beginner-level patterns are a great introduction to fretwork, as they will help you practice making different-sized cutouts and quick turns. If you want to be extra cheeky, cut the maple leaves from maple, the oak from oak, and so on.



## Getting Started

Presand the wood to 220-grit. Photocopy the patterns. Cover the wood with clear packaging tape, and then attach the patterns to the tape with spray adhesive. The clear tape lets you see the wood underneath so you can properly place the pattern; it also helps to lubricate the blade while you are cutting and allows for quicker pattern removal when you are done. Drill the blade-entry holes in the waste areas where the interior cuts will go.

## Cutting

Cut the leaves on a scroll saw, starting with the interior cuts and then cutting the perimeters. The size of the blade you use for the interior cuts depends on the wood thickness and hardness, as well as the level of detail in the cut. For most of this piece, a #3 reverse-tooth blade will suffice, but for the smaller cuts, it may be better to use a #1 blade.

## Sanding and Finishing

Remove the patterns and carefully sand the leaves. I recommend sanding both faces with a shop-made sanding block, moving up progressively through the grits from 220 to 400. Wipe off dust with a tack cloth. Then use a quarter sheet of 400- to 500-grit sandpaper to remove stubborn burrs and refine any problem areas.

Remove dust with a clean, soft paintbrush, and then apply a finish of your choice; I used natural Danish oil. To add extra luster, I applied a coat of carnauba wax with a buffing wheel on a drill press once the oil dried. Hang with a thin piece of decorative ribbon or string.

Additional patterns for **AUTUMN LEAVES** are in the pullout section.

Oak

## Autumn Leaves Patterns

Honeysuckle

Poplar

## WANT MORE UNIQUE FRETWORK?

### Holiday Scroll Saw Ornaments

By Wayne and Jacob Fowler

Includes over 200 fretwork patterns for every holiday and season.

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## Materials & Tools

### Materials

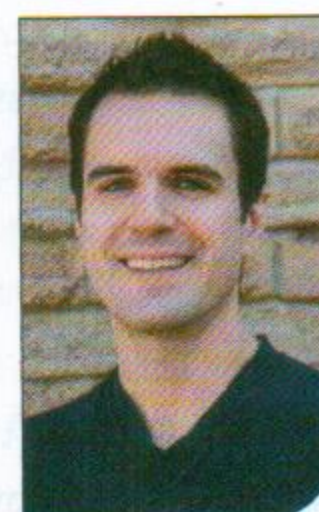
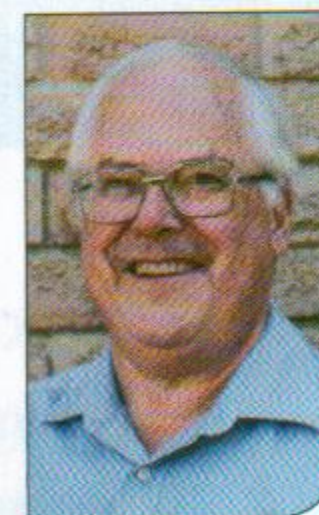
- Wood, such as oak or ash, 1/8" (3mm) thick: sized for patterns
- Tape: clear packaging
- Spray adhesive
- Tack cloth
- Sandpaper: assorted grits to 500
- Natural oil finish, such as Danish oil
- Finishing wax, such as carnauba (optional)
- Decorative ribbon or string

### Tools

- Scroll saw with blades: #1, #3 reverse-tooth
- Drill with bits: assorted small
- Buffing wheel (optional)
- Clean, soft paintbrush

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

Wayne Fowler has been scrolling for over 30 years, first puzzles and then fretwork. Jacob Fowler has been drawing scroll saw designs since he was five (he drew a whale bank for his father, who collects whales). He got serious in his teens and has drawn well over a thousand designs since then. Together, Jacob and Wayne have published over 160 magazine articles, as well as the *Woodworker's Pattern Book*, available at Fox Chapel Publishing. They live in wood-rich Ontario, Canada, just outside Toronto. Find more of their work on Etsy at [FantasiesSaw](https://www.etsy.com/shop/FantasiesSaw).

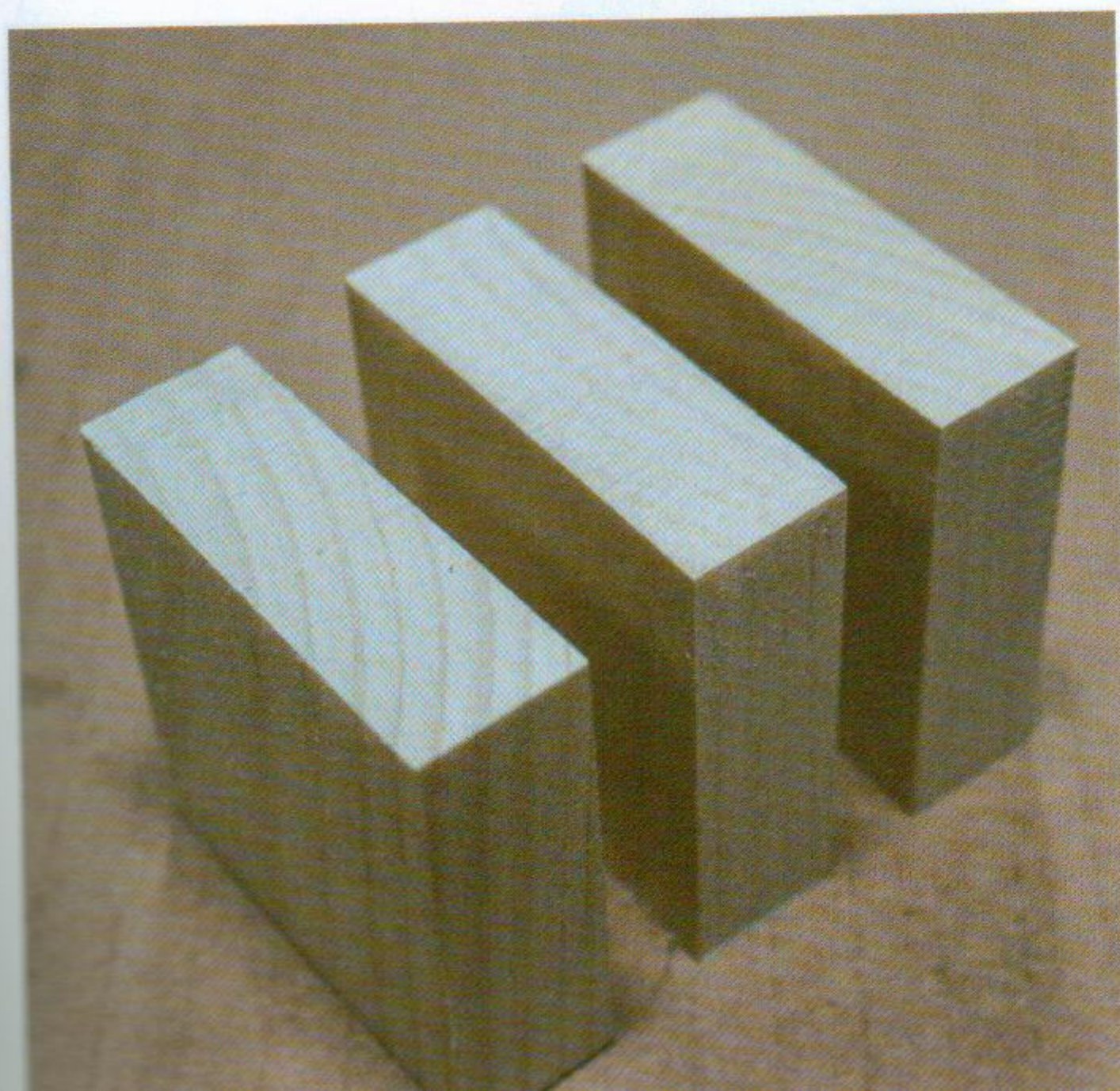
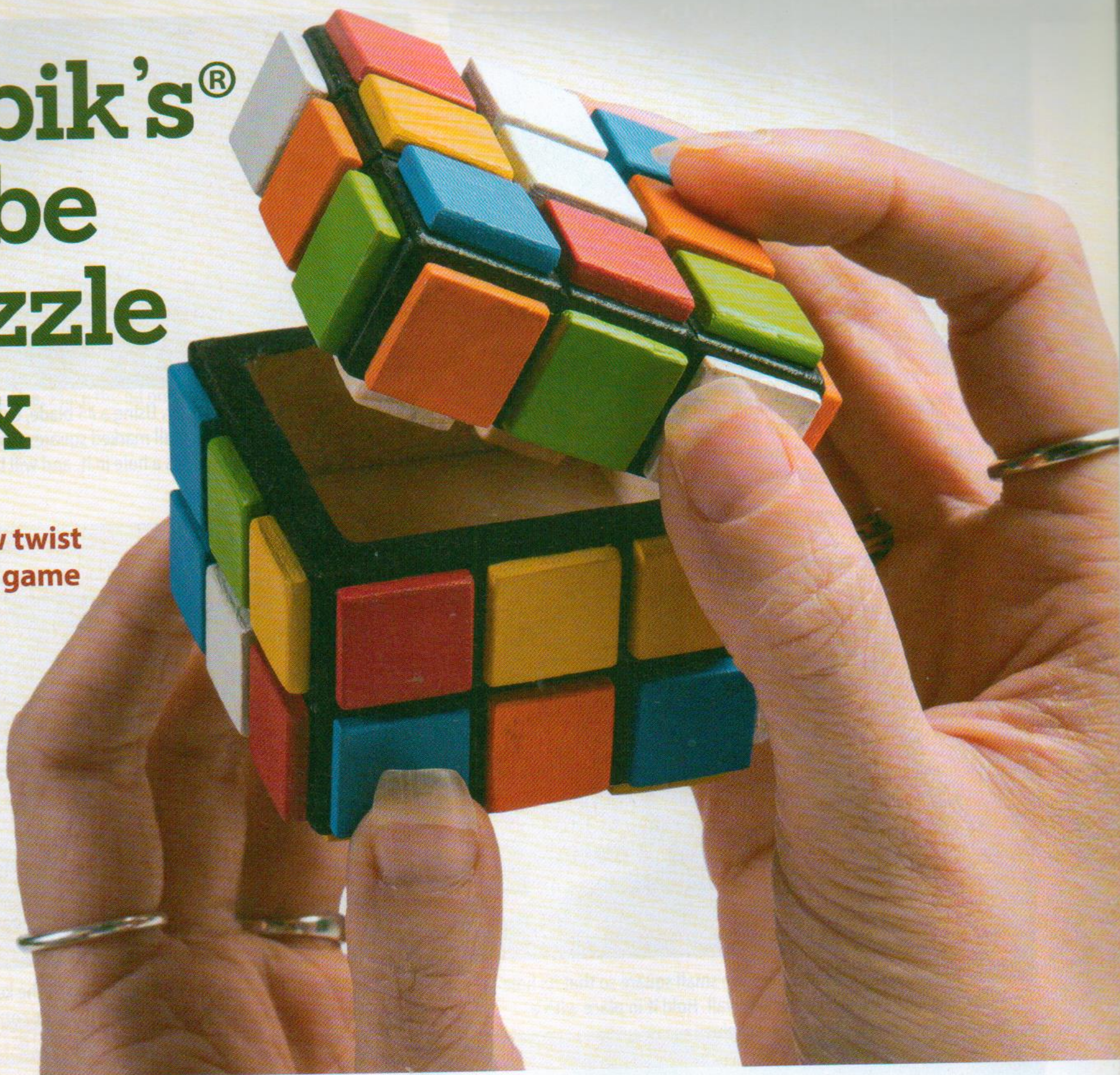




# Rubik's® Cube Puzzle Box

Scroll a new twist  
on a classic game

By Rita Cels



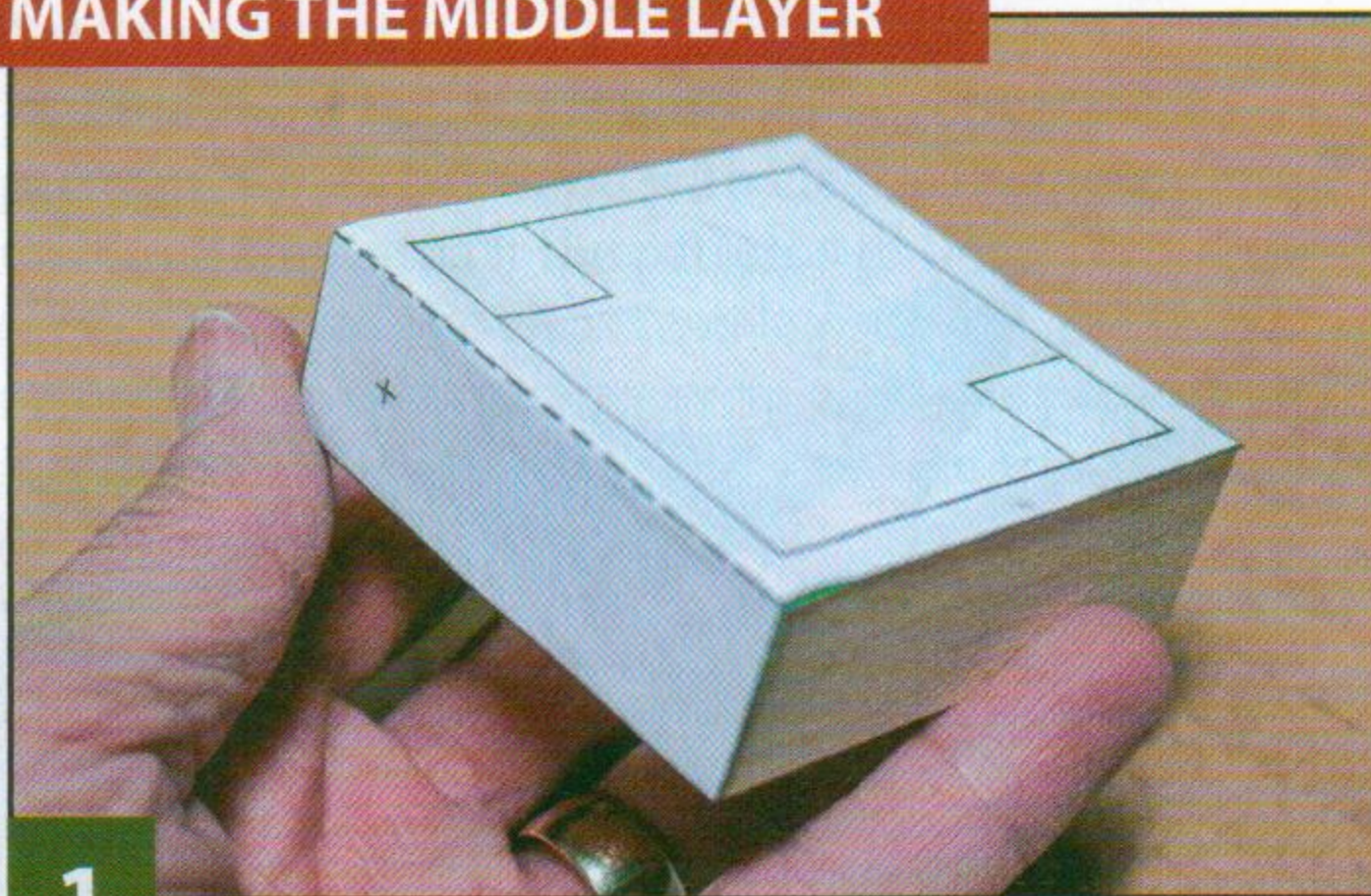
**T**he Rubik's® Cube has been entertaining children and adults since 1974 when it was invented by a Hungarian sculptor and architecture professor. As a child, I remember spending hours in my room trying to solve the twisty toy. For this project, I decided to combine my love of colors, puzzles, and boxes. It may look like a regular Rubik's® Cube, but it's actually a puzzle box! Challenge your friends and family to "solve" the cube. The trick is to find the correct tile (the key) to remove to open the box. Hide a little treasure inside as a reward.

## Getting Started

Cut the pine blank into three equal 2¼" by 2¼" (6cm by 6cm) squares, and photocopy the pattern. *Note: Make sure to read all instructions before you begin cutting.*

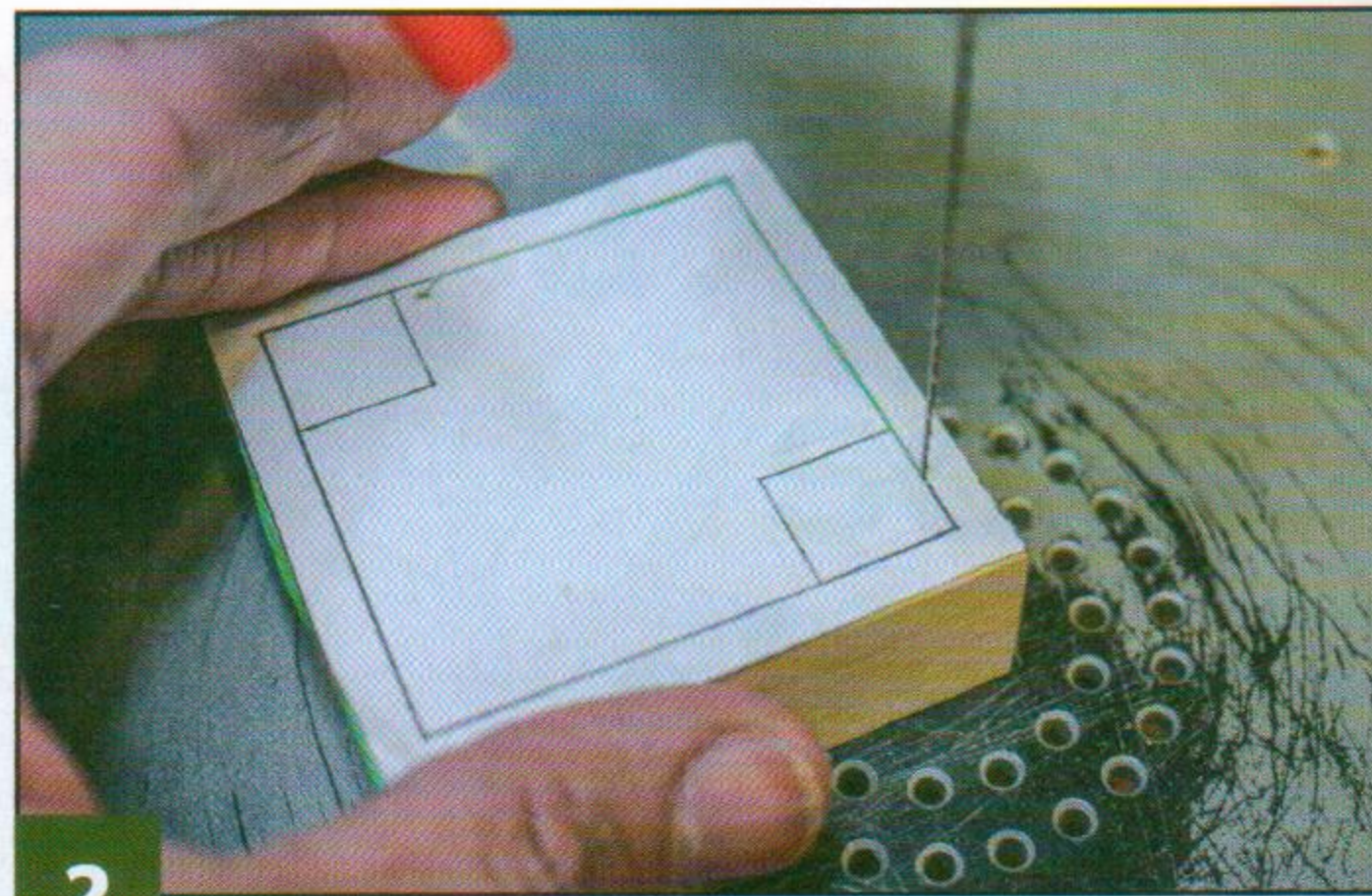


## MAKING THE MIDDLE LAYER



1

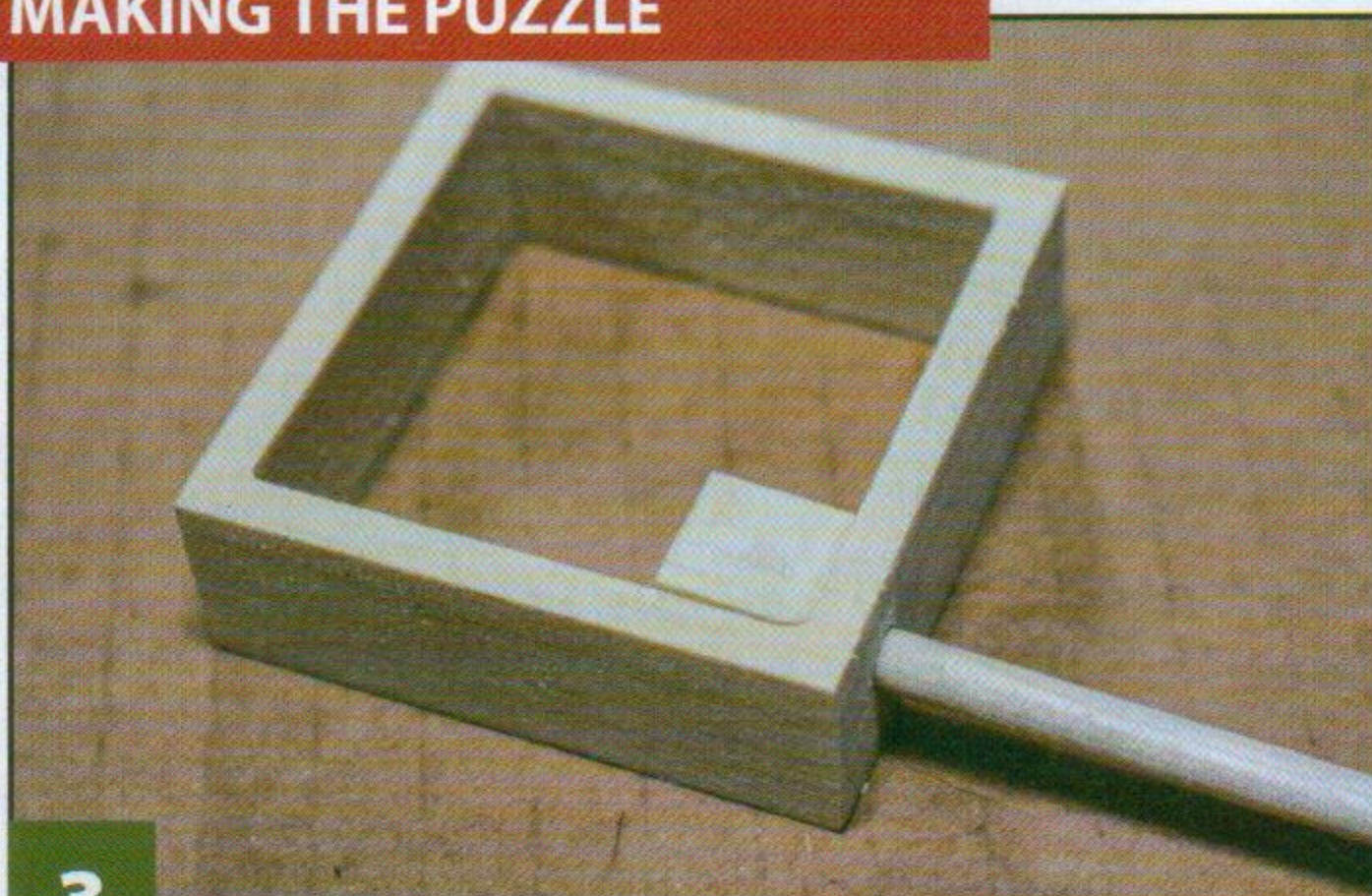
**Prepare the middle layer.** Fold the pattern on the dotted line and attach it to one of the 2¼" by 2¼" (6cm by 6cm) squares (top and side). Drill a ⅛" (2mm) entry hole inside the waste area on the top of the square. Drill a ⅜" (5mm) hole, ½" (1.3cm) deep, at the mark on the side.



2

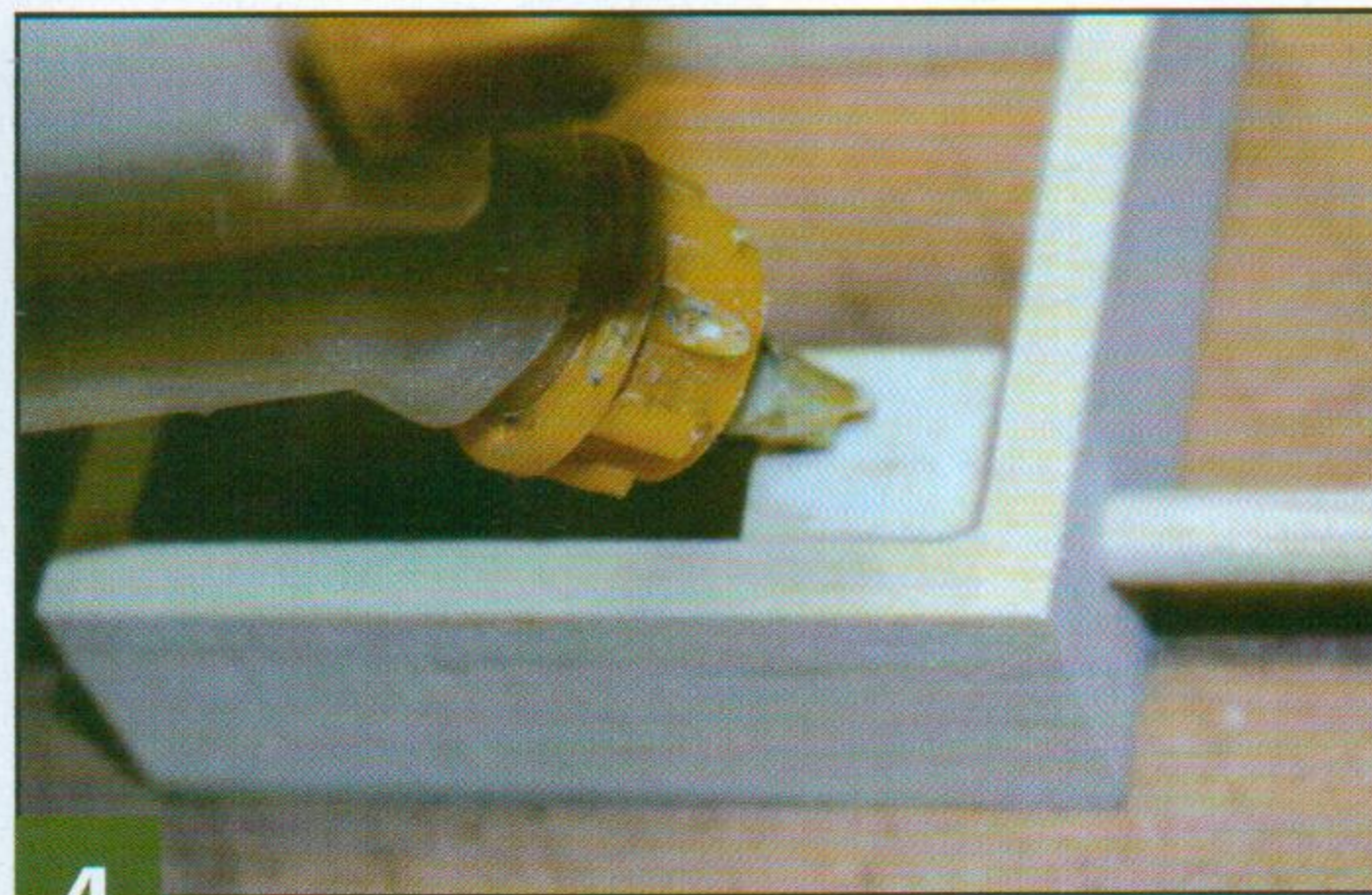
**Cut the middle layer.** Using a #5 blade, cut the inner square perimeter. Then cut the small marked squares from the waste area. One of the squares has a hole in it, and will be used in Step 3.

## MAKING THE PUZZLE



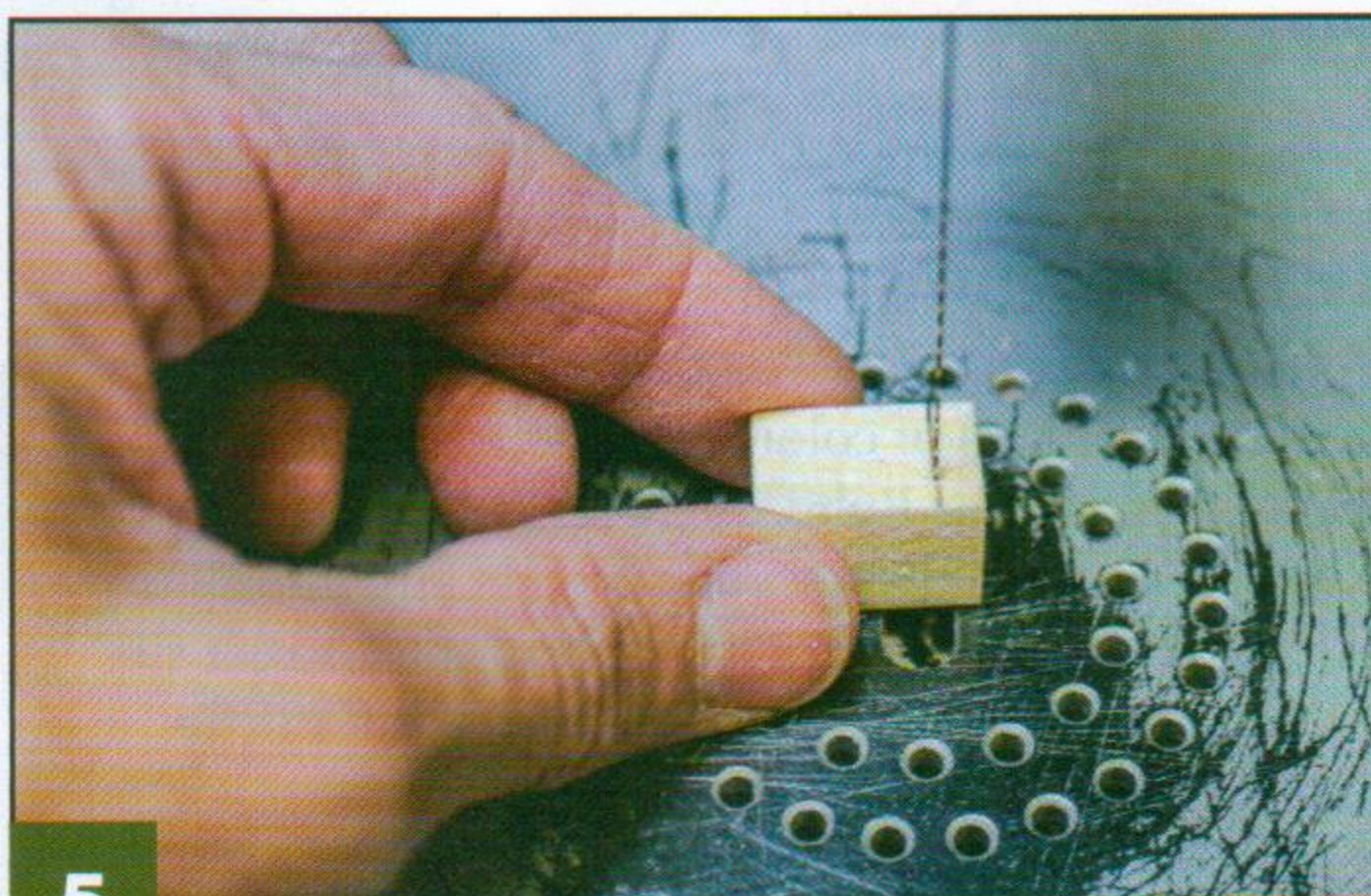
3

**Prepare the key.** Position the small square so that its hole is aligned with the hole in the box wall. Hold it in place with a piece of ⅜" (5mm) dowel. Do not glue.



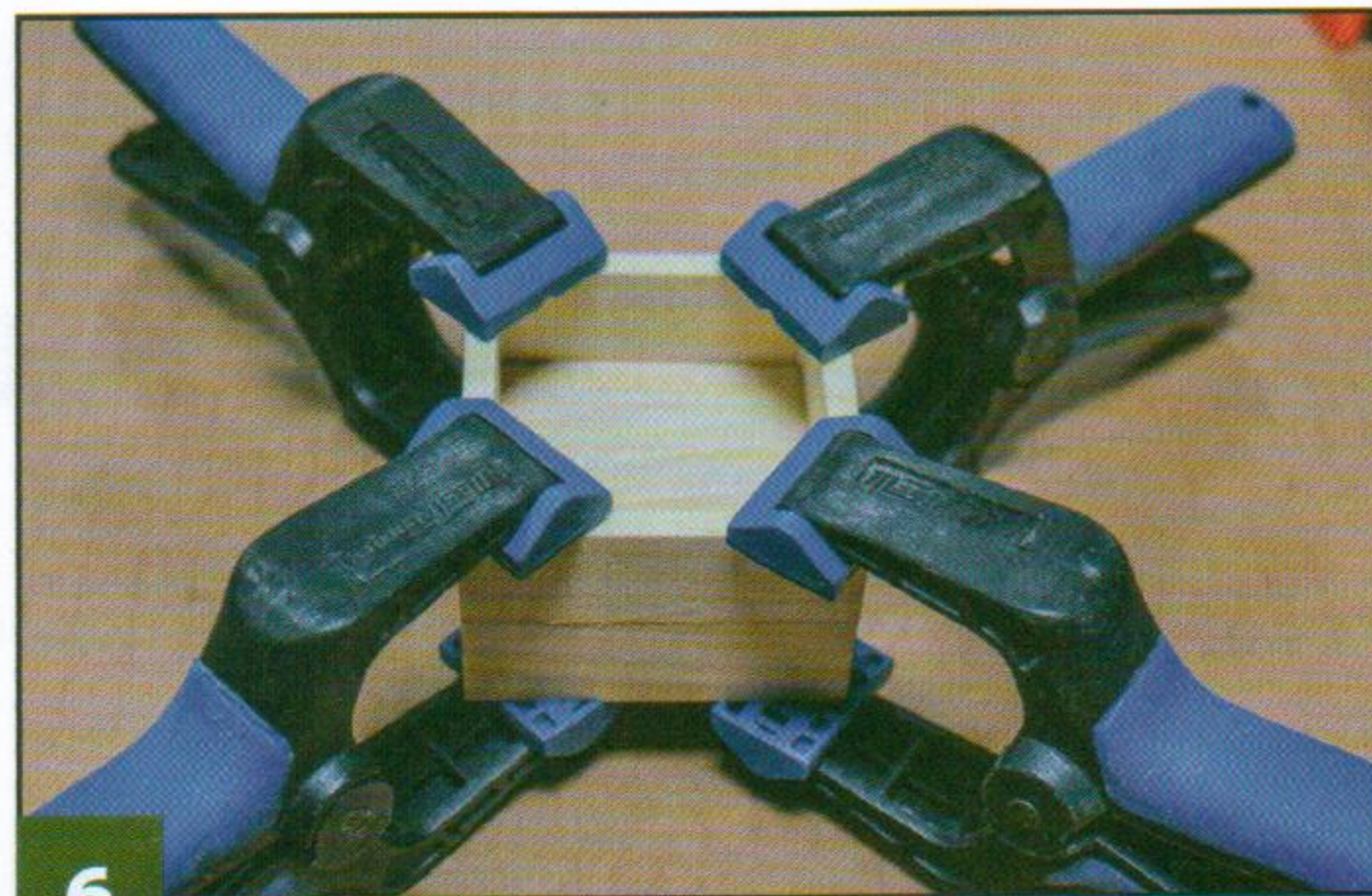
4

**Attach the key.** Put glue on the top of the key, and then clamp the lid onto the middle layer. Clamp the corner key piece onto the lid. Once dry, remove the dowel.



5

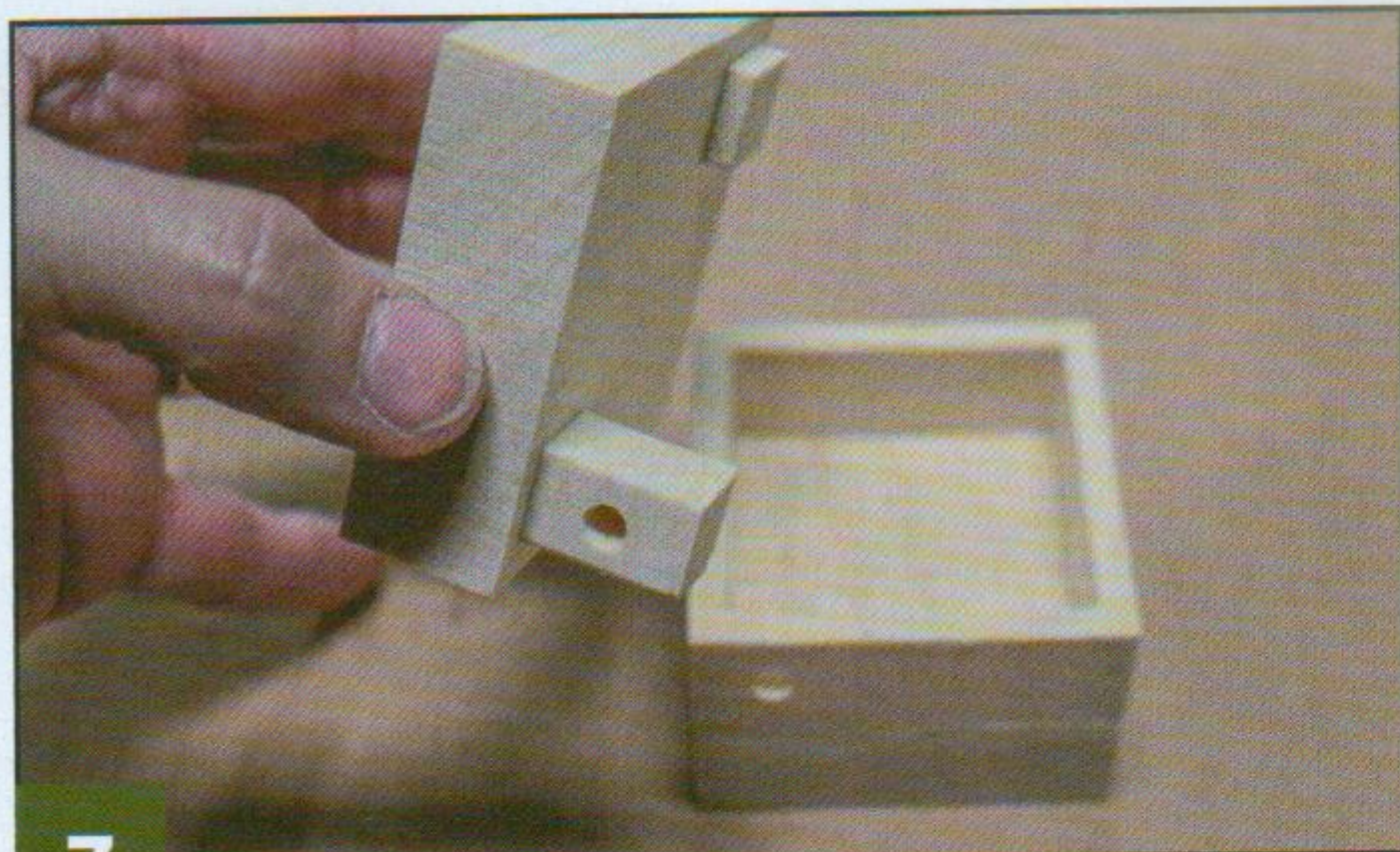
**Attach the support piece.** From the second corner piece, cut a ⅛" (3mm) slice off the top. While the lid is still clamped to the middle section, glue the slice into the corner opposite the key piece.



6

**Glue the bottom.** Glue the bottom section to the middle layer. Clamp until dry.





7

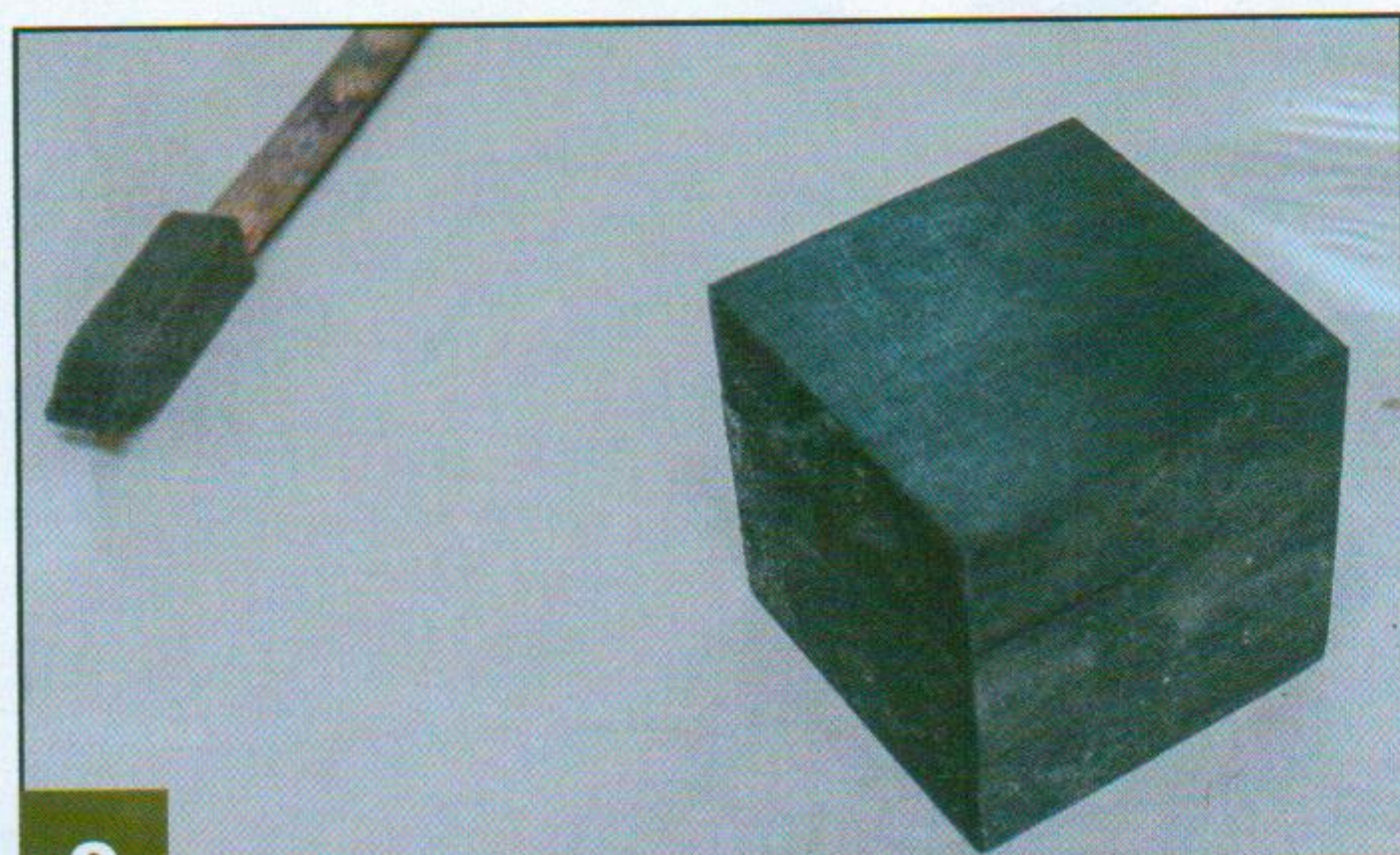
**Sand the cube.** Place the lid onto the box and sand all sides and edges.

## MAKING THE TILES



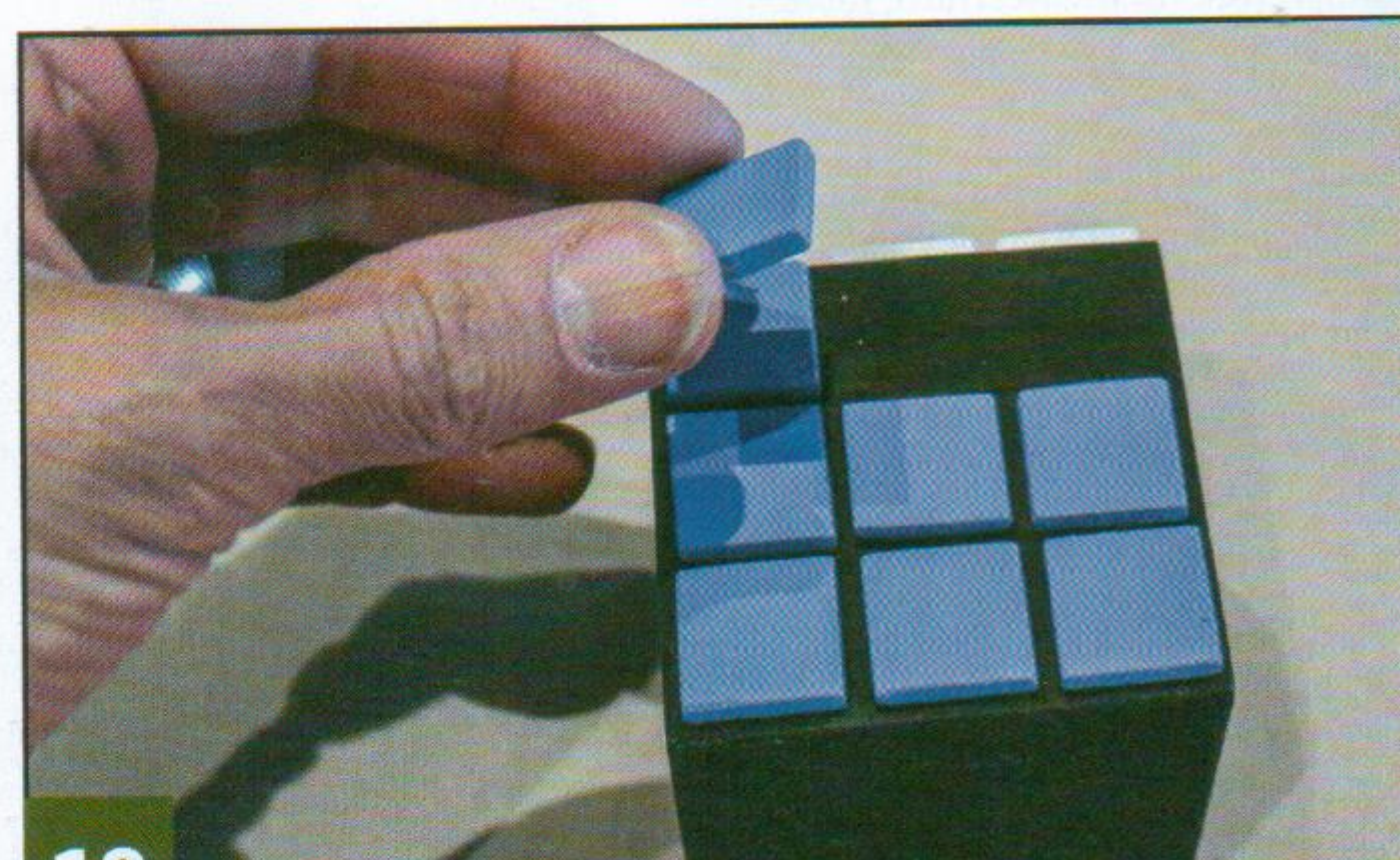
8

**Prepare the tiles.** With a #3 blade, cut 54 squares,  $\frac{5}{8}$ " by  $\frac{5}{8}$ " (1.6cm by 1.6cm), from the  $\frac{1}{8}$ " (3mm)-thick plywood. Sand all the squares smooth.



9

**Paint.** Paint the exterior of the cube black. Let dry and sand. Paint nine tiles each of red, orange, yellow, white, blue, and green.



10

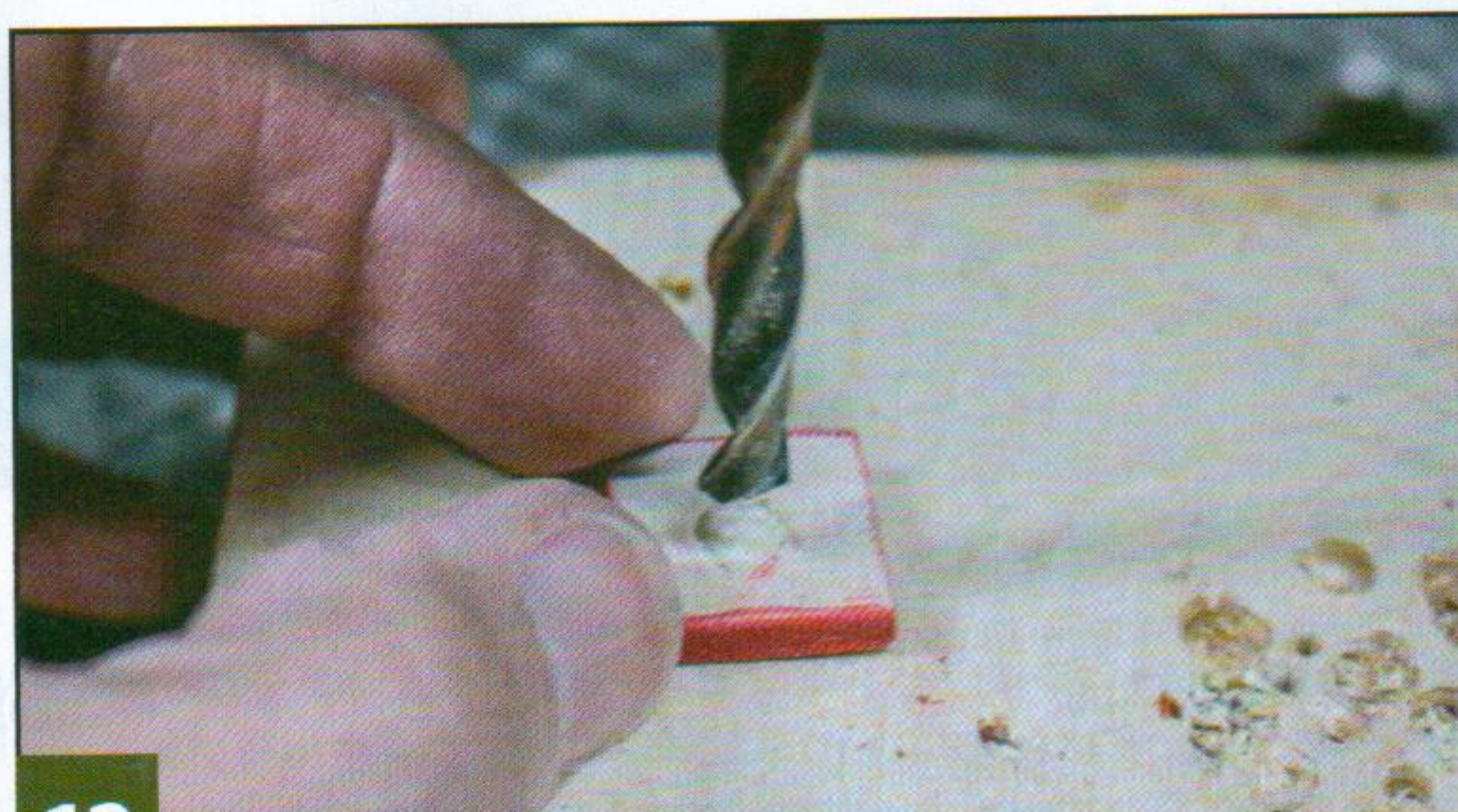
**Glue the tiles.** Decide on a tile arrangement. Glue the tiles in place, spacing nine tiles evenly on each side. Make sure to leave the space with the keyhole empty.

## MAKING THE KEY



11

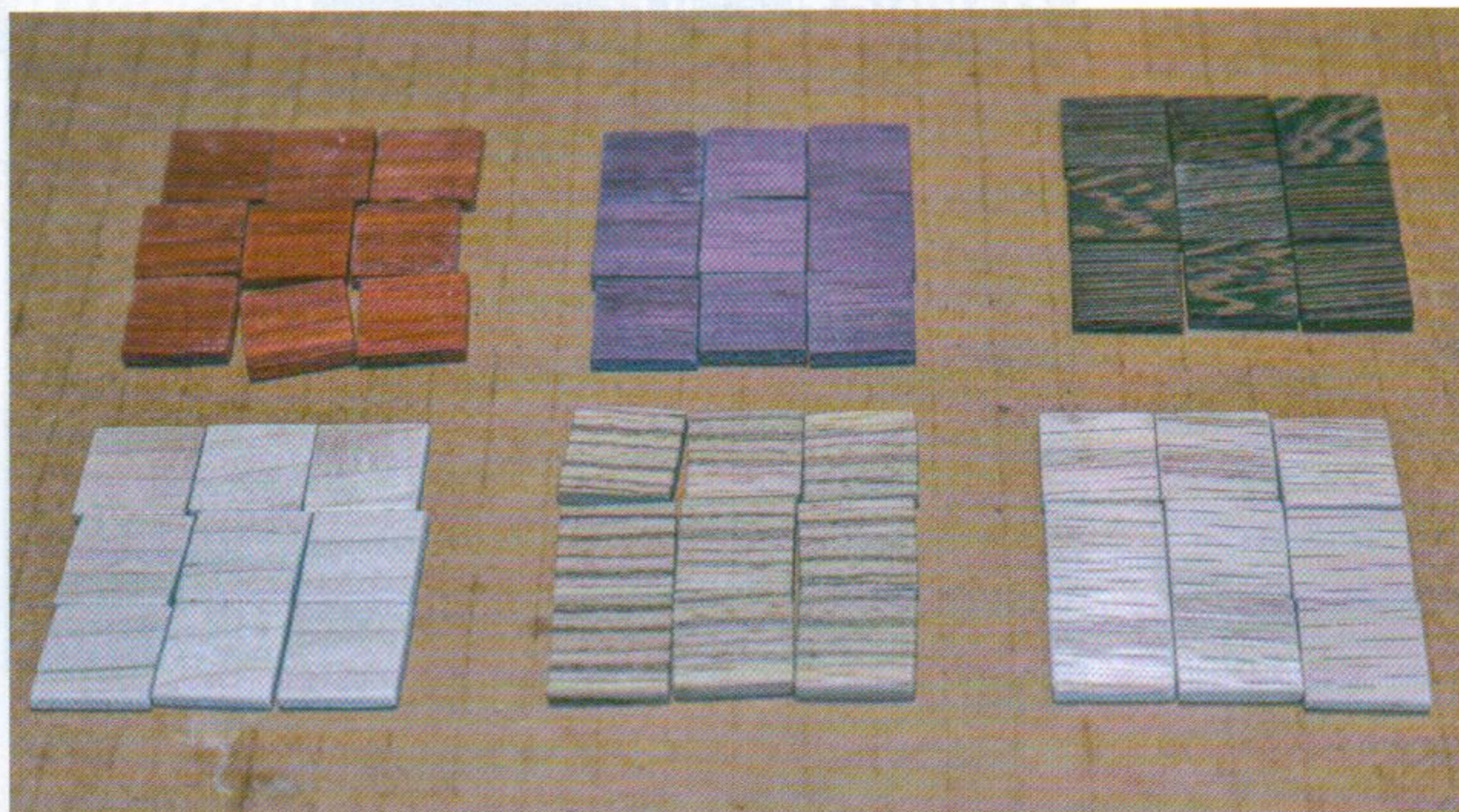
**Prepare the key.** On the scroll saw, cut a  $\frac{3}{16}$ " (5mm) dowel to  $\frac{1}{2}$ " (1.3cm) long. Place the dowel partway into the keyhole, and then shade the top of the dowel with a pencil. Then place the tile onto the dowel into the correct position, and turn it slightly so the pencil mark transfers onto the backside of the tile. Use tweezers if necessary. Be careful not to push the dowel in all the way.



12

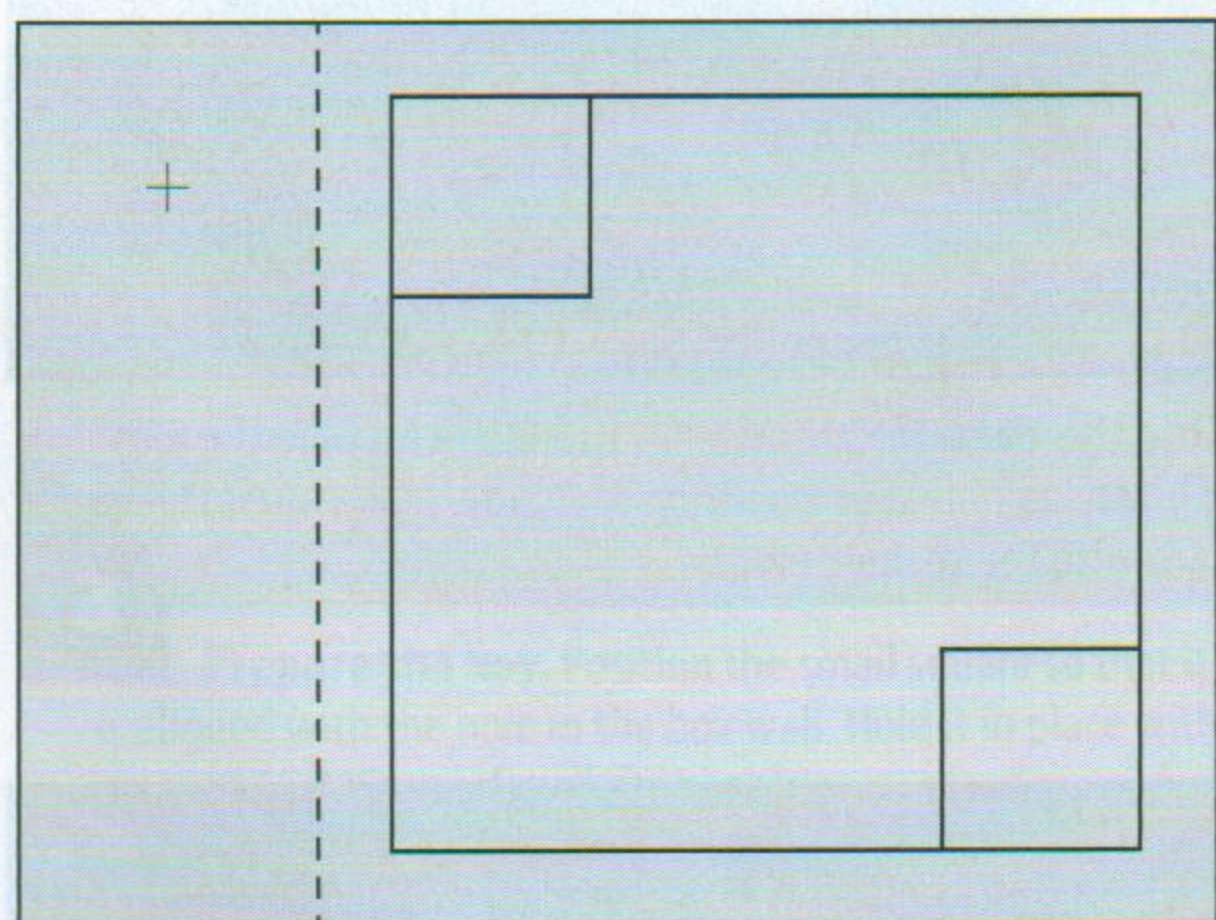
**Assemble the key.** Drill your indentation on the pencil mark. With a  $\frac{7}{32}$ " (6mm) drill bit, make a  $\frac{1}{16}$ " (2mm) indentation on the pencil mark. Remove the dowel peg and glue it in place in the indentation. Set aside to dry. Once the glue is set, place the key tile into the keyhole. Your box is complete! No one will know it's a box until they remove the key.





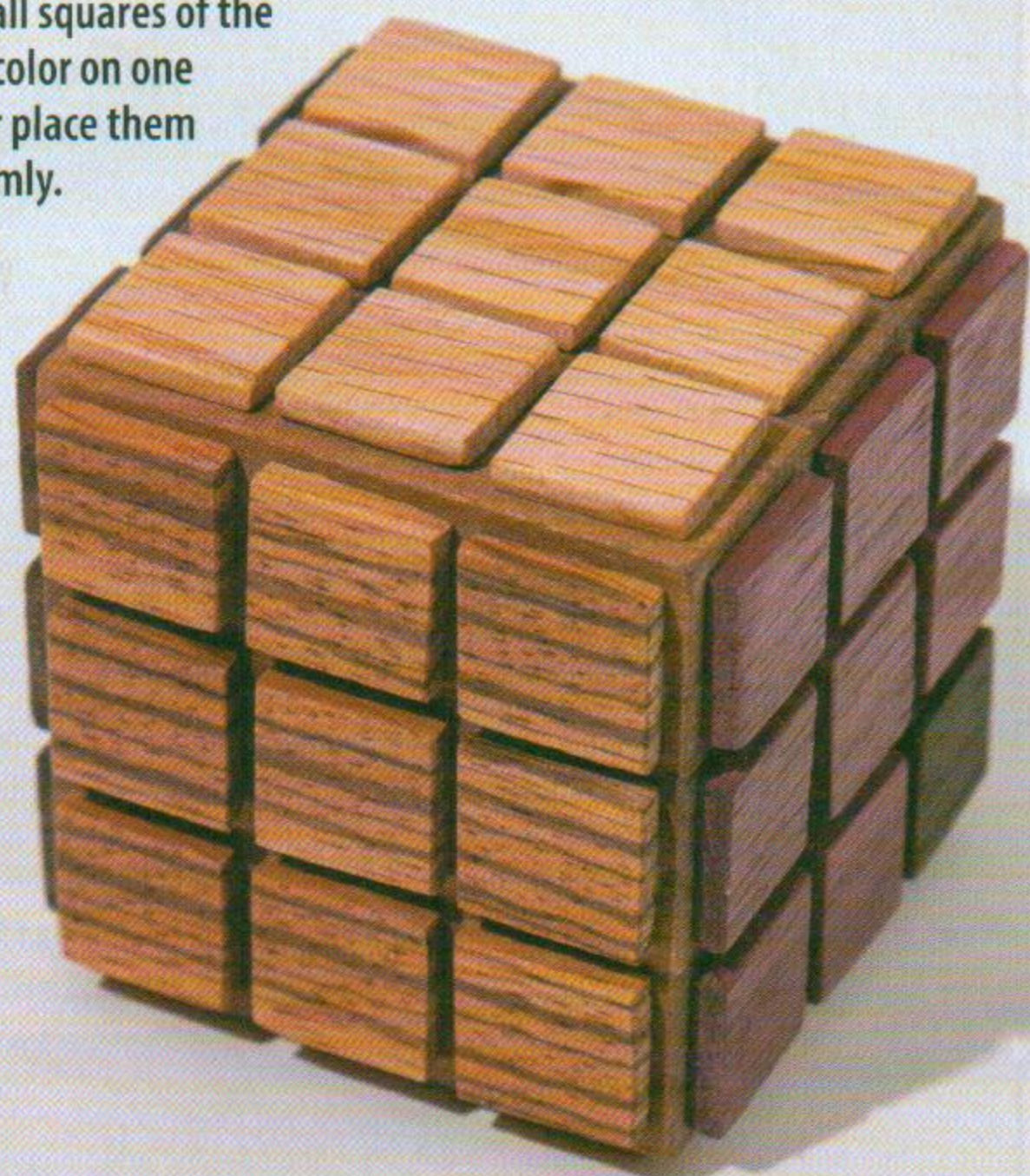
Use natural squares of exotic hardwoods such as purpleheart, padauk, and wenge for an alternate look.

## Rubik's® Cube Puzzle Box Pattern



© 2023 Scroll Saw Woodworking & Crafts

Place all squares of the same color on one side or place them randomly.



### TIP

#### HAVE SOME FUN WITH IT

Try making a box using six different colors of hardwood for the tiles instead of painting them. You can also make two keys; instead of having a corner stability piece, turn it into a second key.

### Materials

- Wood, such as pine,  $\frac{3}{4}$ " (1.9cm) thick: box layers,  $2\frac{1}{4}$ " x 7" (5.7cm x 17.8cm)
- Plywood,  $\frac{1}{8}$ " (3mm) thick: tiles, 4" x 6" (10.2cm x 15.2cm)
- Wood dowel,  $\frac{3}{16}$ " (5mm)-dia.: key stem, 2" (5.1cm)
- Spray adhesive: repositionable
- Sanding sponges: medium and fine
- Acrylic paints: black, blue, green, orange, red, white, yellow
- Wood glue
- Pencil

### Tools

- Scroll saw with blades: #3, #5 reverse-tooth
- Drill press with bits:  $\frac{1}{16}$ " (2mm),  $\frac{13}{64}$ " (5mm),  $\frac{7}{32}$ " (6mm)
- Clamps

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

## Materials & Tools



Rita Cels is a retired teacher and self-taught scroller from Leduc, Alberta, Canada. Although much of Rita's time is spent making wooden children's toys, she loves designing special boxes using a variety of woods and techniques. See more of Rita's work on Instagram and Etsy @ritacelscreations.



# Hiking Couple



**This freestanding ode to the outdoors takes under 30 minutes to cut, sand, and finish**

*By Jean-Bernard Germe (2virgule5d)*

**T**here are few things more thrilling than hiking in a place you have never been before. What majestic views could be waiting over the next hill crest, and what might you learn about yourself as you walk? This project is perfect for lovers of the outdoors, no matter your location. Change up the wood colors, finishing methods, and even the backpacks to suit your preference.

## **Getting Started**

Photocopy the patterns and choose your wood varieties. If you plan to use a contrasting wood for the backpacks, separate those parts of the pattern now. I cut the people from basswood and the



backpacks from glue-ups of walnut and maple. Cover each piece of wood with blue painter's tape, and then apply the patterns to the surface using spray adhesive. For visual contrast, I applied the patterns to the people with the grain running horizontally, and the patterns to the backpacks with the grain running vertically. Drill the  $\frac{3}{16}$ " (5mm) holes for the eyes.

## TIP

### BACKPACK BACKUPS

Alter the backpack design however you like; add more stripes, or change the size or shape based on your preferred backpack style. If you do start with a glue-up, clamp the pieces until dry and then apply your pattern.

## Cutting and Finishing

Cut the pieces on a scroll saw with a #3 reverse-tooth blade, saving the smiles for last. Then remove the patterns and sand each piece to 320-grit, softening the edges slightly. Remove dust with a tack cloth. Flip each piece upside down, secure it, and carefully drill the holes for the walking sticks with a  $\frac{1}{8}$ " (3mm)-dia. bit and sand away any tear-out or fuzzies. Glue the backpacks and walking sticks in place. Apply a natural finish, such as Danish oil, and let dry.

Check out our feature on Jean-Bernard on page 40.

## Materials & Tools

### Materials

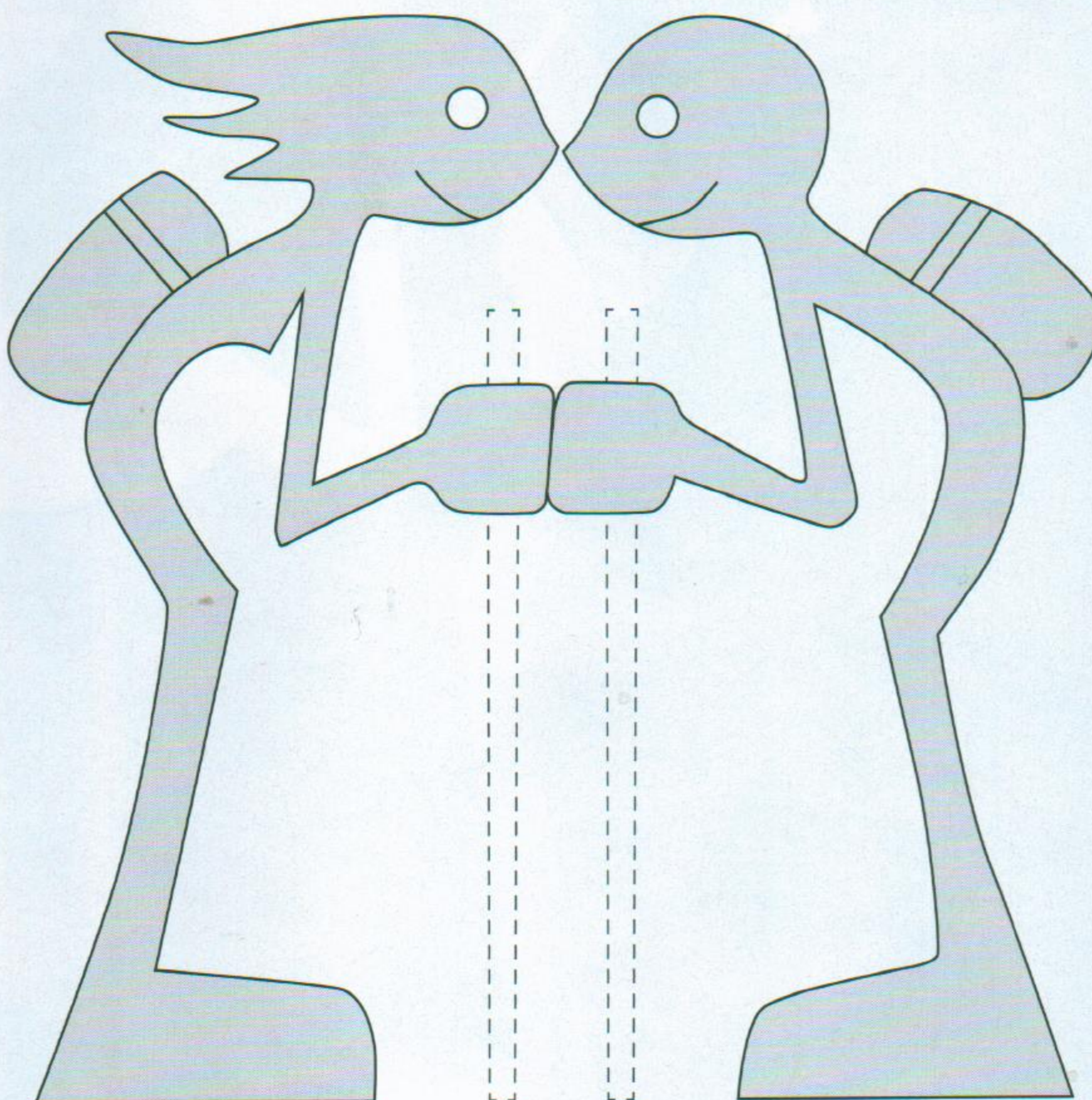
- Wood, such as basswood, maple, or walnut,  $\frac{3}{4}$ " (1.9cm) thick: people and backpacks, approx. 4½" (11.4cm) square
- Wood dowel,  $\frac{1}{8}$ " (3mm) thick: approx. 6½" (16.5cm) long
- Tape: blue painter's
- Spray adhesive
- Tack cloth
- Glue: wood
- Sandpaper: assorted grits to 320
- Natural finish, such as Danish oil

### Tools

- Scroll saw with blades: #3 reverse-tooth
- Drill with bits:  $\frac{1}{8}$ " (3mm),  $\frac{3}{16}$ " (5mm)
- Paintbrush: disposable foam
- Clamps

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

## Hiking Couple Pattern



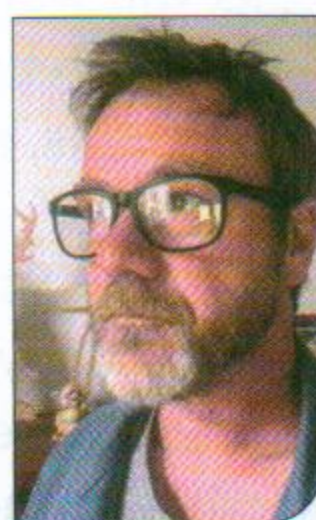
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## WANT MORE FROM JEAN-BERNARD?

### Making Wooden People & Pets with Personality

By Jean-Bernard Germe "2virgule5d"

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Jean-Bernard Germe lives in Amiens, in the north of France. After discovering the scroll saw in 2010, he immediately began designing his own patterns. Jean-Bernard loves sketching patterns as much as he loves cutting them. For more of his work, visit Etsy and Facebook @2virgule5d or 2virgule5d.com.



# Bats and Moon Puzzle

**This sleek two-tone puzzle evokes the feel of a blustery autumn night**

*By Al Baggetta*



**H**alloween evokes in my mind the image of bats against a bright moon in the dark sky. That was the inspiration for this fun puzzle. You can cut it as a chunky stand-up puzzle that fits nicely into your spooky Halloween display. I cut mine from 1" (2.5cm) poplar, but you could use thinner  $\frac{1}{2}$ " (1.3cm) to  $\frac{3}{4}$ " (1.9cm) pine or birch ply to make it easier to cut. The project has a built-in stand, but you could add a rectangular base for more stability.

## Getting Started

Photocopy the pattern, and then cut it out so it fits nicely on a slab of wood that's an 8" (20.3cm) square. Cut your slab of wood to size, lightly sand it with 150-grit sandpaper, and then cover it with strips of 2" (5.1cm) painter's tape. Coat the back of

the cut pattern using a glue stick. Press the pattern onto the painter's tape with the grain running horizontally, and smooth it out so all the edges are nice and flat.



Check fit on the pieces before applying finish.



## Cutting and Finishing

Before starting to cut out the pattern, ensure that the table and blade are perpendicular using a small square, and then make a couple of plug test cuts along the edges of the board. When the plug is cut, it should fall through the bottom and top evenly. Begin the puzzle cuts anywhere along the edge of the blank. Cut slowly and don't put a lot of pressure on the blade. Make the cut leading to a portion of the moon or one of the bats. Cut all around each piece, removing them as you work your way through the puzzle. After you have cut out all the pieces, remove the pattern and tape.

Use the 150-grit sandpaper to gently sand around the edges of each piece so they are smooth and fit into each other. Dust them off and separate the bat pieces from the moon pieces.

Use a black flat or satin spray paint to lightly coat each bat. If your wood is light enough to provide a nice contrast between the bats, you don't have to paint the moon pieces or the base; just spray those pieces with a clear matte finish of your choice and let dry. But if you want to, you can paint these pieces using a white flat or satin spray paint. Assemble the puzzle on a flat piece of cardboard. Use the cardboard to keep the puzzle together when setting it upright on your table or shelf. Display!

## Materials

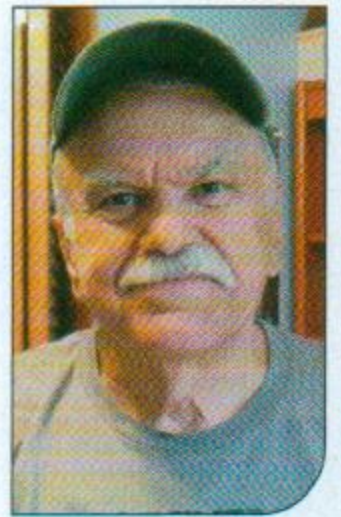
- Wood, such as pine or poplar, 1" (2.5cm) thick: 8" (20.3cm) square
- Tape: painter's such as FrogTape Green®
- Glue: stick, such as Staples® Jumbo Glue Stick
- Sandpaper: 150-grit
- Spray paint, such as Rust-Oleum®: Black/White Ultra Cover Satin or Flat
- Clear spray finish: matte (optional)

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

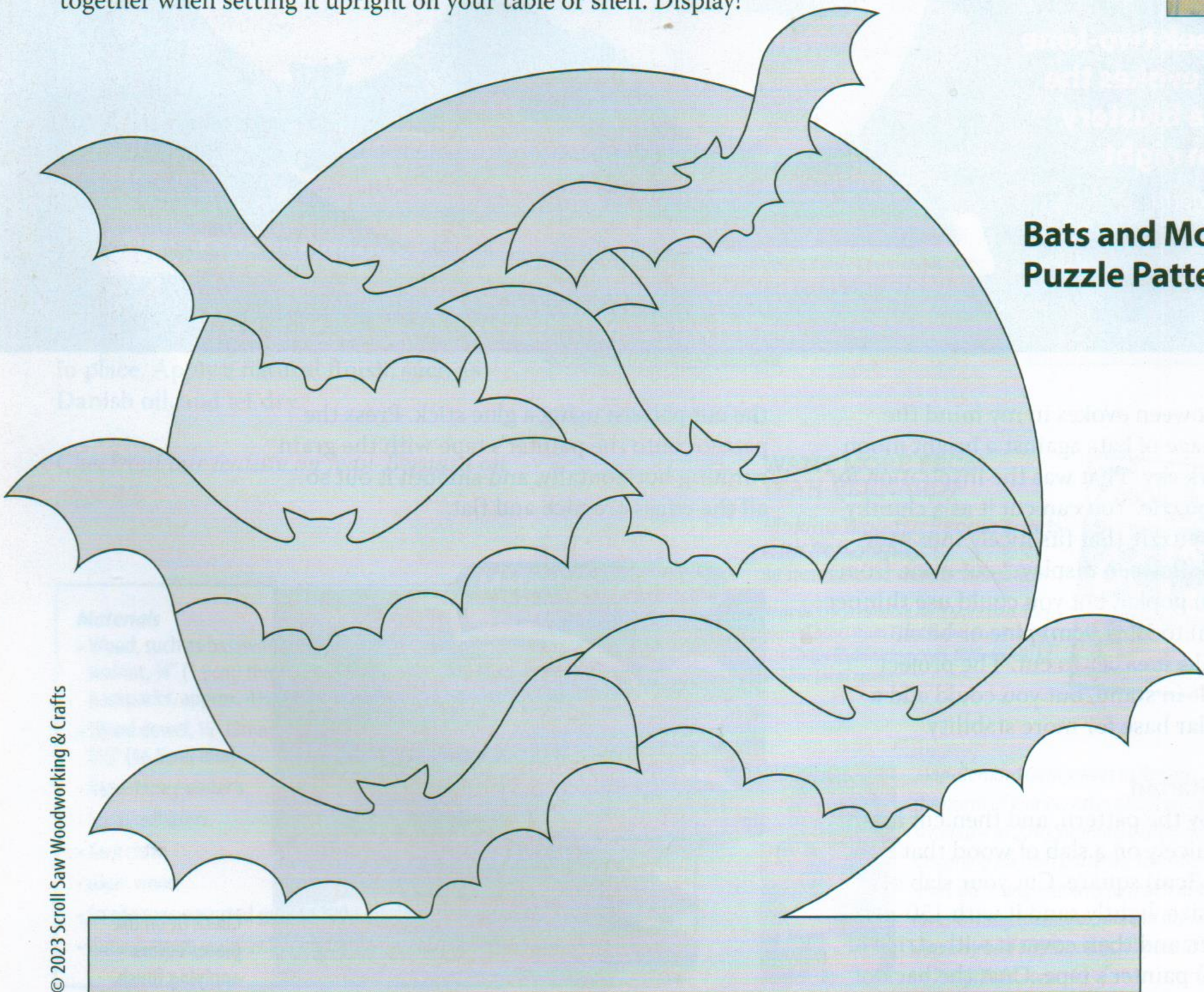
## Tools

- Scroll saw blades, such as Flying Dutchman®: #5 reverse tooth

Al Baggetta is a retired English teacher and former musician who took a liking to scroll sawing. Visit his pattern website at [baggetta.com](http://baggetta.com).



## Bats and Moon Puzzle Pattern





# Witch Intarsia



## Set the mood for a memorable Halloween with this grim-looking character

By Brad Eklund and Hazel Trinidad

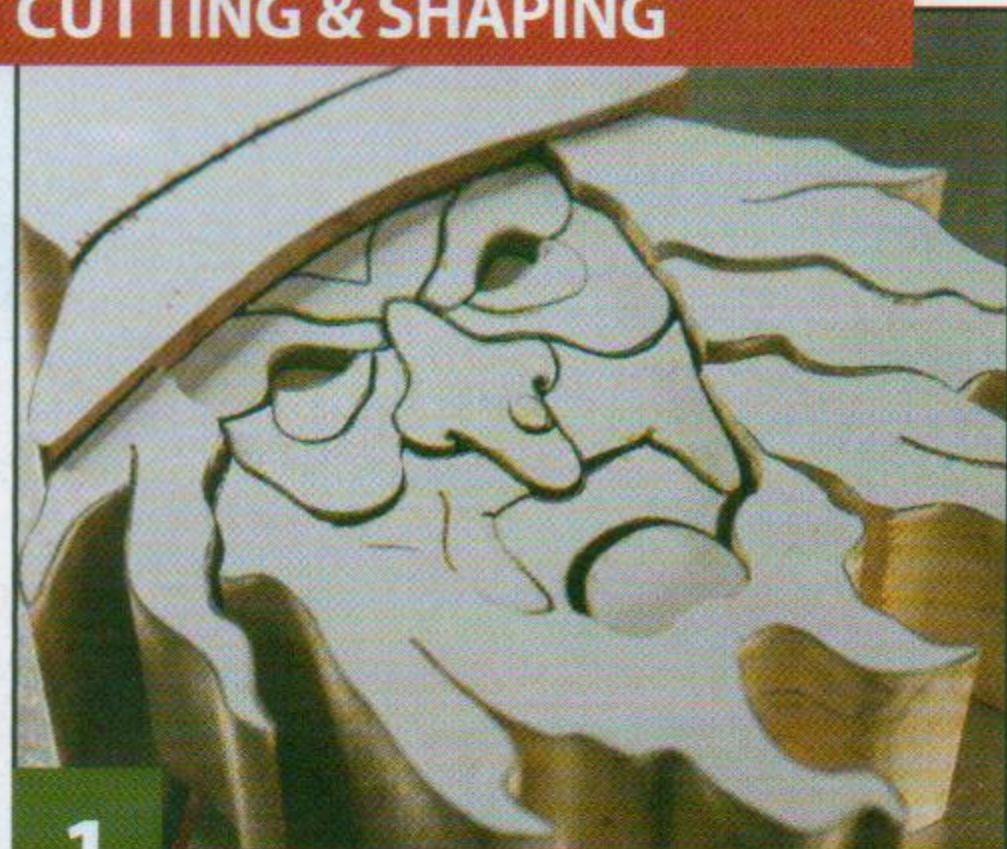
**T**his witch won't cast a spell, but staring into those eyes may give you the shivers! We designed this eerie intarsia when we realized we didn't have many "creepy" Halloween-themed designs. We hope you have as much fun doing this project as we did.

## Getting Started

Decide on the wood you want to use. We chose wood for this project based on the color combinations. Green poplar was used for the skin. For the hair, we picked spalted hackberry because the light, grey, and dark streaks in the wood give the hair a mottled, messy look. We made the witch's black hat with Peruvian walnut and used wenge for the eyes. If black wood is hard to get, you could woodburn the eyes instead. Photocopy the patterns and affix them to their corresponding blocks using repositionable spray adhesive or your desired method.



## CUTTING & SHAPING



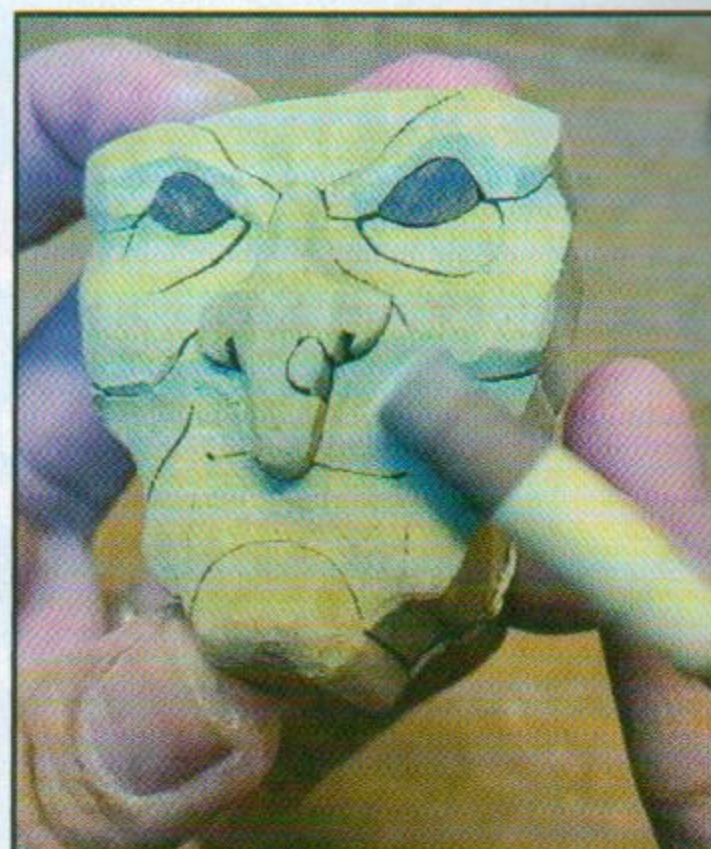
1

**Cut out the shapes.** Cut the eyes and the holes they insert into first. Leave all the face, hat, and hair segments together on a first pass, and then test fit the pieces against each other. Now segment the face, hat, and hair. Be careful not to lose the tiny wart detail when cutting.



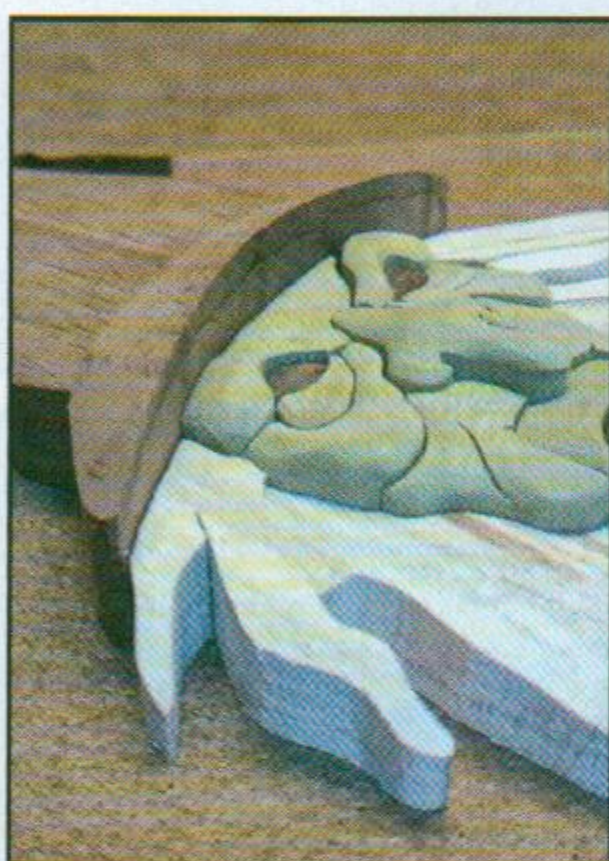
2

**Sand the segments.** Using a disc sander with 80-grit sandpaper, start reducing the thicknesses of the segments. The brim of the hat, nose, and chin should be kept at a base thickness of  $\frac{3}{4}$ " (1.9cm). The face and remainder of the hat should be sanded down to approx.  $\frac{5}{8}$ " (1.6cm) thick. Sand the hair to approx.  $\frac{3}{8}$ " (1cm).



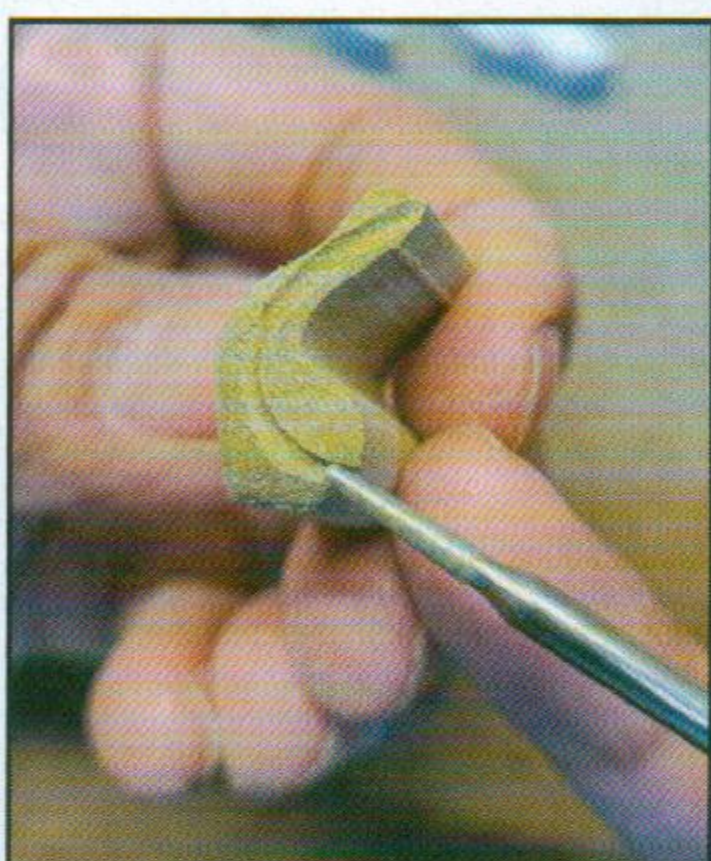
3

**Carve the face and hat.** With a rotary tool and a  $\frac{1}{4}$ " (6mm) sanding drum, carve the contours for the face, using the main project image as a guide for shaping. Use the disc sander to give the brim of the hat a sharp angle, and then blend to meet the top portion of the hat. Shape the top hat segment and hair on a 2" (5.1cm) inflatable drum sander with 120-grit.

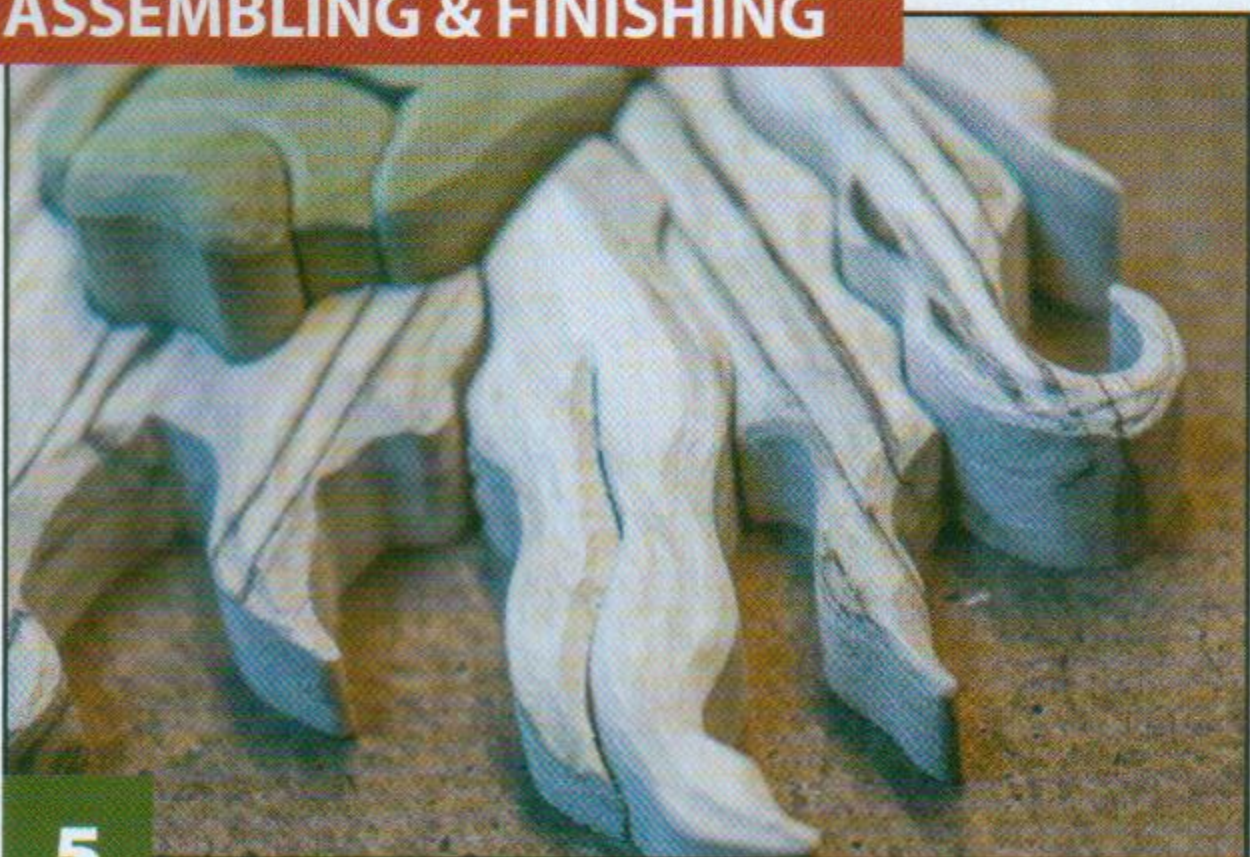


4

**Shape the hair.** Using a fine-tipped carving bit on your rotary tool, carve the wrinkle detail lines on the face indicated by the dashed lines in the pattern. Add the hair texture by using the edge of a  $\frac{1}{2}$ " (1.3cm) sanding drum.



## ASSEMBLING & FINISHING



5

**Give the piece a final sand.** Slightly round over all edges with your rotary tool and sanding drum. Finish sanding with 220-grit sandpaper. A sanding mop is very useful in removing the fuzzies created by carving bits.



6

**Glue the pieces.** Edge glue all the pieces, taking care to properly space the segments to compensate for the kerf. Start with the face and move outward to the hair; finally, glue the hat. Wait for everything to dry, and then flatten the back side of the intarsia on the disc sander.





7

#### Add a backer.

Glue the intarsia onto the backing material. Once dried, use the scroll saw to carefully cut the backing material flush to the intarsia. Use a slightly dulled blade for this step, as a fresh, new blade may be too aggressive.

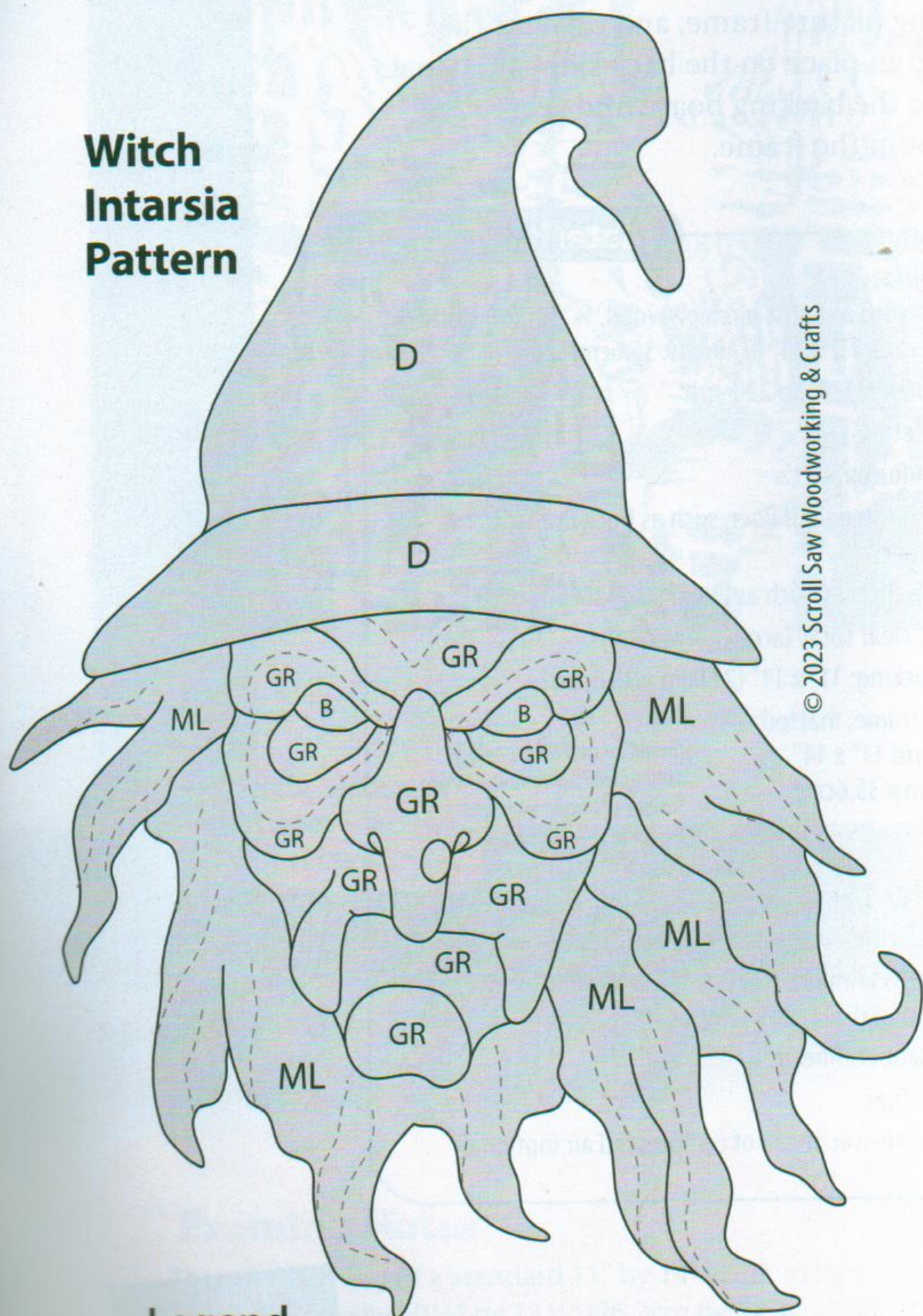


8

#### Add the finishing touches.

Remove any sawdust, and then apply the first few coats of satin lacquer. If the grain has risen, lightly sand smooth with 220- or higher-grit sandpaper. Apply additional coats until the finish is built up to your preference. Finally, apply a small amount of high gloss polyurethane to the eyes to complete the eerie look. Attach the hardware of your choice for hanging, and then enjoy your spooky creation!

## Witch Intarsia Pattern



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### Legend

- D ..... Dark shade, such as walnut
- ML ..... Medium light shade, such as spalted hackberry
- GR ..... Green shade, such as poplar
- B ..... Black shade, such as wenge

## Materials & Tools

### Materials

- Wood, such as spalted hackberry,  $\frac{3}{4}$ " (1.9cm) thick: hair, 5" (12.7cm) square
- Wood, such as walnut,  $\frac{3}{4}$ " (1.9cm) thick: hat, 3" x 3 $\frac{1}{2}$ " (7.6cm x 8.9cm)
- Wood, such as poplar,  $\frac{3}{4}$ " (1.9cm) thick: face, 2" x 2 $\frac{1}{2}$ " (5.1cm x 6.4cm)
- Wood, such as wenge,  $\frac{3}{4}$ " (1.9cm) thick: eyes, 1" (2.5cm) square
- Wood, such as tempered hardboard,  $\frac{1}{8}$ " (3mm) thick: backer, 4 $\frac{1}{2}$ " x 6" (11.4cm x 15.2cm)
- Spray adhesive: repositionable
- Sandpaper: 220-grit
- Clear satin lacquer
- High gloss polyurethane

### Tools

- Wood glue
- Hanger: small
- Scroll saw with blades: #5 MGT
- Disc sander: 12" (30.5cm) 80-grit
- Drum sander: 2" (51mm) inflatable 120-grit
- Sanding drum:  $\frac{1}{4}$ " (6mm)
- Sanding mop
- Rotary tool with bits: fine-tipped carving,  $\frac{1}{2}$ " (13mm) sanding drum
- Woodburner (optional)

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



Brad Eklund and Hazel Trinidad 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.



# Goose on Pond Fretwork

**Capture the tranquility of a remote pond in this striking portrait**

By Charles Hand

I love the outdoors and seeing animals in their natural habitat. I can sit quietly for hours, watching and observing. Near my home in Ontario, there are many ponds and lakes perfect for observing the animals go about their afternoon. Nothing is quite as relaxing as sitting by the waterfront on a calm summer day. This fretwork scene depicts the tranquility of a pond where a single American Buff Goose swims quietly through the reeds, leaving a reflection in the rippling water.

## Getting Started

Sand the front and back of each blank thoroughly. Blow off the dust or remove it with a tack cloth. Attach removable EasyLiner® laminate shelf liner to the top side of one blank. Apply spray adhesive to the back of the pattern. Let the adhesive set for approximately one to two minutes or until tacky, and then press the pattern down onto the shelf liner, smoothing any air bubbles.

## Cutting

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 10-15 cutouts to remove the fuzzies.

## Sanding and Finishing

Remove the tape from the perimeter and peel off the shelf liner. Sand the portrait carefully. For larger, open areas, such as those between the gaps below the goose, insert the cutout pieces before sanding to protect the delicate bridges. Use needle files to clean up tight areas.

Remove the sander dust with an air compressor or a can of compressed air.

Apply a clear coat of spray finish if you do not use a picture frame with glass. Attach black felt to the back of the portrait with blue painter's tape. Remove the backing board from the picture frame, and then set the portrait in place on the back side of the mat. Replace the backing board and secure the portrait in the frame.

## Materials & Tools

### Materials

- Wood, such as Baltic birch plywood, 1/8" (3mm) thick: 2 or 3 each 11" x 14" (27.9cm x 35.6cm)
- Sandpaper: 180- to 220-grit
- Tack cloth
- Tape: blue painter's
- Self-adhesive shelf liner, such as Duck Brand EasyLiner®
- Spray adhesive, such as Elmer's® or 3M Super 77™
- Finish: clear spray lacquer (optional)
- Felt backing: 11" x 14" (27.9cm x 35.6cm)
- Photo frame, matted: standard 11" x 14" (27.9cm x 35.6cm)

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

### Tools

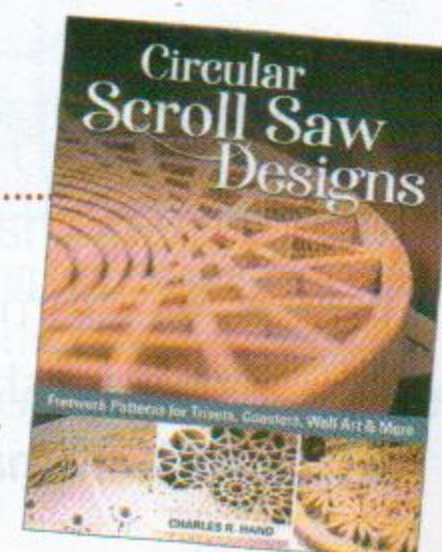
- Scroll saw with blades: #2/0 or #1 spiral (interior cuts), #3 or #5 reverse-tooth flat (straight cuts)
- Drill press with bits: 3/64" (1mm) or (#56) wire size, 1/16" (2mm) dia. or #53 wire size
- Palm sander: fine-grit
- Needle files
- Air compressor or can of compressed air (optional)

## WANT MORE FRETWORK?

### Circular Scroll Saw Designs

By Charles R. Hand

Item 01500. Available for \$17.99 plus S&H (parcel post) from Fox Chapel Publishing, [FoxChapelPublishing.com](http://FoxChapelPublishing.com), 800-457-9112, or your local retailer.



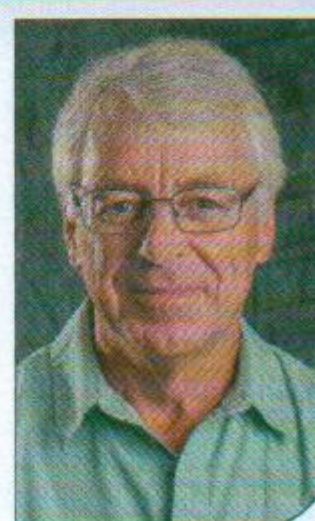




Pattern for the **GOOSE ON POND FRETWORK** is in the pullout section.

## Framing Notes

The mat opening of a standard 11" by 14" (27.9cm by 35.6cm) frame is normally 10½" by 13½" (26.7cm by 34.3cm), so I designed my pattern 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). More information and tutorials on framing and using shelving paper are available on Charles' website at [scrollsawart4u.weebly.com](http://scrollsawart4u.weebly.com).



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' pattern application method and framing techniques, or for more of his patterns, visit [scrollsawart4u.weebly.com](http://scrollsawart4u.weebly.com).



# Vine Fretwork Clock

**Cut a stylish timekeeper without spending hours on frets!**

By John A. Nelson

Cut by Rolf Beuttenmuller

**I**f you enjoy fretwork but get intimidated by hundreds of tiny cuts, you're in luck: this clock will give you the satisfaction of completing a project in just an afternoon. Switch up the clock insert based on your preferred style, or better yet, design your own clock face with inlaid or woodburned numbers. It makes a great gift for holidays and housewarmings!

## Getting Started

Select a type of wood; I chose black walnut for its rich color. Plane the wood for the clock body and backer and then sand it to 320-grit with an orbital sander. Wipe off excess dust with a tack cloth and apply Con-Tact® clear removable shelf paper to the surface. Then attach the patterns to the surface of their respective blanks with spray adhesive. Drill the holes for the frets in the clock body blank, and then, with a hole saw attachment, drill a 1" (2.5cm)-dia. hole in the center of the backer to allow for easy removal of the clock movement.

*Note: Purchase the clock movement first and check the size before cutting the hole for the movement.*

Alternatively, you could drill a smaller hole and expand the circle on a scroll saw.

## Cutting and Finishing

Cut the pieces on a scroll saw with a #3 or #5 reverse-tooth blade, starting with the clock body frets and moving to the perimeter of each piece.

*Note: Follow the directions that come with the clock insert regarding hole size. Cut that hole first and then move on to the frets.* Remove the patterns and lightly hand-sand all edges with 320-grit to soften them. Wipe off dust with a tack cloth and finish with two to three coats of clear satin spray lacquer, sanding lightly between coats. Glue and clamp the backer to the main clock body, let dry, and add the clock movement. Attach a hanger to the center of the backer and display.

## Materials & Tools

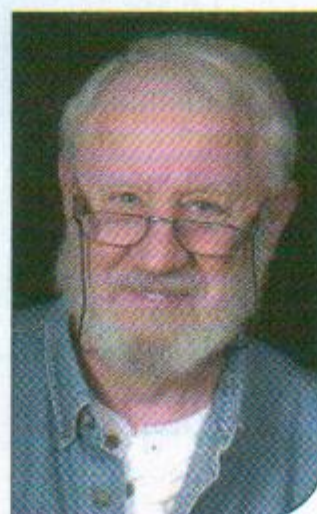
### Materials

- Walnut,  $\frac{3}{4}$ " (1.9cm) thick: clock body, approx. 8" x 14" (20.3cm x 35.6cm)
- Walnut,  $\frac{1}{8}$ " (3mm) thick: backer, approx. 5" (12.7cm) square
- Clock movement insert: 4½" (11.4cm)-dia.
- Shelf paper, such as Con-Tact®: clear removable
- Spray adhesive
- Tack cloth
- Sandpaper: assorted grits to 320
- Wood glue
- Finish, such as clear spray lacquer: satin
- Hanger

### Tools

- Scroll saw with blades: #3 or #5 reverse tooth
- Drill or drill press with bits:  $\frac{1}{16}$ ", 1" (25mm) hole saw (optional)
- Planer
- Sander: orbital
- Clamps

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



John A. Nelson is the author of Fox Chapel's popular Scroll Saw Workbook, available at [foxchapelpublishing.com](http://foxchapelpublishing.com).



Rolf Beuttenmuller started scrolling in 2004 after his wife, June, bought him a scroll saw for his birthday. He joined a local club and enjoys new and challenging projects. His motto is, "I don't know that I can't, therefore I can." Rolf retired from Brookhaven National Lab after 34 years of designing and building special devices for high energy and photon science research. He lives in Bellport, N.Y.





Pattern for the **VINE  
FRETWORK CLOCK** is in the  
pullout section.



# Scrolling in the Garden Shed

**For French woodworker Jean-Bernard Germe, simplicity paved the way to success**

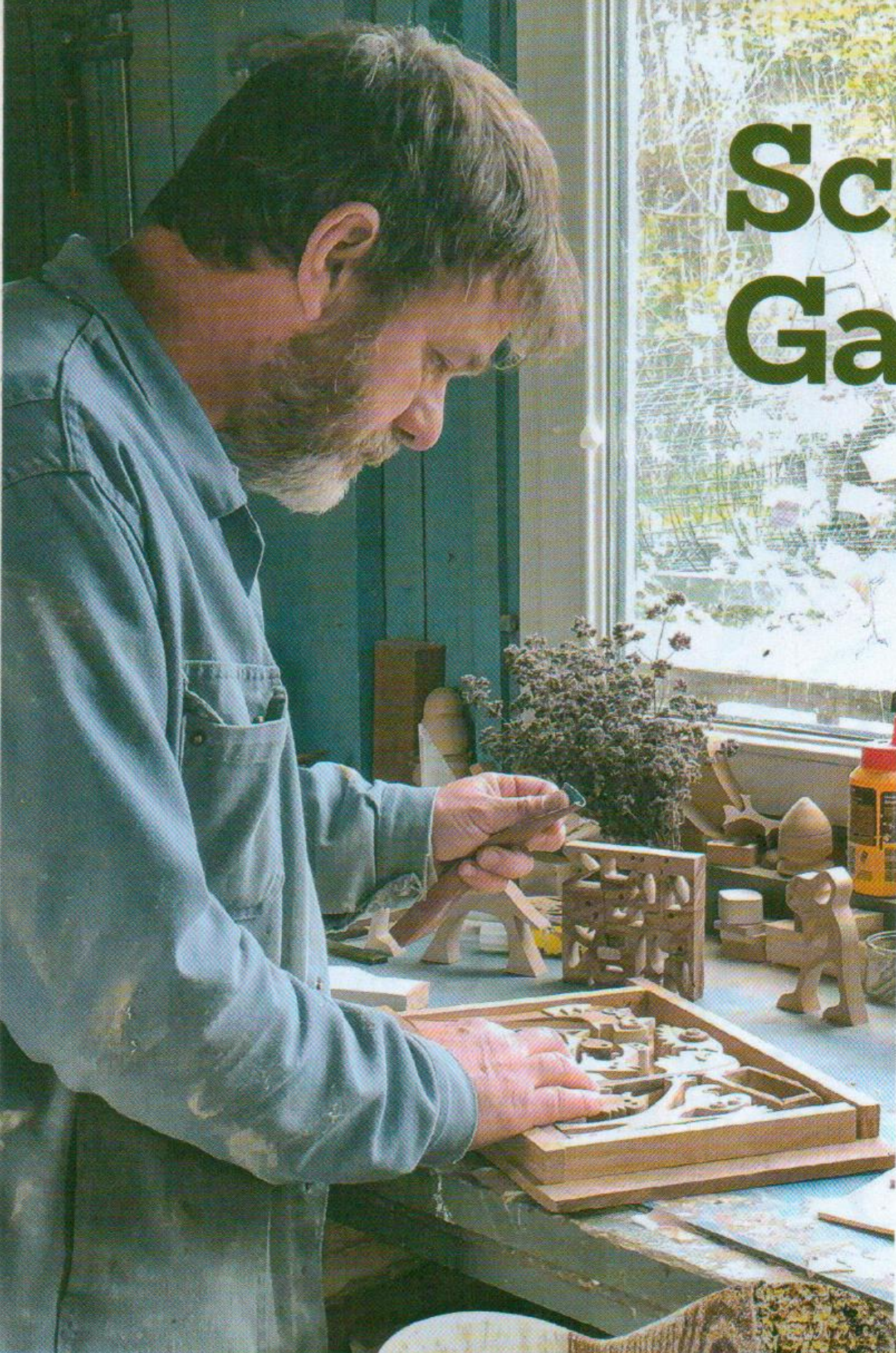
*By Kaylee Schofield*

**Y**ou've probably seen it before: that iconic wooden silhouette of a guy leaning over to touch noses with his dog. This simple design has a universal relatability that most woodworkers would kill for, giving rise to a whole genre of scroll saw projects featuring everything from courting couples to a person screaming from stress—or doing yoga, or chatting with their pet parrot. And it's all thanks to Jean-Bernard Germe.

He remembers sketching an early version of what he calls “a man, a dog” in 2016, at his sister-in-law's kitchen table in Coutances, a small village in Normandy.

“I have a lot of fun in this light stage of drawing, which precedes the more technical realization of the sculpture,” he said.

While not his first wooden creation—Jean-Bernard had previously taught woodshop to young people with learning challenges—it was the design that put him on the map. Soon he began receiving requests for other dog breeds, animals, and human characters.



Stylized chess set, monitored by Java.



### 3 Tips from Jean-Bernard

- Try to always work calmly, without haste.
- Take more time than you think you need at the sanding stage, as this is key to a polished-looking piece.
- Always push yourself to create new things you haven't tried before.

Just like that, his small business, 2virgule5d (which translates roughly to “The 2.5th Dimension”), was born.

His first tool, a salvaged Delta saw, was soon joined by a planer, band saw, drill press, stationary sander, and second scroll saw: all he needs to stock his bustling Etsy shop, which has seen over 11,000 sales to date. Customers all over the world drop notes describing the joy his work has brought their partners, coworkers, neighbors, and pet-loving friends. Jean-Bernard’s inventory has even expanded to include Picassoesque chess sets and tray puzzles reminiscent of Enzo Mari’s famous wooden *Animali*—stylized subjects that interlock to form a larger composition, pleasing to the eye. But “a man, a dog” will always be one of his favorites.

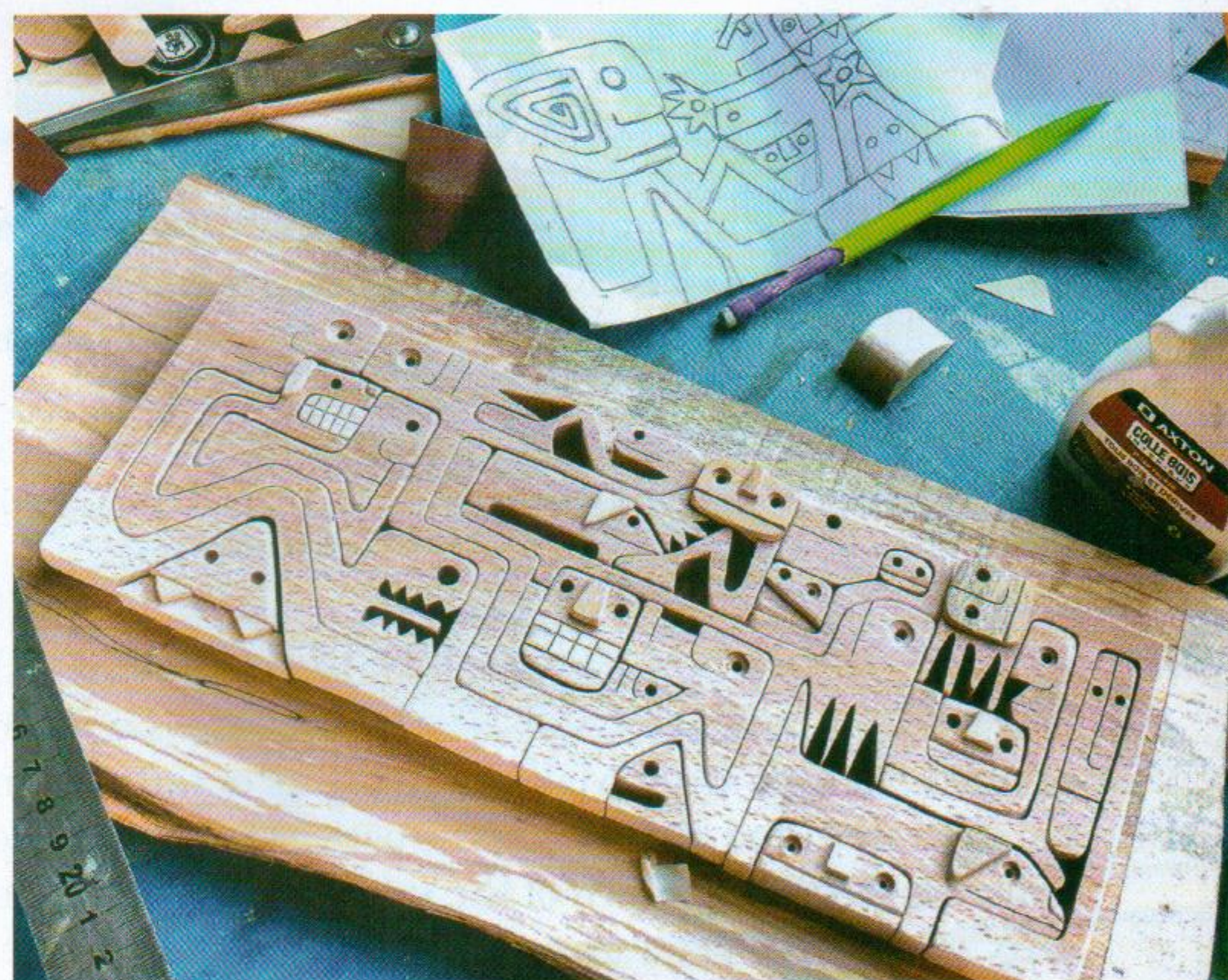
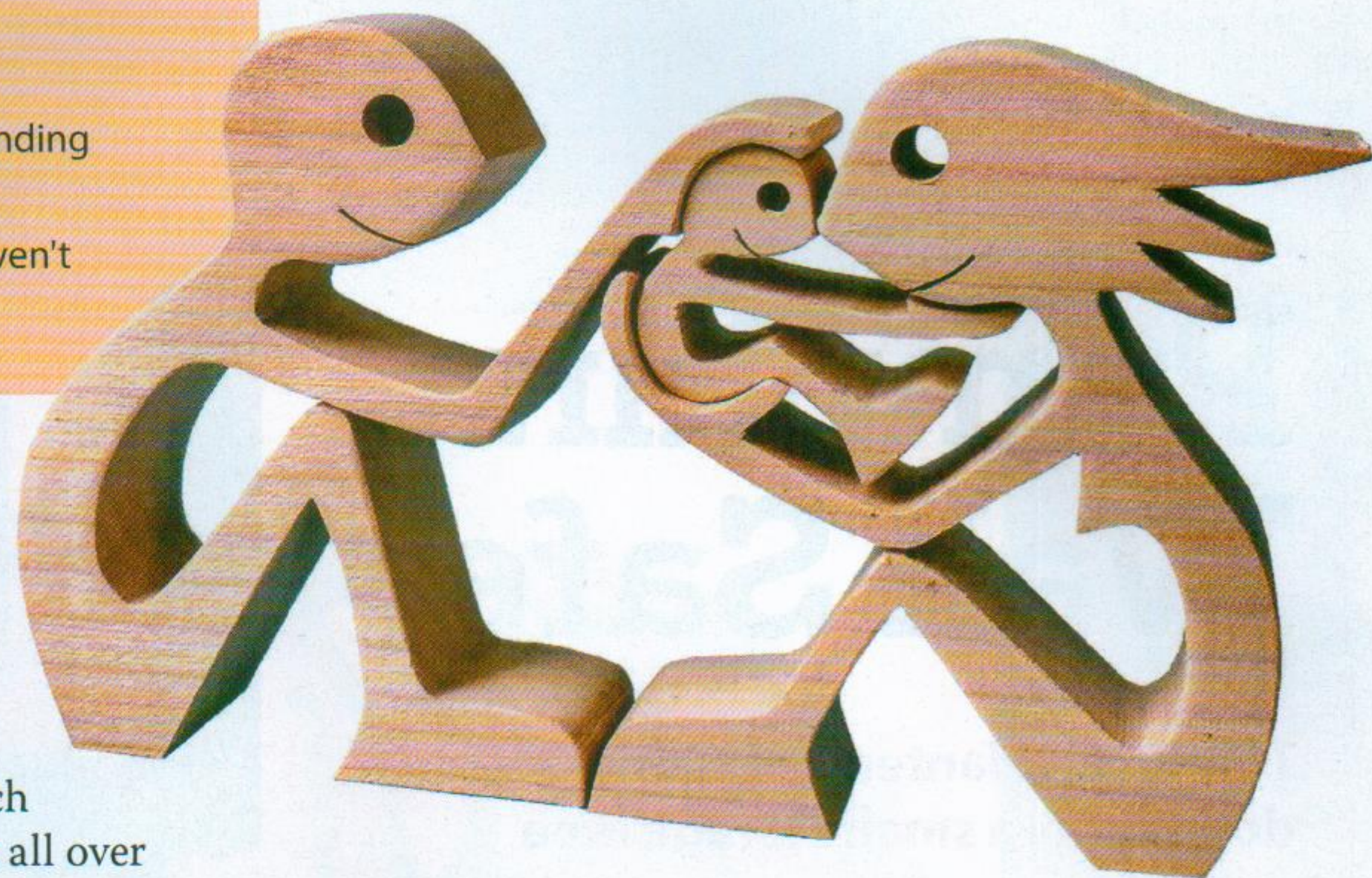
Jean-Bernard doesn’t just pass the time with scroll sawn dogs; his trusty canine companion, Java, supervises the proceedings from her perch at the bottom of the garden, where he keeps his small Amiens workshop.

“She spends part of her day in front of the shop, after which we go for a long walk in the countryside, at the sea, or in the forest,” he said.

As they walk, he collects interesting branches, roots, and bark to incorporate into his sculptures. But whether he’s gathering materials or making sawdust, Jean-Bernard hopes people will continue to be touched by his designs and the “little bit of emotion” they give off.

“Woodworking, for me, exudes something rough and soft at the same time,” he said. “The scroll saw... and the simple lines make that softness possible.”

For more of Jean-Bernard’s work, visit 2virgule5d on Etsy or 2virgule5d.com. You can make one of his designs on page 29.



A tray puzzle modeled after Enzo Mari’s wooden *Animali*.

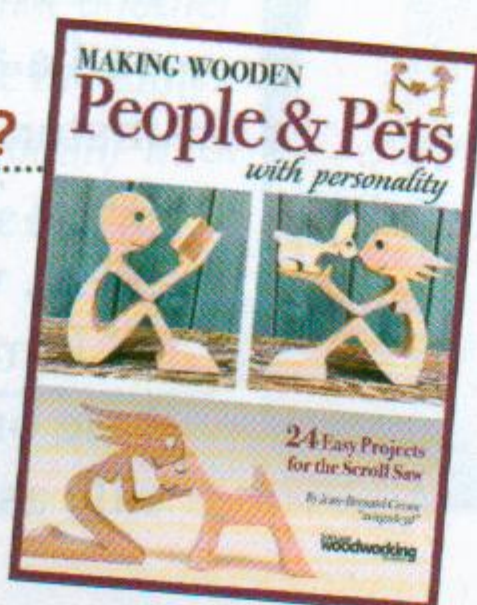


### WANT MORE FROM JEAN-BERNARD?

**Making Wooden People & Pets  
With Personality**

By Jean-Bernard Germe “2virgule5d”

Item 03559. Available for \$12.99 + S&H (parcel post) from  
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# Pumpkin Wall Safe

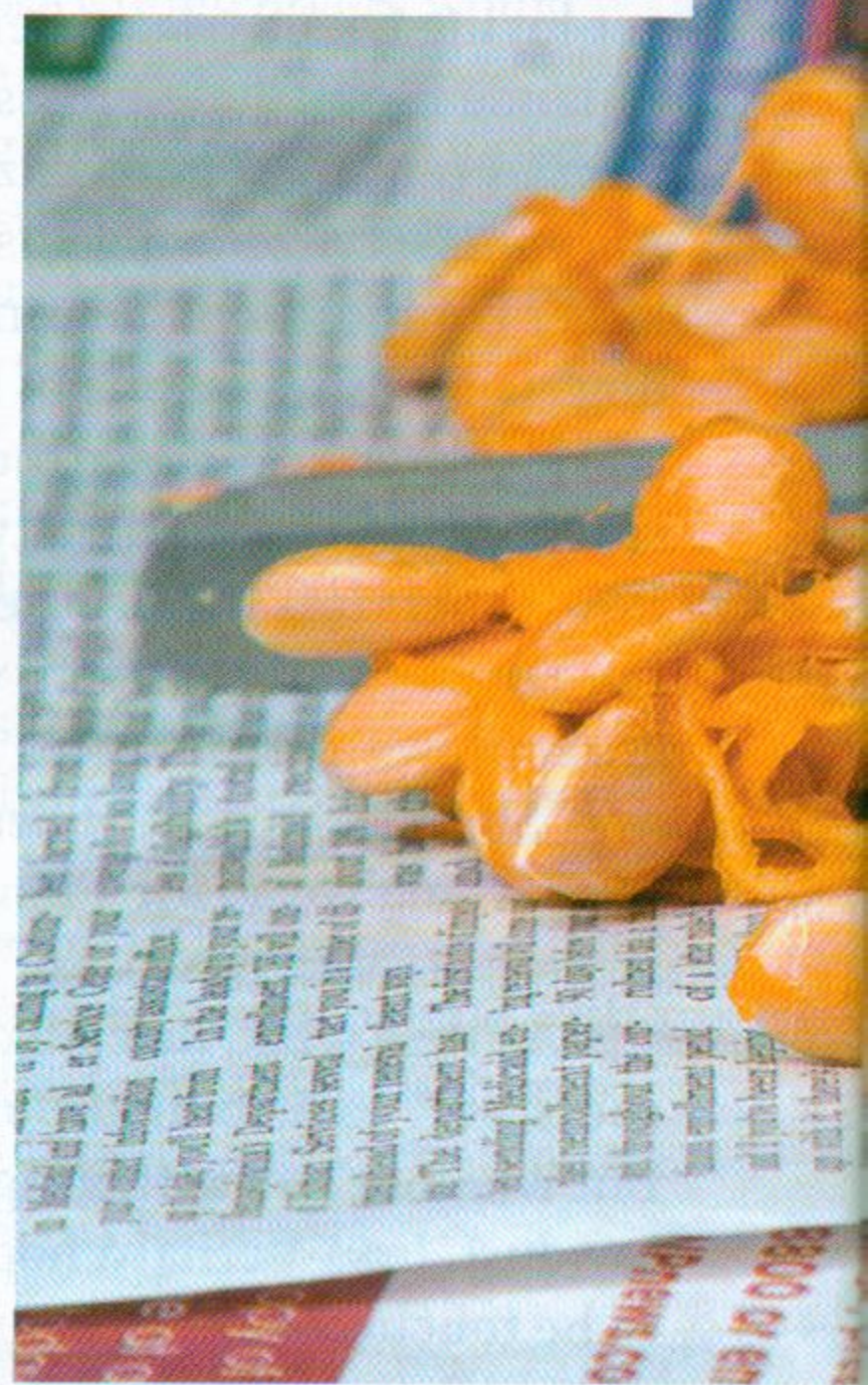
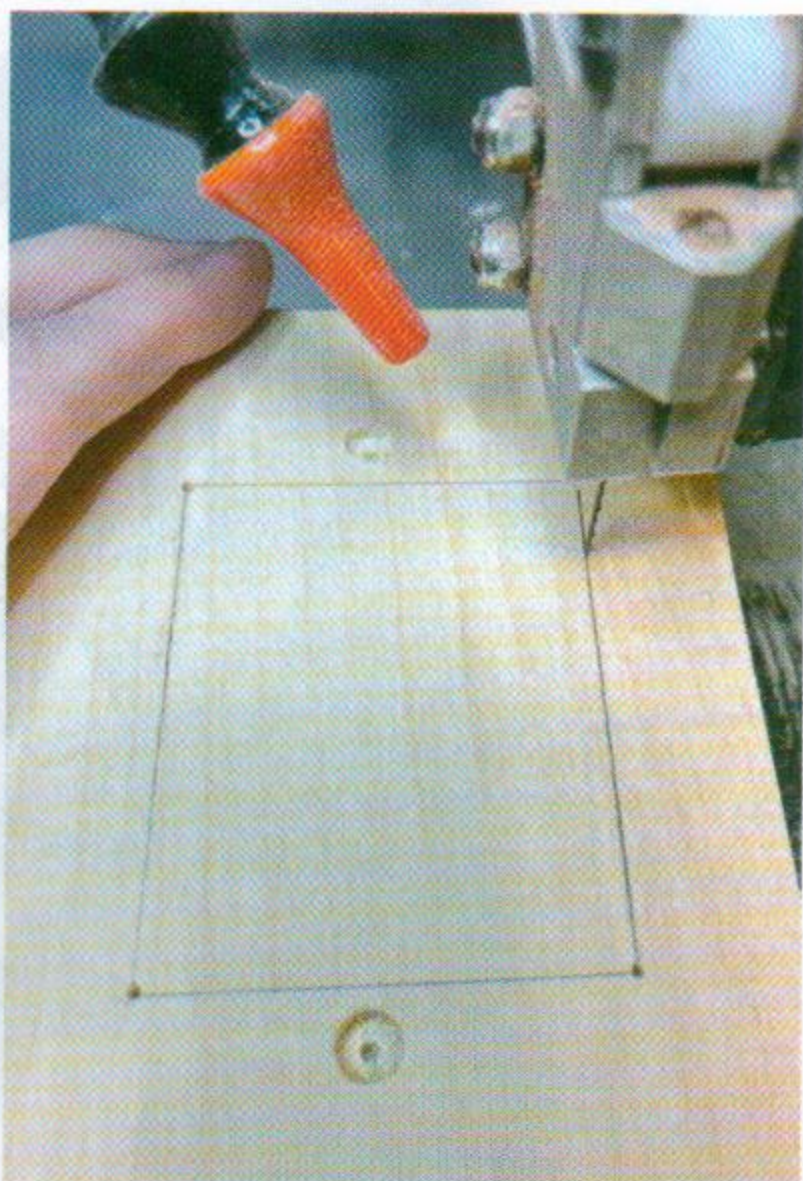
**This jack-o'-lantern trickster doubles as a small storage area**

By Rita Cels

I love secret hiding spots, especially ones where you can hide something in plain sight! This jack-o'-lantern piece is a festive addition to your décor, but it also doubles as a little safe. Simply pull the pumpkin intarsia piece away from the background to reveal a hidden chamber. Magnets keep the pumpkin securely in place, so there is no worry about it slipping. It's a fun way to keep small treasures easily accessible and would make a great stash for your house or car keys.

## Getting Started

Select the wood you will use for this project. If colorful hardwoods aren't available, or if you only have bland wood on hand, you could always paint or dye your pumpkin in later steps. Make three copies of the pattern. Cover the tigerwood with painter's tape, and then attach the pattern to the surface of the tape with spray adhesive. Attach a pattern of the stem to the walnut in the same manner. Then affix the pumpkin pattern to the yellowheart to prepare the facial features. Drill the blade-entry holes in the pumpkin blank.



## Preparing the "Safe"

Lay the safe template on the blank. With an awl or the tip of a nail, mark the four corners of the cavity and the two magnet points. With a pencil, connect the cavity marks. Drill a  $\frac{1}{16}$ " (2mm) entry hole at each corner, and then cut out the cavity with a scroll saw and a #7 reverse-tooth blade. From the waste material, cut a  $\frac{1}{4}$ " (6mm)-thick slice off the front. This slice will be needed in Step 6. Next, with a  $\frac{1}{4}$ " (6mm) blade drill bit or  $\frac{1}{4}$ " (6mm) Forstner bit, drill a  $\frac{1}{8}$ " (3mm)-deep hole on each of the magnet marks. Set the safe aside.





# TIP

## ALTERNATE DESIGNS

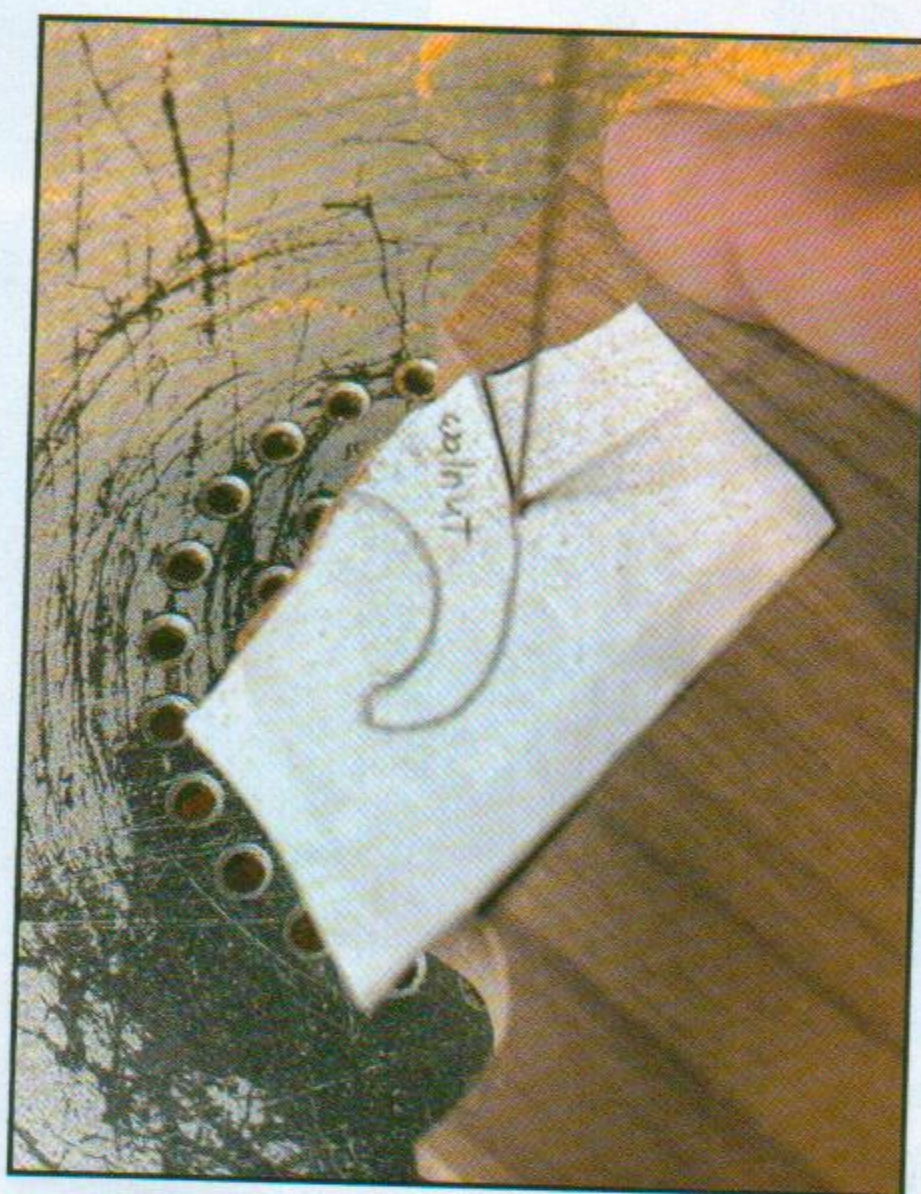
Have fun with this design. You can swap out the pumpkin with another pattern, maybe one for each season or holiday. There's no need to make another frame or background: as long as you use the same magnet points, and the same sized 1/4" (6mm)-thick stabilizer piece, you can create any piece that fits within the frame.





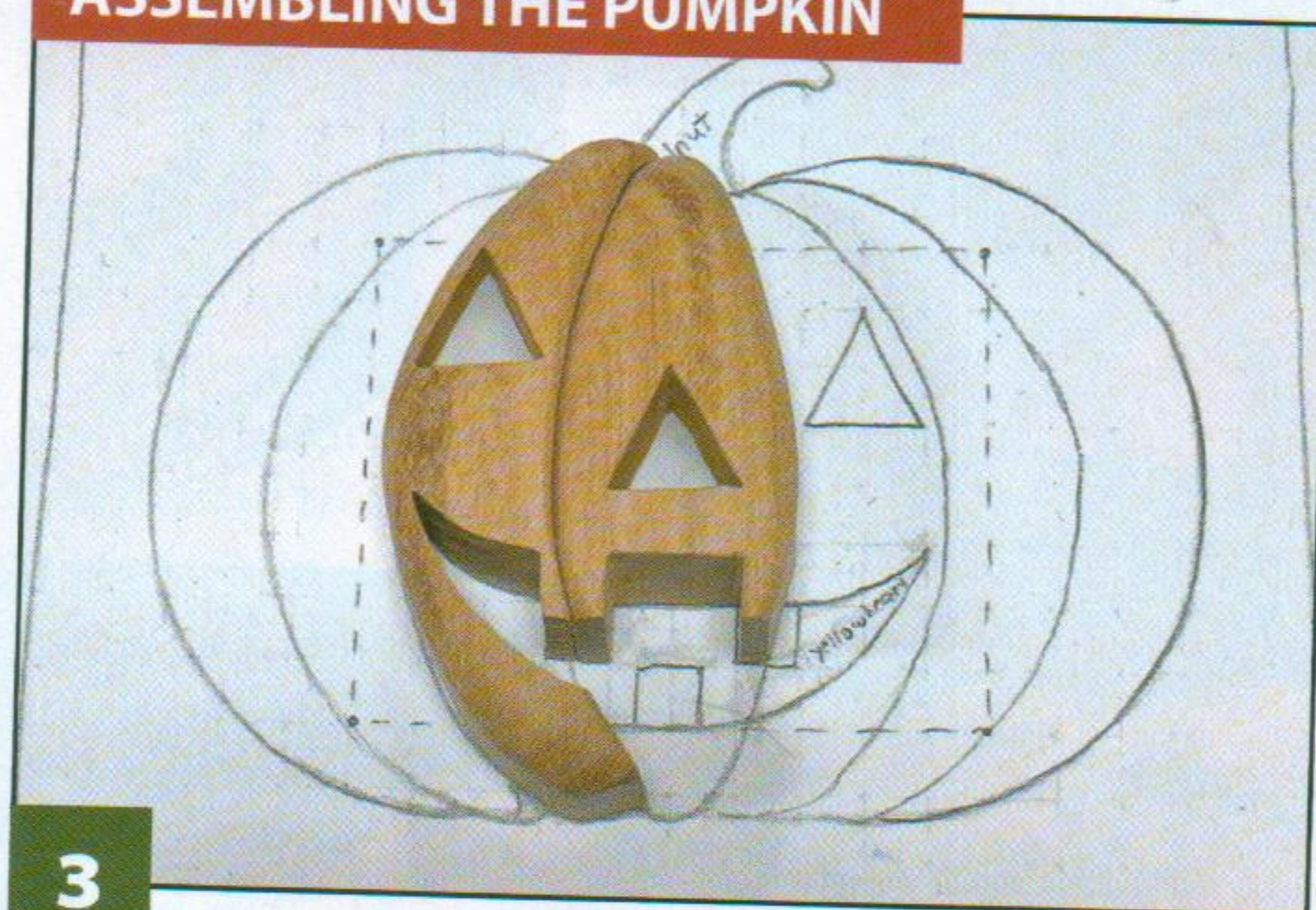


**1** **Cut out the segments.** Using a #5 blade, cut out the eyes, nose, and mouth. Cut around the perimeter of the pumpkin. Cut apart the pumpkin sections.

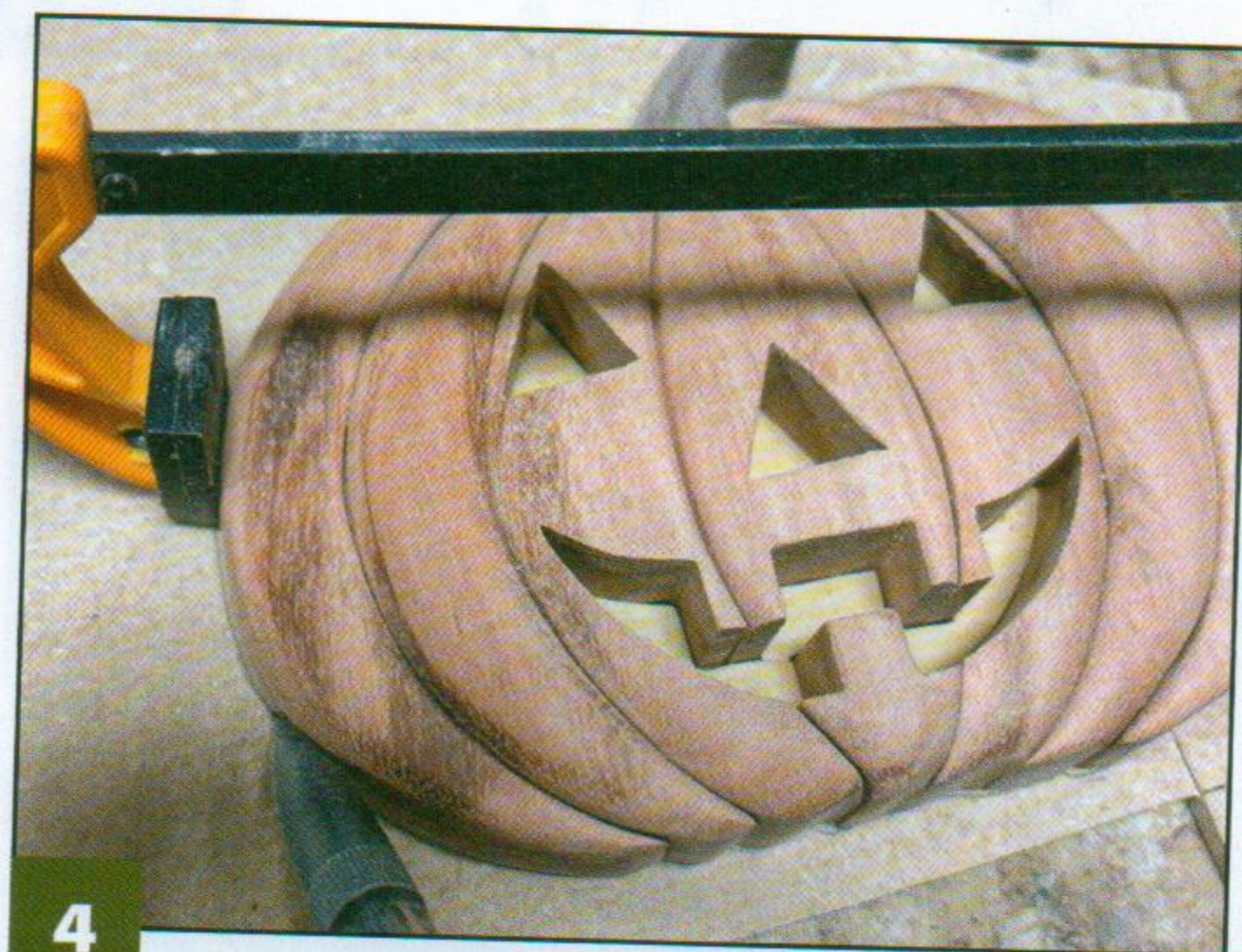


**2** **Cut out the stem and features.** Using the #5 blade, cut out the stem. Shape as desired; I rounded it over with an oscillating drum sander. Using a #3 blade, cut out eyes, nose, and mouth from the yellowheart. Set these pieces aside.

## ASSEMBLING THE PUMPKIN

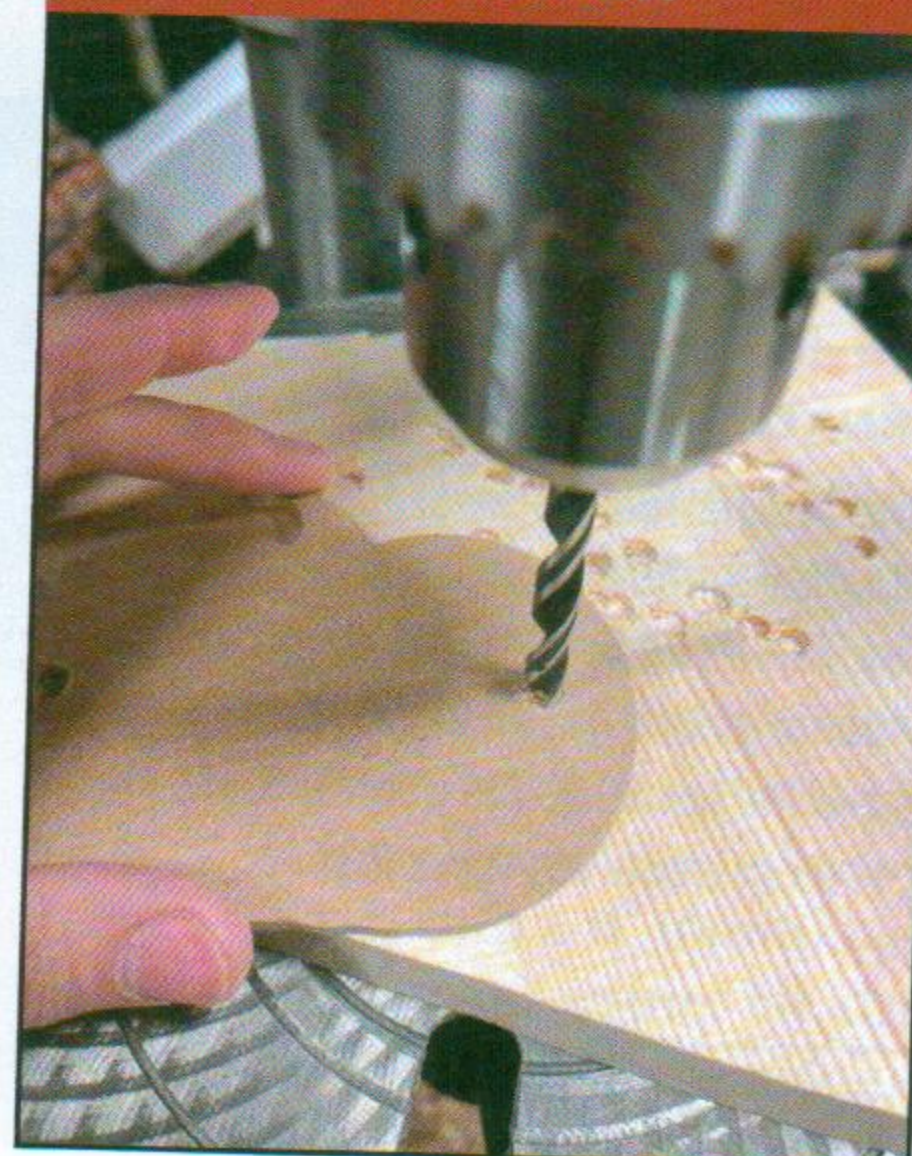


**3** **Shape and glue the pumpkin.** Starting with the middle sections, round the edges of the pumpkin pieces with the oscillating drum sander, using each piece as a guide to gauge height for all adjacent pieces.



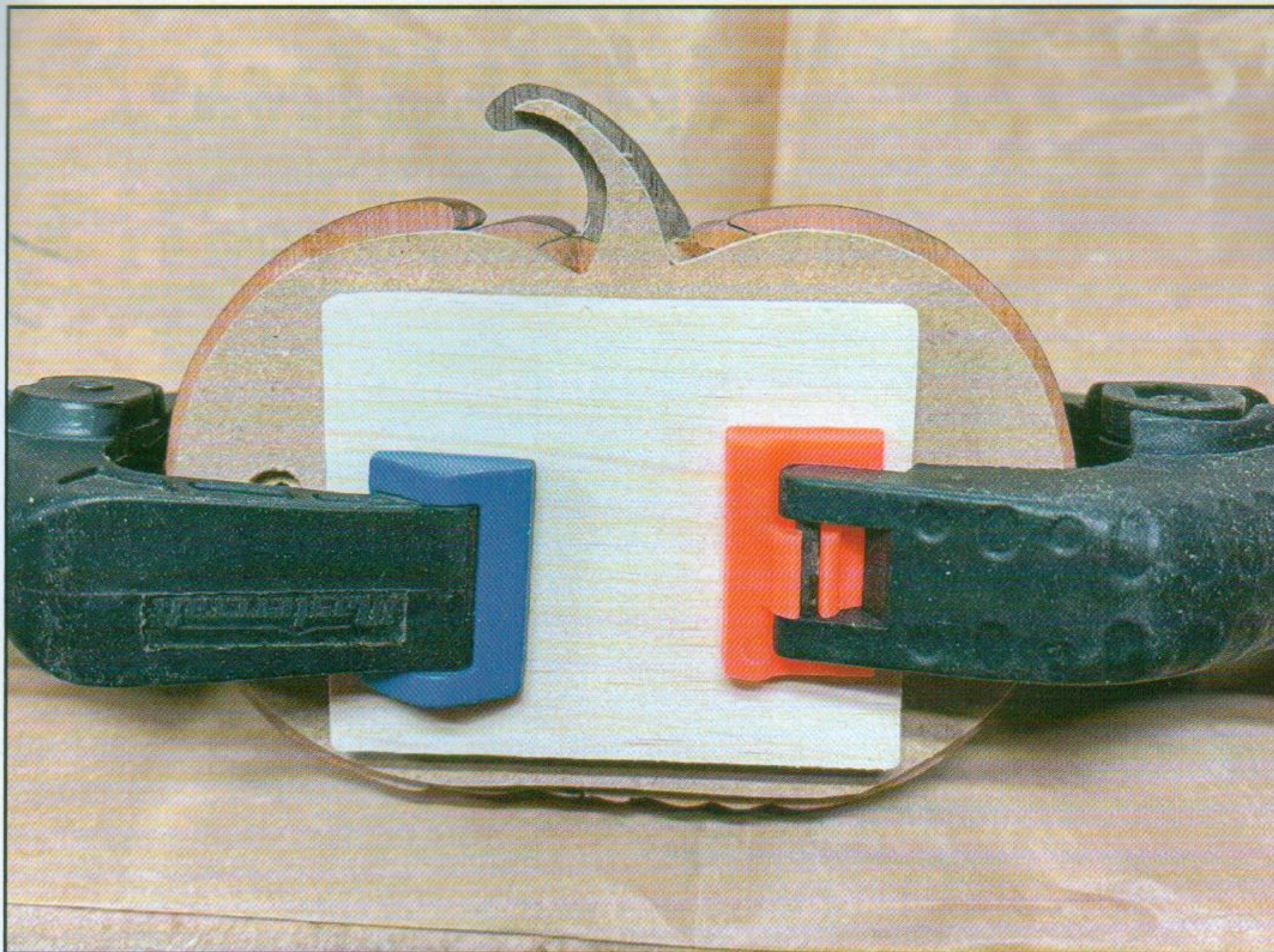
**4** **Assemble.** Glue all pieces together (pumpkin, stem, features) using cyanoacrylate (CA) glue. Clamp and let dry.

## ADDING A BACKER



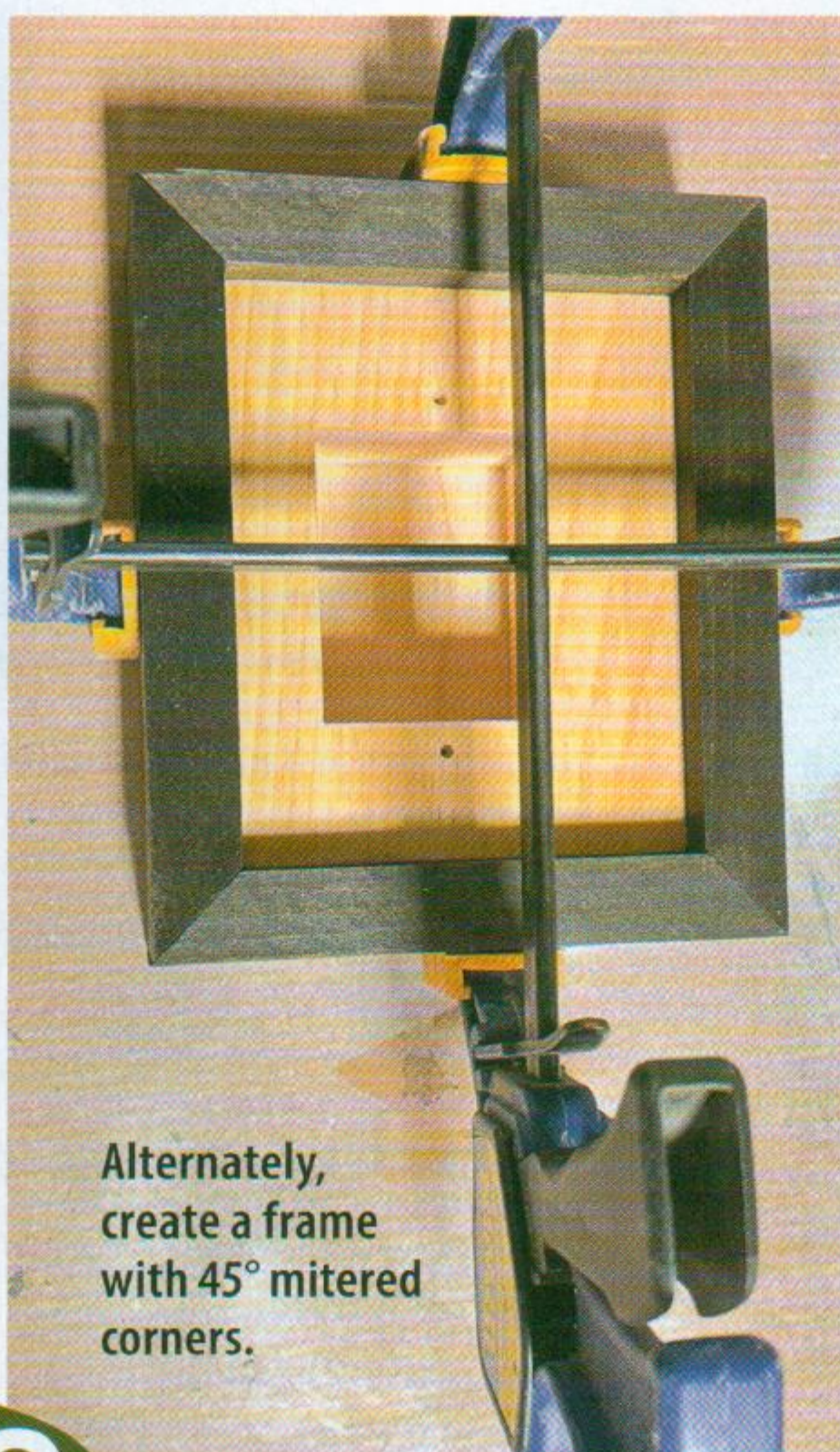
**5** **Prepare the backer.** Trace around the completed pumpkin shape on a piece of  $\frac{1}{8}$ " (3mm)-thick MDF, and then draw a  $\frac{1}{8}$ " (3mm) line that is  $\frac{1}{8}$ " (3mm) in from the traced line. Cut along this line with w #3 blade to create the backer. Using the pattern as a guide, mark and drill  $\frac{1}{4}$ " (6mm) holes for the magnets.





6

**Glue the backer to the pumpkin.** Clamp and set aside to dry. Next, using the pattern as a guide, glue the  $\frac{1}{4}$ " (6mm) slice that you cut from the waste material in Preparing the "Safe" to the back of the pumpkin backer. Clamp and set aside to dry. Measure the safe and adapt the size of your frame accordingly. Cut the frame pieces to size on the scroll saw or with another saw of your choice.



Alternately, create a frame with 45° mitered corners.

### Painting and Finishing

Stain or paint the frame pieces and let dry. I used a water-based stain for the frame. Seal the safe and the pumpkin in your choice of finish; I used clear satin spray varnish.

Glue the  $\frac{1}{8}$ " (3mm)-thick plywood to the back of the safe. Clamp until dry. Glue the frame pieces onto the safe block using simple butt joints. Clamp in place and let dry.

Using CA glue, place two  $\frac{1}{4}$ " (6mm) neodymium magnets in the drill holes that were made in Step 5 on the backer of the pumpkin. Then glue two magnets into the wall safe drill holes. Attach your choice of hanger.

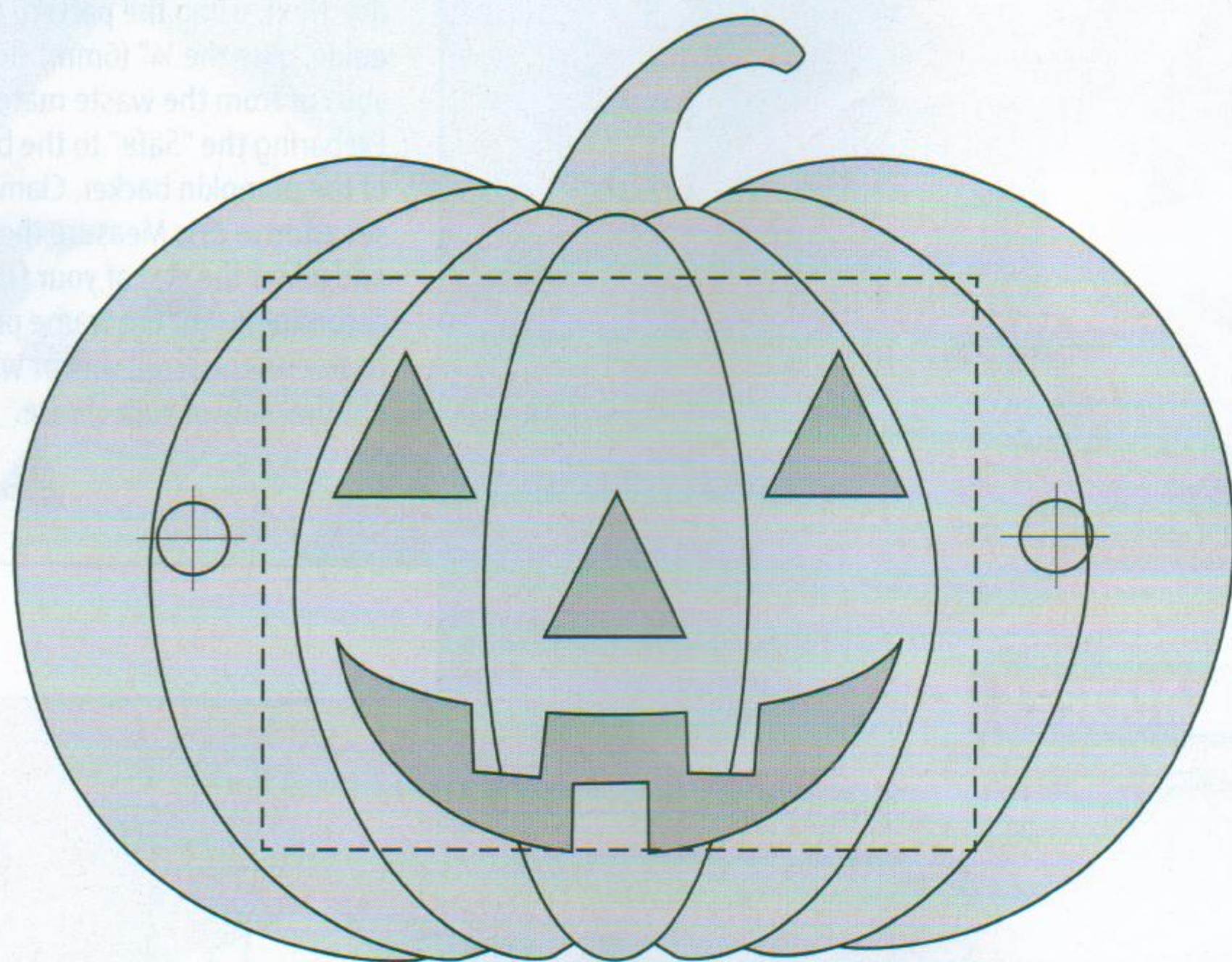
Now you're ready to hang your wall safe or stand it on a shelf.

### Did You Know?

The frame in this project is made with butt joints. Most professional frames are made with a miter saw, which creates angled cuts. However, butt joints are a little easier because they allow you to glue rectangular pieces together directly.



## Pumpkin Wall Safe Pattern



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### Materials & Tools

#### Materials

- Wood, such as pine,  $\frac{3}{4}$ " (1.9cm) thick: frame top and bottom, 2 each 2" x 6 $\frac{1}{2}$ " (5.1cm x 16.5cm); frame sides, 2 each 2" x 4" (5.1cm x 10.2cm)
- Wood, such as pine, 1 $\frac{1}{2}$ " (3.8cm) thick: safe blank, 4" x 5" (10.2cm x 12.7cm)
- Wood, such as tigerwood,  $\frac{3}{4}$ " (1.9 cm) thick: pumpkin, 6" x 7" (15.2cm x 17.8cm)
- Wood, such as walnut,  $\frac{1}{2}$ " (1.27cm) thick: stem, 1" (2.5cm) square
- Wood, such as yellowheart,  $\frac{1}{8}$ " (3mm) thick: features, 2 $\frac{1}{2}$ " (6.4cm) square
- Plywood,  $\frac{1}{8}$ " (3mm) thick: backer, 4" x 5" (10.2cm x 12.7cm)
- Adhesive: repositionable spray
- Glue: wood, cyanoacrylate (CA)
- Tape: painter's
- Sanding sponges: medium and fine
- Stain: water-based brown

- Finish, such as Varathane®: satin
- Neodymium magnets:  $\frac{1}{4}$ " (6mm)-dia.: 4 each  $\frac{1}{8}$ " (3mm) thick
- Hanger: sawtooth or hanger of your choice

#### Tools

- Scroll saw with blades: #3, #5, #7 reverse-tooth
- Drill press with bits:  $\frac{1}{16}$ " (2mm),  $\frac{1}{4}$ " (6mm)-dia.
- Drum sander
- Awl
- Clamps

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



Rita Cels is a retired teacher and self-taught scroller from Leduc, Alberta, Canada. Although much of Rita's time is spent making wooden children's

toys, in her spare time, she loves designing special boxes using a variety of woods and techniques. Check out Rita Cels Creations on Instagram and Etsy.



# Compound-Cut Giraffe Pair

**This power couple is ready to take on the savanna**

*By Sue Mey*

*Cut by Kaylee Schofield and Jon Deck*

**S**ocial and friendly by nature, giraffes are stunning animals that can be found all over sub-Saharan Africa. They live in groups called “towers” and are the world’s tallest mammals. Their long necks evolved to allow them to eat the leaves of high trees, particularly mimosa and acacia. This graceful giraffe pair is made from 1½" (3.8cm)-square wood, and you can use a rotary tool to make the completed shapes more lifelike.

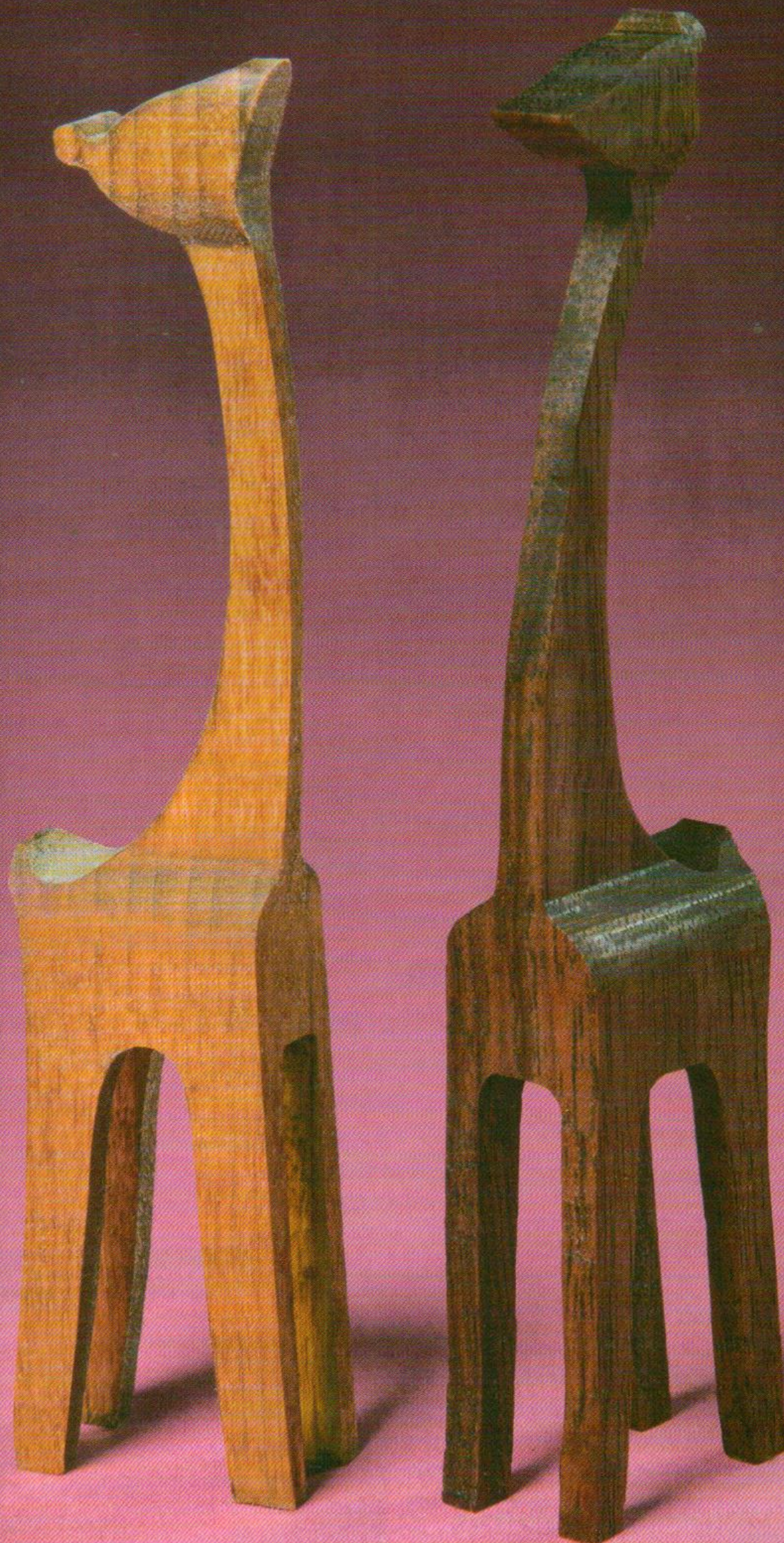
## Getting Started

Apply masking tape or painter’s tape to the workpiece. Photocopy the pattern, and then cut along the perimeter lines for the rectangles. Fold the pattern on the dotted centerline, and then apply spray adhesive or glue stick to the back. Align the fold with the corner of the blank and the bottom with the straight edge of the wood. Press the pattern into place, removing all bubbles.

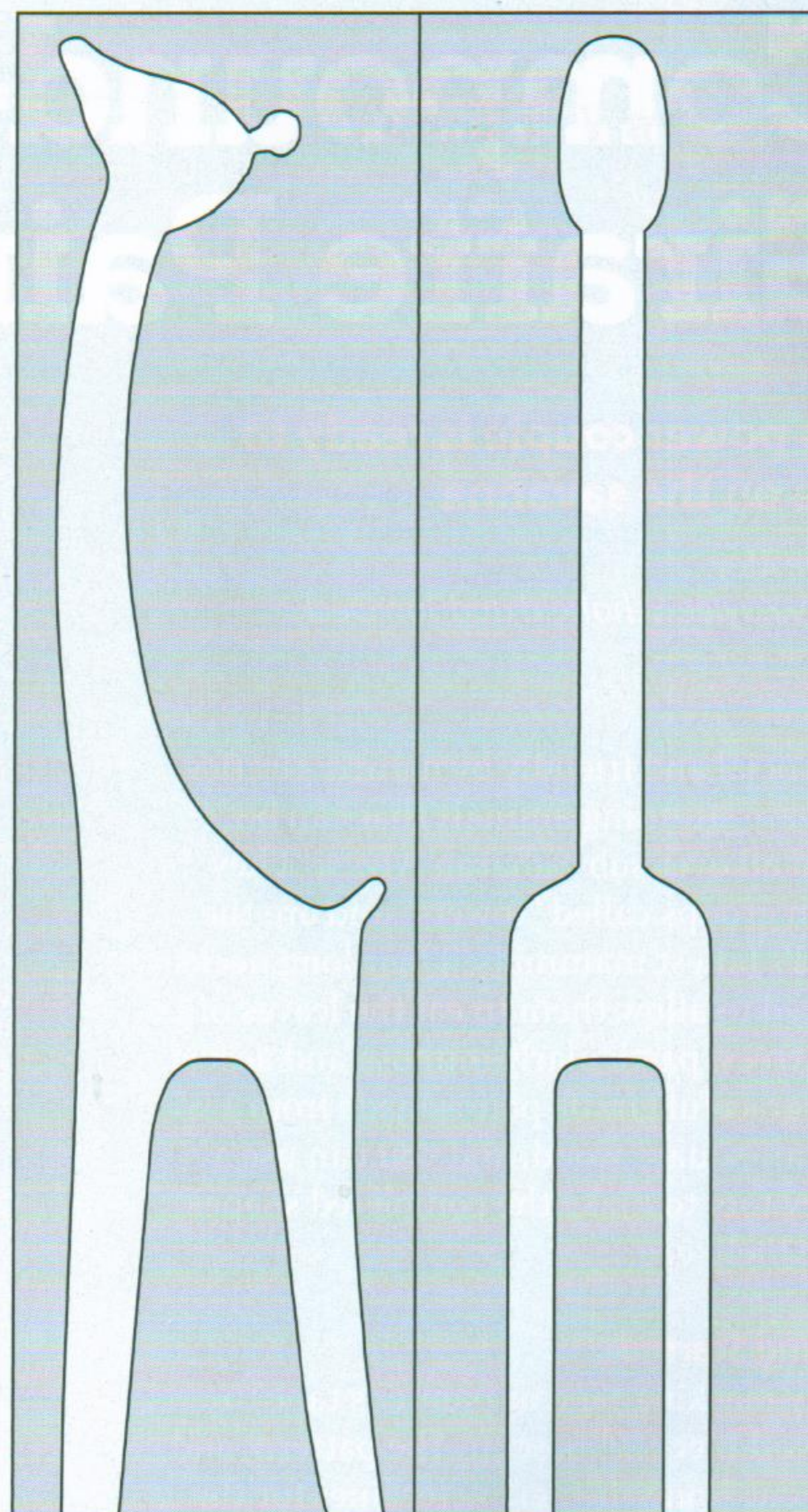
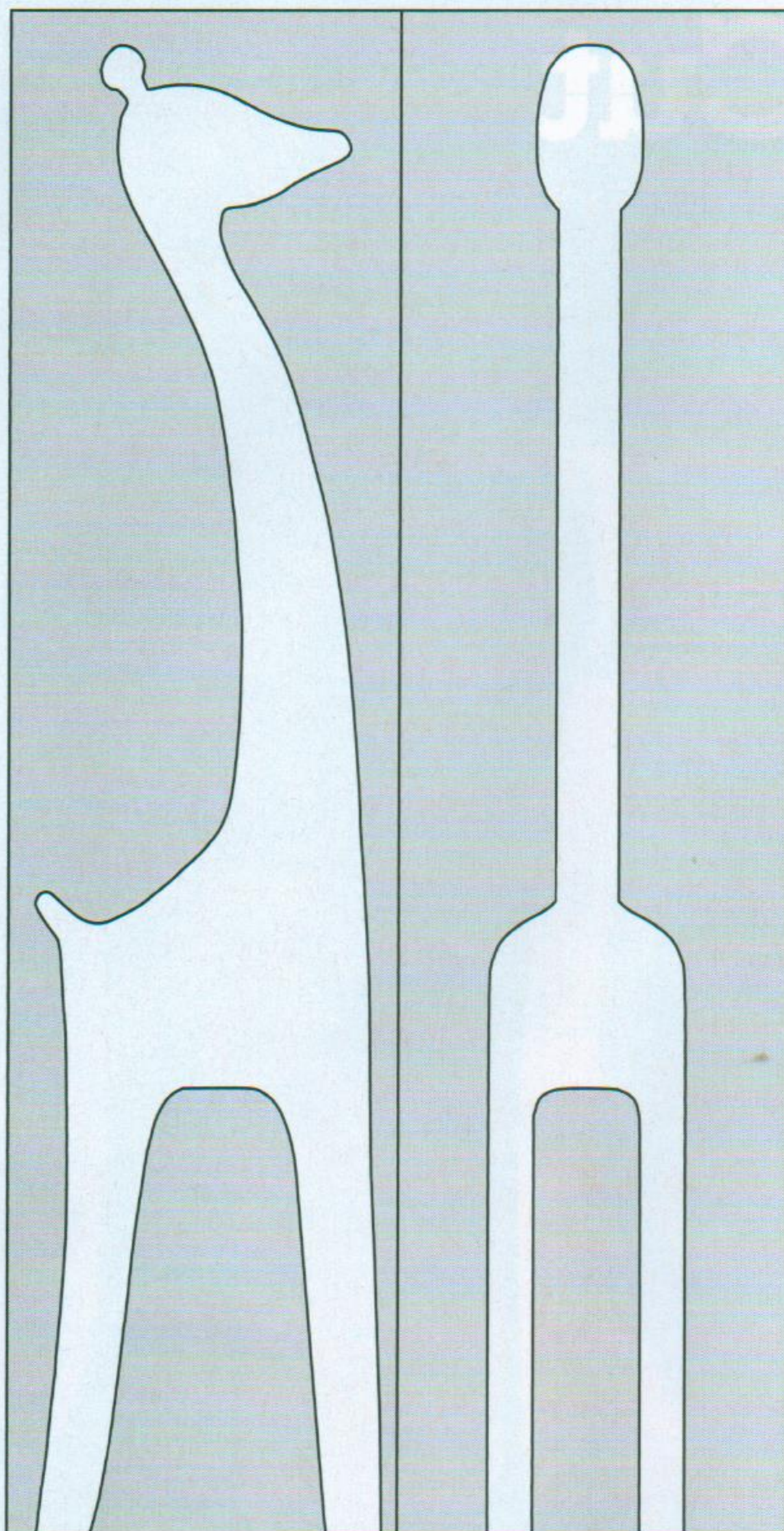
## Cutting and Shaping

Make the scroll saw cuts on one side. I suggest a #7 blade for softer wood like pine and a #9 blade for hardwoods. Replace the waste pieces and wrap clear tape around the blanks to secure them. Rotate the blank 90° and cut the second side. Remove the waste wood.

You can refine the shape of the giraffes using a rotary tool or hand carving tools, and also create ossicones for your animals. (Those are the two protrusions on a giraffe’s head.) To do this, separate the knob on each animal’s head and round over the square edges.







## Compound-Cut Giraffe Pair Patterns

### Materials

- Wood, such as pine, basswood, or hardwood, 1½" (3.8cm) square: 2 each approx. 6" (15.2cm) long
- Tape: masking, painter's, clear packing
- Adhesive: spray or glue stick
- Sandpaper: assorted grits to 320
- Wood stain or acrylic paint (optional)
- Finish, such as clear satin spray varnish

### Tools

- Scroll saw with blades: #7 or #9 reverse-tooth
- Rotary tool with bits or hand carving tools (optional)
- Brush: assorted
- Scissors

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

### Finishing

Sand the pieces by hand until you achieve a smooth finish. Remove all the sanding dust with a stiff-bristled paintbrush. Apply stain or paint, if desired, and allow to dry. Apply several thin coats of clear spray varnish to the giraffe, allowing each coat to dry before applying the next.



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](http://scrollsawartist.com). She can be contacted at [suem@storage.co.za](mailto:suem@storage.co.za). Her pattern book, *Lighted Scroll Saw Projects*, is available from [schifferbooks.com](http://schifferbooks.com) and other outlets.





# Skunk Puzzle

**All the cuteness, none of the odor—  
this project is an instant win**

By Sarah Lyn Chamberlain

**S**imple jigsaw puzzles are great for teaching children problem-solving skills and hand-eye coordination. This cute skunk puzzle features large pieces that are easily manipulated by little fingers. A dark stain on the lower part of this guy's body contrasts with the natural wood to give him the look of a typical backyard skunk.

## Getting Started

I used pine for this puzzle, but almost any wood works. Print the pattern. Cover the wood with painter's tape and secure the pattern with adhesive spray, making sure the grain runs horizontally from nose to tail.

## Cutting and Finishing

Drill a hole for the skunk's eye. Cut the outside shape of the skunk first, and then cut the pieces. After cutting, reassemble the puzzle. Then use an orbital sander on the back and front, and sand the edges by hand to soften them. Stain the lower body pieces with a dark stain and the upper body pieces with a lighter stain. When dry, use clear gloss spray to finish.

Pattern for the  
**SKUNK PUZZLE** is in the  
pullout section.

## Materials & Tools

### Materials

- Wood, such as pine,  $\frac{3}{4}$ " (1.9cm) thick: 6" x 12½" (15.2cm x 31.8cm)
- Sandpaper: 80 and 150-grit
- Adhesive spray
- Tape: painter's
- Stains, such as Minwax®: ebony, golden pecan
- Finish, such as gloss spray

### Tools

- Scroll saw with blades: #7 reverse-tooth
- Drill with bit:  $\frac{1}{4}$  (6mm)-dia.
- Sander: orbital

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



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](http://creativestuff.ca).



# Owl Fretwork

Hang up this watchful bird and keep it out all year-round

By Daria Alyoshkina  
Cut by Robert Carpentier

Owls become active in the fall when they start looking for mates and preparing their winter homes. Elusive and naturally nocturnal, owls are not a common sight. Their glowing eyes, along with spooky screeches and hoots, can surely give pause to any night hiker. Perhaps this is why the owl has become a beloved Halloween icon.

## Getting Started

Pre-sand the wood to 320-grit using an orbital sander. Remove excess dust with a tack cloth. Since the plywood used for this project is thin, you may want to stack cut two or three owls. Once they're stacked, secure the edges with blue painter's tape.

Apply removable shelf paper to the top surface and attach the pattern with spray adhesive, making sure it is centered. Drill the blade-entry holes for the frets and the  $\frac{1}{4}$ " (6mm) holes for the eyes, and then sand the back smooth with the orbital sander once more.

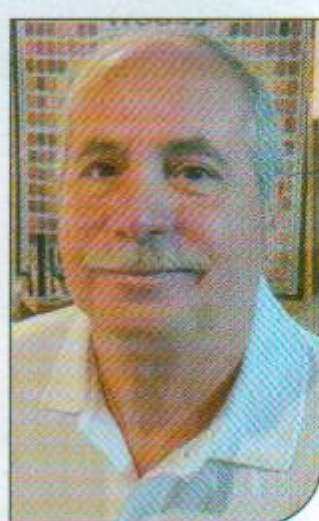
## Cutting and Finishing

Cut the frets on a scroll saw, starting with the center frets and working your way outward. If you did not stack cut, a smaller blade, such as a #2/0, should suffice. *Note: Make sure to cut slowly and let the blade do the work.* Remove the pattern and, if you chose to stack cut, separate the stack. Hand-sand the portrait with 320-grit sandpaper to remove any fuzzies. Wipe away excess dust with the tack cloth and apply a finish of your choice. I finished mine with an ebony stain, sealing the piece with a few coats of clear satin spray once dry.

Let dry and display as desired. This would make a striking Halloween decoration mounted on an orange backer inside a black matte frame.



Daria Alyoshkina is a papercutting artist and sculptor from Lviv, Ukraine. Find more of her work on Instagram @vytynankaalyoshkina.



Robert Carpentier is a retired music teacher living in West Islip, N.Y. He began scrolling in 2010 and joined a local woodworking club. He studied intarsia with Judy Gale Roberts in 2012 and has since done many solo exhibits, displaying over 60 pieces in fretwork, intarsia, inlay, and segmentation. Reach out to Robert via email at rcarpen51@yahoo.com.

## materials & tools

### MATERIALS

- Wood, such as Baltic birch plywood,  $\frac{1}{8}$ " (3mm) thick: 8½" x 11" (21.6cm x 27.9cm)
- Removable shelf paper, such as Con-Tact®
- Sandpaper: assorted grits to 320
- Tape: blue painter's
- Spray adhesive
- Stain, oil-base, such as Minwax® ebony
- Finish, such as clear satin spray

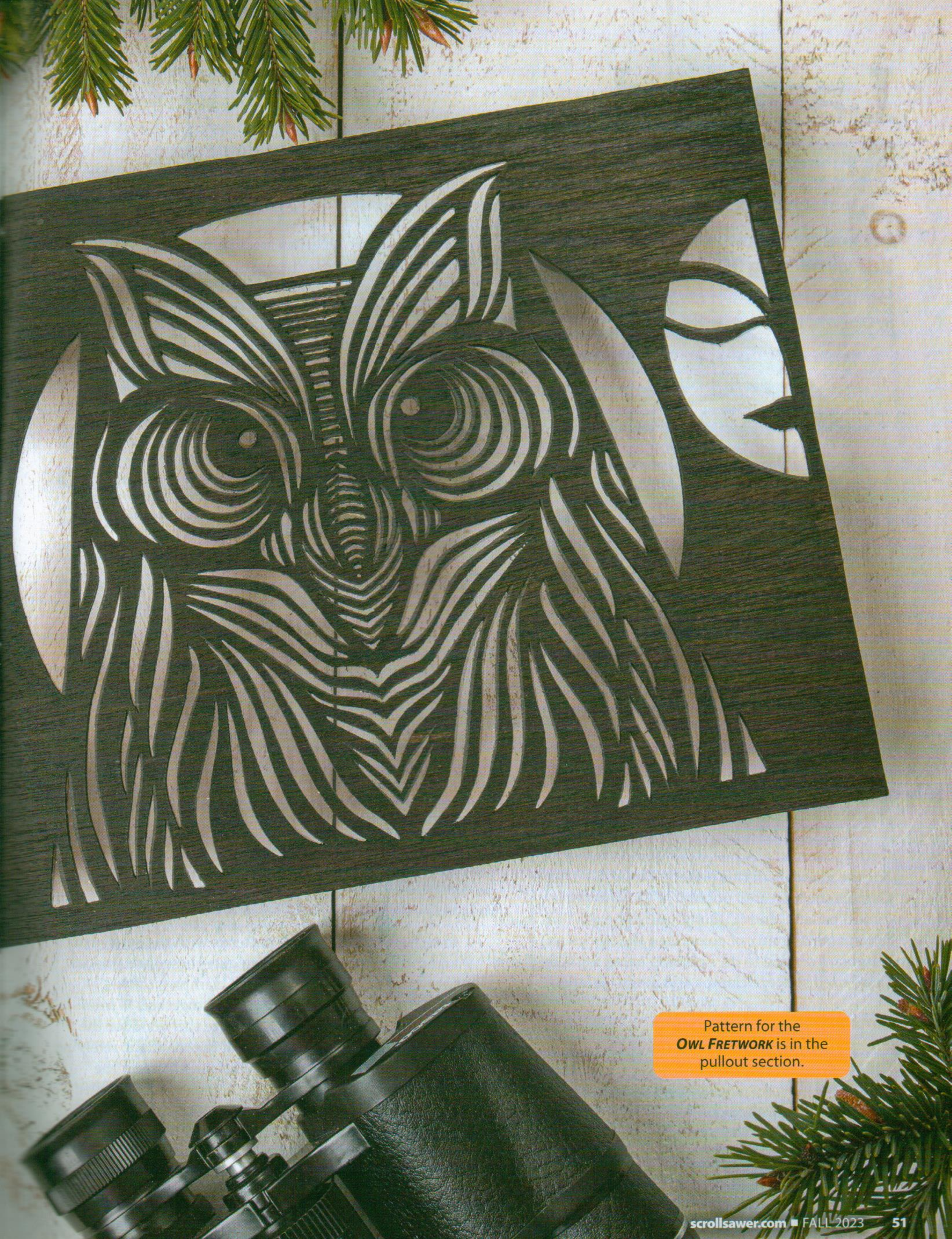
- Hanger of choice
- Paper towels and/or clean cotton cloths

### TOOLS

- Scroll saw with blades: #2/0 to #3 reverse-tooth
- Drill press with bits:  $\frac{1}{16}$ " (2mm),  $\frac{1}{4}$ " (6mm)-dia.
- Sander: orbital

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





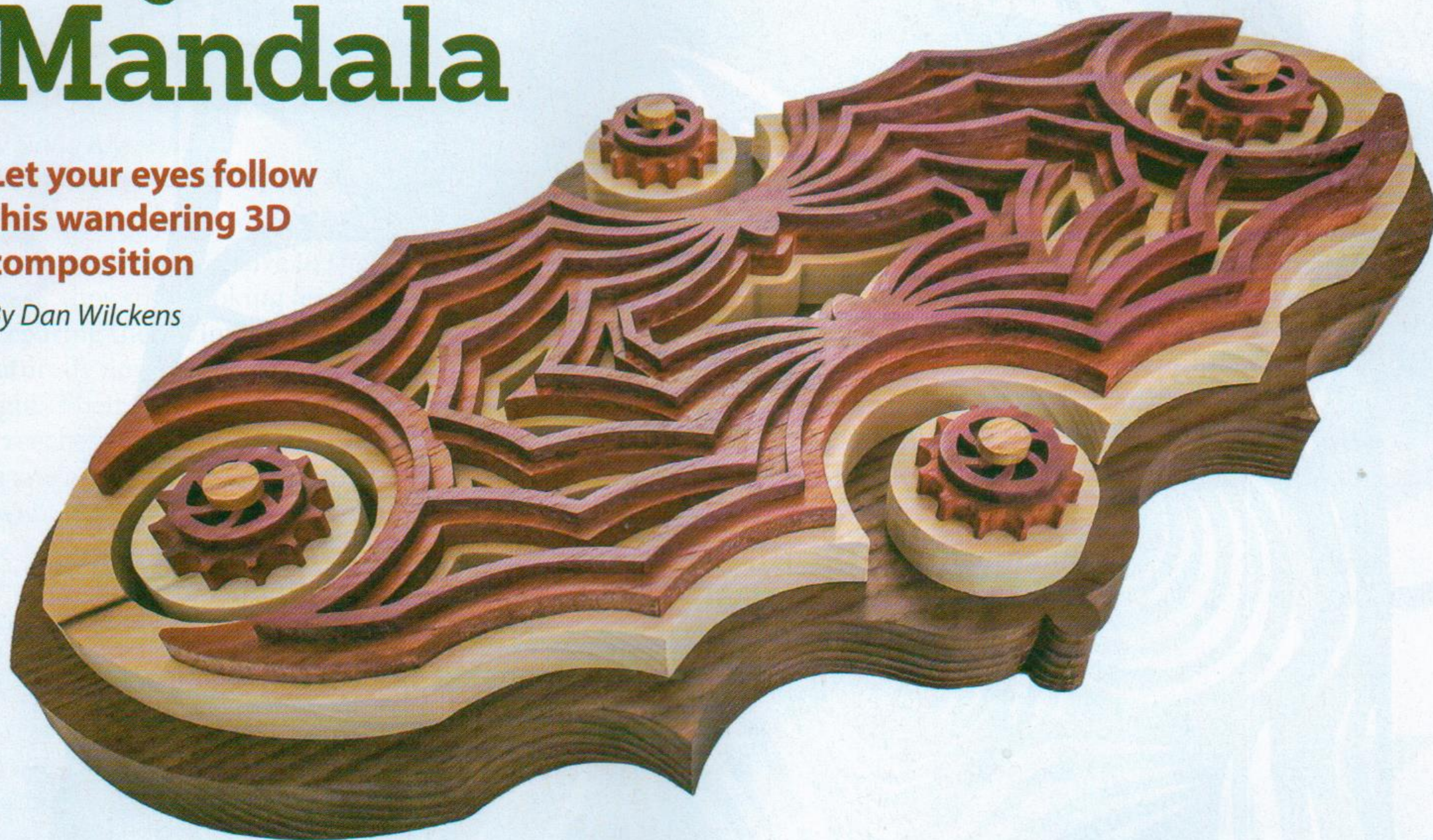
Pattern for the  
**OWL FRETWORK** is in the  
pullout section.



# Layered Mandala

Let your eyes follow this wandering 3D composition

By Dan Wilckens



**M**any people feel a sense of calm when viewing the winding, repetitive design of a mandala. This wall hanging project will bring the soothing feel of the outdoors into any room with an array of naturally colored hardwoods. You can achieve an interesting tactile quality by stacking them. With all the options of hardwoods available, use your imagination to choose your favorite combination!

## Getting Started

For the mandala in this project, I used  $\frac{3}{4}$ " (1.9cm) Cambia (heat-treated poplar),  $\frac{1}{2}$ " (1.3cm) poplar,  $\frac{1}{4}$ " (6mm) padauk, and  $\frac{1}{8}$ " (3mm) purpleheart. This made for an amazing mix of colors! For the  $\frac{3}{4}$ " (1.9cm) Cambia, I needed to do a glue-up using my slide clamp. I also used squeeze clamps and pinch clamps.

## Cutting and Assembling

Pre-sand the wood blanks with an orbital sander, cover the wood with painter's tape, and apply the patterns with spray adhesive. I chose Cambia for the backer. Cambia isn't a great wood for scrolling with internal cuts because it's too fragile, but it has a nice dark color when finished, making it the perfect backer. Drill the start holes, which should be placed in the best corner



to begin cutting. Cut the patterns with the scroll saw and sand to your liking. Then glue these three pieces together and secure with pinch clamps.

Glue and clamp all four pieces together. While those pieces are gluing up, prepare the wood for the four smaller circular portions of the mandala, referring to the Parts List on page 53. You can stack cut the identical pieces, if desired. I opted to cut the smaller circles from canarywood because it contrasts nicely with the dark purpleheart.

Then glue and clamp the four subassemblies together, making sure that everything is centered.



# TIP

## WAX YOUR STACKS

When stack cutting, I put wax paper between the pieces to lubricate the blade. You can also use clear packaging tape, but I find that it creates too much static, causing sawdust to stick during a cut.

## Finishing

Glue the four subassemblies into place on the main part of the mandala. Add a sawtooth hanger to the back and display as desired.

## Parts List

|   | Part           | Qty. | Wood                          | Finished Dimensions                                    |
|---|----------------|------|-------------------------------|--------------------------------------------------------|
| A | Body Layer 1   | 1    | Cambria, 3/4" (1.9cm) thick   | 3/4" (1.9cm) thick: 8 1/2" x 14 1/2" (21.6cm x 36.8cm) |
| B | Body Layer 2   | 1    | Poplar, 1/2" (1.3cm) thick    | 1/2" (1.3cm) thick: 6" x 13 3/4" (15.2cm x 34.9cm)     |
| C | Body Layer 3   | 1    | Padauk, 1/4" (6mm) thick      | 1/4" (6mm) thick: 5 1/2" x 12 1/2" (14cm x 31.8cm)     |
| D | Body Layer 4   | 1    | Purpleheart, 1/8" (3mm) thick | 1/8" (3mm) thick: 5" x 11 1/2" (12.7cm x 29.2cm)       |
| E | Circle Layer 1 | 4    | Poplar, 1/2" (1.3cm) thick    | 1/2" (1.3cm) thick: 2" (5.1cm) square                  |
| F | Circle Layer 2 | 4    | Padauk, 1/4" (6mm) thick      | 1/4" (6mm) thick: 1 3/4" (4.4cm) square                |
| G | Circle Layer 3 | 4    | Purpleheart, 1/8" (3mm) thick | 1/8" (3mm) thick: 1 1/4" (3.2cm) square                |
| H | Circle Layer 4 | 4    | Canarywood, 1/8" (3mm) thick  | 1/8" (3mm) thick: 3/4" (1.9cm) square                  |

## Materials & Tools

### Materials

- Wood, 3/4" (1.9cm) thick: Body Layer 1, 8 1/2" x 14 1/2" (21.6cm x 36.8cm)
- Wood, 1/2" (1.3cm) thick: Body Layer 2, 6" x 13 3/4" (15.2cm x 34.9cm)
- Wood, 1/4" (6mm) thick: Body Layer 3, 5 1/2" x 12 1/2" (14cm x 31.8cm)
- Wood, 1/8" (3mm) thick: Body Layer 4, 5" x 11 1/2" (12.7cm x 29.2cm)
- Wood, 1/2" (1.3cm) thick: Circle Layer 1, 2" (5.1cm) square
- Wood, 1/4" (6mm) thick: Circle Layer 2, 1 3/4" (4.4cm) square
- Wood, 1/8" (3mm) thick: Circle Layer 3, 1 1/4" (3.2cm) square
- Wood, 1/8" (3mm) thick: Circle Layer 4, 3/4" (1.9cm) square
- Hanger: saw tooth
- Tape: clear packaging, masking, painter's
- Sandpaper: various grits
- Clear finish, such as Minwax® Spray Lacquer

- Spray adhesive
- Wood glue

### Tools

- Scroll saw with blades: #2, #3, #5, standard, reverse-tooth
- Saws: table saw, band saw
- Sanders: drum, belt, orbital
- Drill
- Clamps: slide, squeeze, pinch, C-clamps
- 10-lb. weight
- Planer
- X-ACTO® knife
- Squares: various sizes
- Dental picks

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

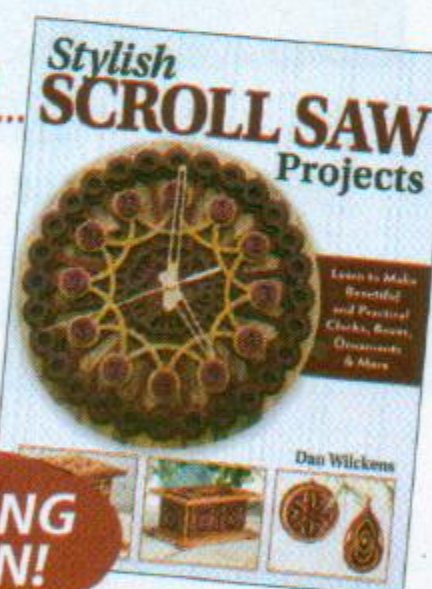
## WANT MORE FROM DAN?

### Stylish Scroll Saw Projects

By Dan Wilckens

Includes 17 step-by-step projects for layered clocks, shelves, ornaments, boxes, and more. Item 03597. Available for \$19.99 plus S&H (parcel post) from Fox Chapel Publishing, FoxChapelPublishing.com, 800-457-9112, or your local retailer.

COMING SOON!



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



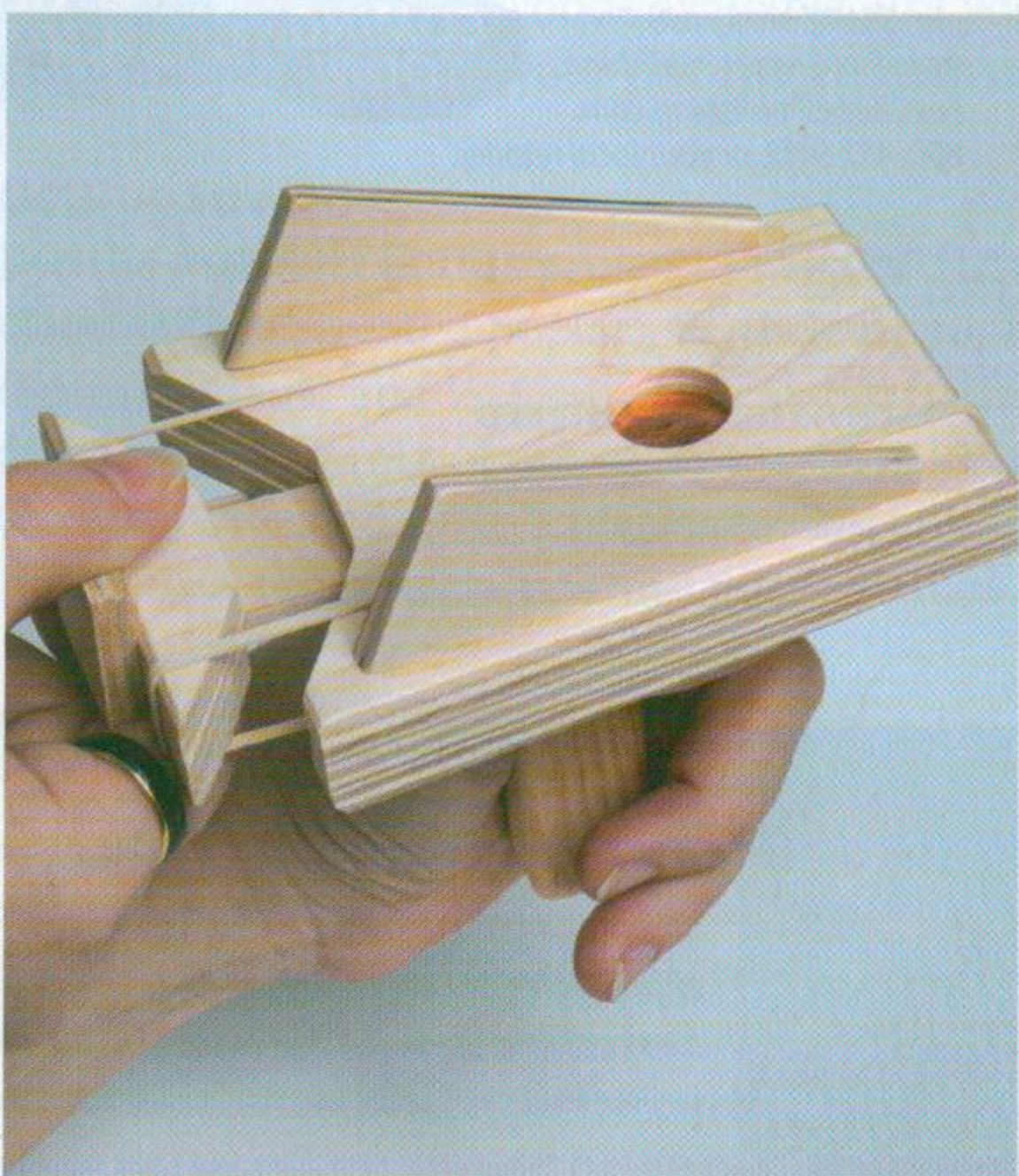
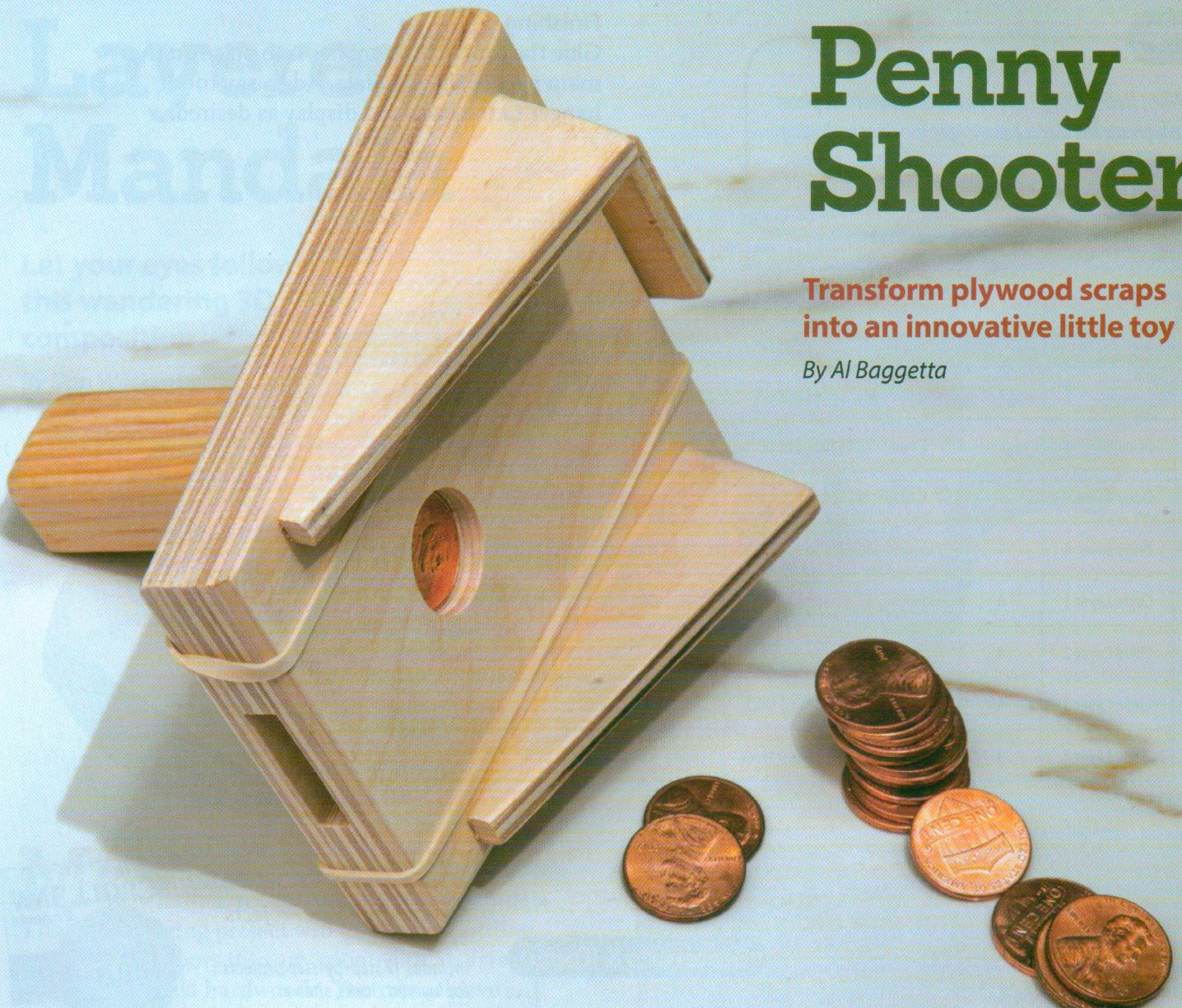
Dan Wilckens and his father, Ray, started scrolling 25 years ago as a hobby. Then they began designing their own patterns and making them available for others to enjoy. Dan's background is in tool design and tool and die work. See more of his work at wilckenswoodworking.net.



# Penny Shooter

**Transform plywood scraps into an innovative little toy**

*By Al Baggetta*



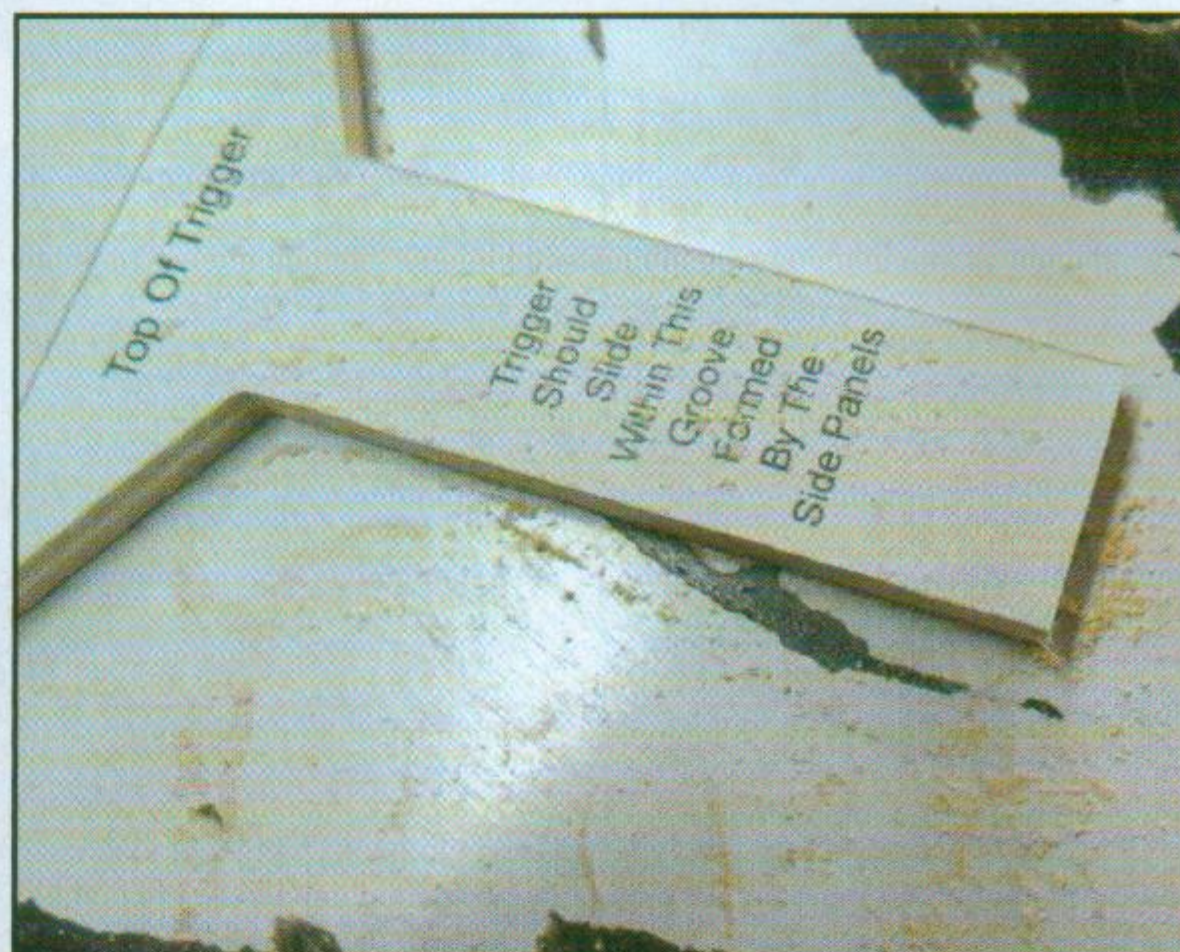
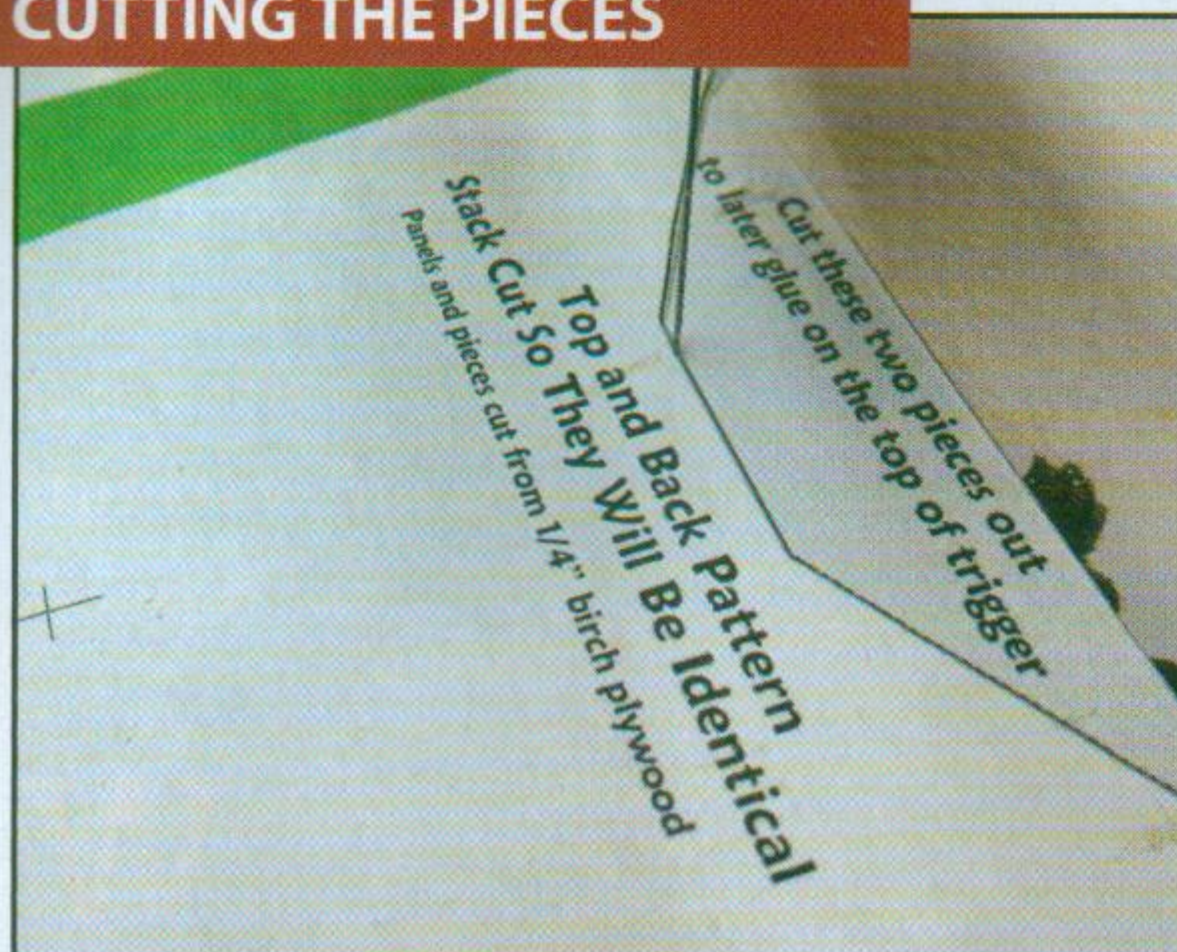
**T**his penny shooter brings back a feeling of long-lost days spent in the park, the world in front of you and not a cell phone in sight. Build this simple project and then set up your own gallery of plastic bottles or cardboard ducks and see how many you can take out. It's almost like bowling in the air. You will just need a little bit of skill on the scroll saw, some scrap wood pieces, and a few incidental parts (including a penny or two). So let's get building, pardner. *Note: This project is not intended for small children. Operate with caution, as flying projectiles can cause injury.*

## Getting Started

Photocopy the patterns. Stack the top and bottom body pieces and secure the edges with blue painter's tape; they will be identical. If you wish to add the optional decorative fins, stack two blanks for that pattern following the same method. Cover all blanks with blue painter's tape, and then attach the patterns to the surface of the tape using spray adhesive or a glue stick.



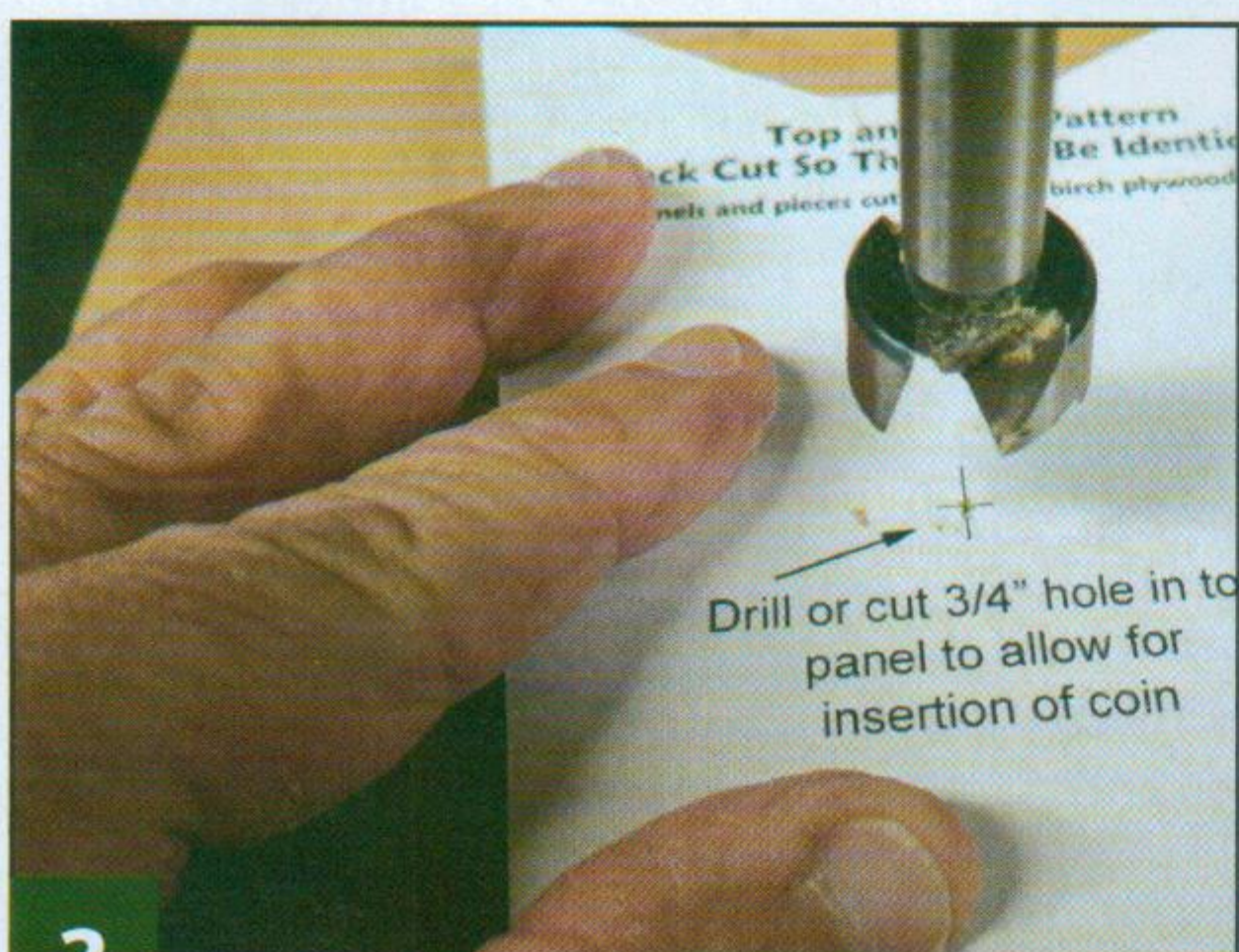
## CUTTING THE PIECES



1

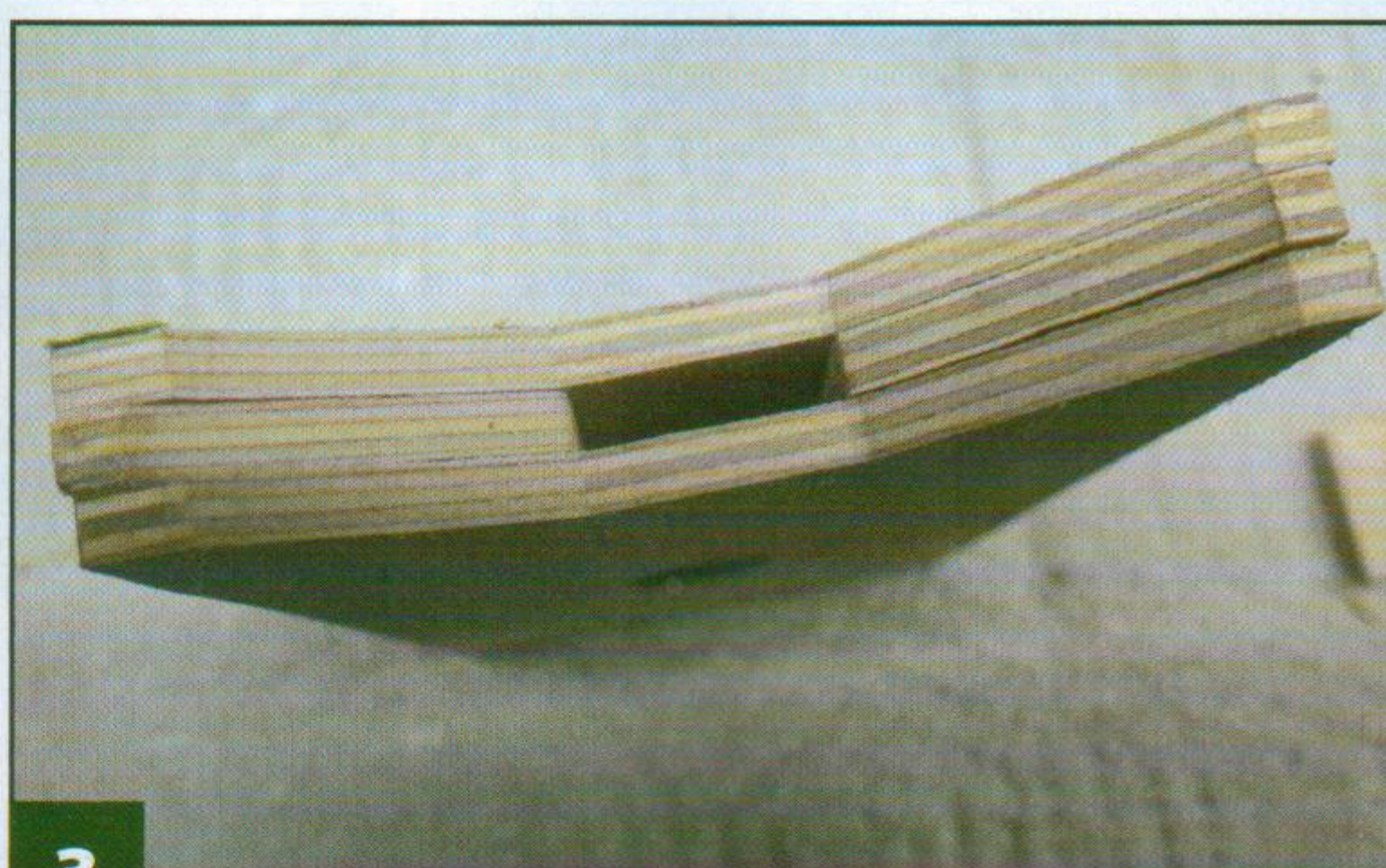
### Begin cutting.

Use a scroll saw to cut the pieces for the top of the trigger. Set these aside for now; you'll add them to the trigger area later. Cut the perimeter of the top and bottom body pattern. Then cut the trigger, side panel pieces, and handle.



2

**Cut the hole for the penny.** Take the top blank from the first cut and, using a drill press with a  $\frac{3}{4}$ " (19mm) Forstner bit, drill an entry hole at the cross mark in the pattern. *Note: If you don't have this bit on hand, you can trace around a penny and cut the hole on the scroll saw.*



3

**Dry-assemble.** Place the bottom piece on your worktable, and then place the side panels on top, with the trigger piece running down the center. Then take the top piece and place it over the side panels and trigger to sandwich them in. If you need to adjust fit for any of the pieces, do it now using the scroll saw or a length of 150-grit sandpaper.

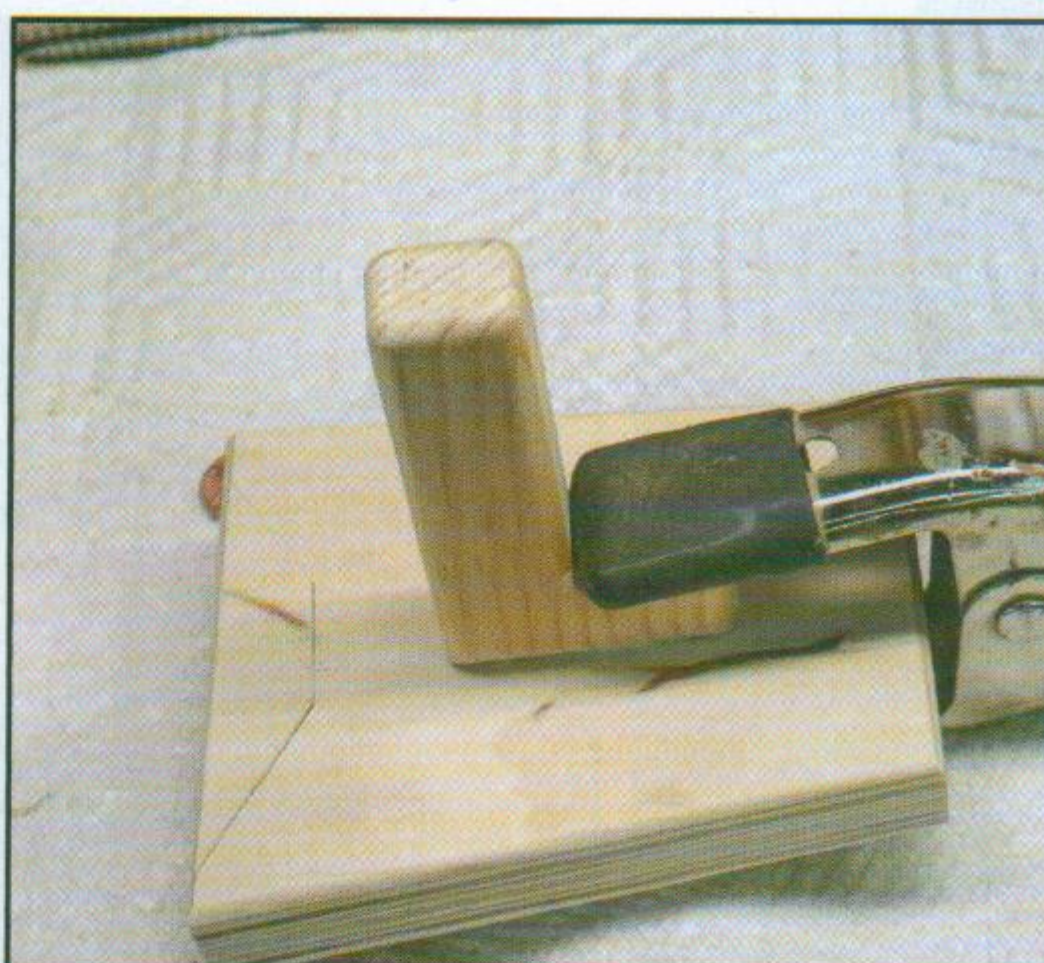
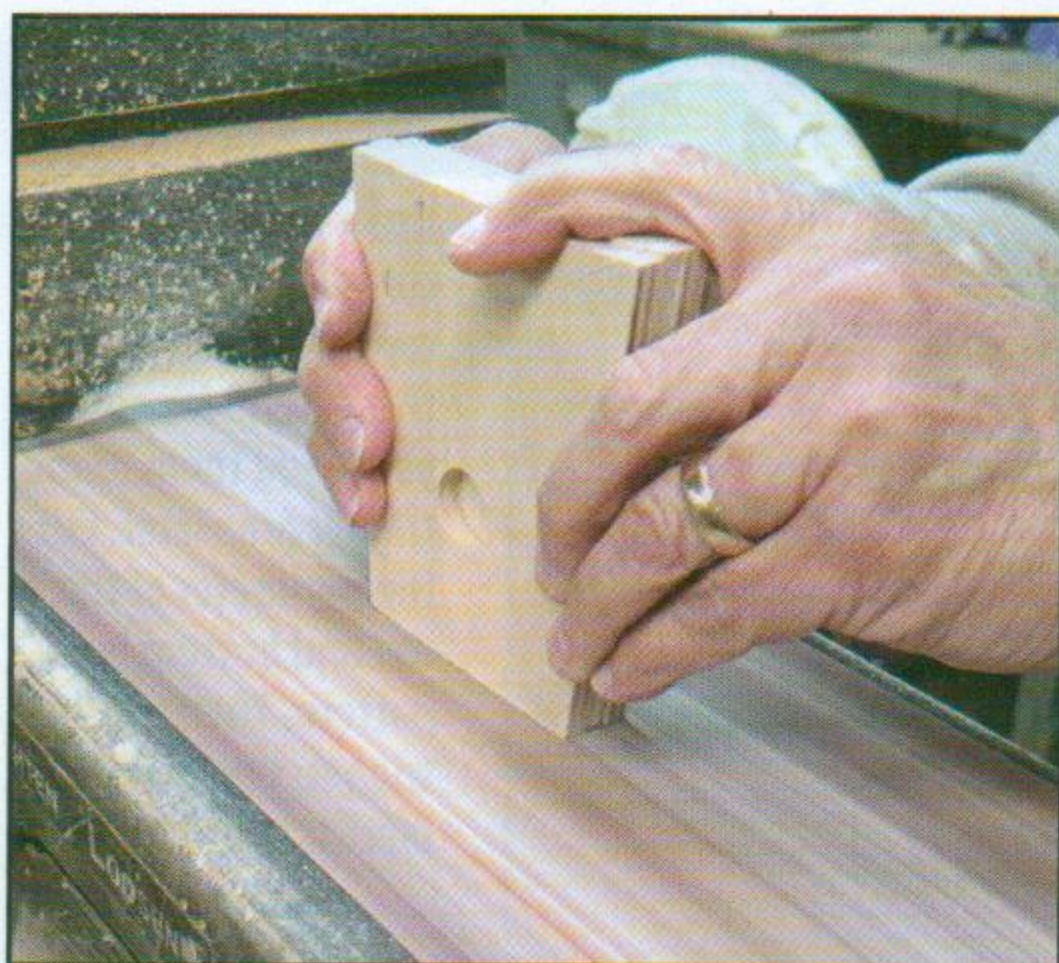
## ASSEMBLING & FINISHING



4

**Glue up.** If all the pieces fit, glue them together using wood glue. Start by sliding the trigger in place between the side panels for placement, glue and clamp the side panels to the bottom, remove the trigger, and let dry. Then slide the trigger back in and glue the two end pieces to the top and bottom of the trigger so that it sits flush with the rest of the pieces. Clamp until dry, and then try pulling the trigger in and out again. If the trigger sticks in the channel, sand and round the edges with 150- and then 220-grit sandpaper until there is smooth movement. Lastly, glue and clamp the top piece to the assembly.

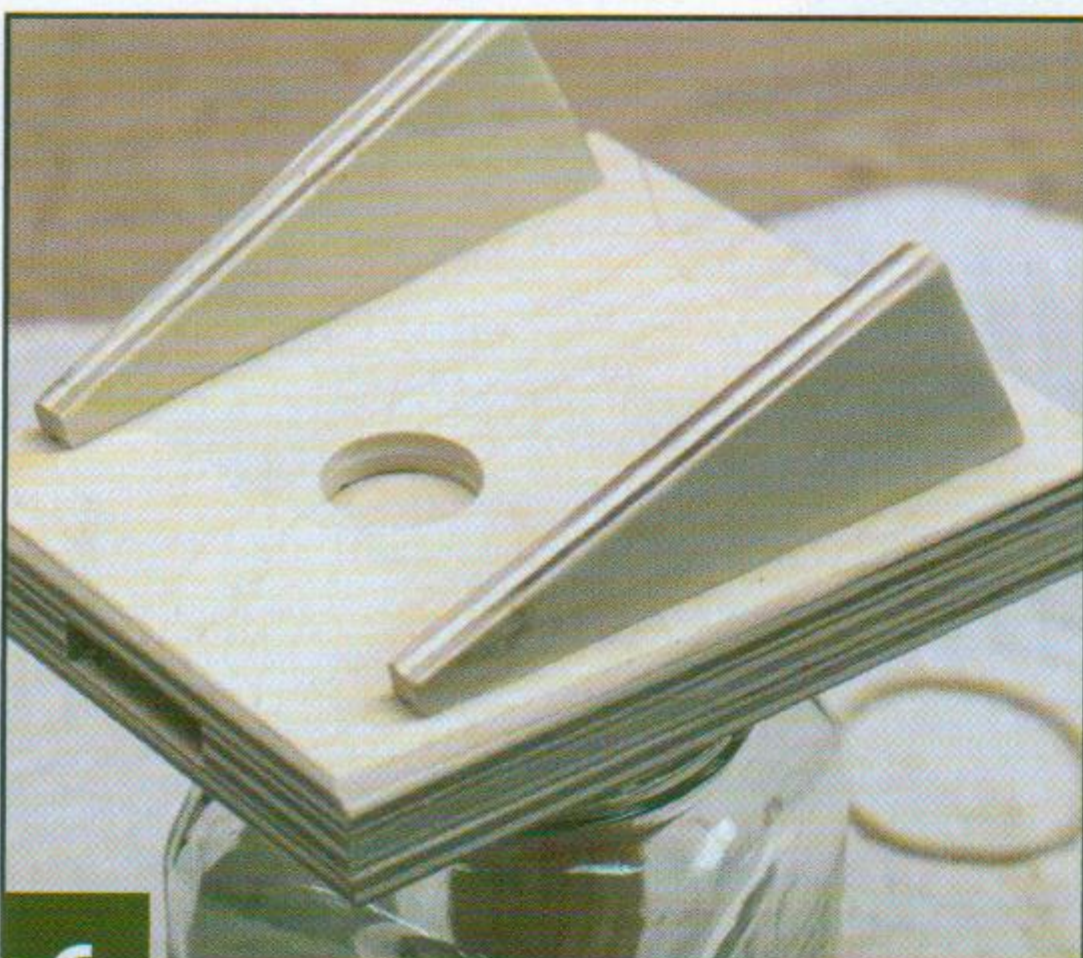




5

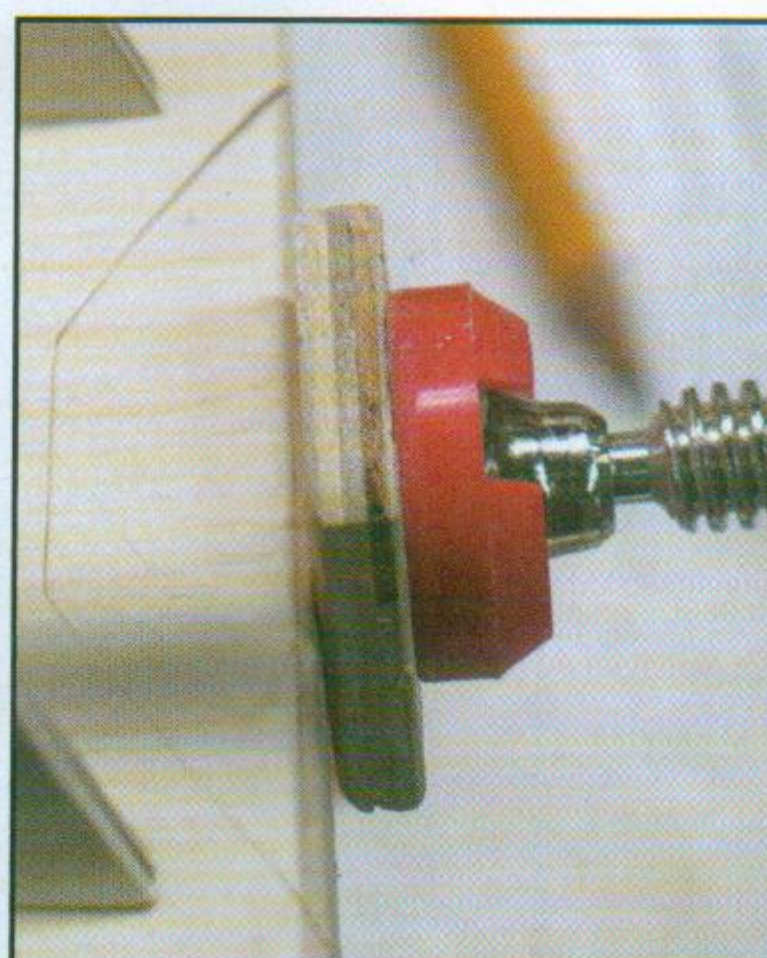
### Refine the penny shooter

**body.** Using a belt sander, sand the edges of the glued assembly flush, rounding them slightly, if desired, to remove any sharp edges. Then, using a pneumatic drum sander or a router with a roundover bit, round the handle edges. Remove all dust with a tack cloth. Glue the handle to the bottom of the shooter and let dry.



6

**Add the finishing touches.** If you want to add the optional decorative fins, mount them along each side of the top of the shooter with wood glue; they should sit about  $\frac{1}{4}$ " (6mm) in from each side. Glue the square grip to the back of the trigger. Once dry, get two rubber bands that fit snugly from the front of the shooter to the back, inside the fins, overlapping the ends of the trigger. Drop a penny in the hole and pull back on the trigger until the penny drops into position. Let the trigger go and the penny will fly out the front.



### Modifications

- If the rubber bands do not stay in place, cut a couple of notches in the front of the shooter and a few along the edge of the trigger.
- I chose to leave my shooter in natural wood, but you can also paint or stain it.
- This shooter was designed to shoot pennies, but if you want, you can make the trigger wider and entry hole bigger so that it shoots quarters or maybe plastic poker chips.

### Materials & Tools

#### Materials

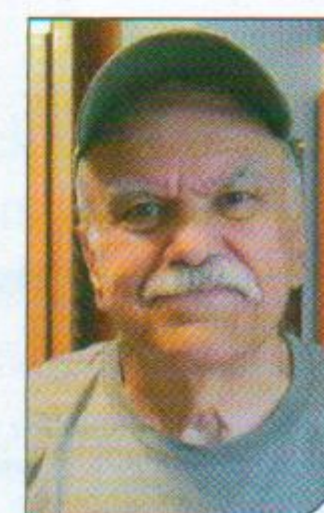
- Baltic birch plywood,  $\frac{1}{4}$ " (6mm) thick: penny shooter body, 2 each 4" x 4 $\frac{1}{2}$ " (10.2cm x 11.5cm)
- Baltic birch plywood,  $\frac{1}{4}$ " (6mm) thick: side panels and trigger, 4" x 4 $\frac{1}{2}$ " (10.2cm x 11.5cm)
- Baltic birch plywood,  $\frac{1}{4}$ " (6mm) thick: trigger grip, 1 $\frac{1}{8}$ " x 1 $\frac{1}{4}$ " (2.9cm x 3.2cm)
- Baltic birch plywood,  $\frac{1}{4}$ " (6mm) thick: fins, 2 each 1 $\frac{1}{4}$ " x 3 $\frac{1}{2}$ " (3.2cm x 8.9cm)
- Wood, such as pine,  $\frac{3}{4}$ " (1.9cm) thick: handle, 2" x 3" (5.1cm x 7.6cm)
- Wood glue, such as Titebond®
- Tape: blue painter's
- Glue stick or spray adhesive
- Tack cloth
- Sandpaper: assorted grits to 220
- Rubber bands: assorted
- Pennies

#### Tools

- Scroll saw with blades: #5 reverse tooth
- Sanders: disc; belt; pneumatic drum (optional)
- Router with bit:  $\frac{3}{4}$ " (19mm) roundover (optional)
- Drill with bit:  $\frac{3}{4}$ " (19mm) Forstner
- Clamps

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

Patterns for the **PENNY SHOOTER** are in the pullout section.



*Al Baggetta is a retired English teacher and former musician who took a liking to scroll sawing. Visit his pattern website at [baggetta.com](http://baggetta.com).*



# Jukebox Puzzle

Rock around the clock with this Day-Glo design

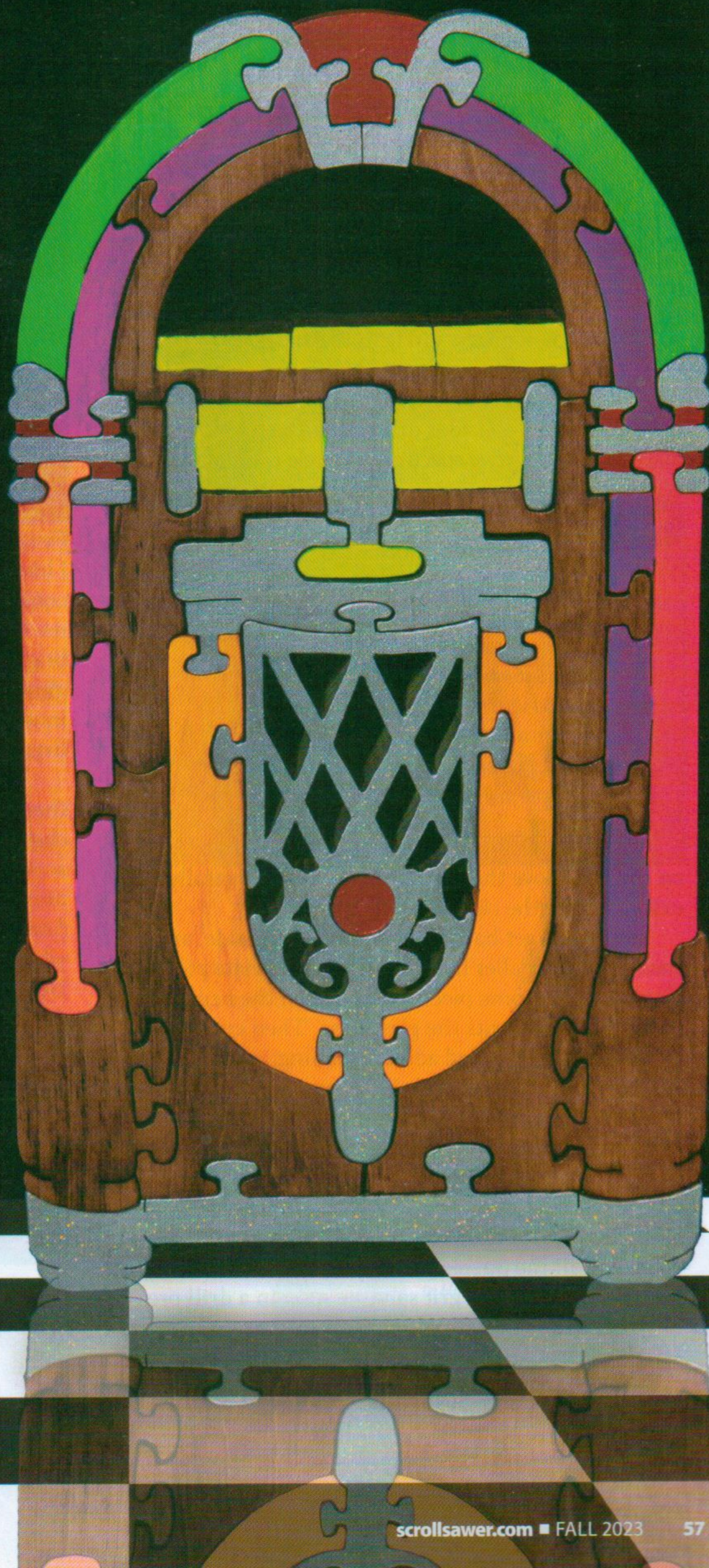
By Tim Gilman

**W**hen I was asked to design a jukebox puzzle, it was music to my ears. I immediately knew it would have two things that make great scroll saw designs: bright colors and plenty of curves! I also wanted to learn about something I'd never seen in person. I had only seen jukeboxes on TV, like in *Happy Days* and *Grease*. Early jukeboxes had the shape of old radios, with high-quality wood veneers and elaborate speaker grill fretwork. They had flourishes of chrome, mesmerizing bubble tubes, and fluorescent lights in colored tubes that continuously changed colors. You could see through the clear glass as the records were changed and the needle played your song.

The detail of this design makes for a puzzle that looks good as natural wood, but I designed it so the color tubes and chrome are separate pieces, making it easy to dye or stain them different colors. The puzzle in the main photo has different colors of black light paint on each side of the bubble tubes. Shine a blacklight on it and you'll see it glow like a classic jukebox! However you decide to finish the puzzle, this makes for a very fun project that can be displayed upright when finished.

## Did You Know?

On real jukeboxes, bubble tubes were ½" (1.3cm)-diameter glass filled with methylene chloride, which boils at 103°F. The tubes were installed vertically in line with the color tubes, often with a curve at the top. Heating crystals hidden at the bottom of the tube created bubbles that continuously rose to the top. The bubble tube lines in this puzzle conveniently double as dividing lines that can make painting easier.





## Getting Started

Begin by selecting the wood; I prefer soft maple. When soft maple is cut on the scroll saw, the end grain is smooth, and this light wood can be dyed or painted any color. I planed the wood to  $\frac{3}{4}$ " (1.9cm) so the finished puzzle is thick enough to be displayed standing upright. I always sand the wood before attaching the pattern. I sanded it on a drum sander with 180-grit sandpaper, but you could also use an orbital sander. Make a copy of the pattern, and then attach it with scroll saw tape or whatever method you prefer.

Drill 13 small holes to thread the blade through the fretwork of the speaker. If you're going to paint this puzzle, use a  $\frac{1}{2}$ " (13mm) Forstner bit to drill about  $\frac{1}{8}$ " (3mm) down on the circle in the speaker. This will create an indentation that will make it easier to accurately paint the circle red. If you don't plan to paint the circle, consider drilling all the way through instead. The negative space of the circle can then become

### TIP

#### FIRST THINGS FIRST

*When I begin a project, I always cut the silhouette of the design first. Then I cut the puzzle pieces that require the most focus to make sure I don't push the wood sideways. Doing so will result in a blade that's not perpendicular to the table and puzzle pieces that don't pull apart correctly.*

part of the fretwork detail.

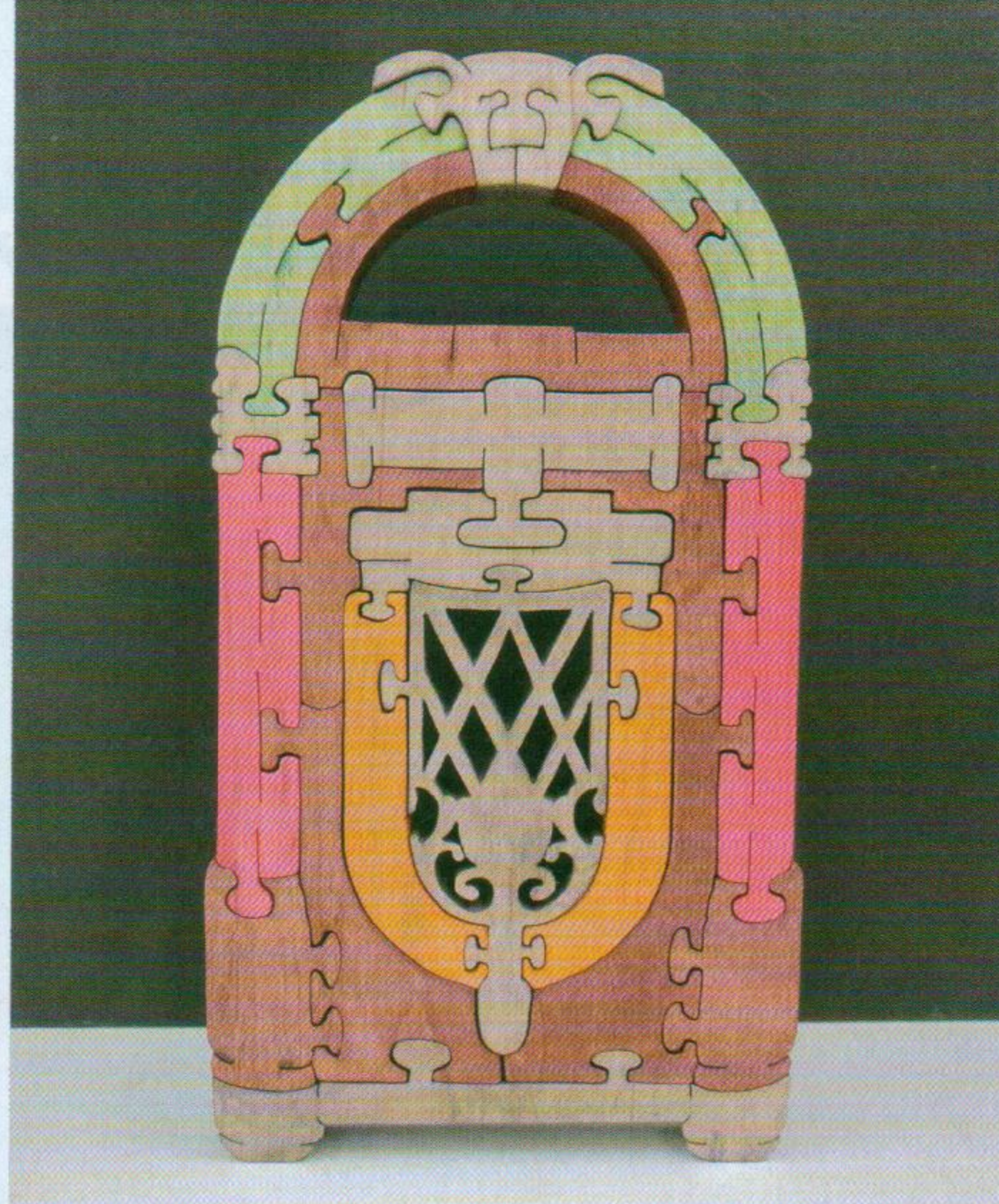
Cut the silhouette first. With a tall puzzle like this, I look for a place where I can split it. When it's split in two pieces, I can sit closer to the saw. To split this puzzle, enter

on the left above the chrome and cut horizontally, exiting above the right chrome piece.

Set the larger half of the puzzle to the side, and then cut the smaller half into the appropriate pieces. Cut the top chrome piece out and then the negative space that represents the glass area. Then cut the curved color tubes and add the veining.

I began the other half of the puzzle by cutting the fretwork so I'd have more surface area to hold onto. With the pierced cuts of the fretwork done, cut the base piece off and work up each of the sides. This puzzle has a lot of pieces, so you should change blades a few times.

Once all the puzzle pieces are cut, remove the pattern. I used a 180-grit sanding mop in a drill press to remove the fuzzies and lightly round over the edges. I used a brush attachment on a Festool dust extractor to remove dust from the puzzle pieces before applying finishes, but you could use a can of compressed air, if desired.



## Finishing the Project

I like colorful puzzles, but painting can be time-consuming. So, I dyed the puzzle, which allowed me to quickly color all the nooks and crannies. That brightened it up, but I wanted to make this jukebox glow and sparkle! I also wanted a way to make the inner half of the outer color tubes purple and the song lists yellow.

The end goal was to use blacklight paint where there would be lights and something sparkly for the chrome. But when testing the blacklight paint on scrap wood, I found it to be translucent. To reduce the number of coats needed to cover up the base color, I first used a few coats of regular opaque acrylic paint where I needed to change the color. Personally, I like Delta Ceramcoat® because it has great coverage and dries quickly. When the inner part of the color tubes







were purple and the song lists yellow, I used a few coats of the appropriate color black light paint on the color tubes.

Then I used a few coats of FolkArt® Color Shift Silver Flash on the chrome and used Delta Ceramcoat® to add the red details. Finally, I put a few coats of FolkArt® Dragonfly Glaze on the chrome. The glitter in this glaze makes the chrome sparkle in the light.

I let the paint dry for a couple days then dipped all the pieces in Gloss Arm-R-Seal® and blotted off the excess before putting it on a drying rack.

## Saving Paint

I used a lot of paint colors for this project and they all needed multiple coats. I discovered a great trick by accident. My daughter went into my workshop and "borrowed" the two colors I had gotten for the chrome to color some slime she was making. I was worried I would run out of those colors. To save paint, I didn't wash out my pallet between coats. Instead, I used clear packaging tape to cover the paint in the pallet. Even the next day the paint under the tape didn't dry out! This worked so well that I will do this anytime something requires multiple coats.



## Changing Blades

When I teach scroll sawing, a common question is, "How often should you change the blades?" When you are cutting, it's hard to tell because a blade's sharpness gradually declines. I tell students that it depends on the type of blade, the type of cuts, and the wood density, but a good rule of thumb is to start out changing the blade at a convenient place in the design, after about 10-15 minutes of cutting. Remember where you set down the old blade. If the new blade performs better, you can throw out the old blade. If the new blade performs the same, the old blade was still OK, and you can put it back in later. Over time you'll develop a memory of how much time you can get out of a blade when cutting a particular wood species. But when learning, it's better to change blades too soon than to realize it too late and have puzzle pieces that stick because the blade was too dull to cut accurately.



Tim has been teaching middle school Tech Ed since the early 2000s in Harrisburg, PA. With the birth of his first child, Grayson, he started cutting scroll saw puzzles and now sells them at several craft shows a year and at [graysonsworkshop.com](http://graysonsworkshop.com). He also teaches scroll saw classes at the Woodcraft in Harrisburg.



## Materials & Tools

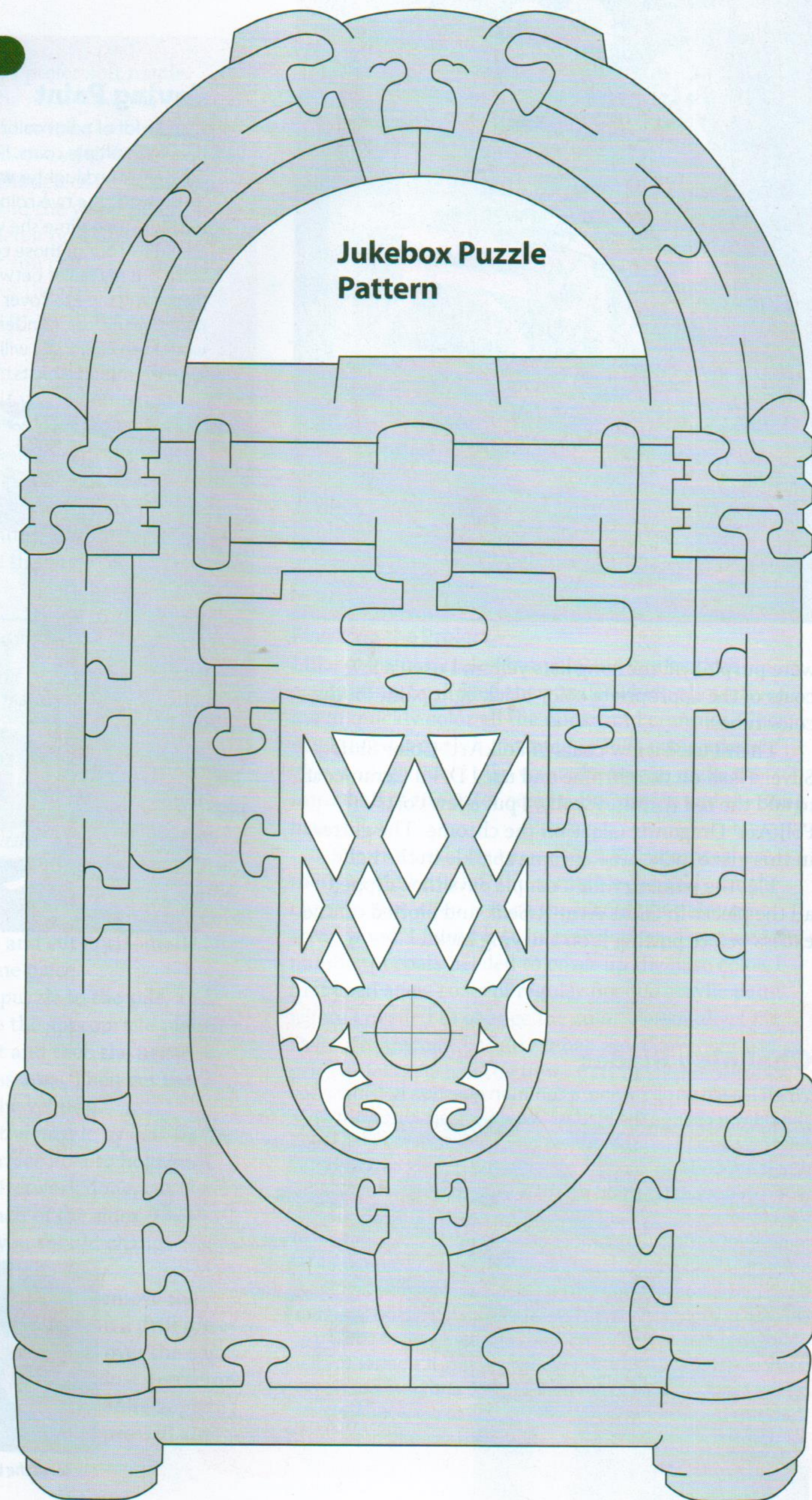
### Materials

- Wood, such as soft maple or hardwood of choice,  $\frac{3}{4}$ " (1.9cm) thick:  $5\frac{1}{2}$ " x  $10\frac{1}{16}$ " (14cm x 25.5cm)
- Tape: scroll saw or blue painter's
- Spray adhesive
- Wood dyes: Mowhawk Ultra Penetrating NGR Stain Light Red Mahogany, TransFast Coral Pink, and TransFast Gray, TransTint Green
- Acrylic paints: FolkArt® Color Shift Silver Flash, FolkArt® Dragonfly Glaze; Delta Ceramcoat: bright red, passion, sunbright yellow; DecoArt® Black Light Neon: green, orange, pink, ultraviolet yellow,
- Finish: clear, such as General Finishes Gloss Arm-R-Seal®

### Tools

- Scroll saw with blades: #7 PS Wood Super Sharp
- Sander: drum or orbital
- Drill press with bits:  $\frac{1}{2}$ " (13mm) Forstner, 180-grit sanding mop
- Vacuum
- Paint pallet
- Paintbrushes

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





# Mummy Intarsia

Turn four little scraps into a spook-tacular magnet or wall hanging

By Brad Eklund and Hazel Trinidad

**S**pooky, scary monsters are fun and all, but how about cute, adorable monsters? They can be even more fun! We designed this Egyptian mummy with a cartoonish look in mind. You have nothing to fear from those goofy eyes. This is also a great project for newer intarsia artists.





## Cutting

Make five copies of the pattern: one for each kind of wood, plus a master copy for reference. Apply the patterns to their respective pieces of wood with repositionable spray adhesive, and then drill the  $\frac{1}{4}$ " (6mm) eyeholes. Cut out all the pieces on a scroll saw, keeping the bandage wraps all together for now. Fit the yellow eyes into the face segment, and then fit the face and eyes into the bandages. If the face section is too large, adjust accordingly; then cut up all the individual bandage segments. Cut the dowels for the pupils. Remove the patterns.

## Shaping

Shaping this project is straightforward. Give all the bandage segments a slight round over with a rotary tool (using a  $\frac{1}{2}$ " [13mm] sanding drum). Round over the edges even more along the perimeter. Thin down the face and eyes slightly, so they look like they are peeking out from under the bandages. Lastly, soften the edges of the yellow eyes to give them a rounded appearance. You can woodburn the  $\frac{1}{4}$ " (6mm) dowels for the

pupils or use a dowel plate to make your own dowel out of a dark wood. Sand the pupils down to an appropriate height.

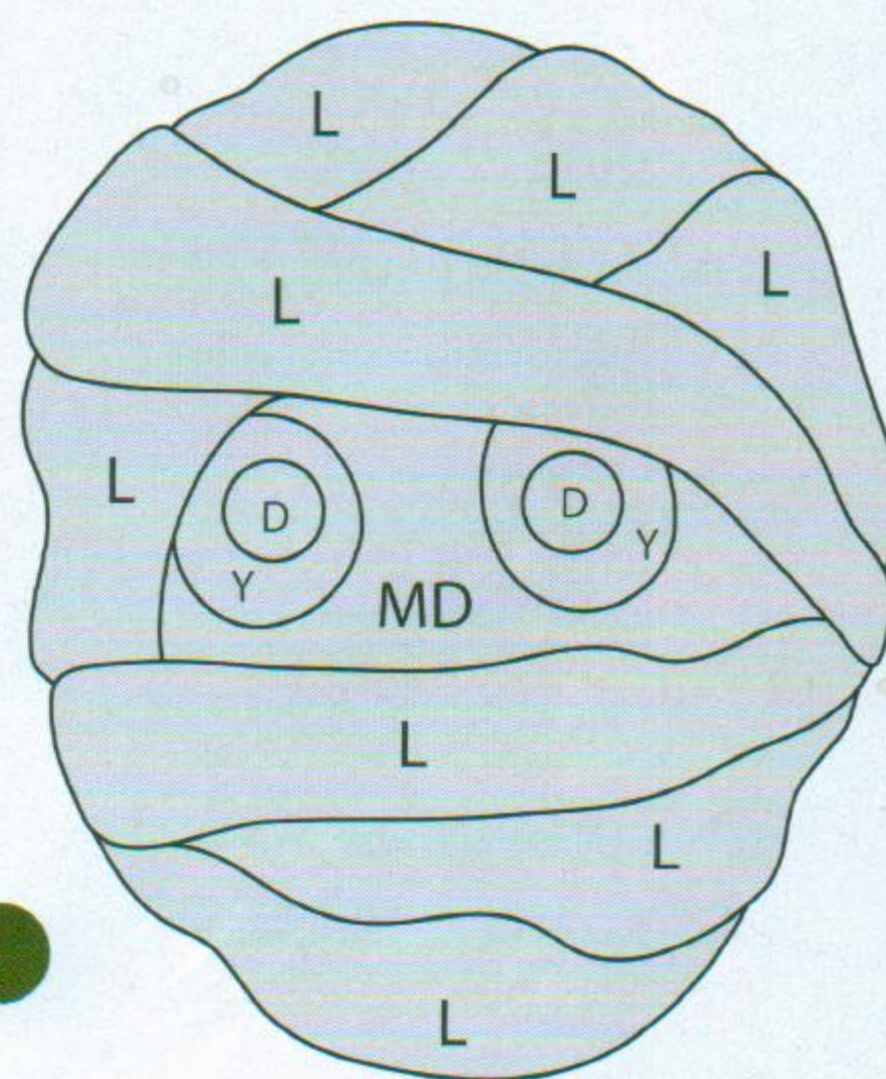
## Assembling and Finishing

Now that everything is cut and shaped, it's time to glue all the segments together. Once the glue is dry, flatten the back side of the intarsia on a belt sander. Wipe off dust with a tack cloth and glue and clamp the entire thing to your backing material of choice. Once dry, carefully cut the backing flush to the intarsia on the scroll saw by trace cutting around the perimeter. *Note: Alternatively, you could trace the outline of the intarsia on the backing material and cut the backer by itself, staying just inside the line.* Spray with clear satin lacquer. For extra detail, use a small amount of high-gloss polyurethane on the eyes. Attach a hanger or other hardware of choice. Now it's all ready for some Halloween fun!

## Mummy Intarsia Pattern

### Legend

- D..... Dark shade, such as walnut  
MD..... Medium light shade, such as shedua  
Y..... Yellow shade, such as yellowheart  
L ..... Light shade, such as maple



© 2023 Scroll Saw Woodworking & Crafts

## Materials & Tools

### Materials

- Medium light wood, such as shedua,  $\frac{1}{2}$ " (1.3cm) thick: exposed face, 1" x 2" (2.5cm x 5.1cm)
- Yellow wood, such as yellowheart,  $\frac{1}{2}$ " (1.3cm) thick: irises, 1" x 2" (2.5cm x 5.1cm)
- Light wood, such as maple,  $\frac{1}{2}$ " (1.3cm) thick: bandages, 3" (7.6cm) square
- Tempered hardboard,  $\frac{1}{8}$ " (3mm) thick: backer, approx. 2 $\frac{1}{2}$ " x 3" (6.4cm x 7.6cm)
- Spray adhesive: repositionable
- Dowel,  $\frac{1}{4}$ " (6mm) thick: pupils, 2 each approx. 1" (2.5cm) long
- Tack cloth
- Polyurethane: high-gloss
- Lacquer: clear satin
- Wood glue

### Tools

- Scroll saw with blades: #5 MGT
- Drill with bit:  $\frac{1}{4}$ " (6mm)
- Sanders: belt; 12" (30.5cm) disc with 80-grit; inflatable drum with 120-, 220-grit
- Rotary tool with bit:  $\frac{1}{2}$ " (13mm) sanding drum
- Dowel plate (optional)
- Clamps: small spring
- Woodburner with nib (optional)

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



Brad Eklund and Hazel Trinidad 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.





# Howling Wolf Fretwork

**Unleash your wild spirit with this stylized woodland scene**

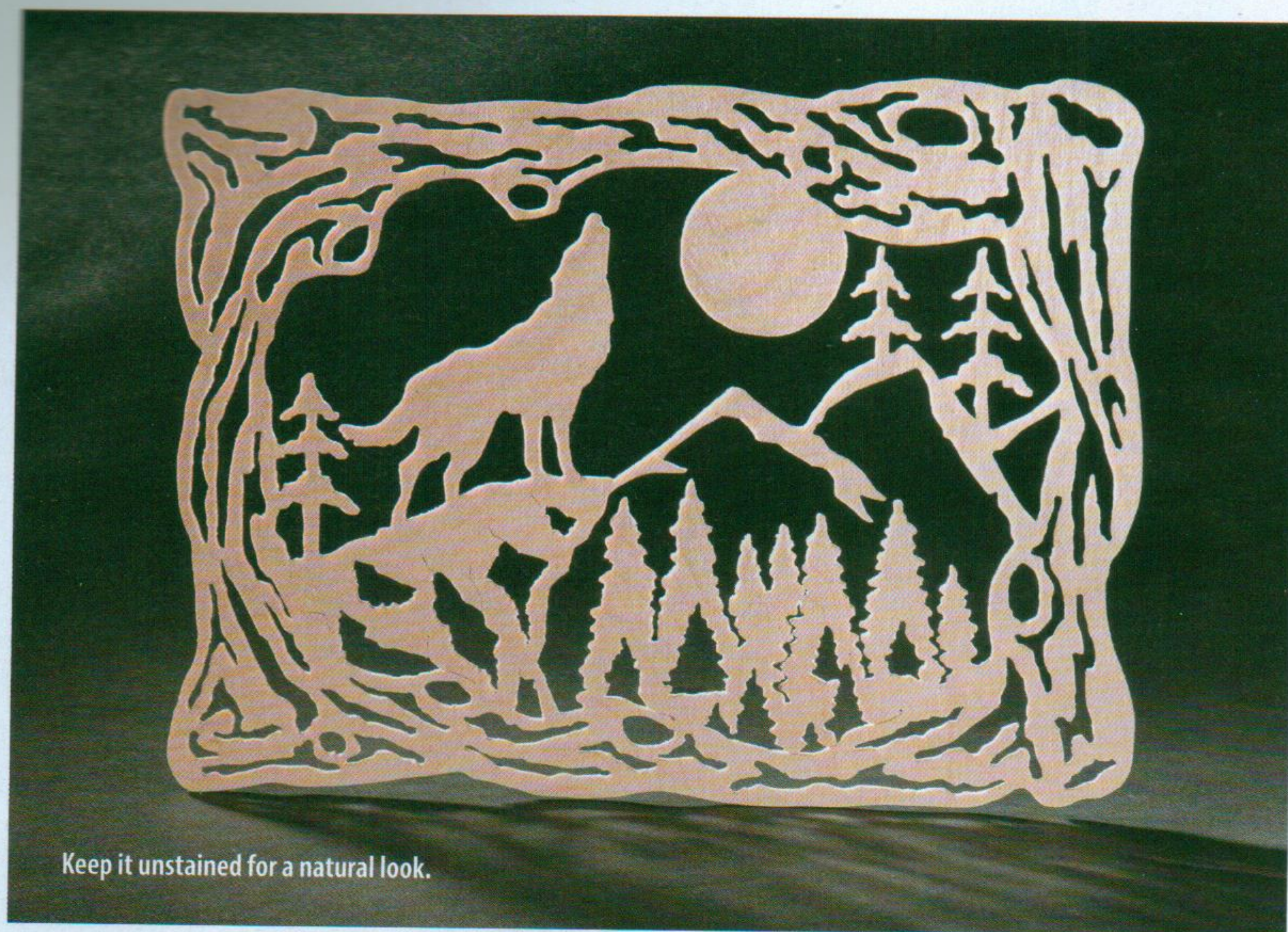
By Sue Mey  
Cut by Jon Deck

**W**olves are fascinating creatures that inspire romantic notions of the wild in those who appreciate their intelligent and elusive ways. The wistful call of a wolf at night is both serene and haunting. This rustic wolf and moon fretwork scene is attached to a backer, which gives the piece nice color contrast. This project would make a great gift for any person who finds these animals fascinating.

## Did You Know?

Even though you can hear wolves howling at night in some areas of the world, they're not just making noise at the moon! Wolves howl to communicate with each other about their location, and to express affection or warn of rivals in their territory.





Keep it unstained for a natural look.

### Getting Started

Stack the wood for the design on top of the wood for the backer, and then secure the pieces around the edges with clear packaging tape. Apply masking tape or painter's tape to the surface of the stack. Photocopy the pattern and apply spray adhesive or glue stick to the back. Press the pattern in place on the wood. Then, if desired, cover the entire piece with clear packaging tape.

### Cutting and Finishing

Cut the perimeter line of the pattern, and then separate the pieces. Drill blade-entry holes into the

wood for the design, and make the interior cuts. Remove the pattern and tape. Hand-sand the pieces until you have achieved a smooth finish, working up progressively through the grits to 320. Remove the sanding dust using a stiff-bristled paintbrush.

Apply a dark-colored wood stain to the backer and allow it to dry. Glue and clamp the design on top of the backer and let dry. Finish the project with several thin coats of clear spray varnish, allowing each coat to dry before applying the next. Fit a sawtooth hanger to the back for displaying.

### Materials & Tools

#### Materials

- Hardwood or plywood,  $\frac{1}{8}$ " (3mm) thick: wolf scene, 8" x 11" (20.3cm x 27.9cm)
- Hardwood or plywood,  $\frac{3}{4}$ " (1.9cm) thick: backer, 8" x 11" (20.3cm x 27.9cm)
- Tape: clear packaging, masking, or painter's
- Spray adhesive or glue stick
- Sandpaper: assorted grits to 320
- Wood stain, such as Minwax Red Chestnut
- Wood glue
- Finish, such as clear satin spray varnish
- Hanger: sawtooth

#### Tools

- Scroll saw with blades: #3 and #7 reverse-tooth
- Drill press with bits:  $\frac{1}{16}$ " (2mm),  $\frac{1}{8}$ " (3mm)-dia.
- Brush: stiff-bristled
- Clamps: small
- Sander

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

Pattern for the **HOWLING WOLF FRETWORK** is in the pullout section.



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](http://scrollsawartist.com). She

can be contacted at [suem@storage.co.za](mailto:suem@storage.co.za). Her pattern book, *Lighted Scroll Saw Projects*, is available from [schifferbooks.com](http://schifferbooks.com) and other outlets.



# Autumn Gourds

Shape and paint a quartet of colorful pumpkins from plywood

By Charles Hand



**T**he colors, smells, and events of fall are all a testament to the season's bounty. A walk or a drive through the countryside near my house often leads me to rolling fields of pumpkins and gourds, spread out like little jewels across the landscape. As the colder months approach, try this combination segmentation-and-layered-fretwork project; I know it will spark your imagination as much as it did mine! Use the colors shown or personalize with your own favorites.



### Prepping and Cutting

Photocopy the patterns. You'll need two copies of the pattern on page 68, labeled Layer 1. Sand the front and back of each blank thoroughly. Blow off the dust or remove it with a tack cloth. Attach removable EasyLiner® laminate shelf paper to the top side of one blank, and then apply spray adhesive to the back of each pattern. Let the adhesive set for approximately one to two minutes or until tacky, and then press each pattern down onto the shelf liner of one blank, eliminating any air bubbles. *Note: This project consists of three layers—the backer, Layer 1, and the shaped and painted pieces (Layers 2a and 2b). Follow the perimeter line for the Layer 1 pattern to make the backer.*

For Layer 1, both the perimeter and the center decorative element are cut; the wood surrounding the decorative element must be kept intact. Drill blade-entry holes where necessary (such as in the facial detail areas and between the bottom two gourds) and cut all pieces on the scroll saw; I alternated between #2 and #3 reverse-tooth blades depending on wood thickness. Make the interior cuts first, as indicated by the gray areas on the patterns. I recommend numbering the backs of the segmentation pieces as you cut them; this makes for easy placement later.

### Sanding and Shaping

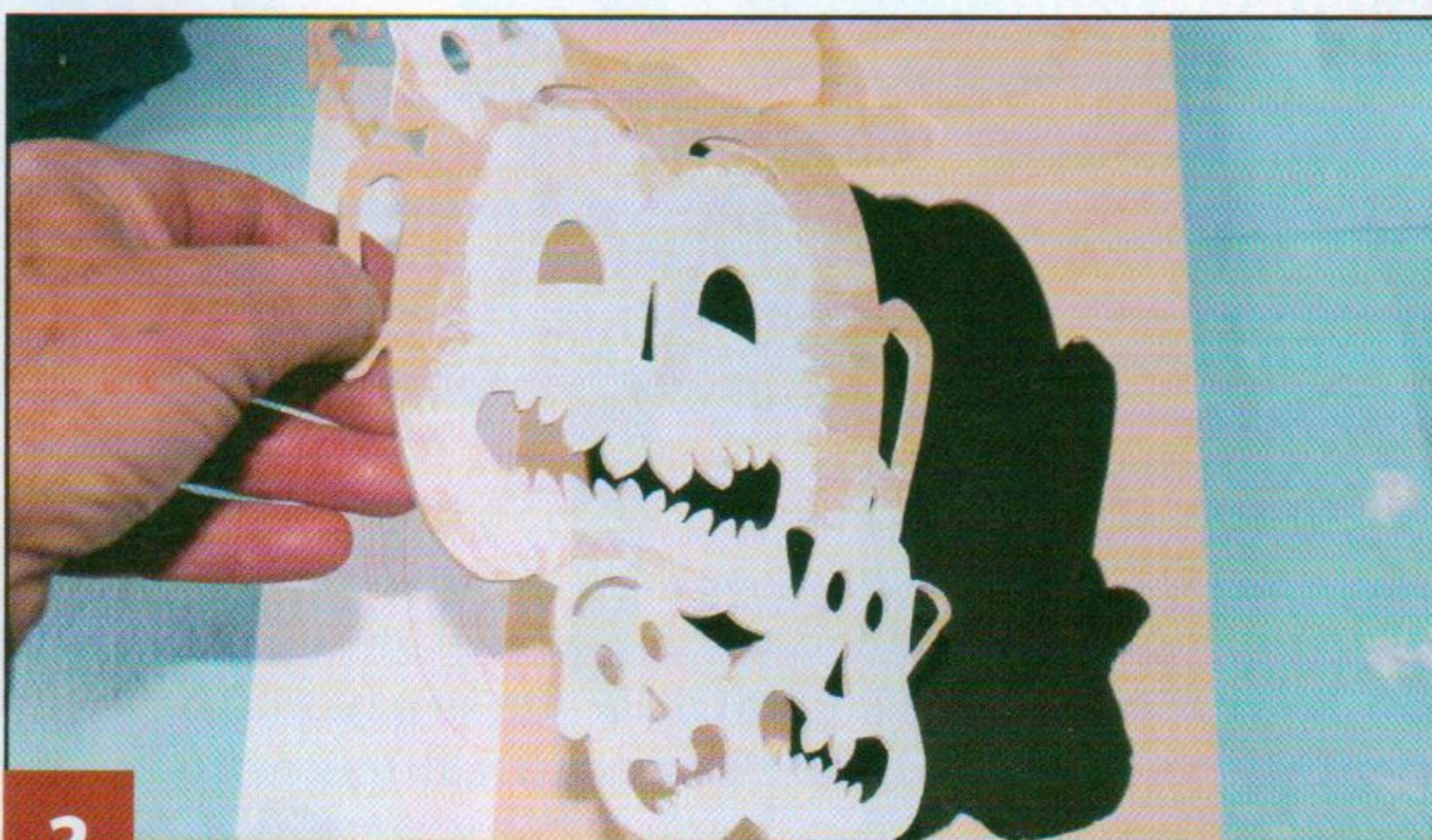
Remove the patterns. Lightly sand the front and back of each piece with a palm sander and 180-grit sandpaper. Then round the edge of each segmentation piece to 220-grit, leaving Layer 1 and backer unshaped. Blow off the dust or remove it with a tack cloth.

Place the surrounding wood from Layer 1 onto the backer and trace inside the main body piece only, carefully following the lines. *Note: Since the areas behind the hat and the top left gourd stem will not show through, leave them unpainted.* Proceed to Step 1.

## PAINTING & FINISHING



**1** **Paint inside the line you just drew.** Cover this area on the backer with black acrylic paint. Then paint Layer 1 with white paint as shown above.



**2** **Begin assembling.** Once both layers are dry, place Layer 1 back inside its original cutout and place that assembly on top of the backer, securing with wood glue and clamping in place.



**3** **Dry-assemble the pieces of Layers 1, 2a, and 2b.** If necessary, make final adjustments to any ill-fitting pieces on the scroll saw and remove dust as before with the tack cloth.





**4** Paint the pieces as desired. Let dry.

## Materials

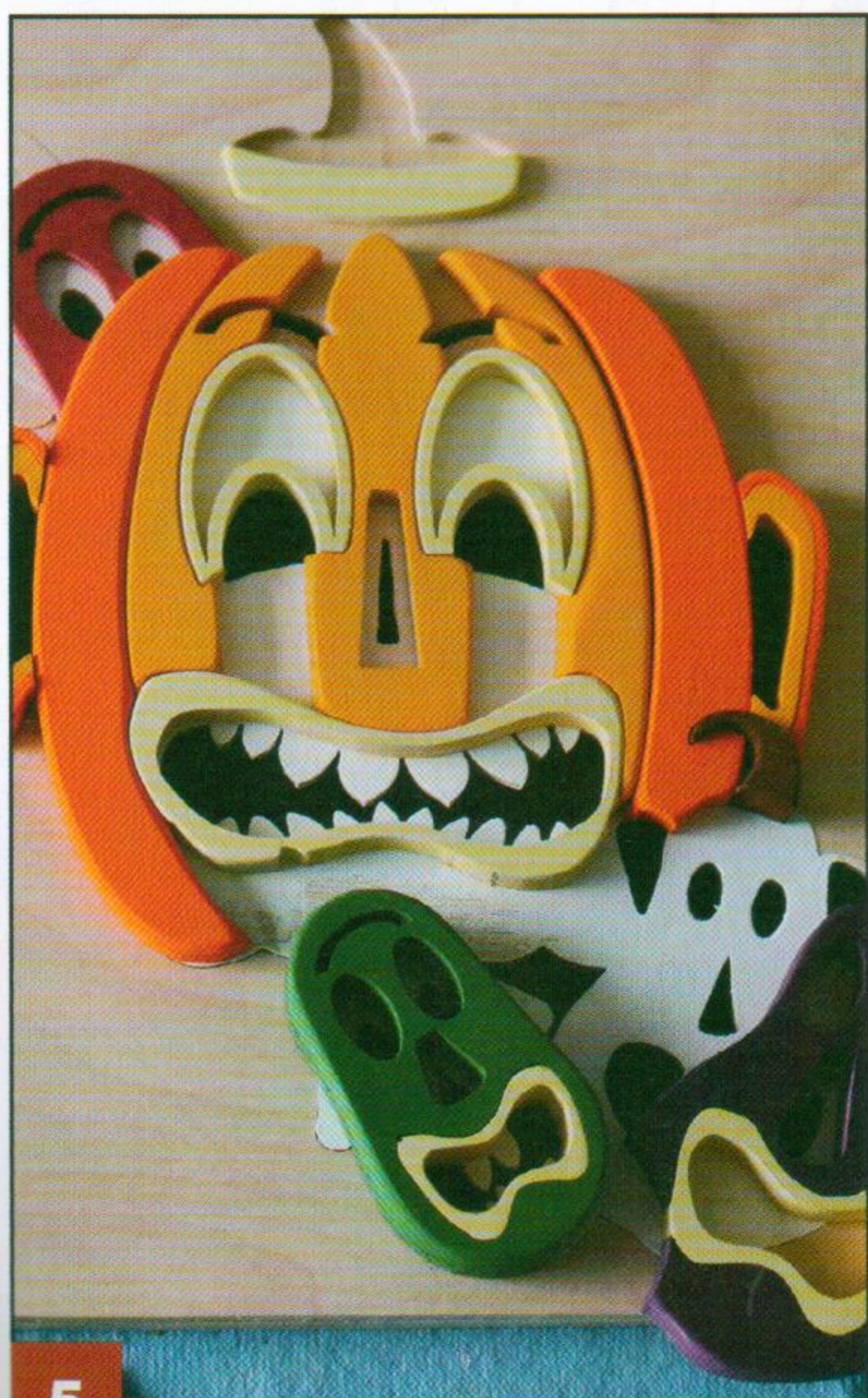
- Baltic birch plywood, 1/4" (6mm) thick: backer, 8 1/2" x 11" (21.6cm x 27.9cm)
- Baltic birch plywood, 1/8" (3mm) thick: Layer 1, 8 1/2" x 11" (21.6cm x 27.9cm); Layer 2a, 7" x 8 1/2" (17.8 cm x 21.6cm)
- Baltic birch plywood, 1/2" (1.3cm) thick: Layer 2b (left gourd), 3" x 3 1/2" (7.6cm x 8.9cm)
- Baltic birch plywood, 3/8" (1cm) thick: Layer 2b (right gourd), 3" x 4 1/2" (7.6cm x 11.4cm)
- Sandpaper: 180, 220-grit
- Pencil
- Tack cloth
- Glue: wood
- Self-adhesive shelf liner, such as Duck Brand EasyLiner®
- Spray adhesive, such as Elmer's® or 3M Super 77
- Acrylic paints: assorted

- Finish: clear semigloss spray or brush-on lacquer
- Hangers (optional)

## Tools

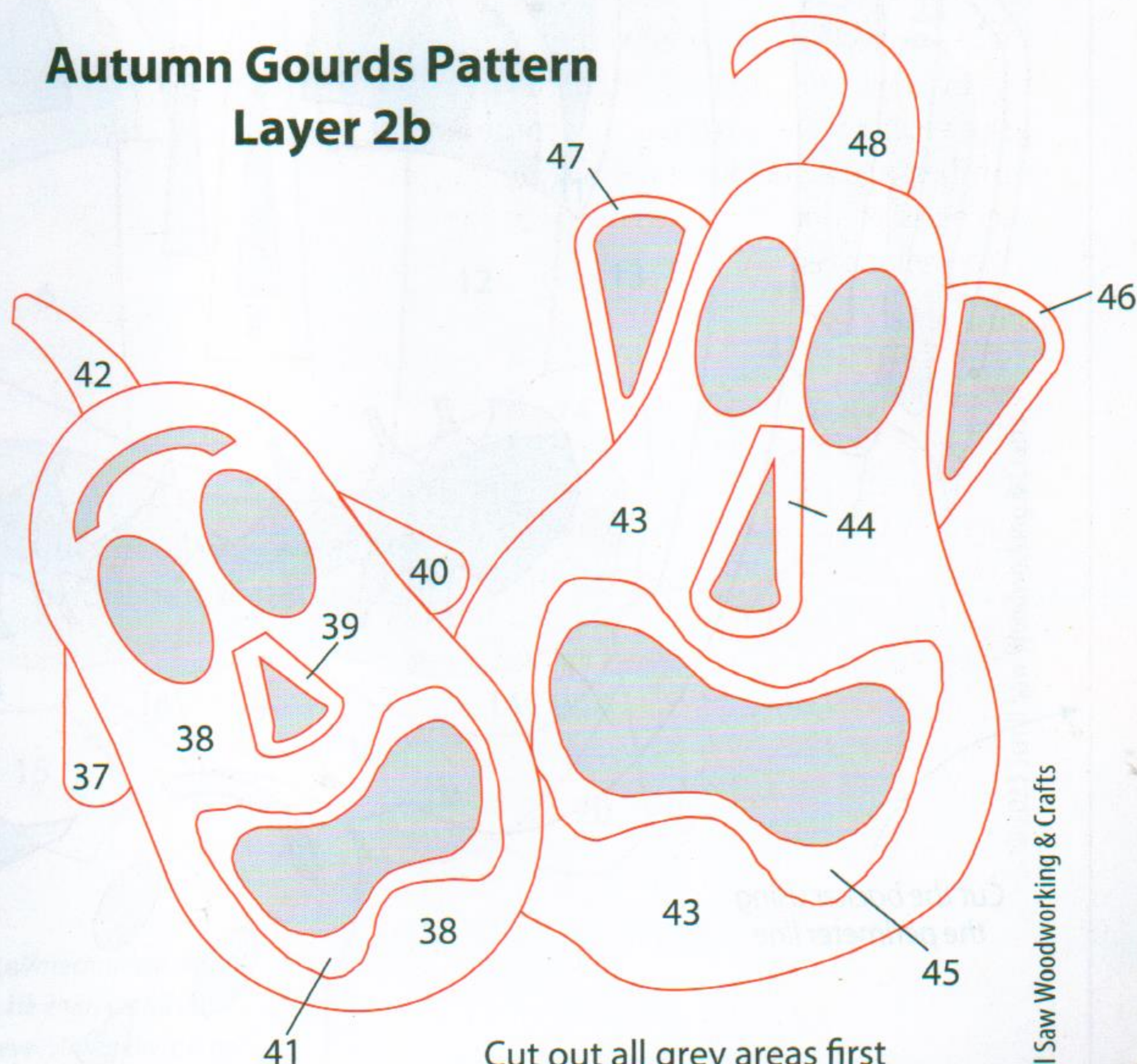
- Scroll saw with blades: #2 and #3 reverse-tooth
- Drill press with bits: 3/64" (1mm)-dia. or #56 wire size, 1/16" (2mm)-dia. or #53 wire size
- Palm sander: fine-grit
- Air compressor (optional)
- Clamps
- Foam brush (optional)
- Paintbrushes: assorted

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



**5** Assemble the rest of the pieces. Referring to the pattern, carefully glue each piece of the segmentation in place over Layer 1. Let dry, and then apply a clear finish of your choice, such as semigloss spray lacquer or a brush-on protective coat. Add hangers to the back, if desired.

## Autumn Gourds Pattern Layer 2b

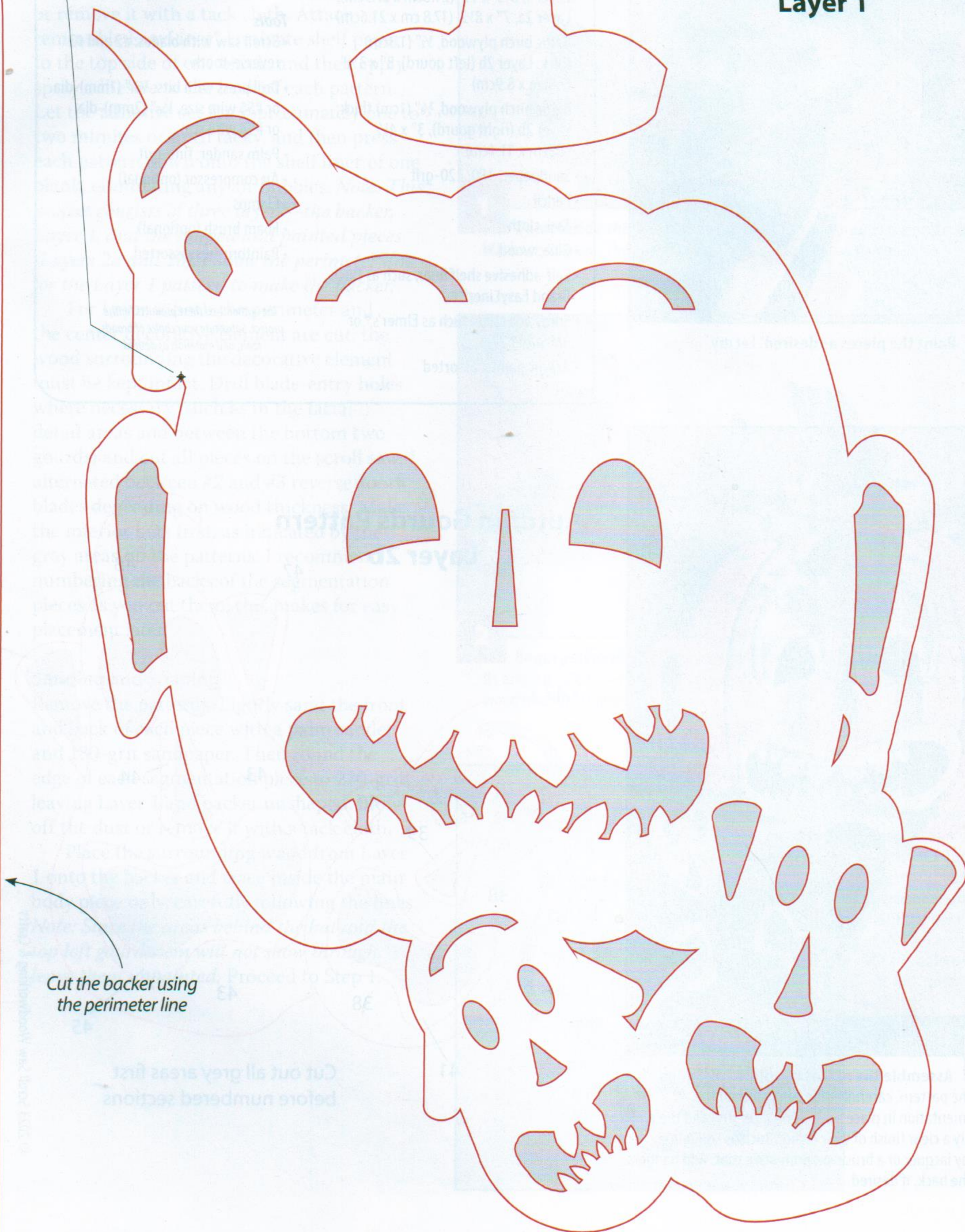


Cut out all grey areas first before numbered sections



Suggested pilot holes (3)

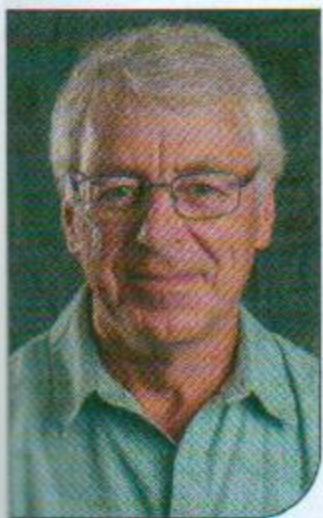
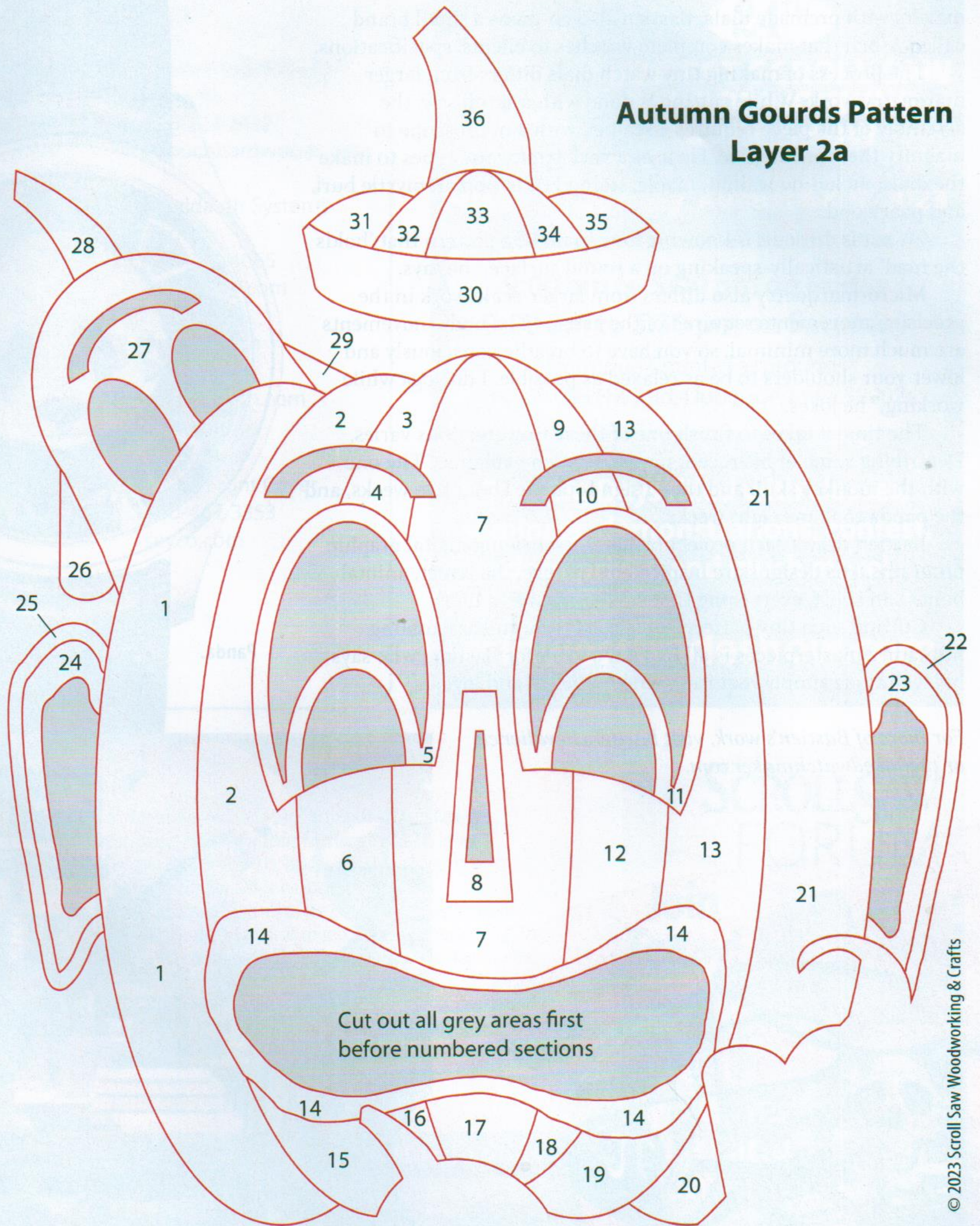
## Autumn Gourds Pattern Layer 1



Cut the backer using  
the perimeter line



## Autumn Gourds Pattern Layer 2a



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' pattern application method and framing technique, or for more of his patterns, visit [scrollsawart4u.weebly.com](http://scrollsawart4u.weebly.com).

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makers with premade dials, Bastien also co-owns a small brand called Mbch that makes complete watches to clients' specifications.

The process of making tiny watch dials differs from larger marquetry work. While cutting is done with a scroll saw, the assembly of the piece requires a scalpel, with a microscope to magnify the work surface. He uses a variety of wood types to make the dials, including walnut, maple, stained tulip poplar, myrtle burl, and pearwood.

"What is difficult is knowing how to make a pattern that 'holds the road' artistically-speaking on a round surface," he says.

Micro-marquetry also differs from larger-scale work in the precision movements required of the artist. "The body movements are much more minimal, so you have to breathe consciously and lower your shoulders to be as relaxed as possible. I do yoga while working," he jokes.

The time it takes to finish one of these tiny creations varies. Describing some of his recent pieces, Bastien explains, "The one with the monkey skull and the Pi sign took me about five weeks, and the panda took me eight weeks."

Bastien draws each project by hand, eschewing digital graphic programs. His designs are inspired by "nature, the street, animal bones...in short, everything that surrounds me in life."

Cutting such tiny patterns on a scroll saw and assembling miniature masterpieces is all in a day's work for Bastien, who says his technique simply requires some "patience and love."

For more of Bastien's work, visit [bastienchevalier.ch](http://bastienchevalier.ch) or [thenakedwatchmaker.com](http://thenakedwatchmaker.com).



Panda.



Photo by Christophe Carissey

Bastien's watch dials are influenced by graffiti and street art.



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## MIDWEST SCROLL SAW & WOODWORKING TRADE SHOW

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### FOX HUNT

Bill De Voe of Moores Hill, Ind., and Sara Wadzinski of Marathon, Wis., were randomly drawn from the readers who located the fox in our last issue (Summer 2023, Issue #91). The fox was shoe-shopping in Rita Cel's Flip-Flop Puzzle Box article on page 35.

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 Aug 23, 2023, to be eligible. *Note: The contest fox is an outline drawing that would face left if its 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](http://scrollsawer.com).

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# One to Watch



## Bastien Chevalier is taking marquetry out of the antique shop and into the boutique

By Dorissa Bolinski



**T**he technique of marquetry dates back to ancient Egypt, reaching its apex of popularity in France in the late 17th and early 18th centuries. Today, it's often considered an antiquated woodworking technique. But Swiss woodworker Bastien Chevalier wants to change that.

One of only a few marquetry craftspeople in his country, Bastien showcases a contemporary style that departs radically from the traditional form. The 40-year-old's aesthetic is influenced by graffiti and street art, and he cites modern artists Jackson Pollock and Jean-Michel Basquiat as touchstones for his work.

Bastien got into marquetry after studying cabinetry for four years. When looking for a job, he met award-winning marqueteur Jérôme Boutteçon. Although Mr. Boutteçon did not work with apprentices, he made an exception for Bastien and, over the course of five years, taught him the fundamentals.

Bastien's portfolio includes sculpture, painting, and jewelry, but he specializes in a type of micro-marquetry specifically used for making watch dials. In addition to supplying several watch

(Continued on page 70)



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Steve Good — Author of  
"The Scroll Saw Workshop"

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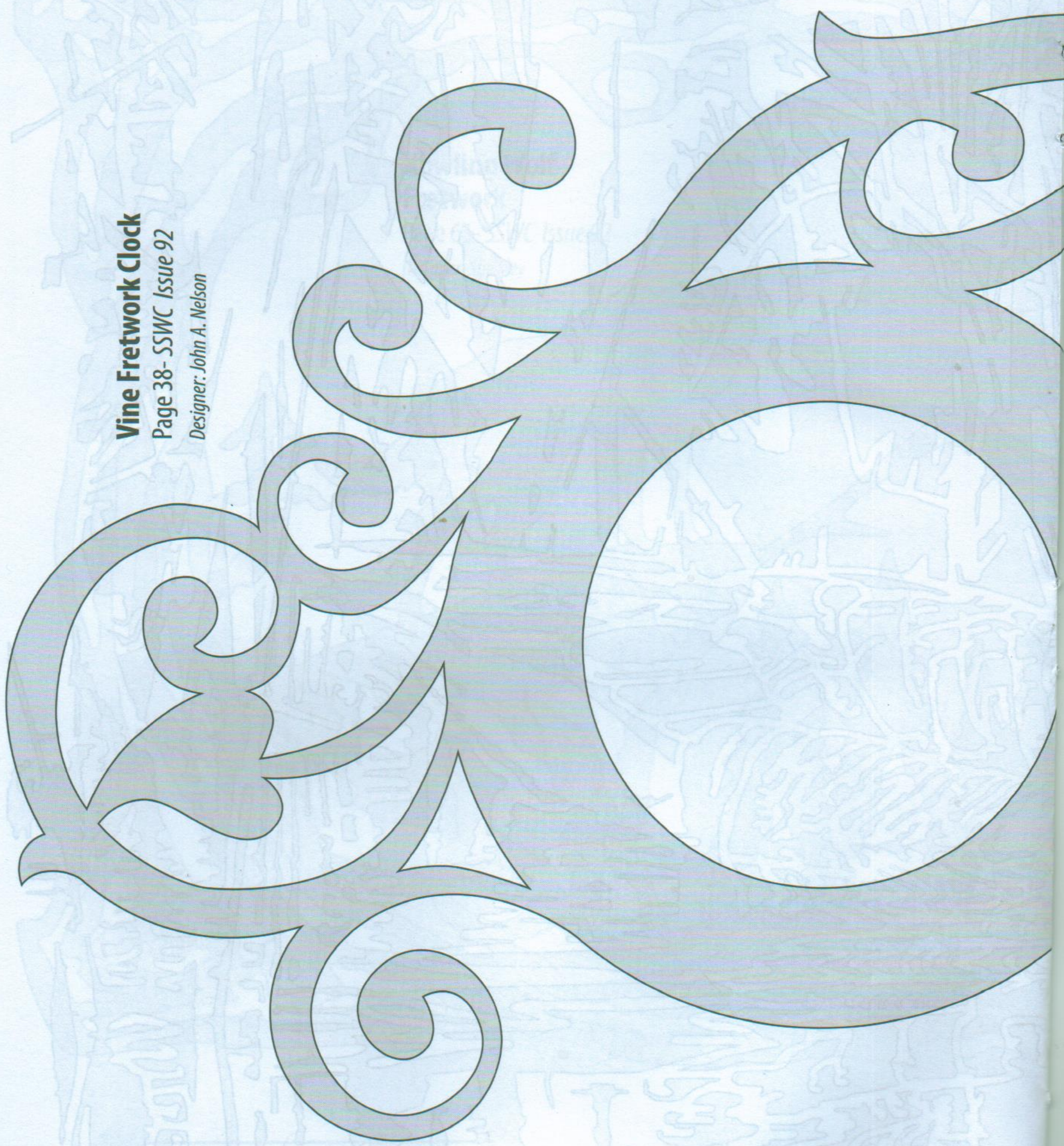




**Vine Fretwork Clock**

Page 38-SSWC Issue 92

Designer: John A. Nelson



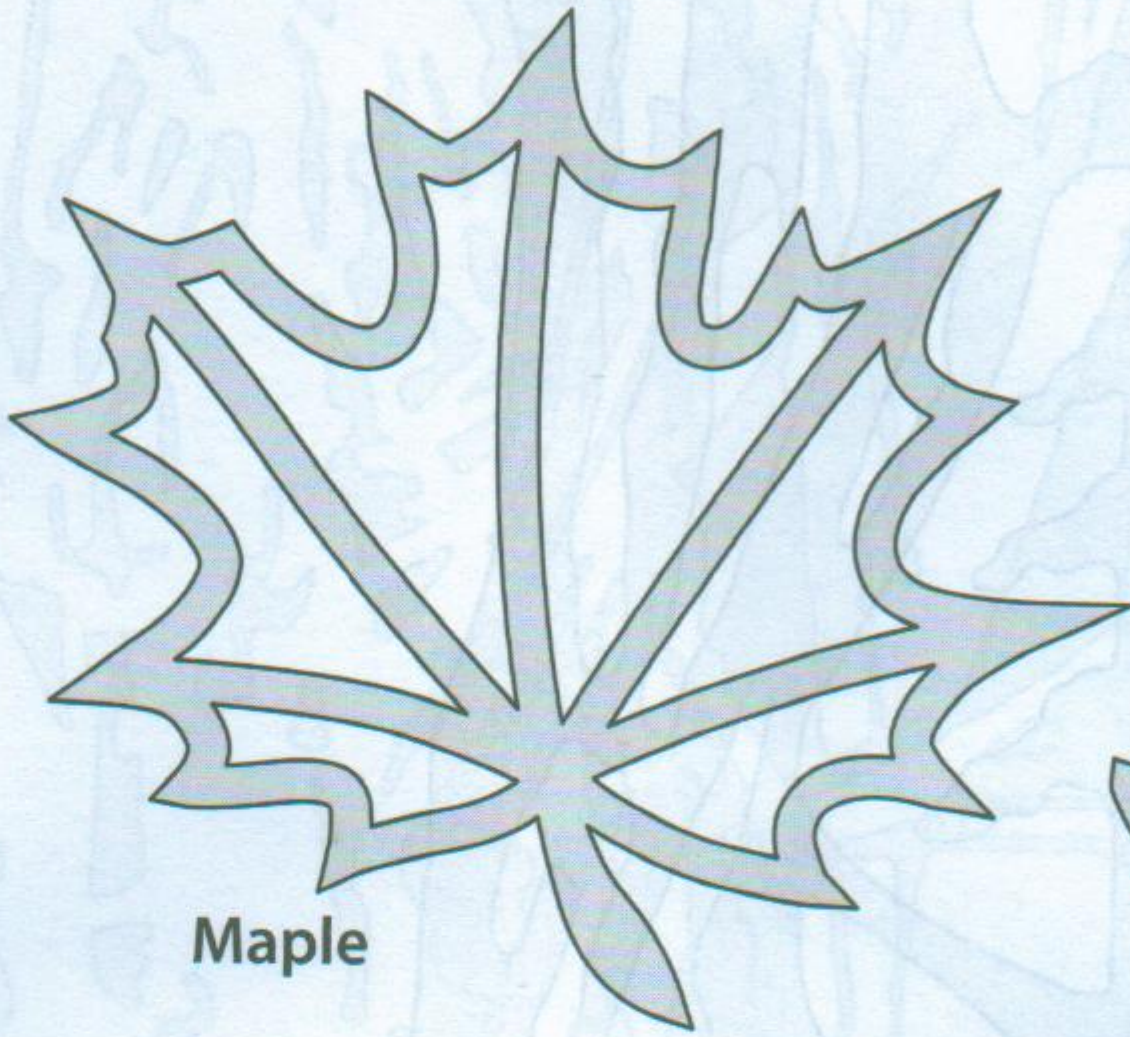
**Notice about photocopying patterns**

Some photocopiers and home printers can distort patterns when you print them, making

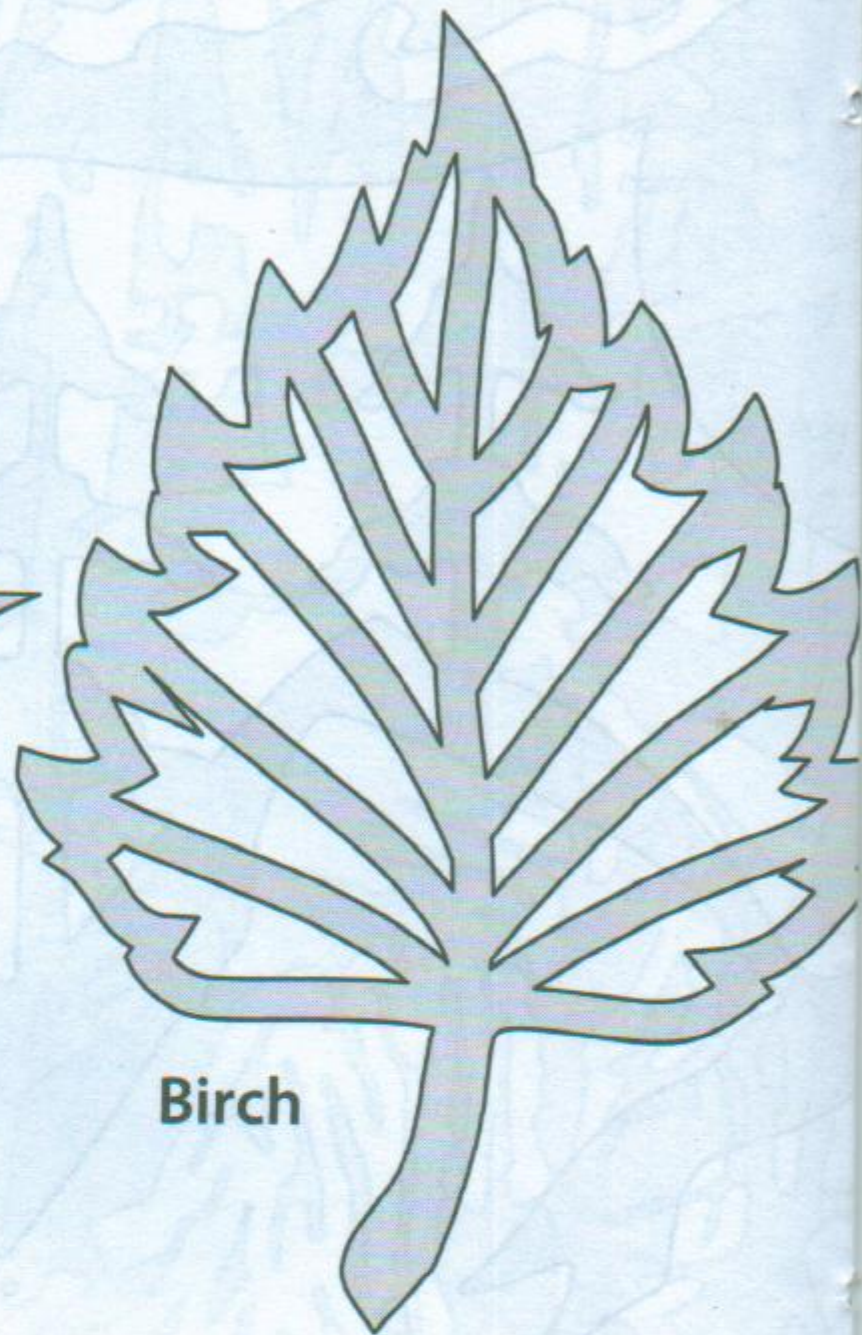








Maple



Birch

**Autumn Leaves**

Page 23- SSWC Issue 92

Designer: Jacob Fowler



A 4

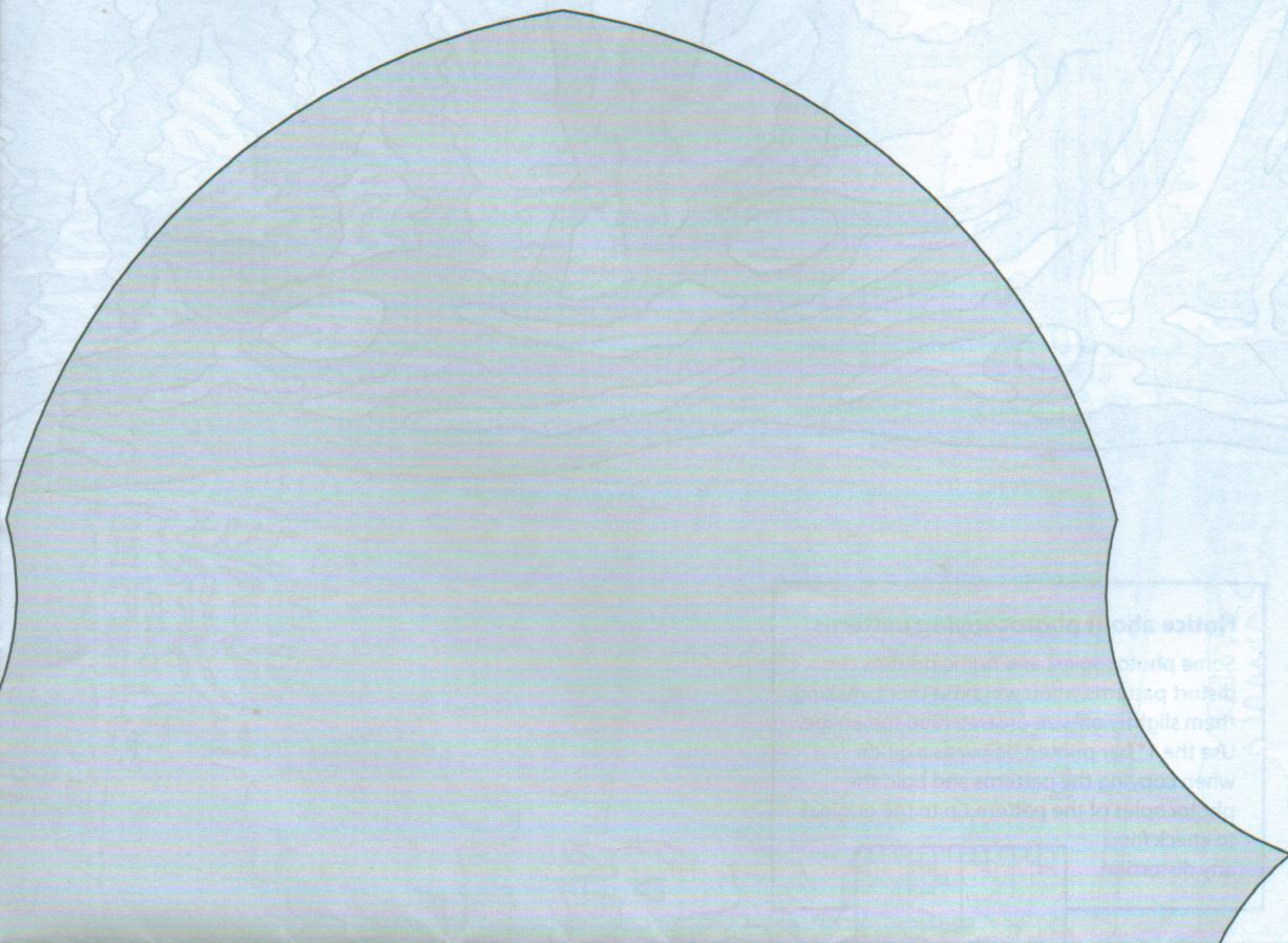
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*All patterns on this pullout section: © 2023 Scroll Saw Woodworking & Crafts*

|                                |    |                            |    |
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distort patterns when you print them slightly off-size or stretching the image. Use the 1" bar printed below as a guide when copying the patterns and hold the photocopies of the pattern up to the original to check for any distortion.



One inch





A6

Body Layer 3  
1/4" thick

Body Layer 4  
1/8" thick

A 6

Body Layer 3  
1/4" thick

Body Layer 4  
1/8" thick

A6

Body Layer 3  
1/4" thick

Body Layer 4  
1/8" thick

A6

Body Layer 3  
1/4" thick

Body Layer 4  
1/8" thick



**B**  
Body Layer 2  
1/2" thick

A7





8 A

Body Layer 1  
3/4" thick

A

Owl Fretwork

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Designer: Dana Ayala, Jaz

Design: Jaz Ayala

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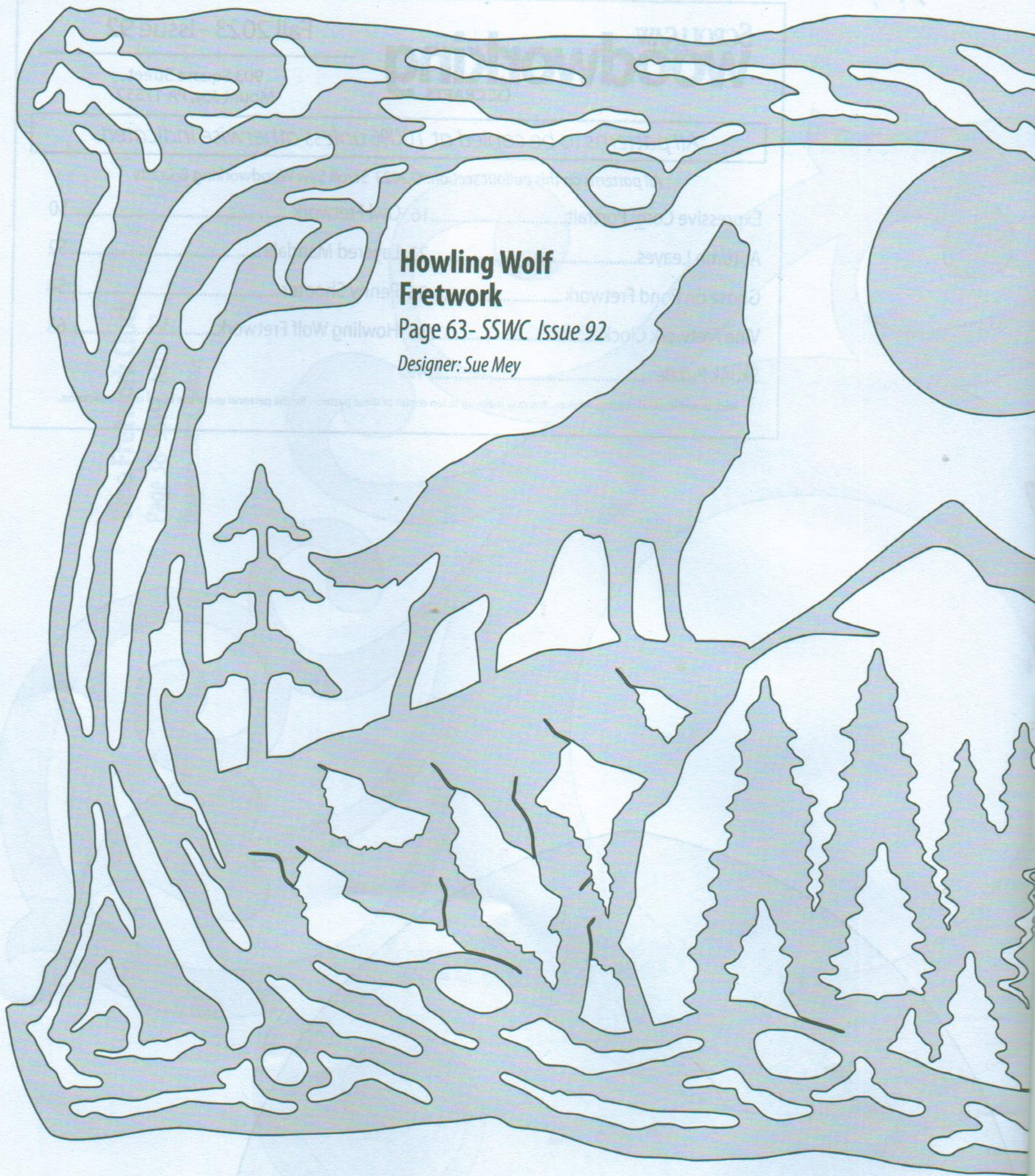
Exhibitor: Dana Ayala, Jaz



## Howling Wolf Fretwork

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Designer: Sue Mey



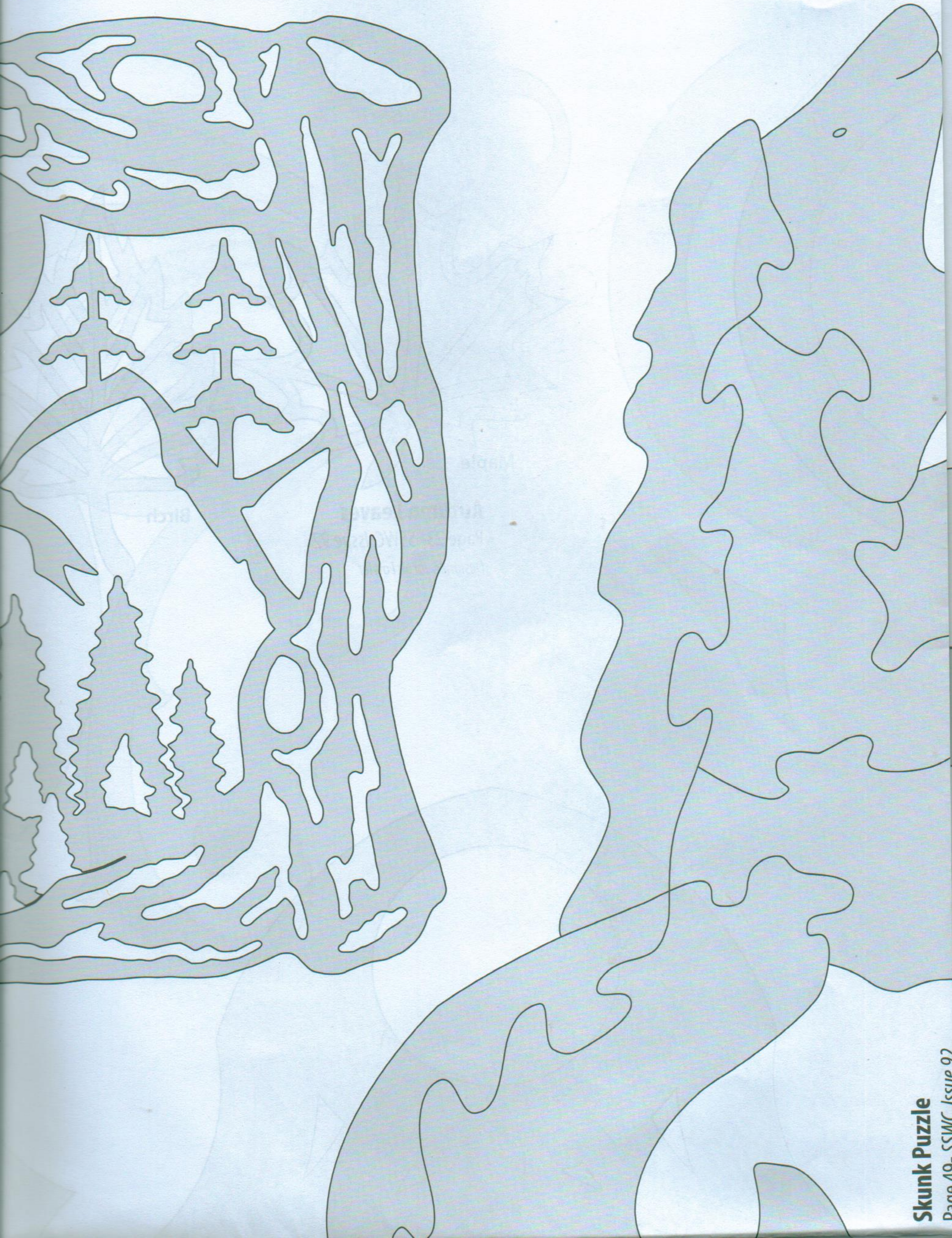
### Notice about photocopying patterns

Some photocopiers and home printers can distort patterns when you print them, making them slightly off-size or stretching the image. Use the 1" bar printed below as a guide when copying the patterns and hold the photocopies of the pattern up to the original to check for any distortion.

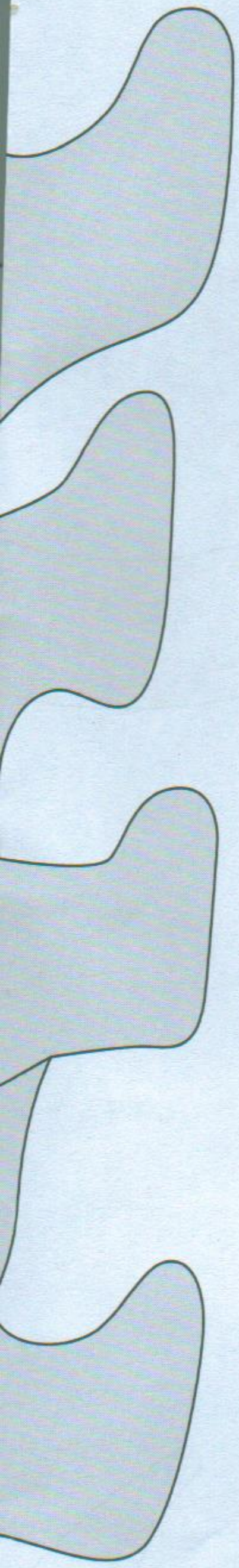




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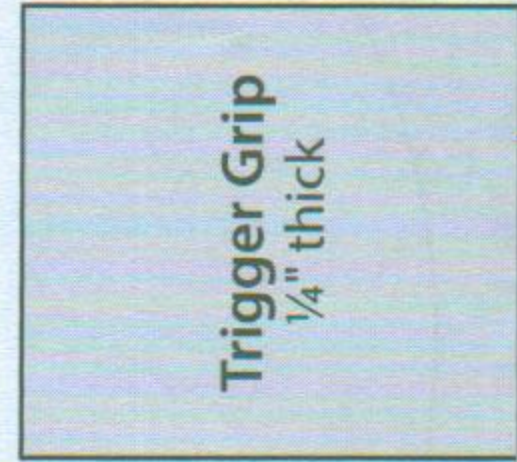
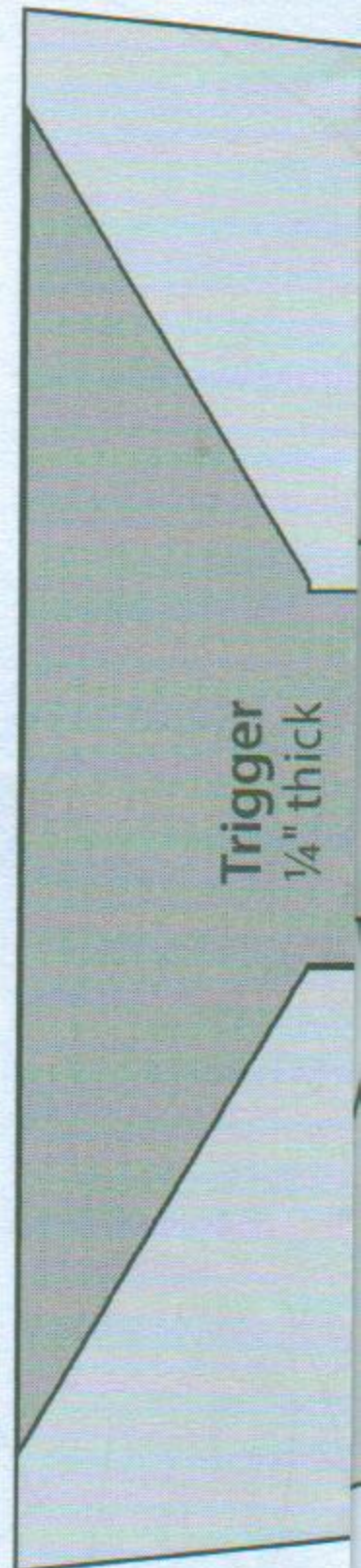
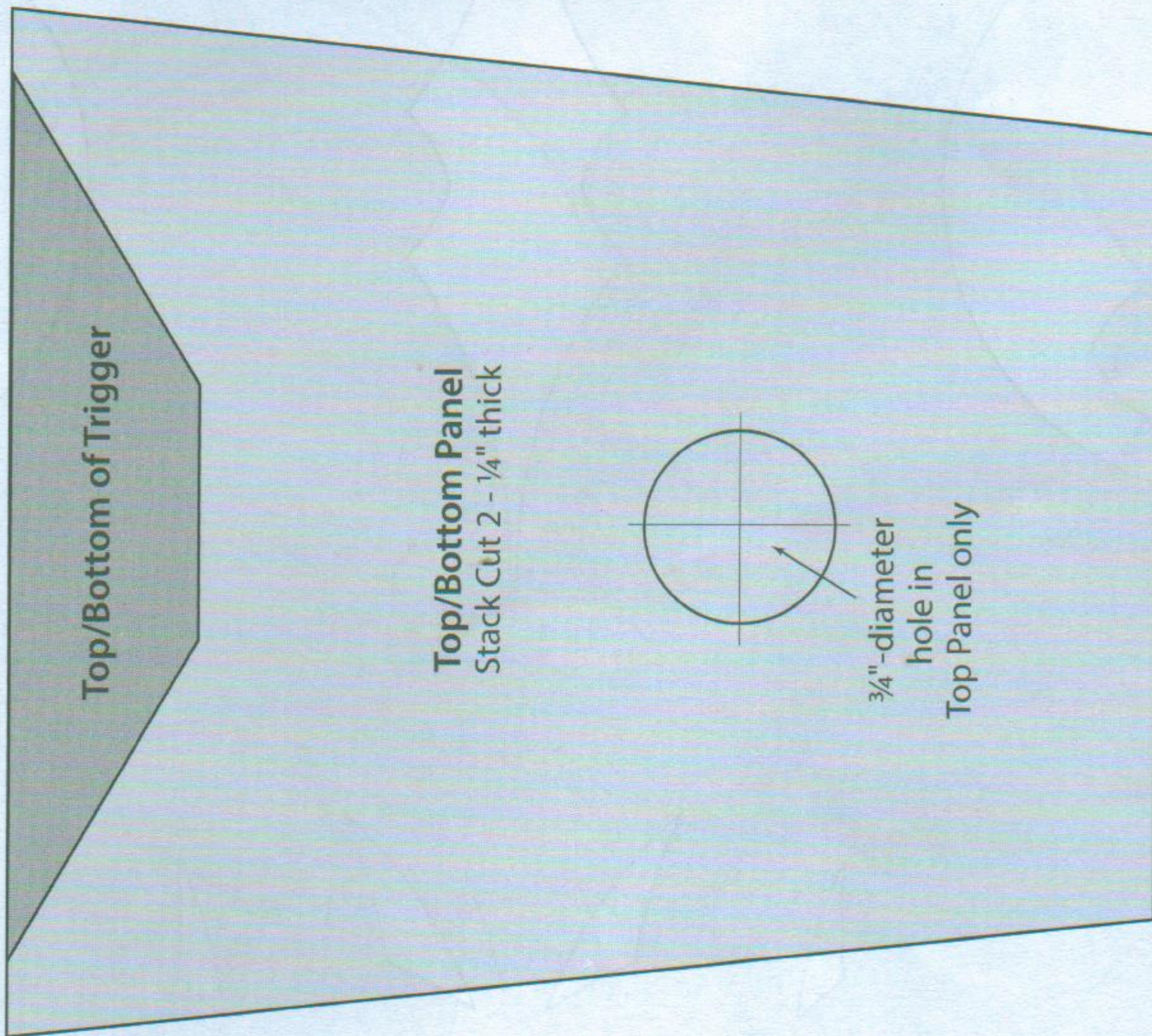
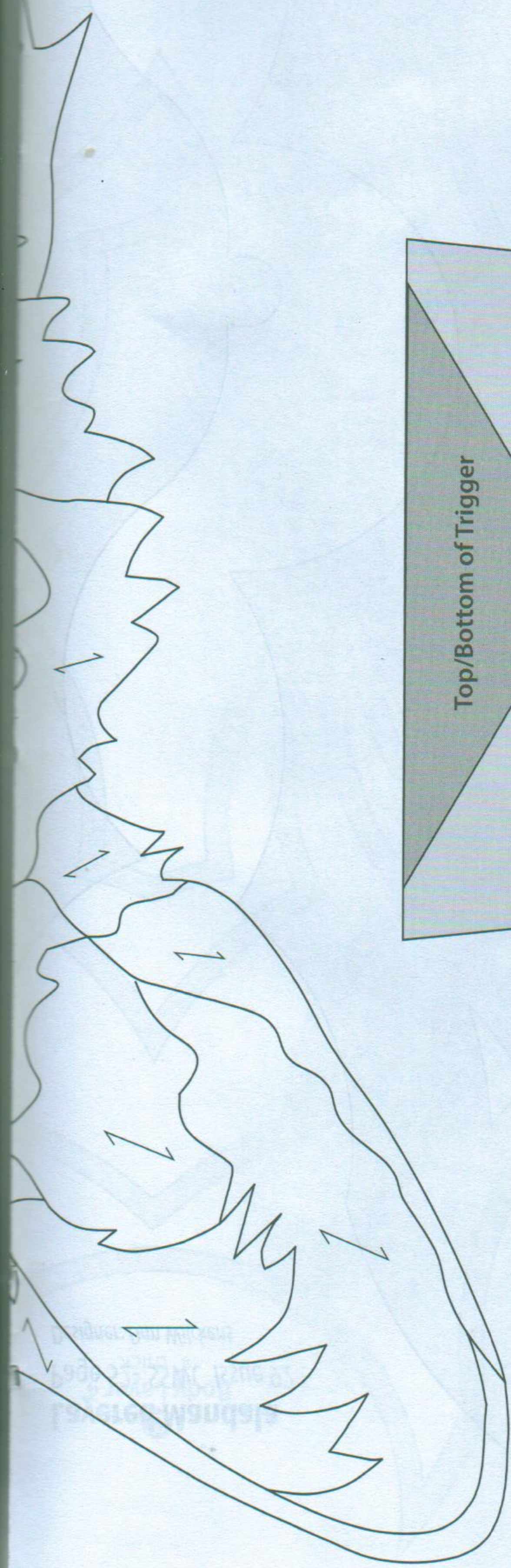






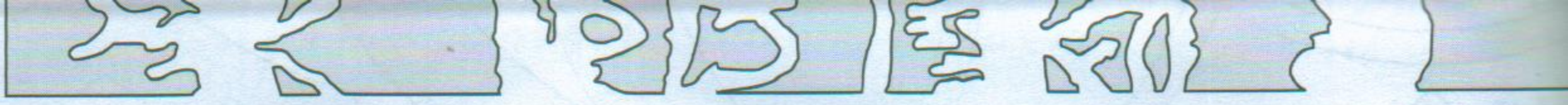






**Penny Shooter**  
Page 54- SSWC Issue 92  
Designer: Al Baggetta

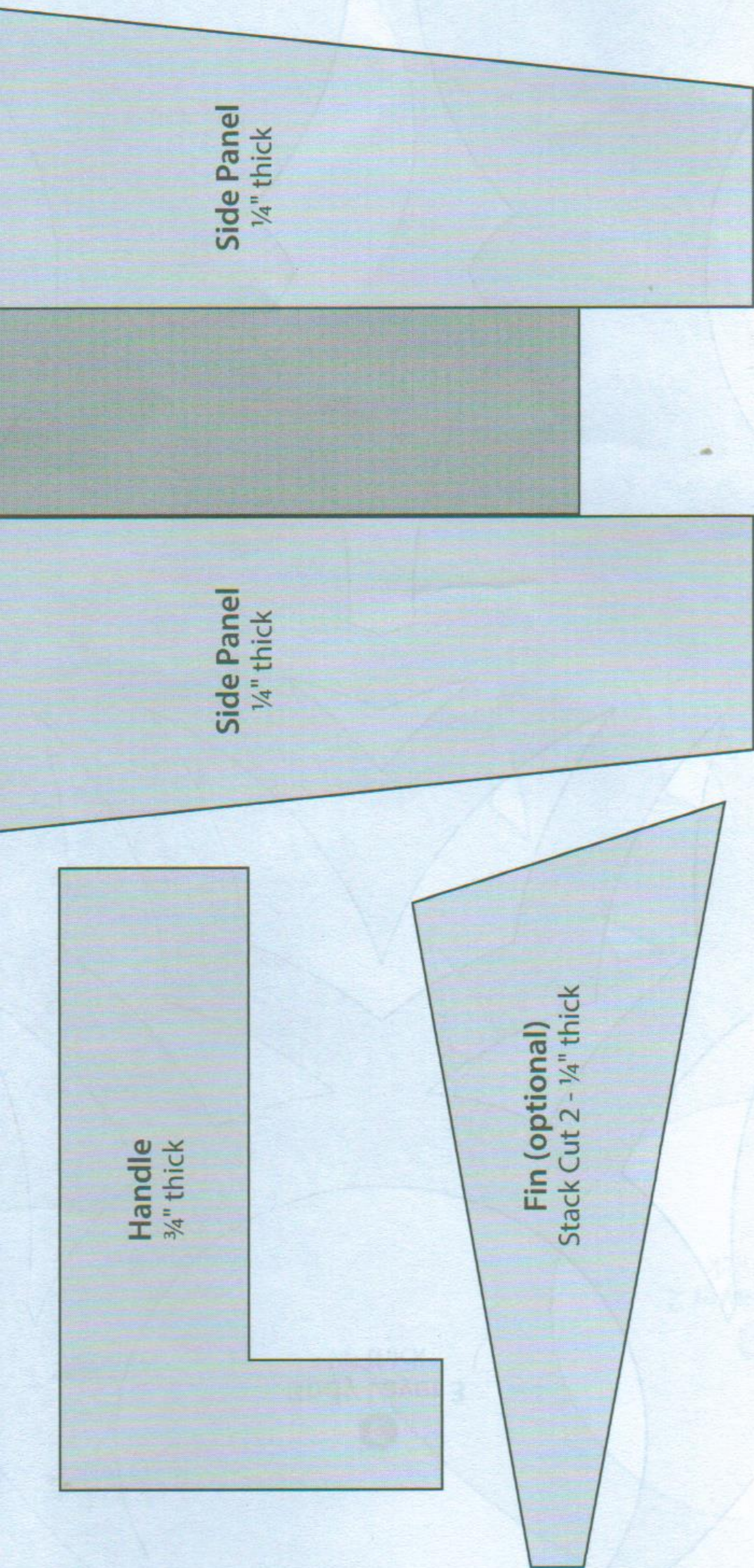




# Goose on Pond Fretwork

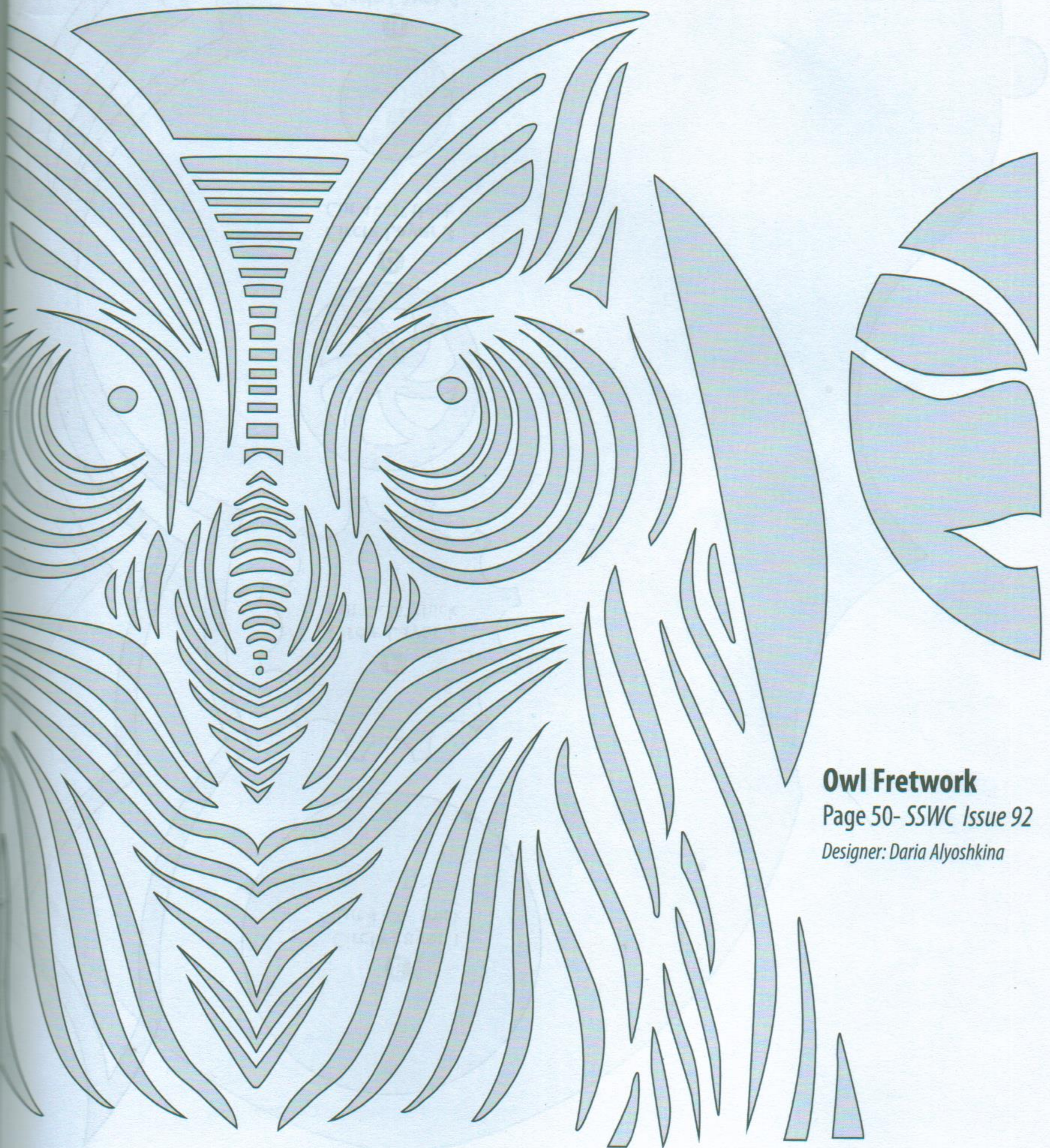
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Designer: Charles Hand





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### Owl Fretwork

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Designer: Daria Alyoshkina