

# WOODWORKING & CRAFTS



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- *Chipmunk Intarsia* →
- *High-Flying Dragon*



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See page 2

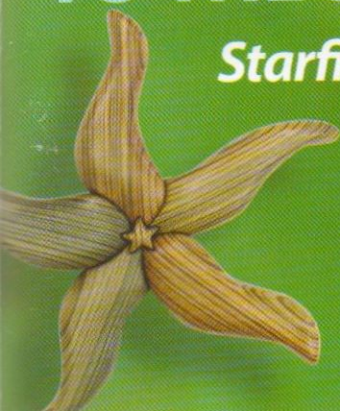
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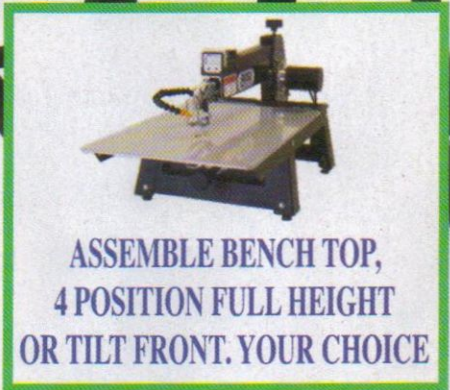
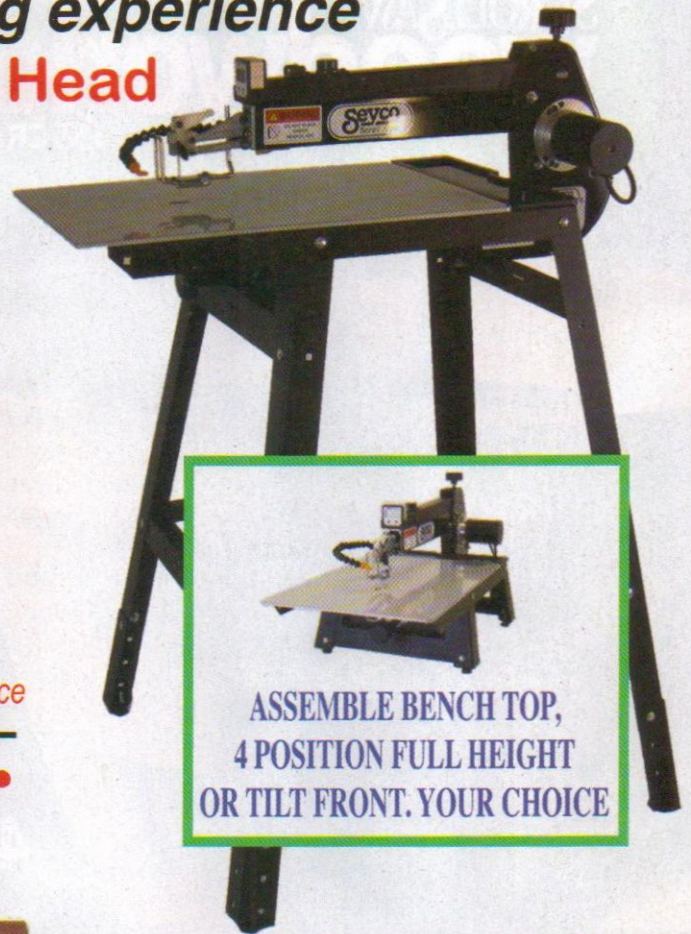
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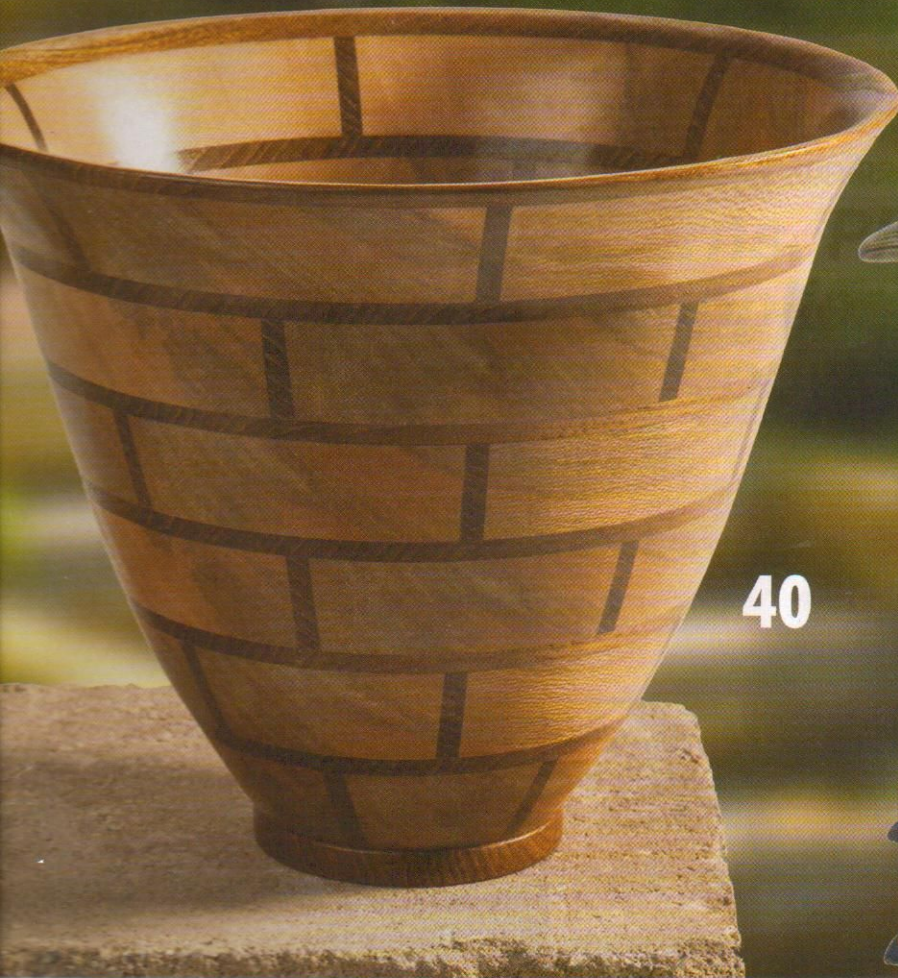


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By the Staff of Scroll Saw Woodworking & Crafts

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## WIN THE CHIPMUNK!

Enter a FREE drawing for our cover project at [FoxChapelPublishing.com](http://FoxChapelPublishing.com)  
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Find these free extras at

[SCROLLSAWER.COM](http://SCROLLSAWER.COM)

#### • Bonus Pattern

Download the plans for Rolf Beuttenmuller's dragon-themed sword holder (pg. 32).

#### • Video Extras

Join us as we take Pégas' new scroll band saw for a test drive (pg. 15).

#### • Free Projects

For bright projects to usher in summer, visit [scrollsawer.com/category/summer](http://scrollsawer.com/category/summer).

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## It's a Puzzle

When I was a kid, one of my favorite toys was a small wooden ball puzzle—you might have had one, too. Smaller than a tennis ball, it consisted of eight or ten odd-shaped pieces that when properly assembled formed a perfect sphere. It took a bit of ingenuity to take apart and put back together, but even when you

knew the solution it was still fun to study the cleverness of it.

That same spirit animates two projects in this issue, the 3-D Dolphin Puzzle (page 25) and the Sea Creatures Puzzle (page 72), neither of which is your typical flat puzzle. The three-dimensional dolphin is a bit like that wooden ball, in that the trick to solving it is figuring out how to take it apart. The trick to *making* it is, in a word, precision—your scroll saw blade, properly tensioned, must be exactly square with the table or the pieces simply won't fit together. (That need for precision made the puzzle perfect for our shop test of the new Pegas scroll band saw—see page 15 for a review of that breakthrough tool.)

The Sea Creatures Puzzle is special in a different way, as dreamed up by its Israeli creator, Tomer Markowitz: Stand it up and it *rocks*. Literally. That, along with its fun, imaginative shapes, is why we selected it as our first Internet-sourced Project of the Month—a new feature we'll be doing regularly to highlight extraordinary work we locate on e-commerce and social media sites (this one's from Etsy). Tomer's puzzle isn't much of a brain teaser to assemble but is tons of fun to make and will utterly delight any lucky children in your life.

Enjoy the issue!

Cheers,

*John Atwood*  
John Atwood  
atwood@foxchapelpublishing.com



To see how precisely the new Pegas scroll band saw would cut much thicker wood, we increased the size of the 3-D Dolphin Puzzle (page 25).

# SCROLLSAW woodworking & CRAFTS

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# Birds Of a Feather

Imagine my surprise at seeing Ed Kupec's version (Letters, Issue #73) of the owl scene designs by Deb Nicholson and Kathy Wise (Issues #43 and #52)! I recently finished a similar version. The "nest" is from the firewood pile, and the owls are shaped from lacewood, blue pine, wenge, yellowheart, and other kinds of hardwood. I removed the right edge using a wood splitter and cut out the cavity with a sabre saw and hand chisel. The piece can either stand alone or hang on the wall.

**Alan Shelvey**  
Shrewsbury, Vt.



## Fox Hunt

Keith Rosenberg of Grimes, Iowa, and Robert Van Vickle of Temple, Texas, were randomly drawn from the participants who located the fox in our last issue (Spring 2019, Issue 74). The fox was hiding in the butterfly pattern in Jacob and Wayne Fowler's article, Spring Takes Wing, on page 22.

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 May 15, 2019, to be eligible. *NOTE: The contest fox is an outline drawing that would face left if his feet were on the "ground" (other foxes appearing in SSW&C don't count).*

Send your entry to SSW&C, Attn: Find the Fox, 1970 Broad St., East Petersburg, PA 17520, or enter online at [scrollsawer.com](http://scrollsawer.com).

## Kid-Friendly Puzzle

I modified Sarah Lyn Chamberlain's "Puzzled Fox" pattern (Issue #73) to make it even more kid-friendly. I reduced the number of puzzle pieces to six and wood burned the remaining lines, using 1/4" (6mm)-thick Baltic birch plywood for the fox and the waste for a frame. As my version is a tray puzzle, I also backed it with 1/8" (3mm)-thick plywood and added wooden axle pegs for handles.

**Jim Jennings**  
Alamogordo, N.M.

Wooden knobs and a plywood tray make this puzzle workable for the smallest of tykes.

## Write to Us!

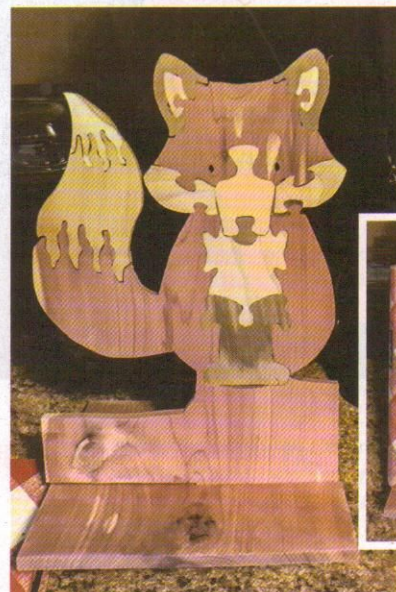
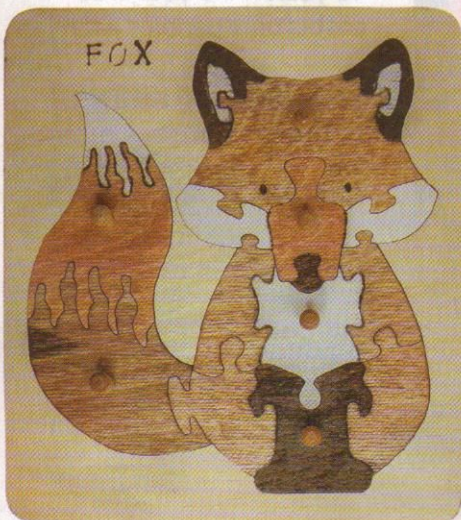
We'd love to hear your thoughts on our projects, ideas for new patterns, scrolling experiences, and woodworking show stories. Write to us at: Letters to the Editor, *Scroll Saw Woodworking & Crafts*, 1970 Broad Street, East Petersburg, Pa., 17520 or e-mail [editors@scrollsawer.com](mailto:editors@scrollsawer.com).

## Foxy Bookend

Someone contacted me just before Christmas, trying frantically to find a fox-themed cookbook holder for her sister. I remembered Sarah Lyn Chamberlain's "Puzzled Fox" (Issue #73) and threw something together, keeping the puzzle idea but gluing the pieces together. I used red cedar for the main body and poplar and walnut for the details. Needless to say, everyone loved the finished product!

**Brian Dennis**  
Farmington, N.M.

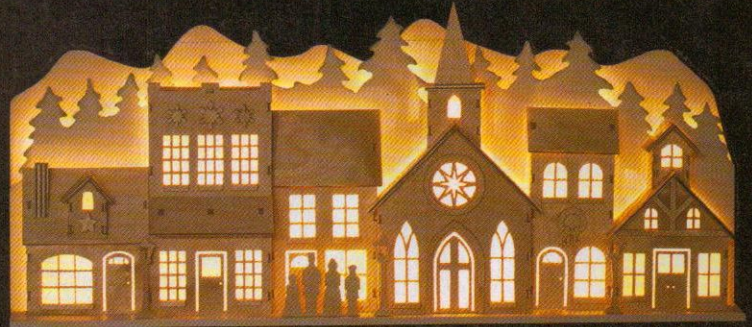
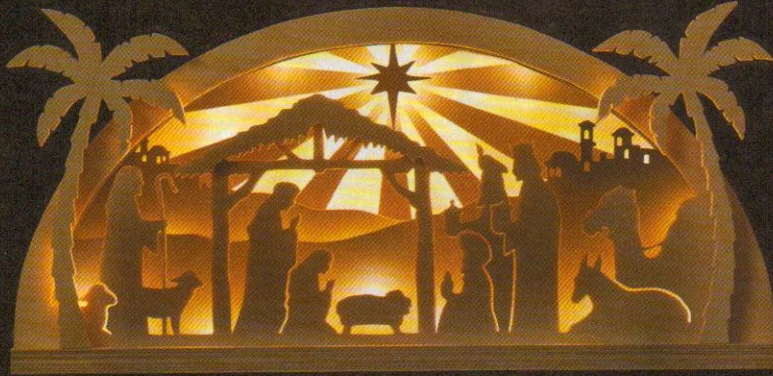
Sarah's fox puzzle repurposed as a recipe book holder.



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**Kenn Bennett** *Las Vegas, Nev.*  
 Kenn Bennett's intarsia ram contains 39 pieces and measures 12½" by 16¾" (31.8cm by 42.5cm). Find Kenn's eclectic wildlife intarsia and patterns on Etsy under kennbennett.



**Dan Fischer** *Grand Rapids, Mich.*  
 A new scroller, 31-year-old Dan Fischer made this layered 19" (48.3cm) square nightlight (inspired by Sauron's tower, Barad-Dûr, from *The Lord of the Rings*) as a gift for his two nieces. He used oak-veneered plywood for the main design and frosted glass for the backing, finishing with airbrushed acrylic paints and spray lacquer. "There are many friendly scrollers out there. If you have a question, don't be afraid to ask the community—shoot, don't be afraid to ask me!" Dan said. He based the piece on a design by Kgullholmen Illustrations. Find Dan on Instagram at fischstickwoodwork.



**Bobby Riggs** *Keller, Texas*  
 "Me and my Hegner saw have been scrolling together since 2001!" Bobby said. He designed this 8" by 10" (20.3cm by 25.4cm) musical cross in CorelDraw and cut it from ½" (1.3cm)-thick oak. Contact Bobby at bobbyriggs57@yahoo.com.





**Hannah Simons** Bryn Athyn, Pa.

Hannah Simons works with her spoon-carving father, Jonathan, to create simple and elegant pieces out of local, sustainably harvested cherry wood. She finished this 7" (17.8cm)-long Celtic-patterned hair stick with mineral oil and a mixture of coconut oil and beeswax. See more of Hannah's work at [hannahsideasinwood.com](http://hannahsideasinwood.com).



**Tony Coleman** Dromduff, Ireland

Tony Coleman began using a hand fretsaw in his youth and switched to power scroll saws just a decade ago. He made this *I Am the Light of the World* piece from a pattern by the late Dirk Boelman, using a combination of mahogany, ash, pine, and plywood. Contact Tony at [topcatony@gmail.com](mailto:topcatony@gmail.com).



**Daniel Brown** Pittsburgh, Pa.

"I wanted the wood to be darker and redder toward the back to simulate light in the depth of the ocean which becomes more red the deeper you go as the blue gets scattered and filtered out," said Daniel. He used lacewood, purpleheart, and other tropical hardwoods for the octopus body and hand-carved the suckers to add dimensionality. Find more of Daniel's work at [laughingmantisstudio.com](http://laughingmantisstudio.com).



**Share Your Latest Work!**

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

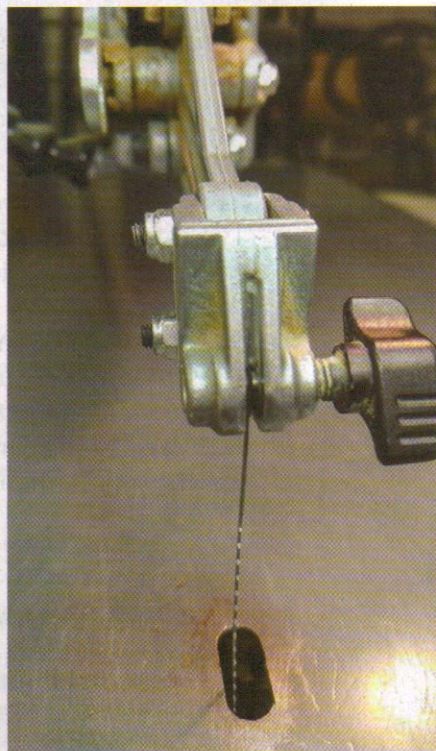
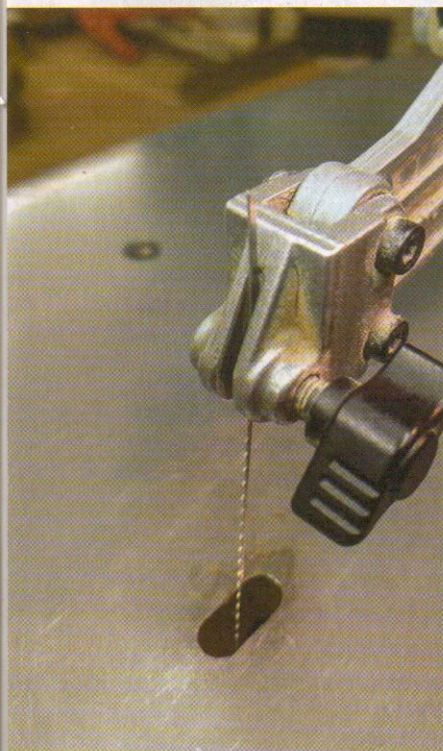
# Dying **TOP TIP** For Intarsia

If you want to create a colorful intarsia project but are on a budget or don't have access to tropical hardwoods, try stains or dyes. Transfast dye powders are my favorite, but you can find wood dyes and stains at various online craft suppliers. I'll cut out the piece from maple, shape and sand with 220-grit sandpaper, and then wet it to pre-raise the grain (since dyes are water-soluble). Then I sand back the fuzzies, mix up the dye, and apply. You can mix and match the colors together to make just about any shade you want. If you use wood tones together with the accent colors, it looks pretty organic.

**Allen Gohl**  
Fort Campbell, Ky.



Replicate the colors of expensive hardwoods with dyes or stains.



## Blade Economy

I'm a professional intarsia artist and go through a lot of blades on my scroll saw. When I put a new blade in, I set it so the bottom of the blade is just hitting the clamping screws. After the blade starts to dull, I move it down so I can just secure it in the top blade clamp. It's like getting a new blade!

**Terry Overmyer**  
Marblehead, Ohio

Position a new blade high in the clamps and slide it lower when the teeth begin to wear.



### Submit and win!

Send your favorite tip to *Scroll Saw Woodworking & Crafts*, 903 Square Street, Mount Joy, PA 17552, or e-mail [editors@scrollsawer.com](mailto:editors@scrollsawer.com). The Top Tip in each issue wins a \$25 Fox Chapel Gift Card.

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Thomas Taylor has given Ohioans a new reason to celebrate. He recently purchased 11 saws—an assortment of Excaliburs, Jets, and Seycos—and opened up a classroom at 38 North 4th St. in Zanesville to teach scrolling to veterans and troubled teens. The best part? He isn't charging a penny for his classes, instead selling his own cuts to pay rent and purchase supplies.

Said Canada-based scroll saw artist Charles Hand, "What Tom is doing for that community is awesome and should be commended. He's a real inspiration to all scroll sawyers and woodworkers."

Thomas's class has already grown so popular that he plans to relocate to a larger room in the same building—one with space for separate work prep, painting, and finishing stations as well as ventilation at each saw. "Last week, my students cut all day. It's getting so big, I just ordered \$3,000 worth of equipment to expand!"

Classes are every Saturday from 8am-3pm.



## Scrolling with Heart

Tom Taylor's scroll saw workshop in Zanesville, Ohio, where veterans and teens enjoy free classes.

For more information or to donate to the cause, contact Tom at [facebook.com/thomas.taylor.965](https://www.facebook.com/thomas.taylor.965).



Members of the Long Island Scroll Saw Association created a slew of projects from the Fall 2018 issue of *Scroll Saw Woodworking & Crafts* magazine.

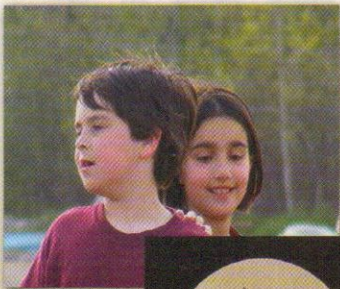
### An Issue Comes to Life

The Long Island Scroll Saw Association (LISA), a special interest group of the Long Island Woodworkers, took on a new challenge in fall of 2018. One of their members, Bob Carpentier, suggested that they choose an issue of *Scroll Saw Woodworking & Crafts*, divvy up the projects, and have each person make a different one from its pages. They selected Issue #68 (Fall 2017) and, at the September 20 meeting, the group got to show off the fruits of their labor.

"What a beautiful display of workmanship," said Rolf Beutenmuller, president of the association. "A big thank you to *SSW&C* for continuously providing us with a variety of projects to keep us busy."

For more information, visit [liwoodworkers.org/lisa](https://www.liwoodworkers.org/lisa).

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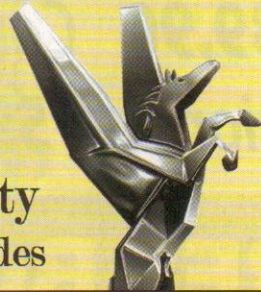
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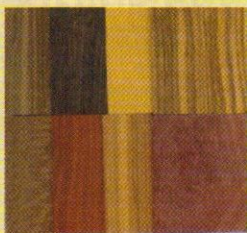
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SPRING 2019  
ISSUE 74

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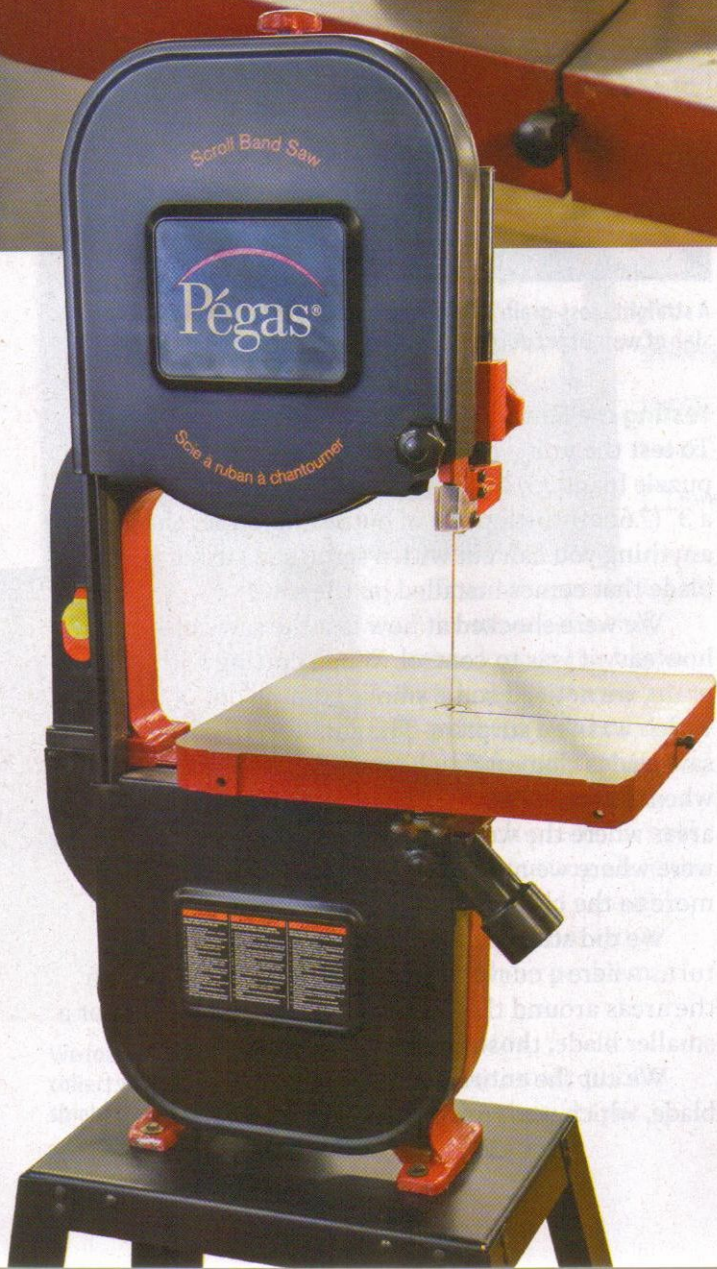
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# The First Band Saw That Cuts Like a Scroll Saw



**The New Pégas Scroll Band Saw cuts wood up to 6¼" thick with ease and accuracy**

*By the Staff of Scroll Saw Woodworking & Crafts*

#### At a Glance

\$1,440 plus S&H  
 Call 800-847-4188 or e-mail  
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**P**égas' new Scroll Band Saw might change how you look at projects—it certainly has for us! The first band saw to accommodate a continuous scroll saw-sized blade, it combines the power of a band saw with the accuracy and tight turning radius of a scroll saw. With this amazing new tool, you can cut thicker wood for intarsia to achieve greater depth and dimension, stack-cut freestanding puzzles, upsize compound-cut projects (like chess pieces), or make large 3-D puzzles—*fast*. The only thing it can't do is cut inside frets—if that's your thing, this baby isn't for you. Everyone else, however, will love it.

### How it Works

The heart of the saw is two precision-grooved bearings—one above the saw table and one below it—which support the blade as you cut. Without these bearings, the blades would snap whenever you made a tight turn. But with them positioned properly, it cuts a  $\frac{1}{4}$ " (6mm)-diameter circle in a piece of 4" (10.2cm)-thick basswood as easily as a scroll saw does on wood of  $\frac{1}{4}$  the thickness.

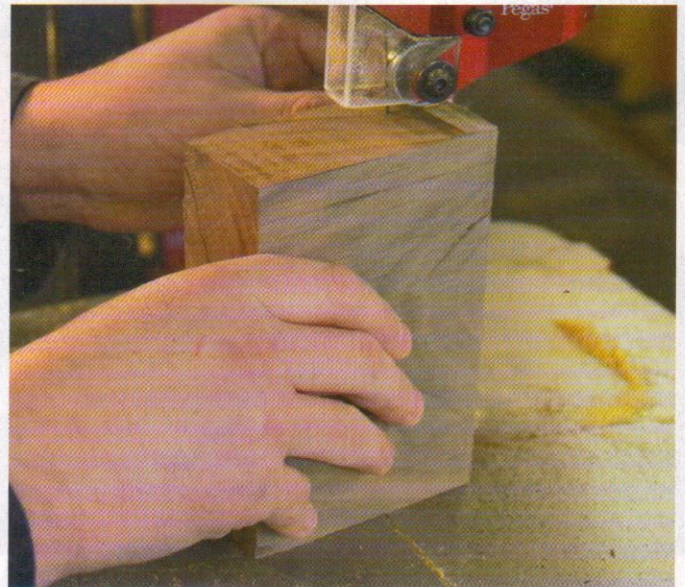
Blade tension plays a big part in making square and accurate cuts. And as with a scroll saw, the proper tension is subjective: too little and the blade wanders and gives you curved cuts; too much, and the blade is more likely to break. Pégas suggests treating the band saw blades like you would scroll saw blades, as follows:



Dual precision-grooved bearings keep the blade aligned in tight turns.

Move the blade guide to the uppermost position. Then press on the side of blade. As a baseline, Pégas recommends tensioning the blade so it flexes  $\frac{1}{8}$ " (3mm) to  $\frac{5}{32}$ " (4mm). We tensioned the saw like this and it cut well on the dolphin puzzle we used as a test.

The saw is large enough to cut  $6\frac{1}{4}$ " (15.9cm)-thick wood. The table is 16" (40.6cm) square; the left side tilts to  $15^\circ$  and the right side tilts down to  $45^\circ$ . It's been precision-engineered to use blades as small as a #5 scroll saw blade at 0.0142" (.36mm) thick and 0.0402" (1.02mm) wide.



A straight cross-grain pass through a  $6\frac{1}{4}$ " (15.9cm)-thick slab of walnut produced a clean cut with no scorching.



Proper tensioning is important. The blade tension should be set similar to that of a scroll saw—approximately  $\frac{1}{8}$ " (3mm) flexion.

### Testing the Saw

To test the unit, we increased the size of the dolphin puzzle (page 25) by Alexander Klimov and cut it from a 3" (7.6cm)-thick piece of butternut (larger than anything you can cut with a scroll saw) using the #12 blade that comes installed on the saw.

We were shocked at how fast the saw cut—and how easy it was to control. When cutting with the grain, we noticed some smoke coming out of the cut, which wasn't a surprise. The small teeth of most scroll saw blades clog easily when cutting with the grain. But when we looked at the cut dolphin, we only saw a few areas where the wood was actually scorched, and those were where we made tight turns. We attribute that more to the new users than to the saw itself.

We did struggle a bit to make especially tight turns where a curve turned back upon itself, as with the areas around the fins. With practice, however, or a smaller blade, those curves would be easier.

We cut the entire dolphin without breaking a blade, which was surprising given our inexperience

## Which Saw Does It Best?

	Scroll Band Saw	Band Saw	Scroll Saw
Maximum Wood Size	Cuts wood up to 6 1/4" (15.9cm)-thick	Depends on the saw, but even the smallest units can cut 3 1/2" (8.9cm) thick	Cannot cut wood more than 2 1/2" (6.4cm)-thick
Blade Variety	Must use Pegas blades with limited sizes and tooth configurations; cannot use large blades to resaw	Can use a variety of blade sizes and tooth configurations. Able to use large blades to resaw wide boards	Can use the smallest blades and offers widest variety incl. metal-cutting and diamond blades (to cut stone and glass)
Cutting Speed	Two settings allow you to tailor the speed to the project you are cutting	Some premium saws allow you to change the speed; less expensive units are single speed	Variable speed allows for the most accurate cutting
Cutting Ability	Continuous blade gives you perfectly square cuts (front to back). Small blade can cut tight curves	Makes larger radius cuts and turns. Useful for rough cutting shapes, but not tight curves	Makes turns tighter than 90°
Blade Strength	Surprisingly durable; last longer than scroll saw blades, but dull over time	Rarely break, but dull over time. Some can be resharpened	Dull and break rapidly because all of the cutting is done with a small portion of the blade
Inside Frets	Cannot cut inside frets without cutting in from an edge	Cannot cut inside frets without cutting in from an edge	Can feed blades through entry holes to cut frets without cutting in from the outside
Accessories	Includes bearings for three blades; additional bearings required for additional blades	Comes with rip fence, miter guide slot, and miter guide	Aftermarket includes lighted magnifiers, foot switch, and blade chuck heads

**“We were shocked at how fast it cut—and how easy it was to control.”**

with this unit. It seems that as long as you keep the blades within the grooves in the bearings, you'll be fine. This means you can't make a 90° pivot turn by pulling back slightly on the blade; it also means that if you inadvertently pull the blade out of the bearing slot, you have to reposition it before continuing.

That also speaks highly of the manufacturing technology of the blade. Think about it—you need to weld the two ends of tiny blade together to create one continuous loop. Such precision pays off: after cutting all of the pieces, I could assemble the puzzle from either side with no problem.

### Side Notes

Our one small quibble was the clear acrylic

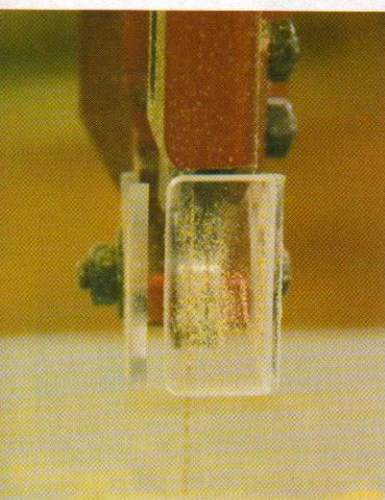
plastic guard at the top of the blade. It collects sawdust right where you're trying to see, so you'll want to keep a can of compressed air handy. We also suggest adding an aftermarket light that uses a magnet to attach to the unit. And keep in mind that only Pegas makes blades for this saw, so you won't be able to run down to your local hardware store to pick up a new one.

### Pricing

At \$1,440, the saw falls in the range of some of the priciest scroll saws: Hegner Multimax 18-V (\$1,594) and the Hawk BM26 (\$1,400). But with this price comes additional power and the ability to cut much thicker wood. Blades range in price from \$25 for a #5 blade to \$30 for a #14 blade. You need to change the top and bottom bearings based on the blade size, and extra bearings sets cost \$99 each. (The saw comes with bearings that accommodate the #9, #11, and #12 blades that are included.)

### Overall Opinion

Simply put, the Pegas Scroll Band Saw is a game changer. Fretwork (and resawing) aside, it expands the possibilities for anyone cutting hardwood puzzles, intarsia, or compound pieces. It cuts thick hardwood accurately and quickly, and the cut is perfectly square from front to back, allowing for more accurate joints. Yes, it's expensive—but it's also a technological breakthrough, and worth every penny.



We found that sawdust collects in the plastic bearing shield during cutting.

**ON THE WEB** See a video of the Dolphin project on our website.  
scrollsawer.com

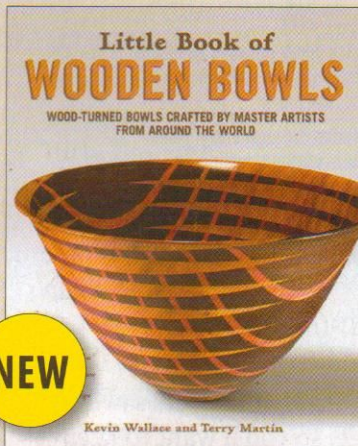
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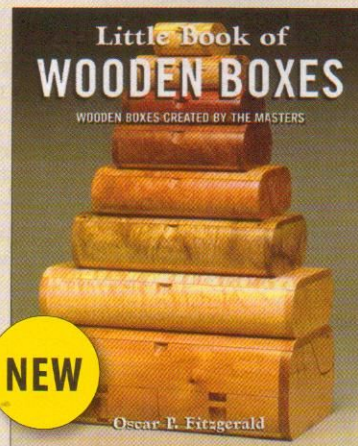
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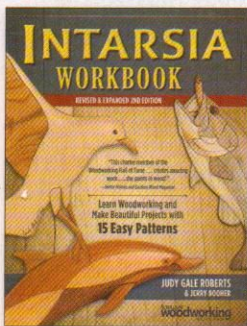
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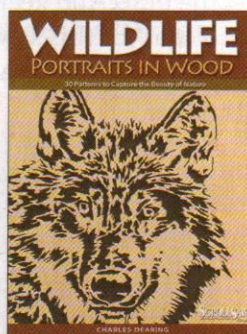
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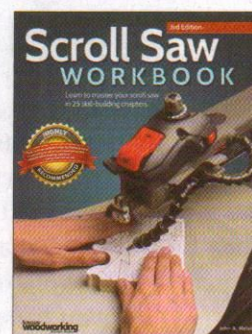
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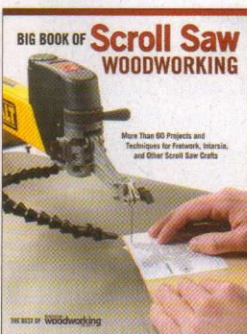
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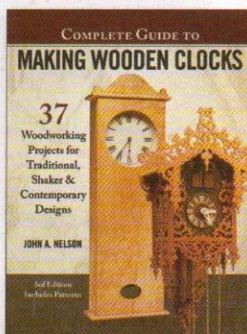
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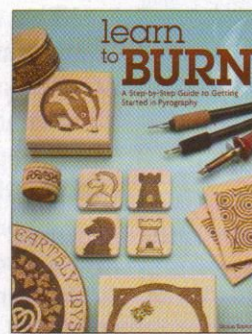
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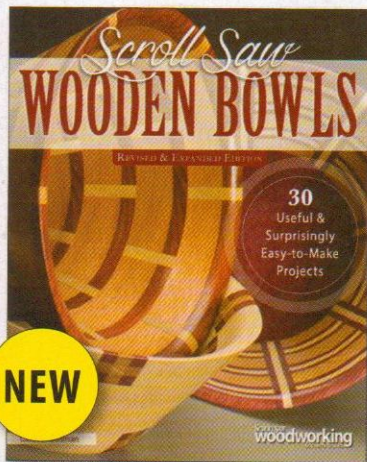
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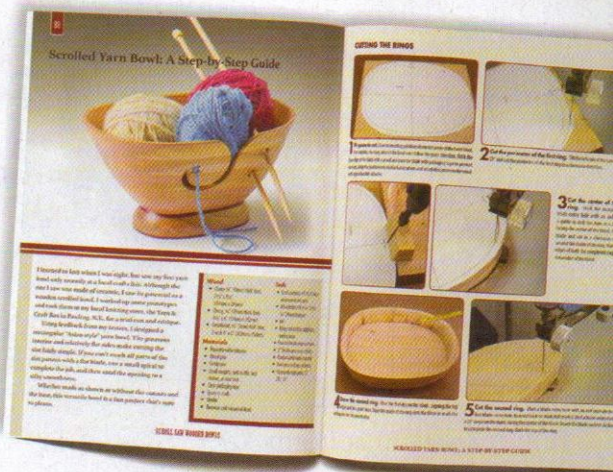




While wood bowls are commonly made on a lathe, this newly updated guided resource offers 30 projects for crafting a variety of beautiful bowls with the more accessible scroll saw. The projects are organized in a progressive learning format: beginning crafters can start with the most basic stacked bowl and gradually work their way toward more elaborate laminated wood bowls, multiple-angle bowls, thin wood bowls and more.

- Updated edition with additional new projects and more pages!

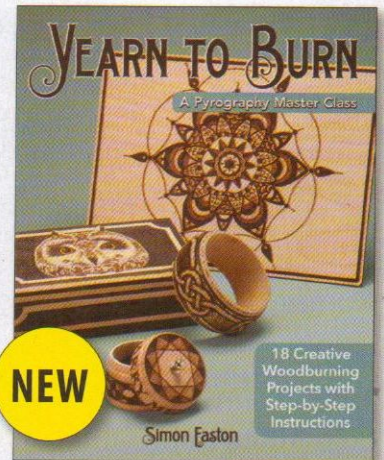
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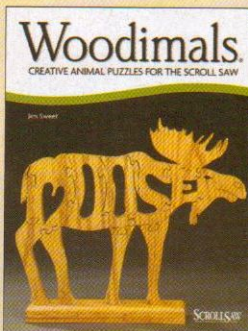
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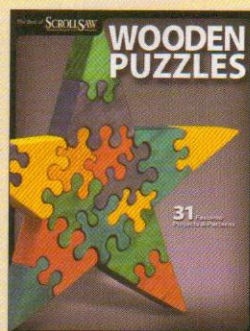
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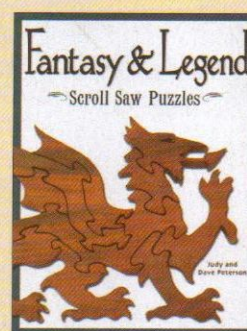
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# Japanese-Inspired Fretwork Shelf

Combine angles with delicate botanicals in one remarkable design

By John A. Nelson  
Cut by Rolf Beuttenmuller

Japan has a long history of decorating with fretwork. My project combines iconic images from nature with shelves and brackets that might remind you of ranma transom panels. Bring a touch of the Far East to your home with this challenging (but satisfying) piece.





This intricate shelf is a perfect place to display knick-knacks or small plants.

## Getting Started

If you plan to make the back from solid wood, glue up the blank. Alternate the curl of the grain between the pieces. This should reduce any warping or twisting.

Stack together blanks for the four small shelves (5), two large braces (2), and two small braces (3). Cover the blanks with removable shelf paper and attach the patterns to the tape with spray adhesive.

## Cutting the Pieces

Drill blade-entry holes for the fretwork in the braces and back and cut the frets. Then cut the perimeter of the braces, shelves and back. Separate the stacks and sand away any fuzzies.

## Finishing and Assembling

Mask the joint areas on the back, braces, and shelves, and apply a few coats of clear satin spray lacquer. Sand gently between coats with 320-grit sandpaper. Allow the finish to dry. *Note: I suggest a dry fit before gluing.*

Glue the bottom shelf (4) to the back, making

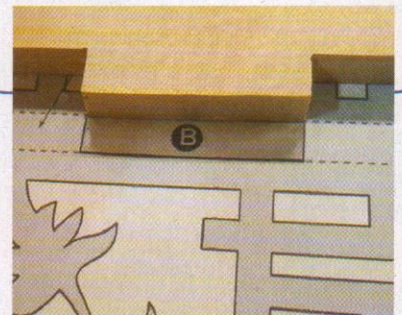
sure it is perfectly square to the back. Let the glue dry. Then glue the top shelf (6) to the back, again making sure it is square, and let the glue dry. Place the large brace (2) in position on one side (with no glue) and then glue and clamp a small shelf (5) in place. Allow the glue to dry, and repeat for the other side. Then, glue and clamp the large braces in place. Use the same procedure to attach the remaining small shelves (5) and small braces (3).

Carefully sand the tabs flush with the back. For additional strength, drill pilot holes and drive small screws through the back into the shelves and braces. Attach a few small D-ring hangers to the back to complete the shelf.

### TIP

#### TABS AND SLOTS

*Cut the tabs and slots first, and check their fit before cutting the fretwork. It is much safer, as the fretwork is fragile.*



## Parts List

	Part	Quantity	Materials	Dimensions
1	Back	3	Maple, 1/4" (6mm) thick	5 1/4" x 16" (13.3cm x 40.6cm)
2	Large brace	2	Maple, 1/4" (6mm) thick	3" x 6" (7.6cm x 15.2cm)
3	Small brace	2	Maple, 1/4" (6mm) thick	3" x 3 3/4" (7.6cm x 9.5cm)
4	Long shelf	1	Maple, 1/4" (6mm) thick	3" x 9 3/4" (7.6cm x 24.8cm)
5	Small shelf	4	Maple, 1/4" (6mm) thick	3" x 3 1/2" (7.6cm x 8.9cm)
6	Medium shelf	1	Maple, 1/4" (6mm) thick	3" x 5" (7.6cm x 12.7cm)

Patterns for the **JAPANESE-INSPIRED FRETWORK SHELF** are in the pullout section.

## Materials & Tools

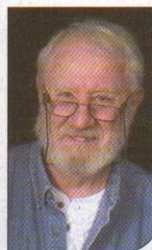
### Materials

- Wood: see Parts List
- Tape: blue painter's
- Sandpaper
- Spray adhesive
- Shelf paper: removable
- Wood glue
- Small screws (optional)
- Finish, such as Minwax satin spray lacquer
- Hangers: D-ring

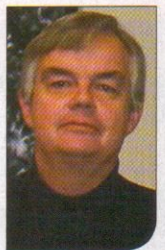
*The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.*

### Tools

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



*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 recently 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.*

# Chipmunk Intarsia

Transform figured scraps into a  
cute backyard chatterer

By Brad and Hazel Eklund



**H**ave you ever been on a peaceful walk through the woods enjoying nature's splendor...and then a sudden, noisy chatter startles you out of your reverie? The sound is coming from none other than the chipmunk, which, for something so small, sure does raise a ruckus. These noisy backyard visitors can be found almost anywhere in North America—and with this project, you can bring a silent version inside to enjoy for years to come.

## Cutting and Finishing

Cut the individual pattern pieces and attach them to the different woods. Pay attention the grain figure and direction. After cutting the pieces, dry-assemble them on a copy of the pattern to check the fit and flow. Since this project contains several seamless transitions of wood—in the tail, back, and face—for these areas, glue the pieces together, and then shape the assembly as one unit. After shaping all of these segments, fill any gaps along the transition lines with glue and sand everything smooth. (The glue collects the sawdust and fills in the gaps.) Then, glue and clamp the segments to the backing board. Allow the assembly to dry and apply a clear satin finish.

## Legend

← Grain direction

D..... Shedua: Dark shade of wood

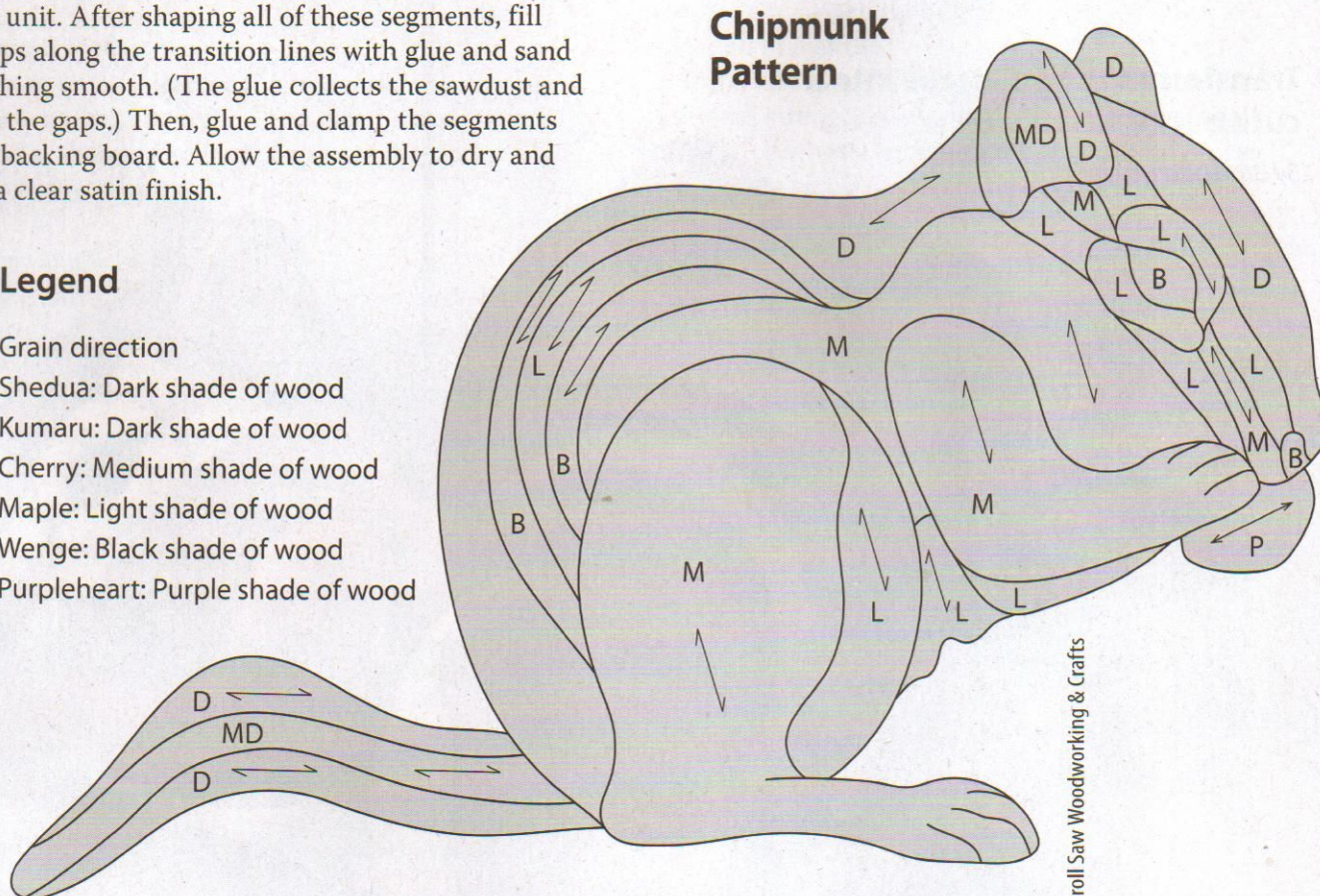
MD... Kumaru: Dark shade of wood

M..... Cherry: Medium shade of wood

L..... Maple: Light shade of wood

B..... Wenge: Black shade of wood

P..... Purpleheart: Purple shade of wood



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## Materials & Tools

### Materials

All wood sizes are approximate

- Dark wood, such as shedua,  $\frac{3}{4}$ " (1.9cm) thick: 5" x 7" (12.7cm x 17.8cm)
- Medium dark wood, such as kumaru,  $\frac{3}{4}$ " (1.9cm) thick: 2" x 3" (5.1cm x 7.6cm)
- Medium tone wood, such as cherry,  $\frac{3}{4}$ " (1.9cm) thick: 4" (10.2cm) square
- Light wood, such as maple,  $\frac{3}{4}$ " (1.9cm) thick: 4" (10.2cm) square
- Purple wood, such as purpleheart,  $\frac{3}{4}$ " (1.9cm) thick: 1" (2.5cm) square
- Black wood, such as wenge,  $\frac{3}{4}$ " (1.9cm) thick: 3" (7.6cm) square
- Backing material, such as Baltic birch plywood,  $\frac{1}{8}$ " (3mm) thick: 5" x 7" (12.7cm x 17.8cm)

- Wood glue, high quality

- Waxed paper (for gluing)

- Spray adhesive

- Tape: blue painter's

- Finish: clear satin

- Picture hanger

### Tools

- Scroll saw blades: #5 or #7 reverse-tooth

- Rotary tool with various bits

- Sanders: sanding mop, disc, and/or drum

- Clamps: small

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




Brad and Hazel Eklund have been creating scroll saw art for the last seven years. They have always been fascinated by the beauty and intricacies of wildlife and nature in general. Brad has a degree in horticulture, while Hazel has a degree in wildlife. They avoid the

use of stains or dyes, instead relying on the natural appeal of the wood itself. They live and work next to a nature preserve in coastal North Carolina.

# 3-D Dolphin Puzzle

Use a dowel eye to lock the pieces together in this freestanding design

By Alexander Klimov

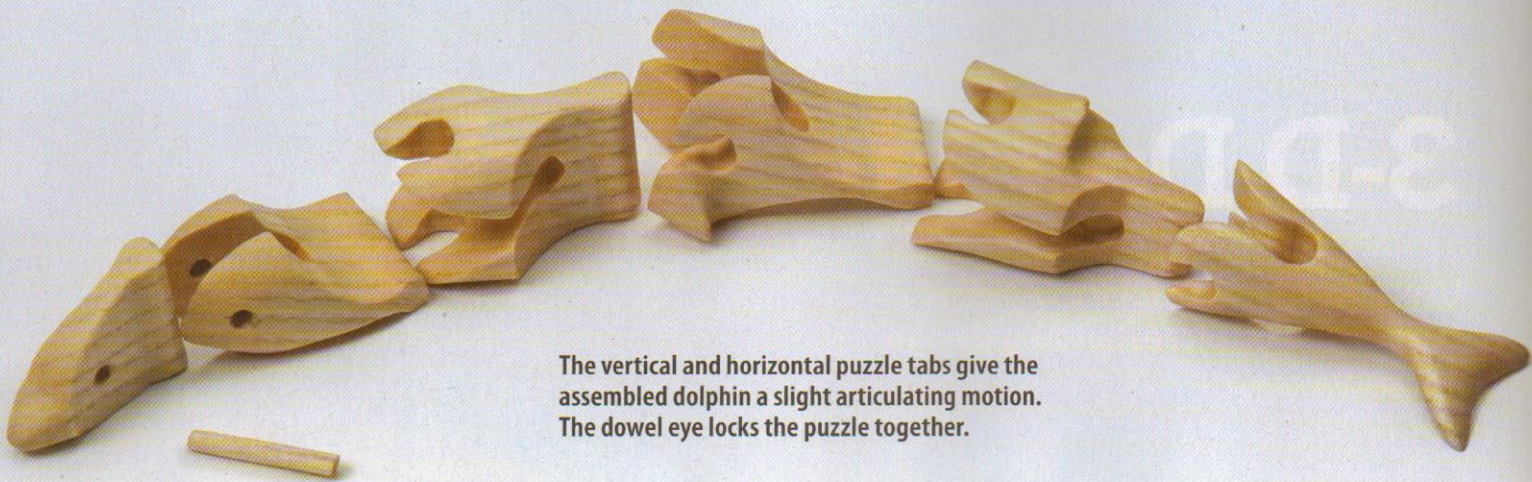


**W**hile I've seen a variety of larger animal puzzles made with a band saw, I've never come across any that I could cut on a scroll saw. So I designed this jumping dolphin specifically for that tool. It cuts easily but go slowly and deliberately—otherwise, he may lose a fin!

## Getting Started

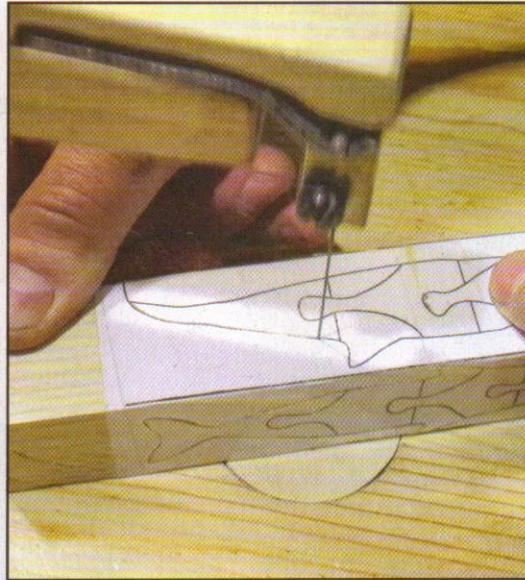
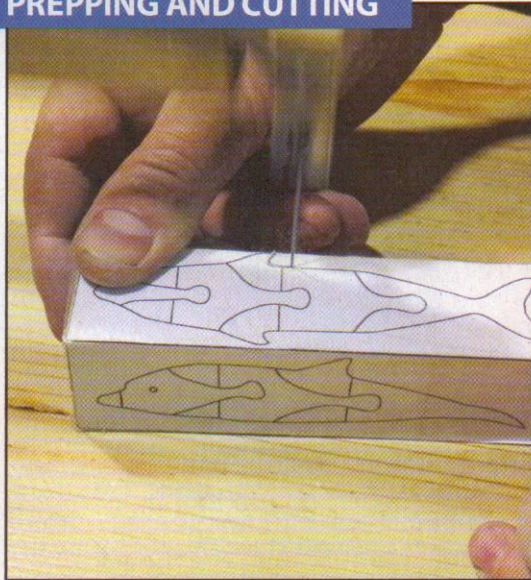
Cut the blank to size and make sure the sides are perfectly square. While this one is made from maple, I've found that birch, beech, walnut, and ash also work. Make sure the blade is exactly square with the table or you won't be able to assemble the puzzle properly. Tension the blade, as well. You want to minimize blade deflection while cutting thick wood.

Fold the pattern on the dotted line. Apply a glue stick or spray adhesive to the back, align the fold with the corner of the blank, and press the pattern into place. Wrap clear packaging tape around the blank to further secure the pattern.



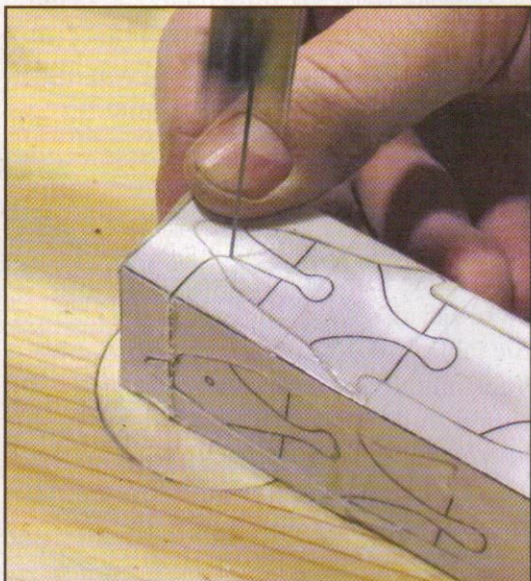
The vertical and horizontal puzzle tabs give the assembled dolphin a slight articulating motion. The dowel eye locks the puzzle together.

## PREPPING AND CUTTING



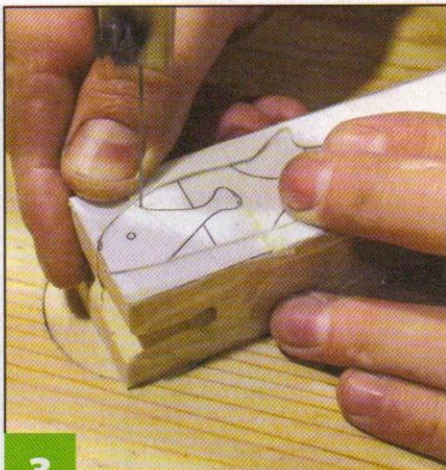
1

**Make one continuous cut around the top profile.** Remove the cut piece to clear out the sawdust and use clear packaging tape to secure the wood back in place. Rotate the blank 90° and cut the side profile. Remove the sawdust and wrap the entire blank with clear packaging tape.



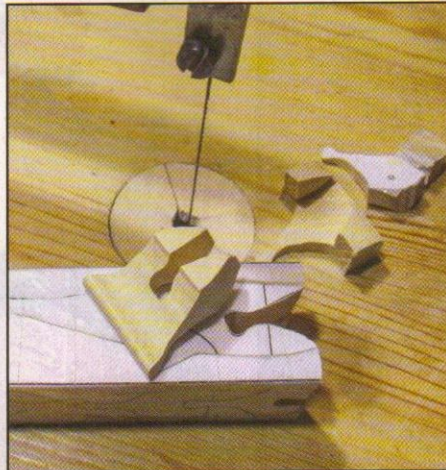
2

**Position the blank with the top profile facing up.** Cut the first puzzle piece (labeled 1). Remove the cut part and any scrap and set it aside.



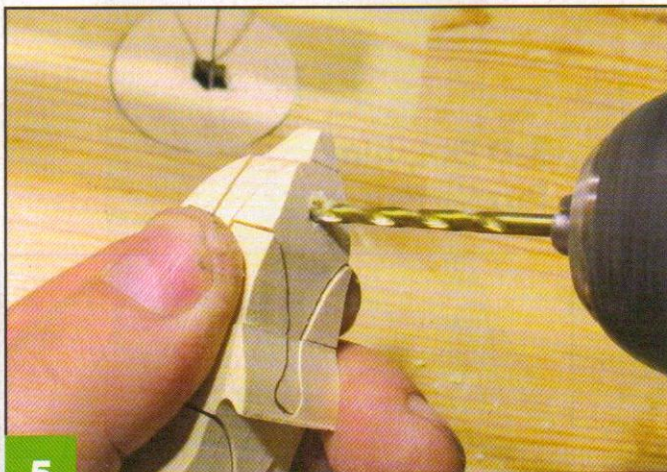
3

**Rotate the blank 90°.** Cut the second part (labeled 2). Remove the part, and any scrap, and set it aside.



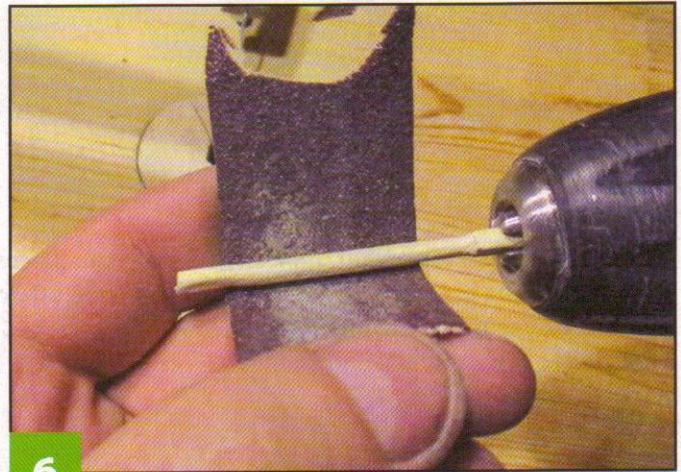
4

**Cut the remaining pieces.** Repeat steps 2 and 3.



5

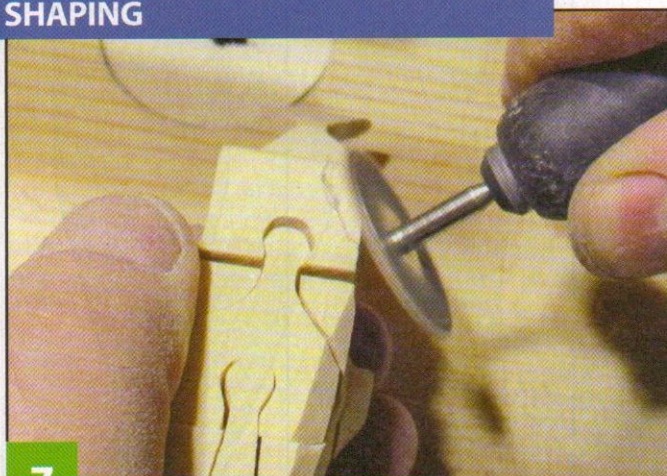
**Reassemble the puzzle in reverse order.** Drill the 1/8" (3mm)-diameter eye hole through pieces 1 and 2.



6

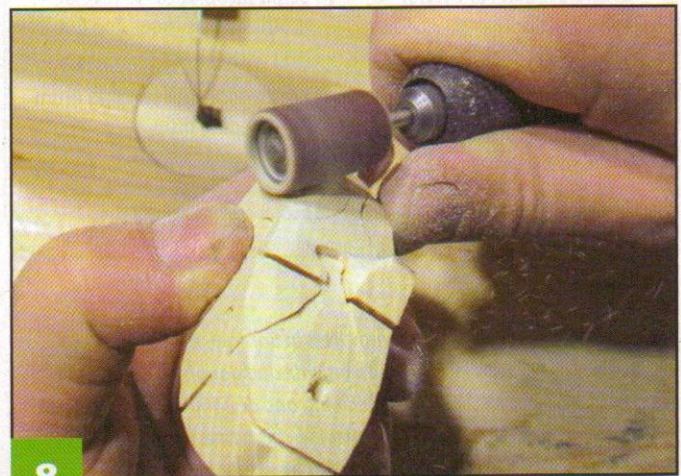
**Chuck a small stick in the drill.** Use sandpaper to sand the stick into a cylinder that fits into the eye hole. Leave one end of the cylinder a little thicker to secure it in the hole. This eye locks the pieces together.

## SHAPING



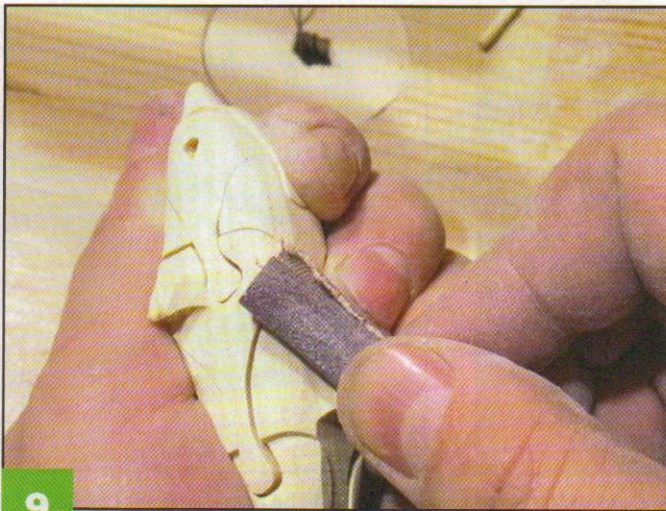
7

**Rough shape the dorsal and pectoral fins.** Use an 80- to 100-grit sanding disc on a mandrel in a rotary tool. Use the same disc to round the body.



8

**Shape the tail and fins.** Use a small sanding drum with an 80- to 100-grit band in the rotary tool. Smooth and refine the body with the sanding drum.



9

**Hand sand the dolphin with the grain.** Start with 120-grit paper, and move on to 180- and finally 240-grit. Cut the eye stick about  $\frac{3}{16}$ " (5mm) longer than the width of the head. Take the puzzle apart.



10

**Round the sharp corners on the edges of each of the pieces.** Use 240-grit sandpaper.

### Finishing

I use an oil finish for my puzzles. You can dip the pieces in oil, allow the excess to drain off, and then wipe off any residue, or use a napkin and small stick to apply the oil, wait five to ten minutes, and then wipe off any oil that isn't absorbed.

### Materials & Tools

#### Materials

- Medium hard wood, such as birch, maple, or cherry,  $1\frac{1}{2}$ " (3.8cm) square:  $5\frac{1}{8}$ " (13cm) long
- Scrap of same wood (eye)
- Glue stick or spray adhesive
- Sandpaper
- Oil finish

#### Tools

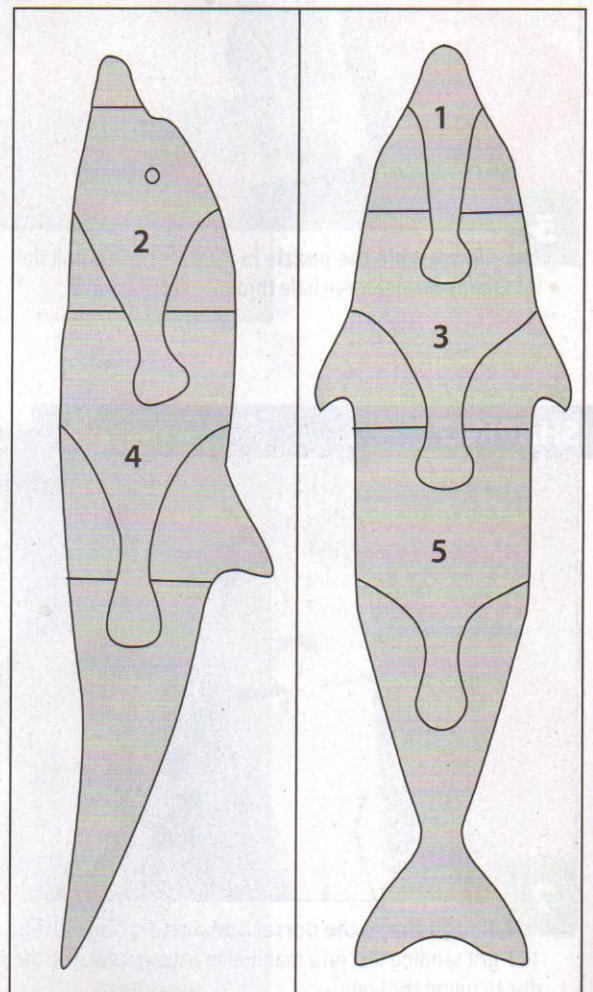
- Scroll saw blades: #5 reverse-tooth, such as Niqua Top Cut
- Drill with bit:  $\frac{1}{8}$ " (3mm)-dia.
- Rotary tool with sanding drum and sanding discs

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

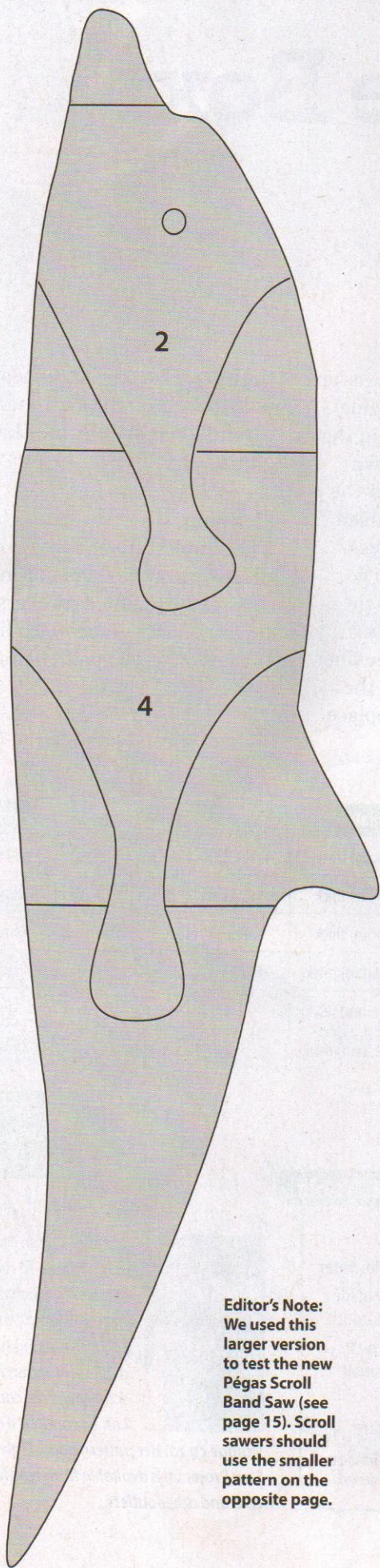


Alexander Klimov lives in Barnaul, Altai Krai, Russia, with his wife and daughter. He's been scroll sawing and designing patterns for four years in his home workshop. For more of his patterns, visit him on Etsy at [SiberianWoodworker](#).

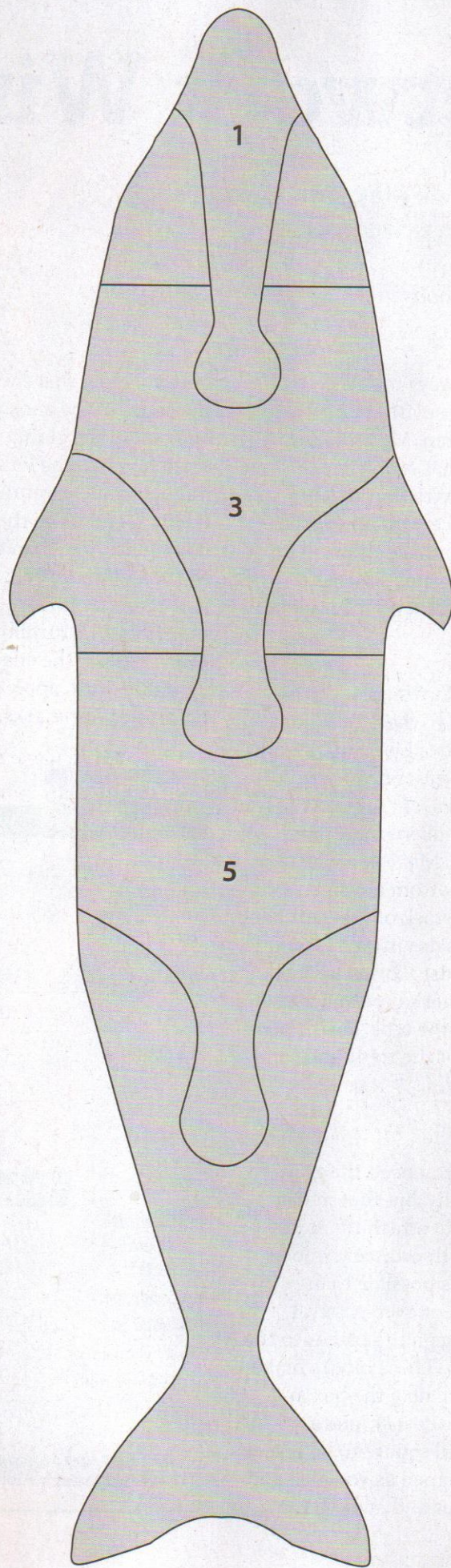
### 3-D Dolphin Puzzle Patterns



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**Editor's Note:**  
We used this larger version to test the new Pégas Scroll Band Saw (see page 15). Scroll sawers should use the smaller pattern on the opposite page.



# Fretwork Wine Box

This festive display case makes every bottle extra-special

By Sue Mey  
Cut by Dennis Knappen

**W**ine always makes a welcome gift, but it's a challenge to wrap. My fretwork design solves that problem while adding extra flair to your vintage of choice. On top of that, this beautiful project allows you to show off your skills as a woodworker and sommelier all at the same time!

## Prepping and Cutting

Cut the blanks to the dimensions listed in the Parts List. I use a table saw and miter saw, but you could mark the blanks, cut outside the lines with a scroll saw, and sand up to the lines. Make sure the top, lid liner, and bottom are square. Then create a stack of the ends and a stack of the sides (see page 66 for several methods). Cover the stack with blue painter's tape and attach the pattern to the tape. Drill blade-entry holes, cut the frets, and sand away any fuzzies.

## Assembling

For strength, you need the grain to run horizontally, but that makes it a challenge to attach the sides to the ends with ordinary wood glue. While it's possible to use dowels, brads, or even epoxy, I suggest adding gluing blocks to the inside corners. These blocks make it easier to assemble the box and strengthen the corner joints.

Use a small square to help keep everything aligned as you glue and clamp the sides and ends to the

bottom. Note that the sides overlap the edges of the ends. Then, glue and clamp the gluing blocks in the corners. Place the lid face down on the bench, carefully center the lid liner, and place the assembled box on the lid. Align the edges of the box with the edges of the lid, and carefully lift the lid straight up without disturbing the liner. Trace around the edges of the liner, carefully lift it, apply glue to the lid inside your marks, and replace

the liner. Place the box sides in position, check the alignment, and carefully remove them. Allow the glue to dry.

## Finishing

The simplest finish is a few coats of clear spray lacquer. For more artistically inclined scrollers, paint the leaves and grapes with light washes of acrylic paint before applying a clear finish.

## Parts List

Part	Quantity	Materials	Dimensions	Presentation
Lid	1	Oak, ¼" (6mm) thick	4½" x 13½" (11.4cm x 34.3cm)	Dimensions
Bottom	1	Oak, ¼" (6mm) thick	4½" x 13½" (11.4cm x 34.3cm)	Dimensions
Lid liner	1	Oak, ⅛" (3mm) thick	4" x 13" (10.2cm x 33cm)	Dimensions
Sides	2	Cherry, ¼" (6mm) thick	4" x 13½" (10.2cm x 34.3cm)	Pattern
Ends	2	Cherry, ¼" (6mm) thick	4" (10.2cm) square	Pattern
Glue blocks	8	Cherry, ½" (1.3cm) thick	½" (1.3cm) square	Dimensions

## Materials & Tools

### Materials

- Wood: See Parts List
- Sandpaper
- Wood glue
- Acrylic paint or clear spray finish

### Tools

- Saws: table, miter
- Scroll saw blades: #3 reverse-tooth
- Drill with bits: assorted small
- Clamps
- Small square

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

Pattern for the **FRETWORK WINE BOX** 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.





# Flying Dragon

**Forget training your winged beast—why not scroll one?**

By Sue Mey

Cut by Rolf Beuttenmuller

**L**ayered pieces make impressive wall hangings, but when it comes to displaying this majestic dragon, I like to color outside the lines. Add it to a custom sword rack or mount it on a shield. Stack a few sheets of cardstock between two pieces of wood to create custom paper art. Assemble the paper dragon, position it on a table, and cover it with a layer of bar-top epoxy for your next big game night. Let this versatile design be a starting point for a stunning conversation piece!

## Prepping and Cutting

Because most of this dragon is made from thin wood— $\frac{1}{8}$ " to  $\frac{1}{4}$ " (3mm to 6mm) thick—plan to make more than one dragon so you can stack-cut the pieces. It's easier to make accurate cuts when cutting thicker wood. (See page 66 for several stack-cutting methods.)

For beginners, I suggest using Baltic birch plywood and painting or staining the different layers. More advanced scrollers can cut the different layers from colorful hardwoods.

Cover the stack with blue painter's tape and attach the pattern to the tape with spray adhesive. After cutting, carefully separate the stacks and sand the pieces smooth. Be careful to keep the edges square and the corners sharp. Dry-assemble the design, and then lightly round any exposed corners (the corners not covered by another layer). Mark the places where parts overlap; we will mask these areas to ensure good glue joints.

## Assembling and Finishing

This dragon can be a challenge to finish. All the nooks, crannies, and open frets will collect finish, and it can be challenging to get the excess out. One method is to finish *before* assembling (mask the areas where the layers overlap—these are where you'll be gluing them together—then finish each layer individually, remove the masking tape, and assemble the project).

If you are careful, it's possible to finish *after* assembling (assemble the project first, and then apply several light coats of spray finish). The hazard of this method is that it's impossible to sand away any places where you applied too much finish, so be diligent and careful with your application.

A third method is to assemble the dragon, dip it in an oil finish, and suspend it over paper towels upside down so the finish drips down out of the frets. Use compressed air or rubber dental tools to coax stubborn finish puddles out of tight areas.

Stack-cut the pieces to make multiple dragons at the same time.



## Materials & Tools

### Materials

- Hardwood or Baltic birch plywood, 1/8" to 1/4" (3mm to 6mm) thick: See Parts List
- Tape: blue painter's
- Spray adhesive
- Sandpaper
- Finish: alcohol dyes, clear spray or oil
- Glue: wood, cyanoacrylate (CA)

### Tools

- Scroll saw blades: #3 reverse-tooth
- Drill with bits: assorted small
- Clamps
- Air compressor or compressed air can (optional)
- Rubber dental tools (optional)

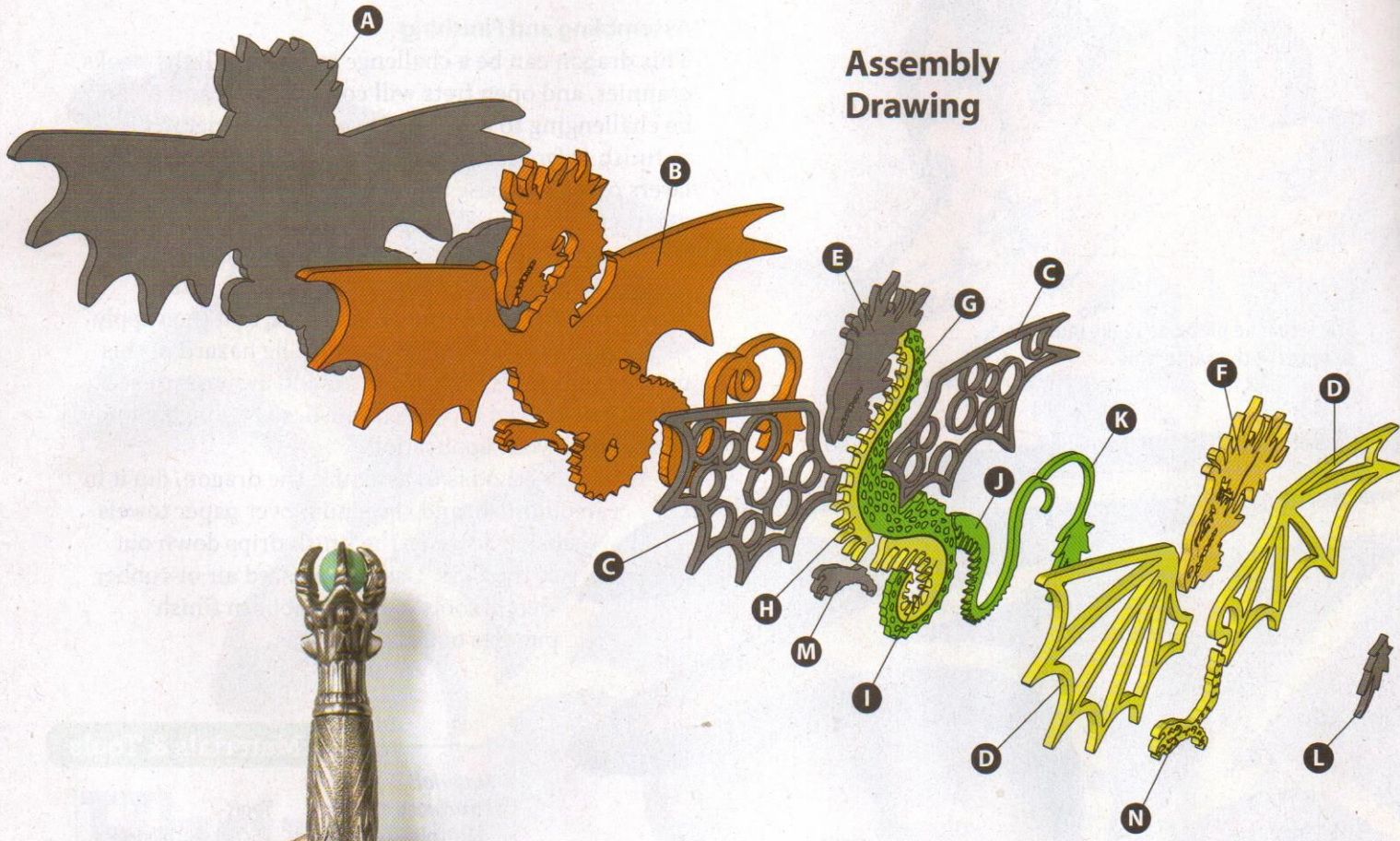
*The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.*



Sue Mey lives in Pretoria, South Africa. To see more of her work, including a wide variety of patterns and pattern-making tutorials available

for purchase, visit [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.

## Assembly Drawing



Rolf Beuttenmuller incorporated the dragon design into a sword holder.

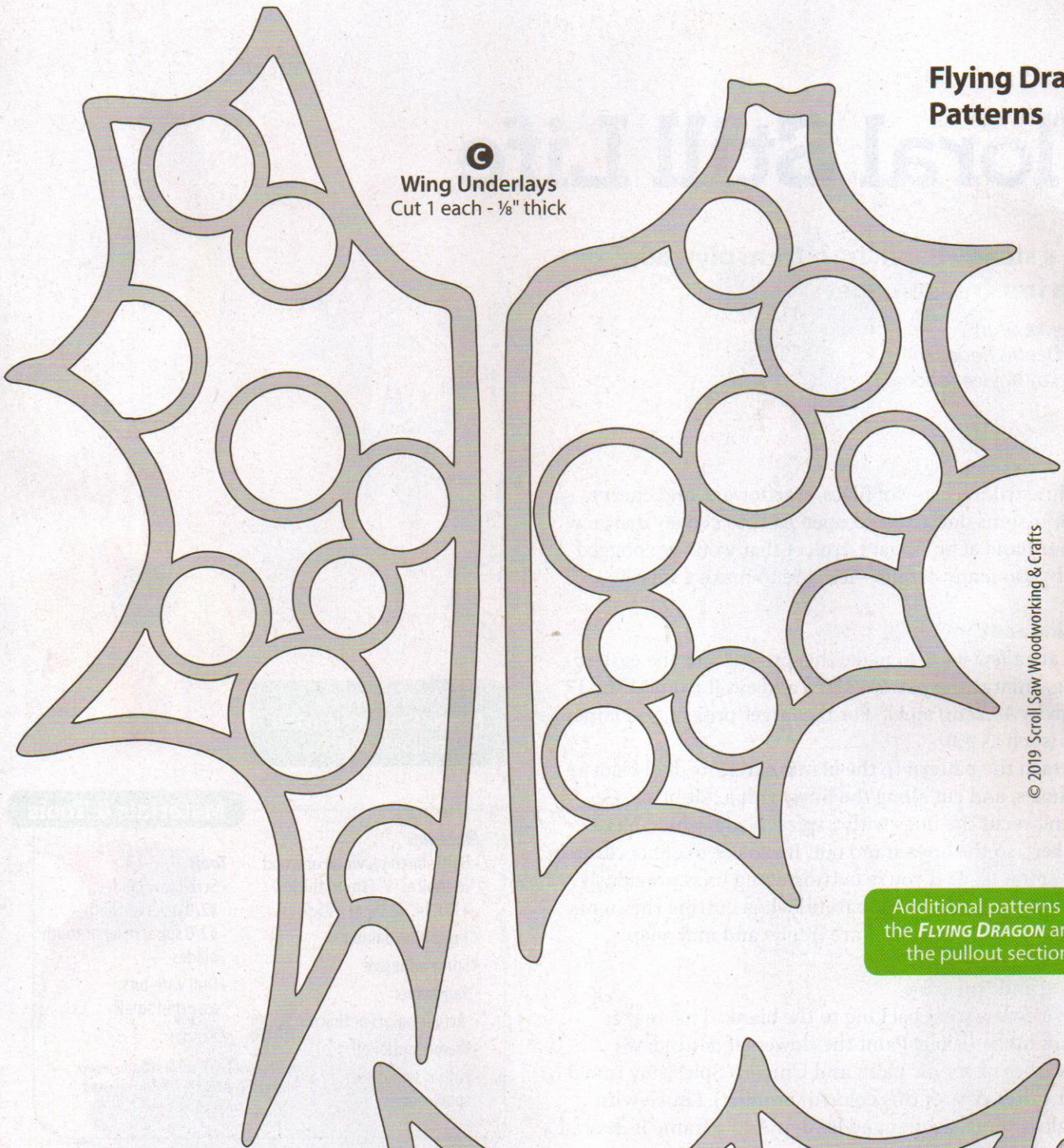
**ON THE WEB** Patterns for the Sword Holder are on our website.  
[woodcarvingillustrated.com](http://woodcarvingillustrated.com)

### Parts List

Part	Materials	Dimensions
A	Background	12½" x 17½" (31.8cm x 44.5cm)
B	Dragon body	12" x 16" (30.5cm x 40.6cm)
C	Wing underlays	8" x 9" (20.3cm x 22.9cm)
D	Wing overlays	8½" x 9" (21.6cm x 22.9cm)
E	Head underlay	3½" (8.9cm) square
F	Head overlay	3½" x 4" (8.9cm x 10.2cm)
G	Back	Wood, ⅛" (3mm) to ¼" (6mm) thick 4½" x 8½" (11.4cm x 21.6cm)
H	Belly A	3" x 5½" (7.6cm x 14cm)
I	Belly B	3" (7.6cm) square
J	Tail A	4" x 4½" (10.2cm x 11.4cm)
K	Tail B	3" x 4½" (7.6cm x 11.4cm)
L	Tail overlay	3" (7.6cm) square
M	Foot underlay	1¼" x 3" (3.2cm x 7.6cm)
N	Foot overlay	3" (7.6cm) square

## Flying Dragon Patterns

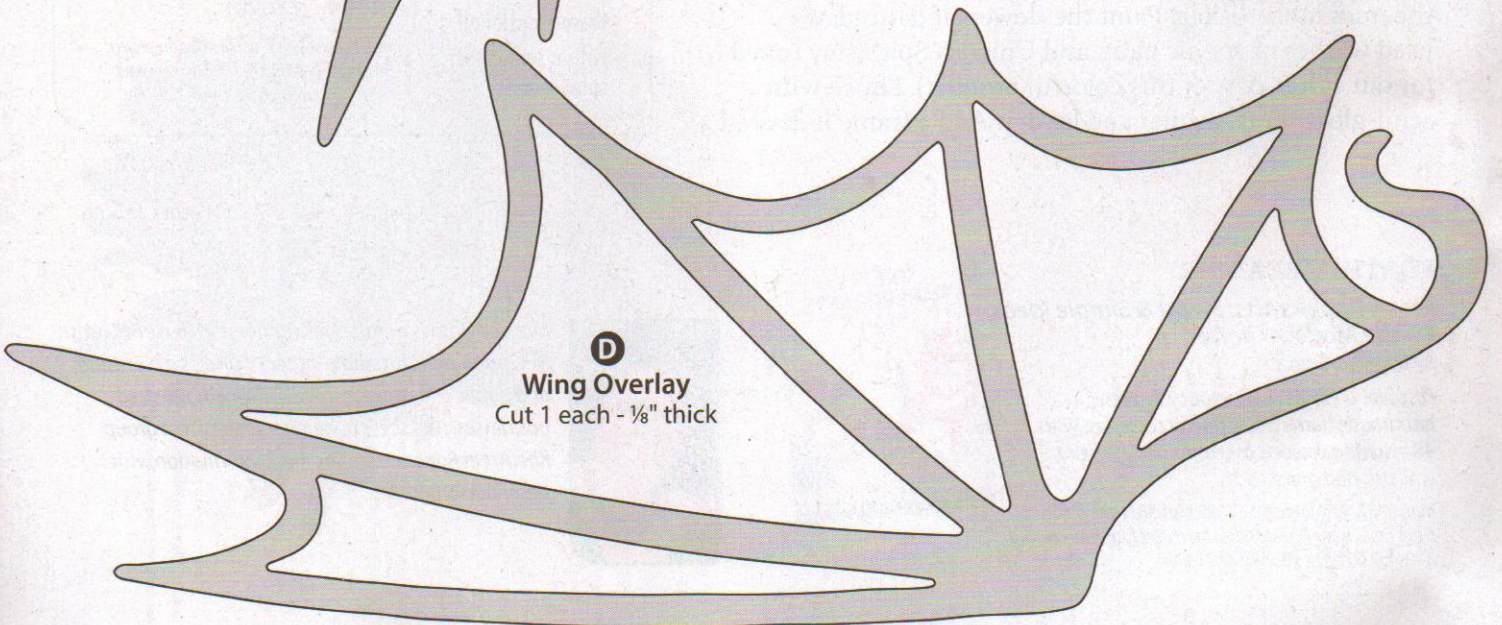
**C**  
Wing Underlays  
Cut 1 each - 1/8" thick



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Additional patterns for  
the *FLYING DRAGON* are in  
the pullout section.

**D**  
Wing Overlay  
Cut 1 each - 1/8" thick



# Floral Still Life

**With a steady hand, transform plywood into a fret-free bouquet**

By Mareike Grün

Cut by Dennis Knappen

Painted by Kaylee Schofield

**T**his striking array of lilacs, starflowers, and cherry blossoms doesn't need open frets to convey delicacy. Try your hand at an elegant project that won't get bogged down by too many details—it's sure to make a splash!

## Prepping and Cutting

There are a few ways to make this project. For the easiest cutting, enlarge the pattern 180% and cut it from 11" by 17" (27.9cm by 43.2cm) stock. For the larger project, use larger blades (such as #3).

Attach the pattern to the blank, carefully drill blade-entry holes, and cut along the lines with a flat blade. Go back and recut the lines with a spiral blade, which has a wider kerf, so the lines stand out. It's easier to cut accurately with a spiral blade if you're cutting along lines previously cut with a straight one. Be careful when cutting the stems with the spiral blades; they are fragile and may snap.

## Painting and Finishing

Attach a contrasting backing to the blank. This makes the lines more visible. Paint the flowers if desired; we used washes of acrylic paint and Unicorn Spit® (stay tuned for our full review of this colorful product). Finish with semi-gloss spray lacquer and let dry. Add a frame if desired.

## FURTHER READING

### *Pretty Papercrafts: Sweet & Simple Ideas for the Modern Crafter*

By Mareike Grün

Discover creative ways to upcycle paper in handmade home decor and accessories, with 48 inspiring projects for containers, jewelry, wall art, and more.

Item 5432. Available for \$17.99 plus S&H (parcel post) from Fox Chapel Publishing, foxchapelpublishing.com, 800-457-9112, or your local retailer.



Mareike Grün is a craft book author and freelance artist. Her graphic design studio agency handles advertising and public relations for small- and medium-sized businesses, and she is a member of the artist group KiR (Art in Rodermark). For more information, visit [besondersgruen.de](http://besondersgruen.de).

Pattern for the **FLORAL STILL LIFE** is in the pullout section.

## Materials & Tools

### Materials

- Baltic birch plywood or wood of choice, 1/8" (3mm) thick: 11" x 14" (27.9cm x 35.6cm)
- Tape: blue painter's
- Spray adhesive
- Sandpaper
- Acrylic paints or Unicorn Spit®
- Frame (optional)
- Finish: semigloss spray lacquer

### Tools

- Scroll saw blades: #2/0 reverse-tooth, #2/0 spiral reverse-tooth blades
- Drill with bits: assorted small
- Sander

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



# Feline Predators

Intricate portraits capture the majesty of a lion and a jaguar

By Charles Hand



**N**o animal balances majesty and mystery quite like the cat—particularly the big versions found in the wild. These fretwork portraits are my tribute to two of the world's most magnificent felines: the lion and the jaguar. Both are perfect projects for any cat lover in need of a little challenge. I promise that when you're done, you'll look like the cat that swallowed the canary!

## Prepping and Cutting

Sand the front and back of each blank thoroughly. Blow off the dust or remove it with a tack cloth. Attach removable Con-Tact® creative covering paper to the top of one blank. Apply spray adhesive to the back of the pattern. Let the adhesive set for about a minute, and

then press the pattern down onto the paper. Eliminate any air bubbles, and then stack the portrait blanks with the pattern on top. Hold the wood flat and secure and wrap blue painter's tape around the perimeter. Drill blade-entry holes and cut the frets.

Since I use spiral blades, I sand the bottom of the stack every 10 cuts to remove the fuzzies. Otherwise, they will lift the stack and skew the cuts.

## Finishing

Remove the tape from the perimeter and peel off the Con-Tact® paper. Sand the portraits carefully. For large open areas, insert the cut-out pieces before sanding to protect the delicate bridges. Use needle files to clean up tight areas.



## Materials & Tools

### Materials

- Baltic birch plywood, 1/8" (3mm) thick: 11" x 14" (27.9cm x 35.6cm)
- Sandpaper: 180 to 220 grit
- Tack cloth
- Tape: blue painter's
- White shelf paper, such as Con-Tact® removable adhesive creative covering
- Spray adhesive: Elmer's or 3M Super 77
- Finish: clear spray lacquer (optional)
- Felt backing, black: 11" x 14" (27.9cm x 35.6cm)
- Photo frame, matted: standard 11" x 14" (27.9cm x 35.6cm)

### Tools

- Scroll saw blades, #0 or #1 flat-end spiral (interior cuts), #3 reverse-tooth flat blades (straight cuts)
- Drill press with bits: 3/64" (1.1mm) dia. or #56 wire size, 1/16" (2mm) dia. or #53 wire size
- Palm sander
- Needle files
- Air compressor (optional)

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

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

### Framing Notes

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

Patterns for the **FELINE PREDATORS** are in the pullout section.



Charles Hand is retired from a career in electrical/mechanical design, graphic arts, and senior project management. He enjoys intarsia, fretwork, segmentation, inlay, and just about everything there is to cut with a scroll saw. Charles has won Best of Show and several other awards for his work, and designs at local craft and woodworking shows. For more information and a tutorial on Charles' Con-Tact® paper method and framing technique, or for more of his patterns, visit [scrollsawart4u.weebly.com](http://scrollsawart4u.weebly.com).

# Flared-Rim Brickwork Bowl

**A beautiful laminated design  
for a special piece of wood**

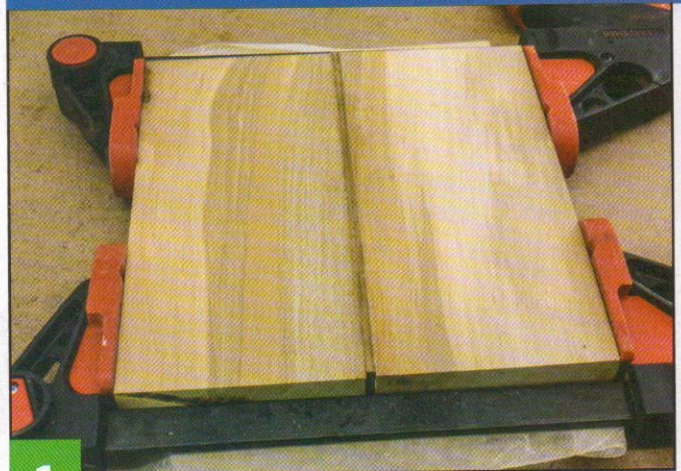
By Carole Rothman

**U**nique pieces of wood come with built-in dilemmas. On one hand, there's potential for great beauty, but on the other, you have only one chance to get it right. The simple shape of this bowl is the perfect way to showcase that unique piece of wood you've been saving for something special.

## Wood Selection

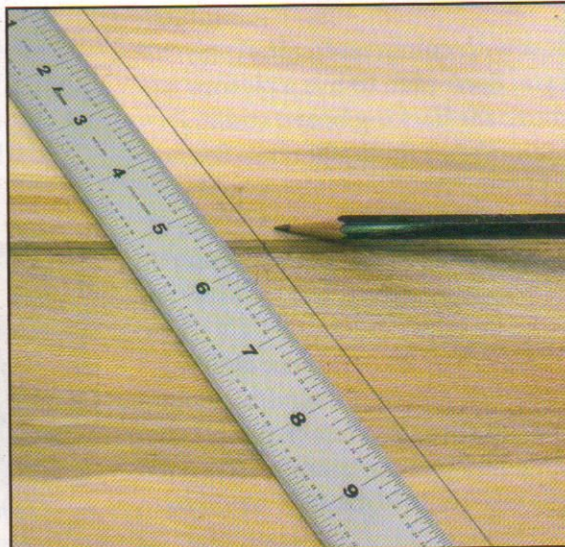
For this colorful piece of spalted sycamore, I wanted to add a contrasting brickwork pattern for interest. Finding a suitable wood to complement sycamore's warm brown and green tones took longer than anticipated, but I finally settled on teak.

## PREPARING THE BLANKS



1

**Cut the main blank in half.** Joint or sand the cut edges if not smooth and square. Glue the first accent strip between the sycamore halves, making sure that the strip and both pieces of the main blank are flush at the bottom. Clamp and let dry.

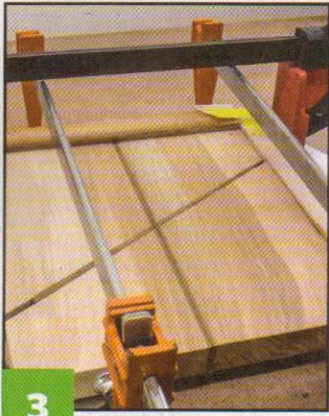


2

**Sand the top of the blank just until the accent strip is flush.** Draw a line down the center of the strip and locate its midpoint. Place a protractor on this line, zeroed at the midpoint. Draw a line at a 60° angle from that point and extend it so it runs the whole way across the blank. Cut along the line.

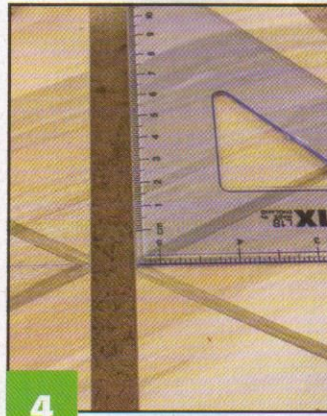
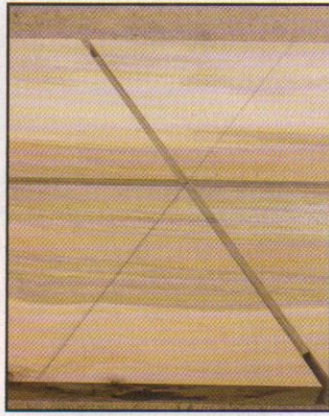


The author used spalted sycamore with teak accents to create this special piece.



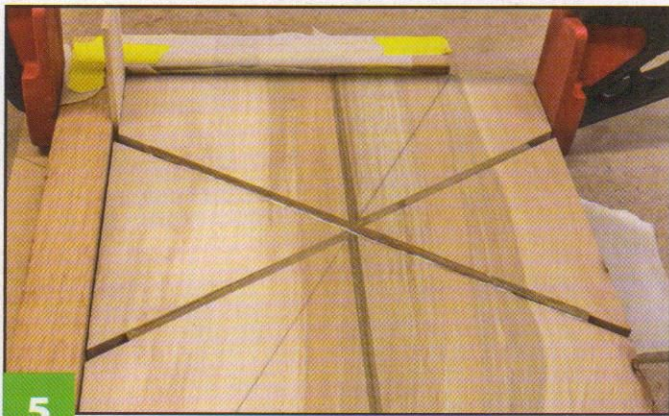
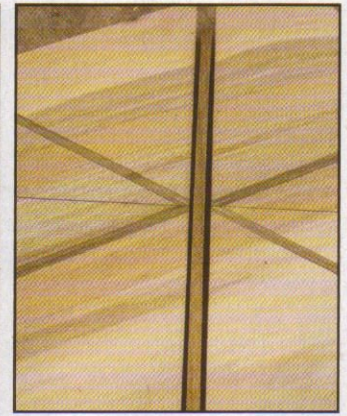
3

**Joint or sand the cut edges.** Mark the midpoint of the second accent strip. Glue it in, matching midpoints with the first strip and keeping the halves aligned. If slippage occurs as you tighten the clamps, loosen them so you can slide the pieces back into place, and then re-clamp, using minimal pressure. Let the glue dry completely. Repeat Steps 2 and 3 to cut and sand the blank in preparation for gluing the third strip, which will be done in Step 5.



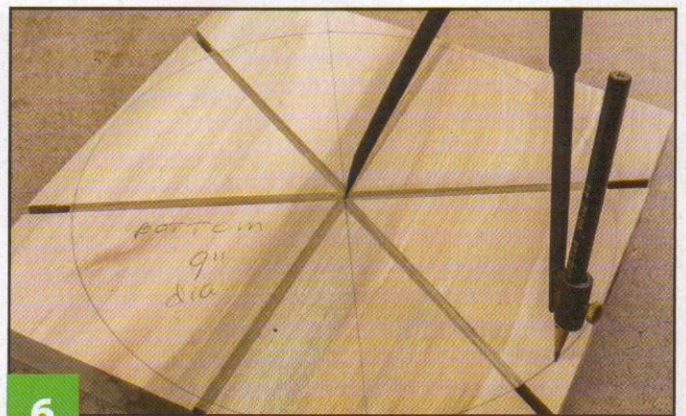
4

**Align a drafting triangle with one edge of the blank cut in Step 3.** Position the lower edge of the triangle on the "V" formed at the intersection of the first two strips. Draw a line across the lower edge of the drafting triangle. Repeat for the other half. Mark the midpoint of the third strip.



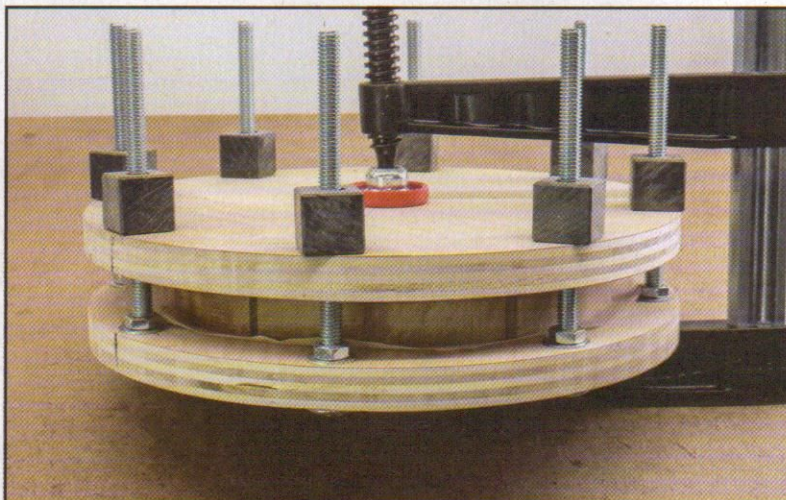
5

**Align the midpoint of the third strip with the lines drawn in Step 4.** Note that all strips are not perfectly aligned; this will not affect the brick pattern. Glue and clamp the strip in position and allow the glue to dry. Sand both faces of the blank. Make sure the finished thickness is at least  $1\frac{3}{16}$ " (2.1cm).



6

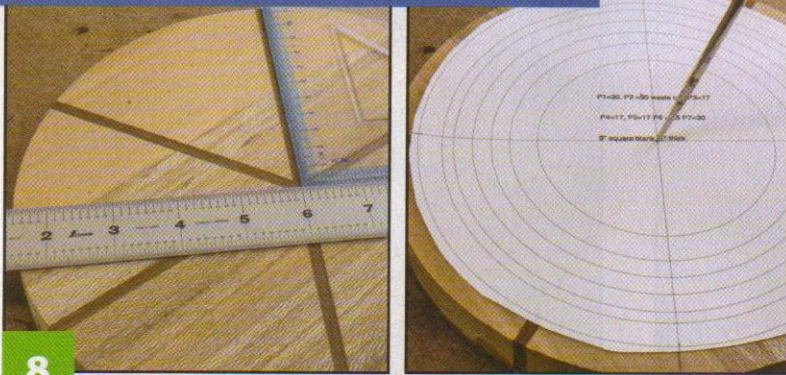
**Flip the glued-together blank upside down.** Redraw the line across the "V" formed by the strips (see Step 4) to help determine the midpoint of the blank. Make an awl mark at the intersection of this line and the center of the third strip. Use this mark and a compass to draw a 9" (22.9cm)-dia. circle. Draw a matching 9" (22.9cm)-diameter circle on the accent layer blank. Cut both circles with the scroll saw blade square to the table.



7

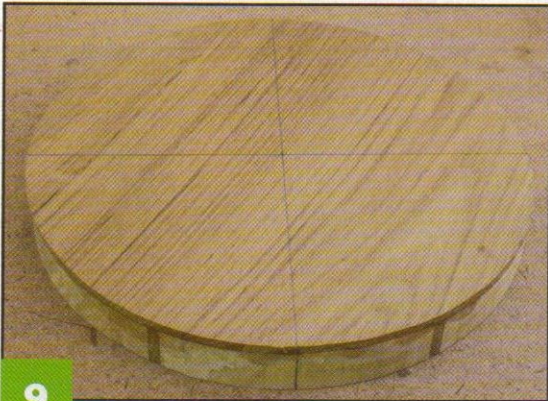
**Apply a generous coat of glue to the upper face of the main blank.** Match the edges and align the grain of the accent layer and main blank and clamp them securely. I used a bowl press. To ensure a flat lamination, clamp the center in addition to the outer edges and allow the glue to dry. Measure the thickness of the laminated blank. It should be 1" (2.5cm) thick for best alignment. If thicker, sand away excess wood from the sycamore face, but make sure that the awl mark remains visible. (If it's less than  $1\frac{1}{16}$ " (2.7cm) and sanding is not possible, you can use the blank as is.) Make sure both faces of the laminated blank are smooth, level, and glue-free.

## MAKING THE BOWL



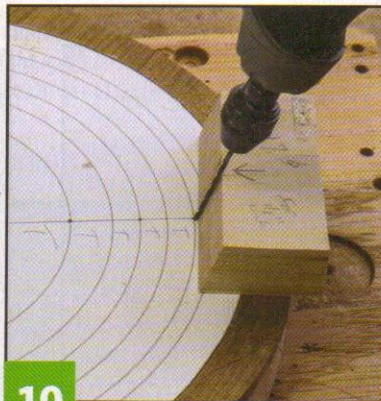
8

**Draw a registration line down the center of the third strip.** Then, use a ruler and triangle to draw a second line, perpendicular to the first, across the awl mark. Place the pattern on the blank to confirm correct positioning of your marks. The registration lines of the pattern and blank and the center point of the pattern and awl mark should all match. Remove the pattern.



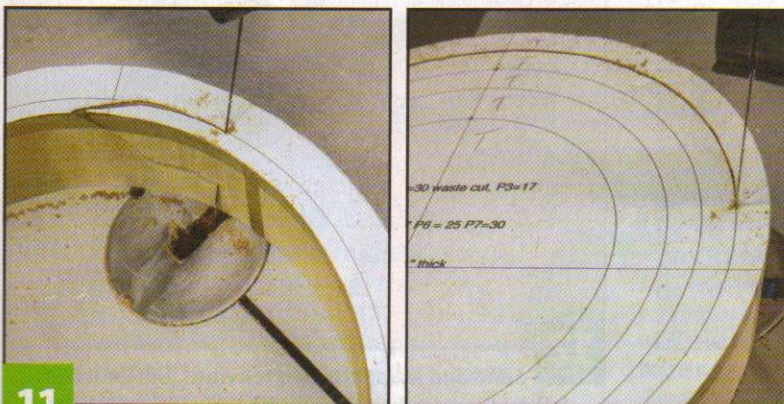
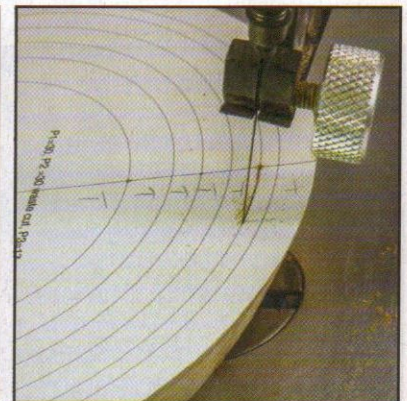
9

**Drill through the center of the blank at the awl mark.** Use a #62 wire size bit. This transfers the center point to the accent layer side of the blank. Extend the registration lines down the sides of the blank and across the face of the accent layer. They should intersect at the drilled hole. You will fill this hole in Step 15.



10

**Attach the pattern to the face of the accent layer.** Use repositionable adhesive. Use an awl to align the pattern with the drilled center hole and the registration lines. Tilt the left side of the saw table down to 30°. Cut the first circle in a clockwise direction. Use an awl to mark the drill point on the third circle, as shown on the pattern. Drill a blade-entry hole at a 17° angle at that mark, drilling towards the center of the pattern. Tilt the left side of the saw table down to 17°. Insert the blade and cut in a clockwise direction to complete the first ring. Mark the top of this and every ring to maintain the grain orientation during glue-up.



11

**Tilt the left side of the saw table down to 30°.** With the blade placed inside the ring, cut the second circle in a clockwise direction to remove excess wood and to establish the flare. Do not to cut into the bottom of the ring. Drill and cut the second and third rings at 17° as in Step 10. Drill and cut the fourth ring at 25° and the fifth ring at 30°.

## Working With a Thinner Blank

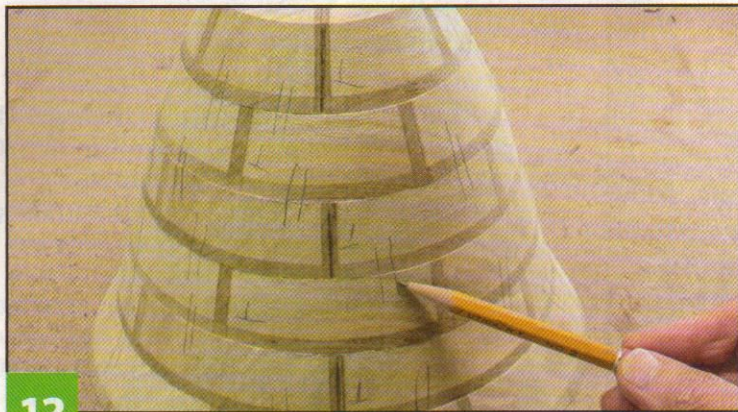
If your sanded blank is less than 1" (2.5cm) thick but at least 15/16" (2.1cm) thick, you can still make the bowl. Attach the pattern as in Step 10 and follow the instructions to cut the first ring, including the waste removal cut. Place that ring on the blank and compare its inside edge with the pattern cut line for the second ring. If they match, you can use the pattern. If not, keep the pattern attached and use your first ring to draw the cut line for the second ring. Cut that ring at 17°. Use your second ring to draw the cut line for the third ring, the third for the fourth, and the fourth for the fifth, using the angles given in the instructions.

### TIP

#### FLAT RINGS

*When gluing rings together, stack and align them as needed. Then, check carefully for spaces between the rings. Sand away uneven areas with a sheet of 150-grit sandpaper attached to a flat tile.*

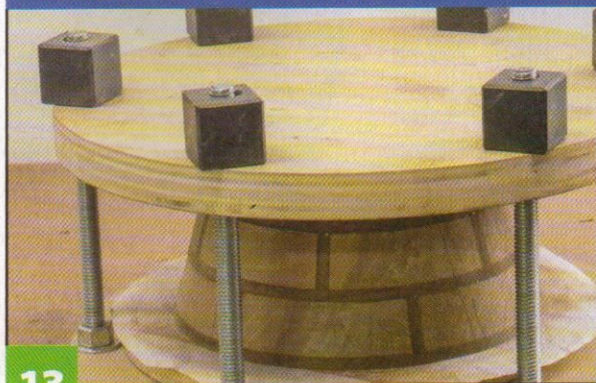




12

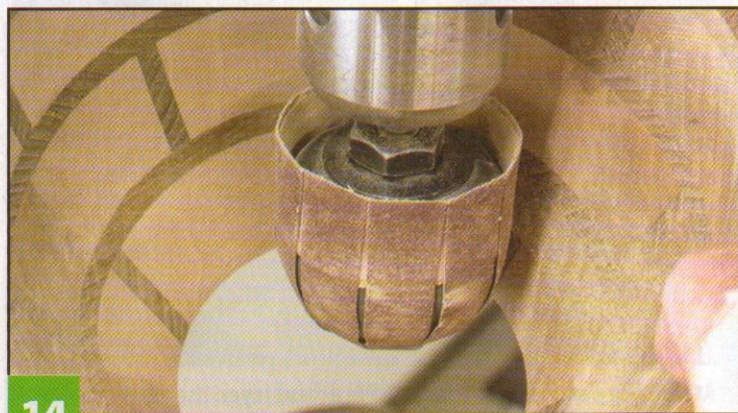
**Stack the rings and base upside down.** Keep the tops aligned. Rotate the second and fourth rings and the base slightly to the right so that their vertical strips are halfway between the strips of the adjacent rings. Rotate the stack carefully and adjust the components to obtain the best overall alignment. Draw several sets of pencil lines across the pieces to help with alignment during glue-up.

## ASSEMBLING THE RINGS



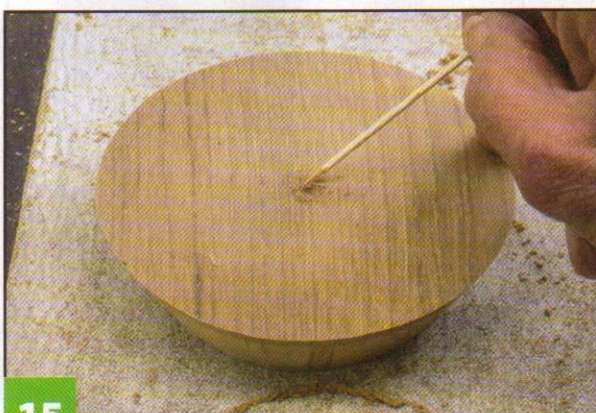
13

**Stack the three smallest rings, keeping the alignment.** Remove any marks from the gluing surfaces and any fuzzies from the bottom edges. Apply glue to the rings, clamp them in a press, and let the assembly dry.



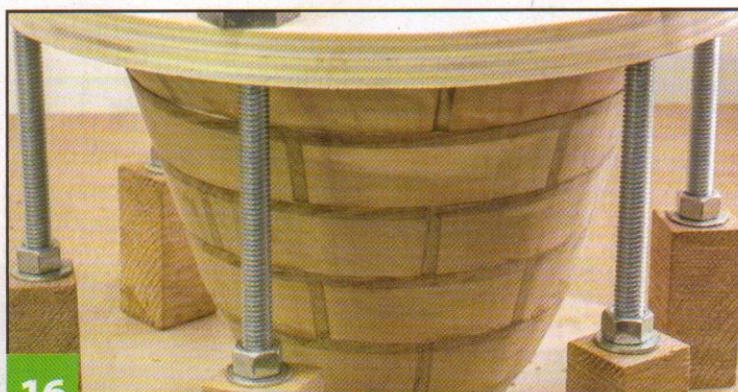
14

**Sand the insides of the rings until smooth.** Use the round inflatable sander, starting with the coarse-grit sleeve, and then moving to the medium and fine-grit sleeves. To preserve the gluing surface needed for Step 16, do not sand the upper edge of the top ring. Invert the rings to sand the lower edge into a smooth circle.



15

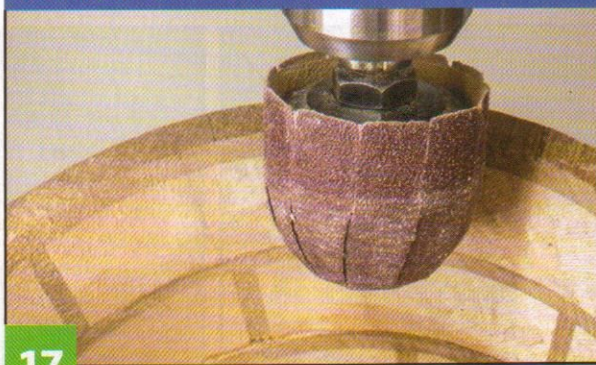
**Remove pencil marks from the upper surface of the base.** Fill the small center hole with a mixture of sawdust from the accent wood and glue. Sand the entire surface until smooth and level.



16

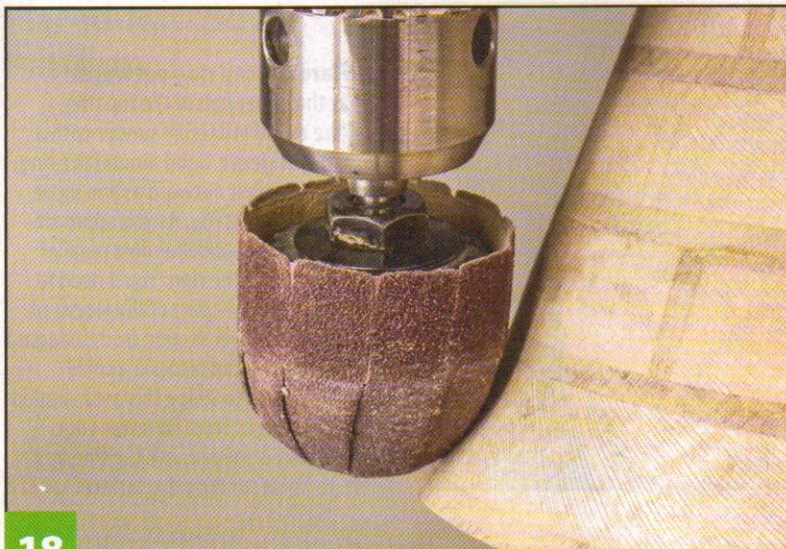
**Place the glued-up rings on the base.** Use the pencil marks for alignment and sand away any gaps (see Tip, page 43). Apply glue to the bottom ring, keeping the glue about  $\frac{1}{8}$ " (3mm) from the inner edge to prevent squeeze-out. Place the ring assembly on the base and clamp the unit until the glue has set. Add the remaining two rings, matching registration marks and correcting any spaces. Clamp the bowl and let the glue dry thoroughly.

## SANDING AND SHAPING



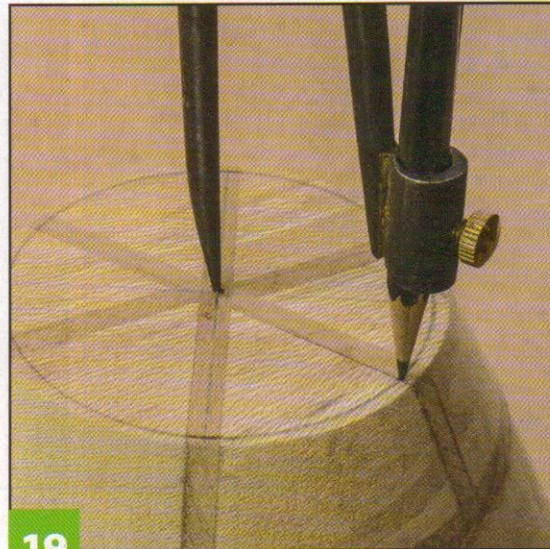
17

**Sand and shape the two top rings.** Use the round inflatable sander with a coarse-grit sleeve. Follow the flare created in Step 11. Sand the inside top edge into a smooth circle, but do not flare it outward; this will be done in Step 22. Smooth the joint between the second and third rings to create a continuous surface. After shaping, switch to the medium and fine-grit sleeves to smooth the surface.



18

**Smooth the joint on the outside where the first and second rings meet.** Use the round inflatable sander with a coarse-grit sleeve. This can be done with the bowl upright or inverted. Do not create more than a slight indentation in the second ring as you smooth the joint. With the bowl upright, gradually sand towards the accent rim as you deepen the curve. When the curve has been shaped, smooth the surface with the medium-grit sleeve.



19

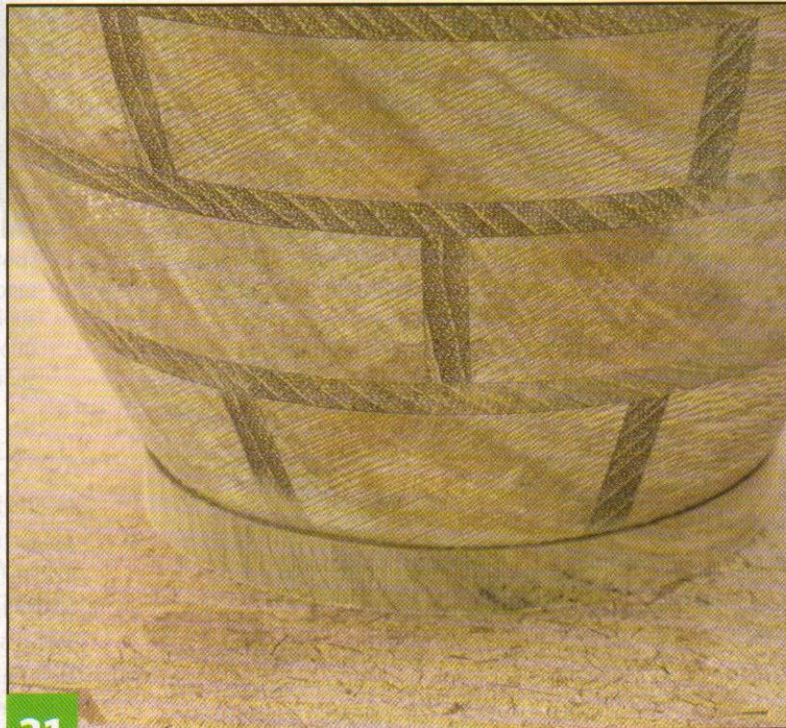
**Invert the bowl.** Use a compass centered at the midpoint of the base to draw a circle slightly smaller than the base. Use this circle as a reference point to keep your shaping symmetrical as you sand the lower portion of the bowl.



20

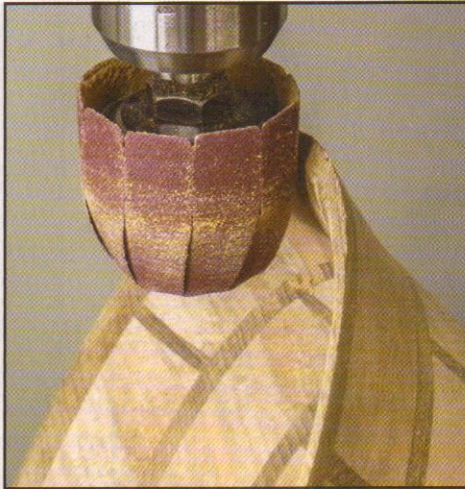
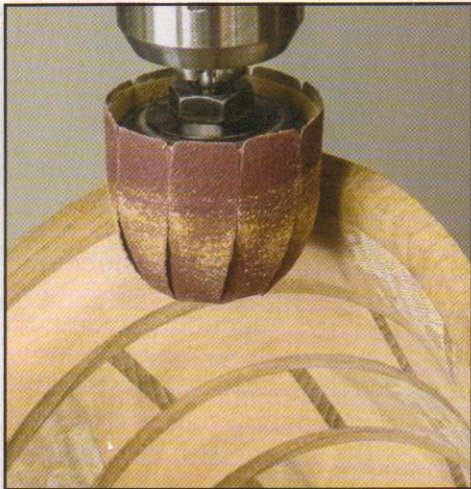
**Shape the remainder of the bowl exterior.**

Start at the top of the second ring with the 2" (5.1cm)-diameter pad sander and 80-grit disc and blend the sanded flared area into the second ring. Work your way down to the base, removing blade and drill marks as you establish the shape. Work through the grits in small increments up to 220, making sure to remove swirl marks as you move to higher grits. When the surface is smooth and free of bumps, sand the flared area with the round inflatable sander using a fine-grit sleeve.



21

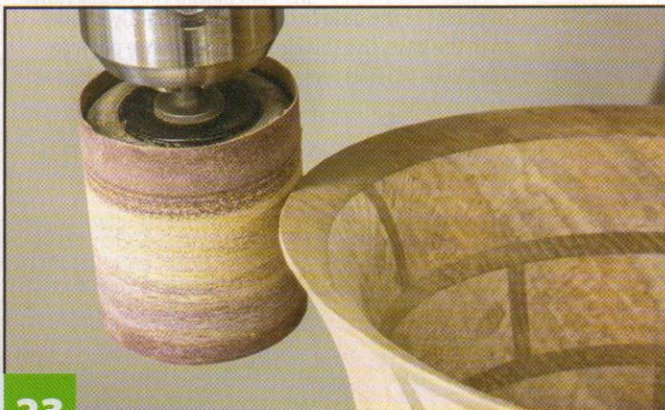
**Invert the bowl and measure the base.** Use a compass to draw a circle the size of the bowl bottom on the blank for the base. Use the same center to draw a second circle  $\frac{1}{8}$ " (3mm) larger. With saw table level, cut to the outside of the outer circle and sand to that line with a vertical belt sander. Place the bowl on the bottom piece; it should protrude about  $\frac{1}{16}$ " (2mm) all around. If you'd like a smaller reveal, reduce the size of the piece, using the inner circle for reference as you sand. Make sure the bowl bottom and accent wood base are flat. Soften the upper and lower edges of the accent wood. Apply glue to the bowl bottom, but away from the edge to prevent squeeze-out. Clamp the piece briefly to establish a tight bond. Remove clamps, correct any slippage, and let it dry without clamps.



22

### Flare the top ring outward.

Start at the upper half of the top ring, using the round inflatable sander with a medium-grit sleeve. Sand around the ring, gradually flaring it outward as you move towards the accent rim. As you approach the rim, hold the sander almost parallel to the top face of the ring. You'll need to sand with the upper part of the sleeve to keep the open lower section from snagging on the edge. You can also use a small pneumatic drum to shape this area, angled to prevent gouges from its lower edge. Once the ring is shaped, use the fine-grit sleeve to finish sanding the surface.



23

**Check the width of the accent rim and mark any uneven places.** To even out and soften the edge, sand around the circumference using a pneumatic drum with a 220-grit sleeve. Hold the bowl firmly with both hands as you work around the rim for maximum control. Finish the rim by hand sanding with a 220-grit sanding sponge.

## FINISHING THE BOWL



24

**Apply a coat of mineral spirits to detect any glue spots.** Mark them with a white pencil. When the wood is dry, sand the glue spots and make a final check for irregularities. Then, apply a sealer coat of shellac. When it has dried, sand the bowl smooth with 320-grit sandpaper or a 320-grit sanding mop. Apply additional coats of shellac or a finish of your choice.

## Materials & Tools

### Materials

- Medium-tone wood such as spalted sycamore,  $\frac{7}{8}$ " (2.2cm) thick: main blank,  $9\frac{1}{2}$ " (24.1cm) square
- Medium-dark wood, such as teak,  $\frac{3}{16}$ " (5mm) thick: accent layer,  $9\frac{1}{2}$ " (24.1cm) square; accent strips, 3 each  $1\frac{5}{16}$ " x  $9\frac{1}{2}$ " (2.4cm x 24.1cm)
- Medium-dark wood, such as teak,  $\frac{5}{16}$ " (8mm) thick: base,  $3\frac{1}{2}$ " (8.9cm) square
- Spray adhesive: repositionable
- Glue: wood, Weldbond preferred
- Assorted sanding sleeves

- Assorted sanding discs
- Sandpaper: 150 grit (attached to granite floor tile); see Tip
- Sanding sponges: 220-grit
- Shellac sealer: 1 pound cut
- Clear finish, such as a thicker cut of shellac
- Mineral spirits
- White pencil

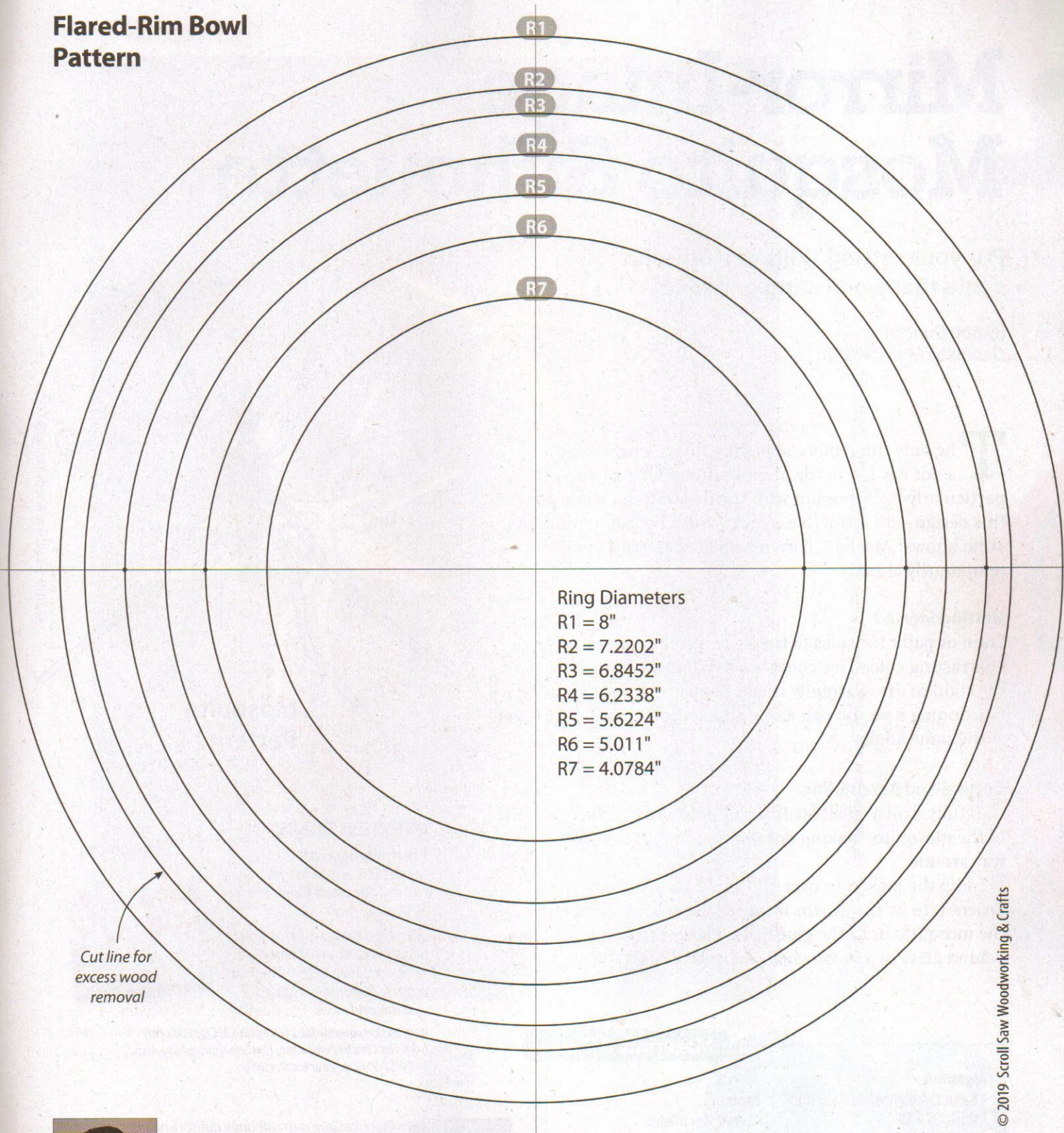
### Tools

- Scroll saw blades: #3 and #7 skip tooth, such as Pegas Super Skip
- Protractor
- Compass

- Straight edge
- Drafting triangle
- Drill with bits: #56, #62 wire size
- Stationary sanders: drum, portable drum such as SandFlee
- Inflatable sanders: large round, short drum
- Pad sander: 2" (5.1cm)-dia.
- Shop-made angle drilling guides: 17°, 25°, 30°
- Belt sander: vertical
- Awl
- Clamps

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

# Flared-Rim Bowl Pattern



### Ring Diameters

- R1 = 8"
- R2 = 7.2202"
- R3 = 6.8452"
- R4 = 6.2338"
- R5 = 5.6224"
- R6 = 5.011"
- R7 = 4.0784"

Cut line for  
excess wood  
removal



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 *Wooden Bowls from the Scroll Saw*, at [foxchapelpublishing.com](http://foxchapelpublishing.com).

# Mirror-Image Mosquito Silhouette

Put your cutting skills to work with a bug that won't sting or whine

By Bob Duncan  
Design by Mareike Grün

The only thing more annoying than a mosquito on a hot day is a horde of mosquitoes. One day, after a particularly lively pursuit with the fly swatter, I came up with this design—it's attractive, simple, and a little bit humorous. Who knows? Maybe it'll even help keep the real pests temporarily at bay.

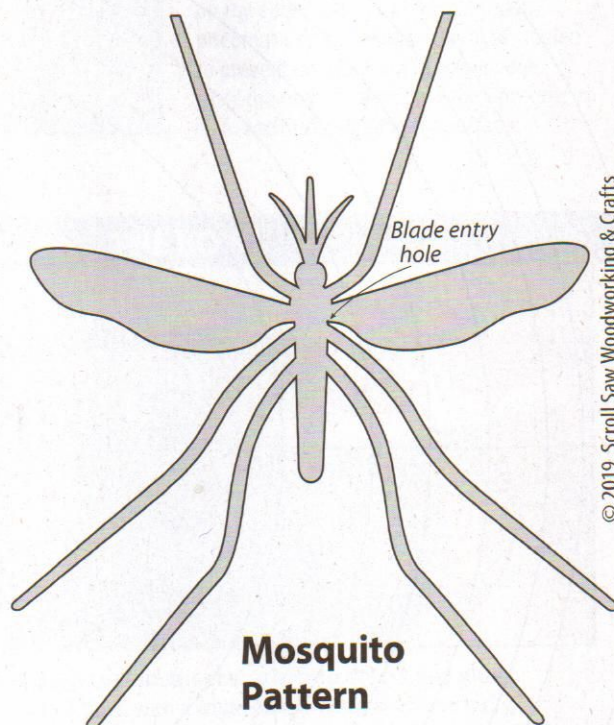
## Getting Started

Stain or paint the sides of the Baltic birch plywood blank contrasting colors; we chose walnut and natural. Allow the stain to dry. Carefully orient the pattern on the blank, positioning it so you can easily attach the mirror image cutout at the same angle.

## Cutting and Assembling

Carefully drill a small blade-entry hole and cut the perimeter of the mosquito, making one continuous cut the whole way around.

Flip the mosquito over and apply glue to the bottom. Orient it to be the mirror image of the cutout and secure the mosquito until the glue dries. Place the completed piece behind glass in a shadowbox or display it unframed.



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## Materials & Tools

### Materials

- Baltic birch plywood, 1/8" (3mm) thick: 8" x 10" (20.3cm x 25.4cm)
- Spray adhesive: repositionable
- Wood glue
- Danish oil, such as dark walnut

### Tools

- Scroll saw blades: #3 reverse-tooth
- Drill with bits: assorted small
- Clamps
- Paintbrushes

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

## FURTHER READING

**Pretty Papercrafts:**  
*Sweet & Simple Ideas for the Modern Crafter*

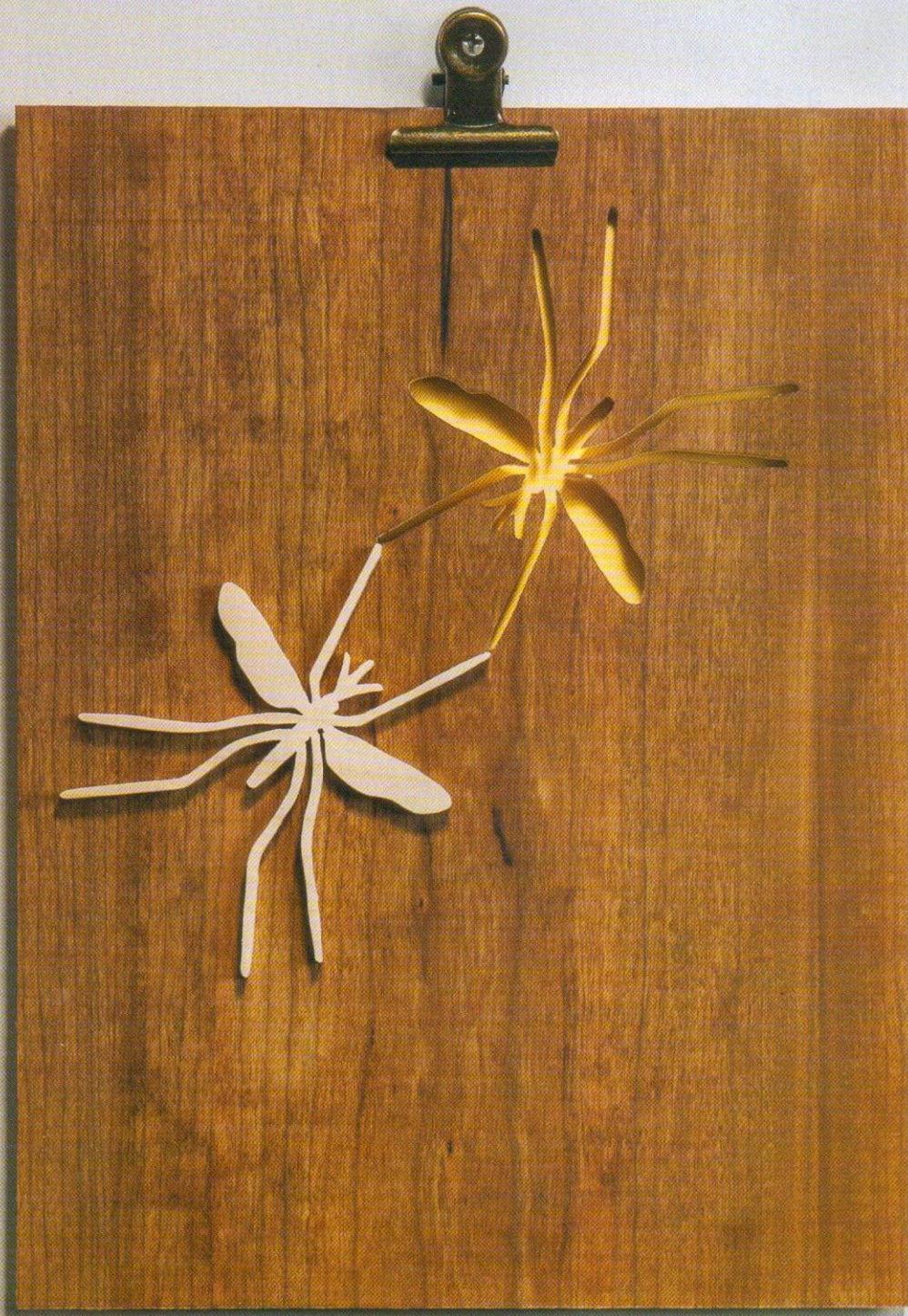
By Mareike Grün

Discover creative ways to upcycle paper in handmade home decor and accessories, with 48 inspiring projects for containers, jewelry, wall art, and more.

Item 5432. Available for \$17.99 plus S&H (parcel post) from Fox Chapel Publishing, foxchapelpublishing.com, 800-457-9112, or your local retailer.

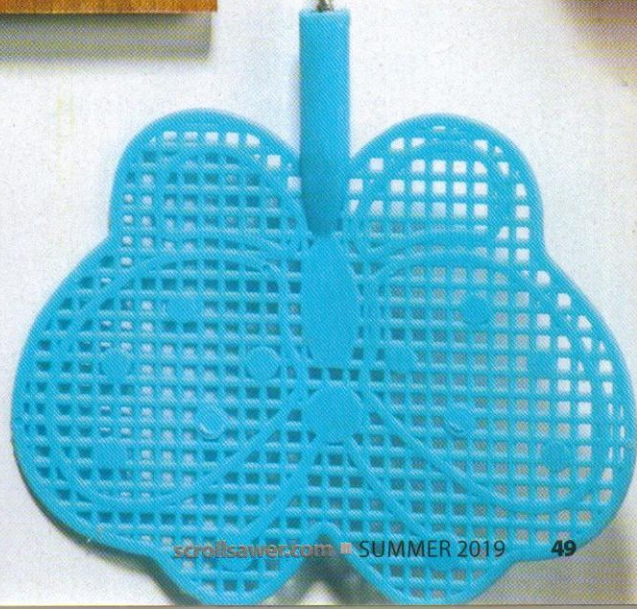


Mareike Grün is a craft book author and freelance artist. Her graphic design studio agency handles advertising and public relations for small- and medium-sized businesses, and she is a member of the artist group KiR (Art in Rodermark). For more information, visit [besondersgruen.de](http://besondersgruen.de).



Pick up  
- Spinach  
- eggs  
- Corn starch

BREAKFAST  
W/ HEATH  
→ 8 a.m. ←



# Flower Triptych



**Stack cut these modern floral designs to create an impressive wall hanging**

*By Mindy Kinsey  
Design by Anna Bondoc*

**T**his cheery flower pattern is a natural for stack cutting. Because the petals are fairly thin and come together to create a fragile center—and I wanted to finish the design with bright paint—I cut it from Baltic birch plywood. I sandwiched my project pieces between waste wood to further protect the fragile edges.

## **Prepping, Cutting, and Finishing**

Stack the blanks, sandwiching between waste wood if desired. Cover the top with blue painter's tape and adhere the pattern to the tape with spray adhesive. Drill blade-entry holes and cut the frets. To ensure sharp points along the center circle, I cut the large part of each petal first, removed the waste, and then



went back and cut into the points from each side. Separate the stack, discard the waste pieces, and sand the fuzzies off. I used disposable nail files and rolled sandpaper to clean inside the frets. Spray the pieces with paint as desired, letting the paint dry and sanding between coats. Attach cardstock in contrasting colors to the back of each project piece and frame as desired.

*Note: I used tape to secure my stack, but had trouble with the pieces slipping slightly as I worked. It would be a better idea to cut oversized blanks and tack or glue them together along the edges to ensure a firm hold, and then cut them apart when the frets are completed.*



## Materials & Tools

### Materials

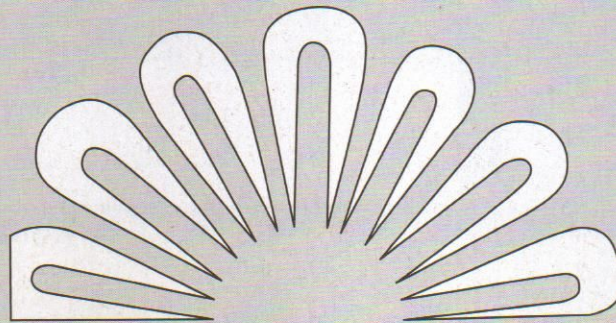
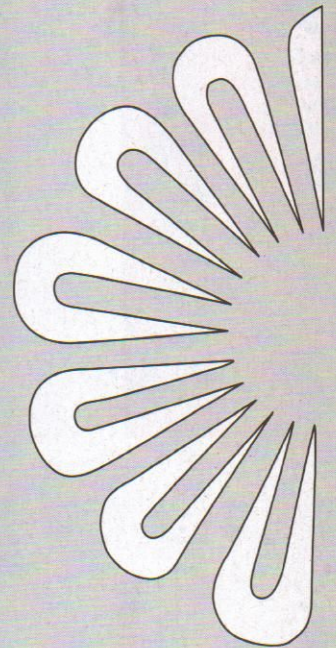
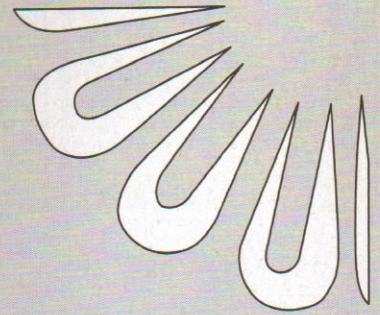
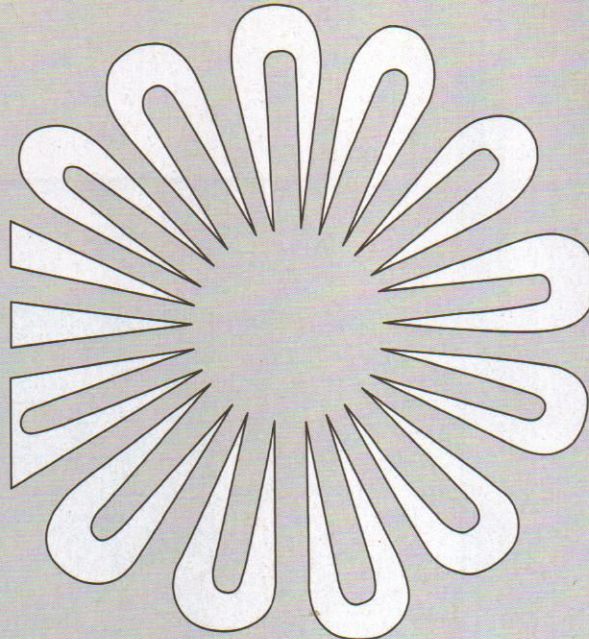
- Baltic birch plywood, 1/8" (3mm) thick:  
3 each 5 1/2" x 7 1/2"  
(14cm x 19cm)
- Waste wood: sized for pattern (optional)
- Spray adhesive
- Tape: blue painter's
- Sandpaper
- Disposable nail files
- Spray paint:  
assorted colors
- Cardstock,  
assorted colors:  
3 each 5 1/2" x 7 1/2"  
(14cm x 19cm)
- Frames: sized for pattern;  
1 used 8" x 10" (20.3cm  
x 25.4cm) with a 5" x 7"  
(12.7cm x 17.8cm) mat

### Tools

- Scroll saw blades:  
#5 reverse-tooth
- Drill with bits:  
assorted small
- Screwdriver  
(to attach hanger)

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

## Flower Triptych Pattern



## FURTHER READING

### Simply Paper Cutting: Hand-Cut Paper Projects for Home Décor, Stationery & Gifts

By Anna Bondoc

*Readers learn to cut colored paper into bold patterns to create stunning note cards, journals, wall art, picture frames, and gift boxes.*

Item 5389. Available for \$19.99 plus S&H from Fox Chapel Publishing, 800-457-9112, 1970 Broad St., East Petersburg, PA 17520. Or check your local retailer.



Anna Bondoc, author of *Simply Paper Cutting*, is an artist, designer, teacher, writer, and avid home cook. She developed her unique paper cutting technique in 2005 shortly after becoming a new mom and was looking for a way to continue printmaking without toxic paints and solvents. Experimenting with a craft knife and colored paper, she fell in love with cutting and layering paper. She lives in Los Angeles with her husband, daughter, and oh-so-gentle pit bull. For more of her work, visit [annabondoc.com](http://annabondoc.com).



# Starfish Intarsia

These six-part sea creatures make perfect gifts for your next summery bash

By Janette Square

The name “starfish” describes an array of different creatures, each as brilliant and unearthly as the next. Relatives of the sand dollar and sea urchin, these saltwater dwellers are staples in “beachy” décor—what’s more, they’re a great way to use up small scraps of colorful or figured woods.

You can easily complete this piece in an afternoon, and it makes a great first intarsia project. More advanced craftspeople can create a work of art in a few hours. This versatile design looks good in almost any size and color of wood.

I highly recommend selecting a piece of wood with attractive grain or figuring. This will make a huge difference in your final piece. For this project, I selected spalted figured maple.

## Getting Started

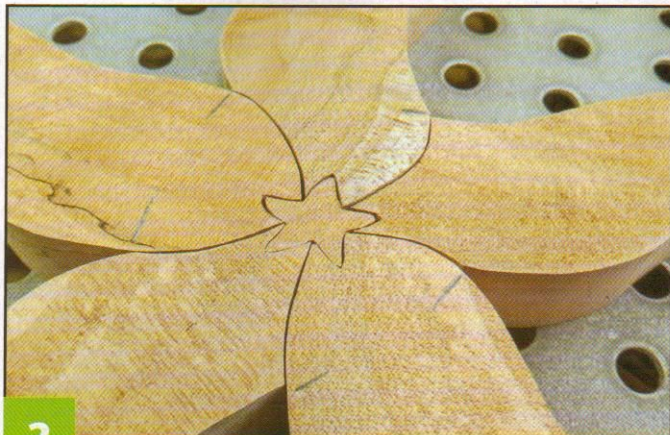
Apply packaging tape to the surface of the wood. Cut the patterns, apply spray adhesive to the backs, and position them on the wood.

## CUTTING & SHAPING



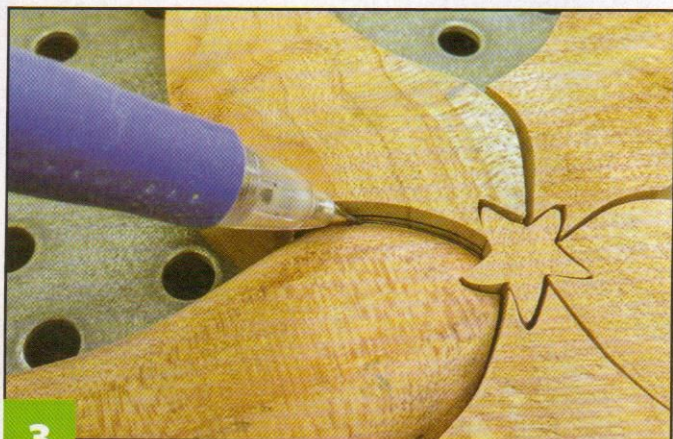
1

**Cut the pieces.** Use a #7 reverse-tooth blade. Remove the pattern from the front and transfer the piece number to the back. Dry-assemble the pieces on a photocopy of the pattern.



2

**Mark where the adjoining pieces meet.** Use a pencil to make these marks on pieces 1, 3, and 5. Transfer these marks to the edges of the pieces.



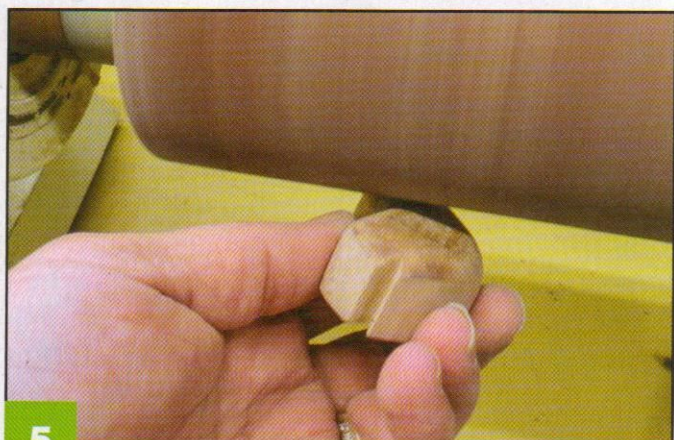
3

**Rough shape piece 5.** Use a flex drum sander with an 80- to 120-grit sleeve. Pay attention to where it meets adjoining pieces. Replace the shaped piece to the pattern and make a pencil mark on the adjoining pieces so you know how much to sand the other pieces.



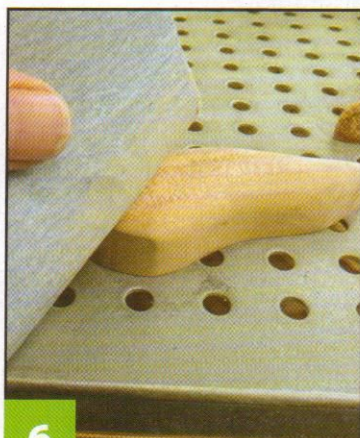
4

**Rough shape the remaining pieces.** Use the same flex drum sander and technique.



5

**Add texture to the arms of the stars.** Make the tip point up on some arms and make it point down on others. Add indents to some areas to make it look like the starfish is alive. Sand the pieces smooth with a 220-grit sleeve on the flex drum sander.

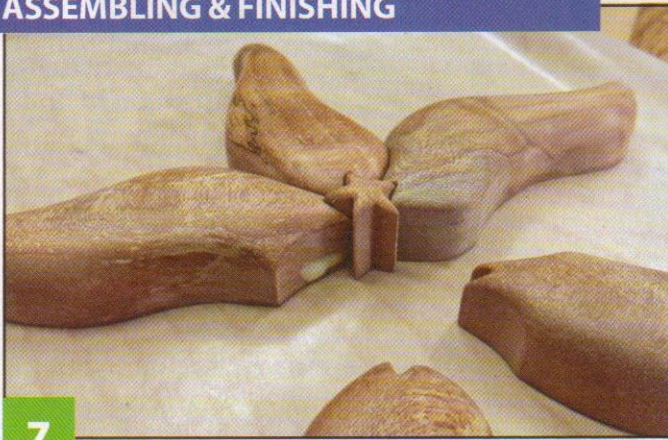


6

**Hand-sand each piece.** Fine tune the fit and soften any sharp edges. Remove any remaining pencil lines. Then buff the pieces with a 220-grit sanding mop.



## ASSEMBLING & FINISHING



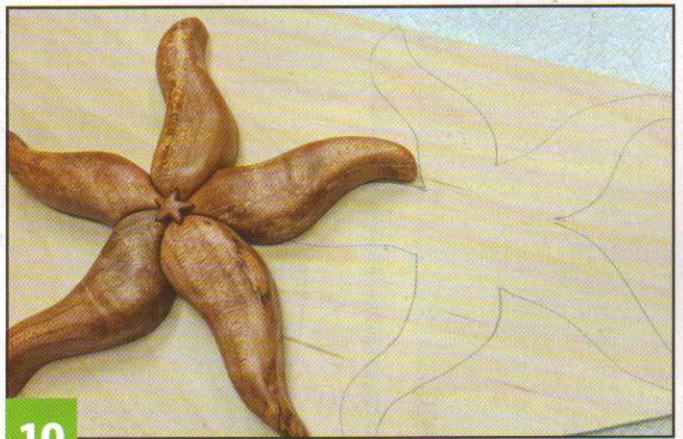
**7** **Dry-assemble the pieces.** Check the fit. Then, edge glue the pieces together using wood glue. Allow the assembly to dry.



**8** **Apply clear satin gel varnish to the project.** I prefer the hand-rubbed look of this over a gloss or spray finish. It's a little extra work, but the results are worth it.



**9** **Remove as much varnish as possible with paper towels.** Then use compressed air to remove the excess from tight areas. Wear safety glasses to keep the varnish out of your eyes. Use rubber-tipped dental tools and paper towels to get any remaining finish out of the cracks and crevices. Allow the finish to dry thoroughly.

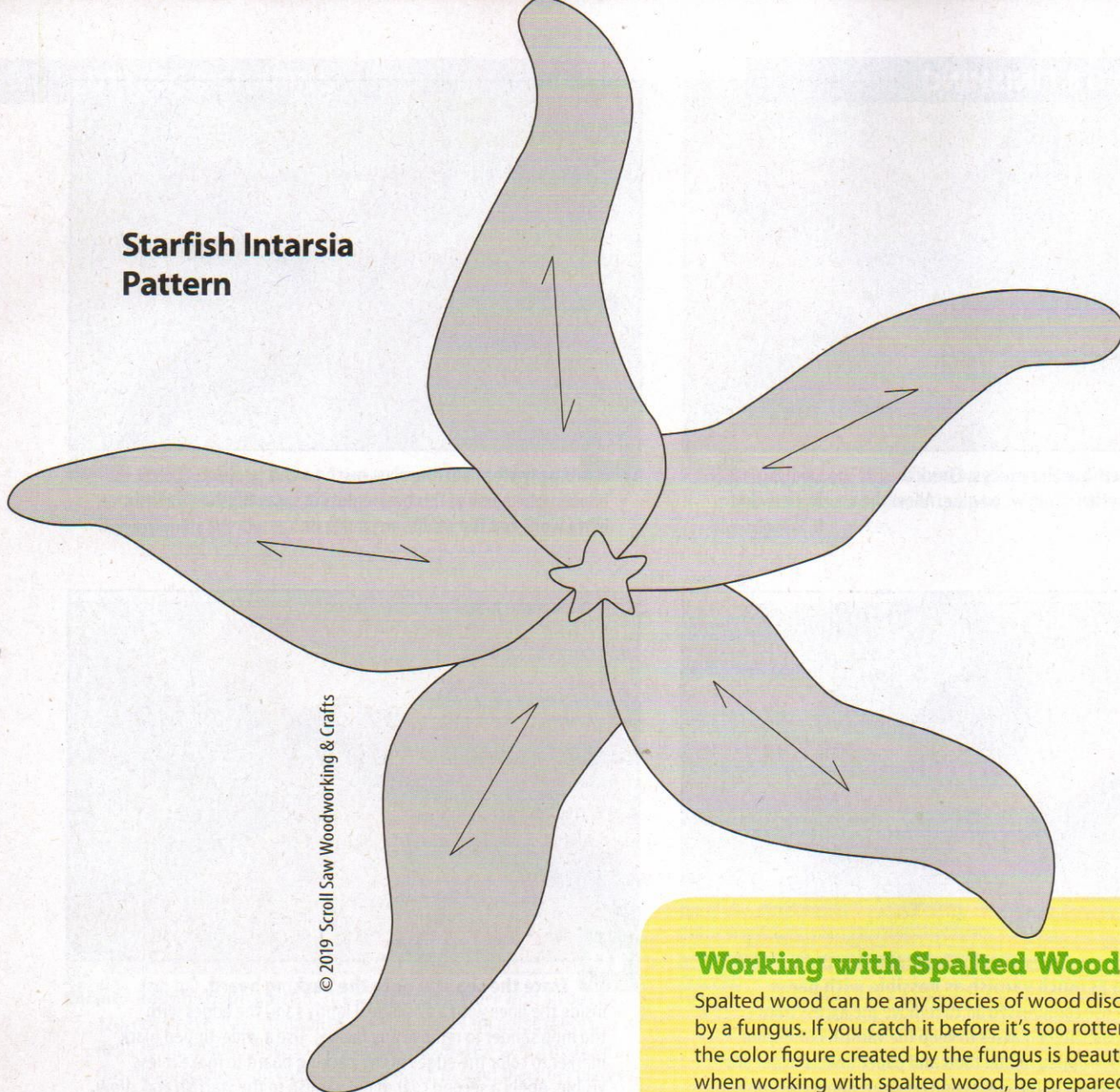


**10** **Trace the sea star onto the backing board.** Cut just inside the lines with a #2 blade. Lightly sand the edges with the mop sander to remove any fuzzies. Use a wide-tipped black marker to color the edges of the backing board to make it less visible. Apply a second coat of gel varnish to the starfish and allow it to dry according to the manufacturer's instructions.



**11** **Apply glue to the top of the backing board.** Position the intarsia on the backing board and clamp it until the glue dries. Add a hanger to the back and sign your work.

## Starfish Intarsia Pattern



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### Materials & Tools

#### Materials

- Wood with an interesting grain, such as spalted maple,  $\frac{3}{4}$ " to 1" (1.9cm to 2.5cm) thick: 4" x 10" (10.2cm x 25.4cm)
- Baltic birch plywood,  $\frac{1}{8}$ " (3mm) thick: backing board, 7" (17.8cm) square
- Packaging tape
- Spray adhesive
- Sandpaper, 220-grit
- Sanding sleeves: 80 to 120-grit, 220-grit
- Sanding mop: 220-grit
- Wood glue

- Black marker
- Gel varnish: clear satin
- Paper towels
- Hanger

#### Tools

- Scroll saw blades: #7, #2 reverse-tooth
- Sanders: flex drum
- Dental tools: rubber-tipped
- Clamps
- Air compressor

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

### Working with Spalted Wood

Spalted wood can be any species of wood discolored slightly by a fungus. If you catch it before it's too rotten to work with, the color figure created by the fungus is beautiful. However, when working with spalted wood, be prepared for anything as far as grain, texture, and coloring go. Learn to embrace its imperfections since you never know what will show up as you sand your project. You must have some sort of breathing protection and dust collection; spalted wood dust can carry fungal spores that could damage your lungs. When working with spalted wood, note that you can run into a variety of wood densities throughout a single piece. This is caused by the varying stages of decay. If your wood is too soft, apply thin liquid cyanoacrylate (CA) glue and allow it to soak in. This will help stabilize the wood.



*Janette Square lives in Yachats, on the Oregon coast. For more of Janette's work, visit her website at [square-designs.com](http://square-designs.com).*

# Fretwork Gift Tags

**Spruce up bland cards with these impressive additions**

By Kaylee Schofield  
Design by Anna Bondoc

**A** well-made card is a gift in itself. That's why we've included four whimsical patterns to help you amp up your card, tag, and invitation-making game. Stick these snazzy decorations on any message to add a personal touch—and, best of all, you can stack-cut them to turn out dozens in an afternoon.

## Prepping and Cutting

Photocopy the patterns and attach them to the wood using temporary-bond spray adhesive. Cut the innermost frets first and work outward; I recommend stack-cutting a few pieces of plywood, so the thin bridges won't snap. You can even add a layer or two of colored card stock for variation. Once all the frets are done, dust off the blank and cut the perimeter of the shape. Separate the stack.



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## Sanding and Finishing

Carefully sand each gift tag on both sides with 220-grit sandpaper to remove all fuzzies. Spray with semi-gloss lacquer or a finish of your choice. (*Note: If you want to add a pop of color, I recommend spray paint or an airbrush; even small paintbrushes could damage these delicate pieces.*) Drop one in every invite or gift-card envelope to make any occasion extra-special.

## Materials & Tools

### Materials

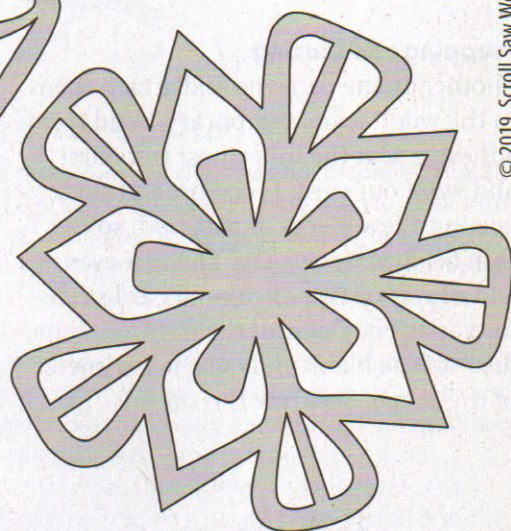
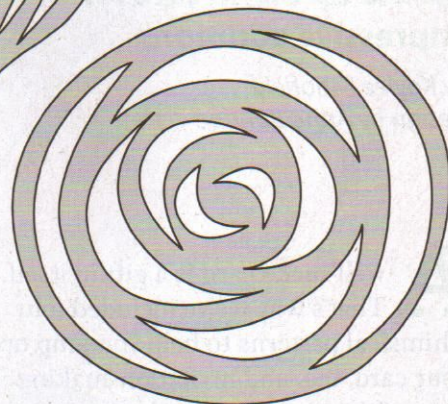
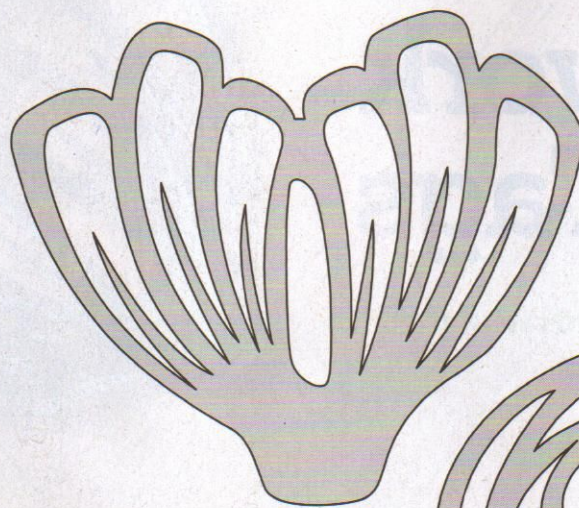
- Maple plywood, 1/4" (6mm) thick: sized for pattern
- Spray adhesive: temporary-bond
- Tape: blue painter's
- Sandpaper: 220-grit
- Finish, such as semi-gloss spray lacquer
- Spray paint (optional)

### Tools

- Scroll saw blades: #1 reverse-tooth
- Drill press with bits: assorted small
- Airbrush (optional)

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

## Gift Tags Patterns



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## FURTHER READING

### Simply Paper Cutting: Hand-Cut Paper Projects for Home Décor, Stationery & Gifts

By Anna Bondoc

Learn to cut colored paper into bold patterns to create stunning note cards, journals, wall art, picture frames, and gift boxes.

Item 5389. Available for \$19.99 plus S&H (parcel post) from Fox Chapel Publishing, foxchapelpublishing.com, 800-457-9112, or your local retailer.



Anna Bondoc, author of *Simply Paper Cutting*, is an artist, designer, teacher, writer, and avid home cook. She developed her unique paper cutting technique in 2005 shortly after becoming a new mom and was looking for a way to continue printmaking without toxic paints and solvents. Experimenting with a craft knife and colored paper, she fell in love with cutting and layering paper.

She lives in Los Angeles with her husband, daughter, and oh-so-gentle pit bull. For more of her work, visit [annabondoc.com](http://annabondoc.com).



# Great White Shark

**Intensify your beach décor  
with a fearsome fish portrait**

*By Charlie Dearing*

**T**here's no denying the appeal of sharks—especially the Great White. These predators date back countless millennia and still frighten beachgoers today, thanks in part to the iconic movie, *Jaws*, and Discovery Channel's Shark Week, which takes place every July.

I designed this piece so the shark appears to be gliding along the surface of the water while the viewer swims below—a position I'd never want to be in. However, it puts the sheer elegance of this creature on display.

## **Cutting the Portrait**

Cut two or more blanks to fit into your frames. Stack the blanks (see page 66 for a few methods). Cover the top surface with blue painter's tape and attach the pattern to the stack with spray adhesive. Align the dotted line on the edge with one corner of the blank. Drill the blade-entry holes, and start cutting the frets from the center out. I use spiral blades. Save the large cutout pieces for later.

After cutting the frets, separate the stack, remove the tape and pattern, and carefully sand away the fuzzies. I replace the large pieces I cut out and sand with a vibrating pad sander. Use needle files or small sanding sticks to remove stubborn fuzzies.

## Great White Shark Pattern

### Finishing the Portrait

Apply a few coats of clear spray finish. Use matte finish if you plan to use glass in the frame. I use semigloss if I'm framing it without glass. Install the portrait in your frame of choice.

### Materials & Tools

#### Materials

- Baltic birch plywood,  $\frac{1}{8}$ " to  $\frac{1}{4}$ " (3mm to 6mm) thick: 8" x 10" (20.3cm x 25.4cm)
- Sandpaper
- Clear spray finish: matte or semigloss
- Frame: sized to pattern

#### Tools

- Scroll saw blades: #3 spiral reverse
- Drill with bits: assorted small
- Sander
- Needle files
- Sanding sticks: small

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



Charlie Dearing says his artistic talents were evident at an early age, but he didn't discover the joys of scrolling until later in life. Scrolling became an addiction, so Charlie started creating his own designs when he couldn't find commercial patterns to meet his needs.

# Undersea PHOTO FRAME

Display your next  
"shell-fie" in style with  
this beachy project

By Alison Tanner



**W**hy stick your fun beach photos in a stuffy old commercial frame? Stumped by the lack of fun and affordable designs in stores, I devised one of my own that's adaptable to a wide variety of looks and won't break the bank. Cut one (or a handful) and watch it draw attention to all your favorite pictures—and set you up to tell some great vacation stories!

## Prepping and Cutting

Stack together the backing board and frame. (See page 66 for several methods.) Cover the top of the stack with blue painter's tape and attach the pattern with spray adhesive. Cut around the perimeter and separate the stack. Drill blade-entry holes and cut the frets. Leave the center opening for last.

Remove the tape and pattern. Replace the cutout from the center opening, and then sand everything smooth. Finish the frame and backing board as desired; I chose slightly thinned acrylic paints in various summery tones and coated the assembly with a semigloss spray lacquer.

### Assembling and Finishing

One way to assemble the project is to drill matching recesses in the frame and backing board to accommodate rare earth magnets. That way, you can just pull the frame off the backing board to change photos. A second method is to drill pilot holes and use small screws to secure the frame to the backing board. Obviously, this will make changing photos a bit more difficult.

### Materials & Tools

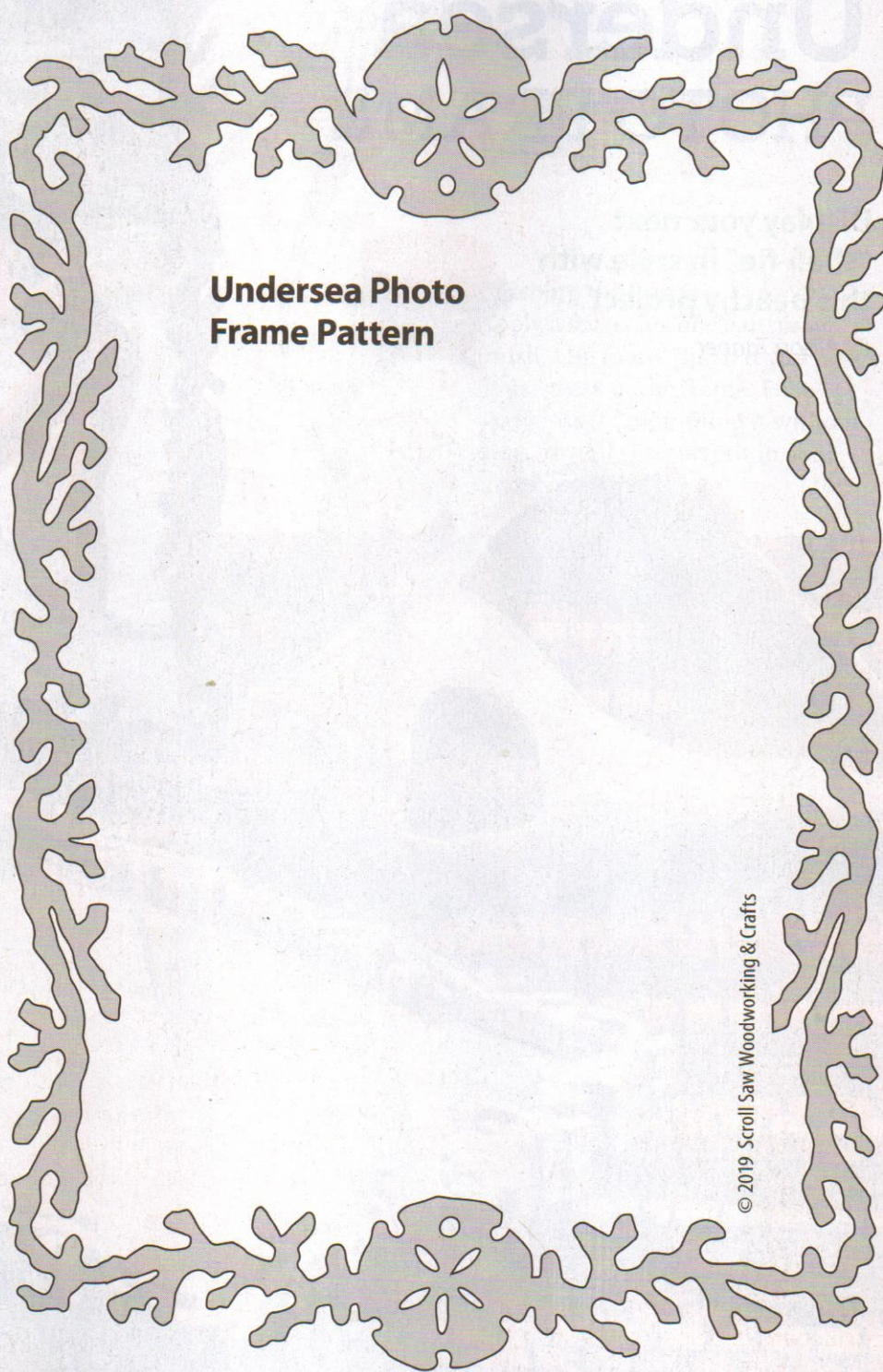
#### Materials

- Baltic birch plywood, 1/8" (3mm) thick: 2 each 5" x 7 1/2" (12.7cm x 19.1cm)
- Sandpaper
- Acrylic paint or finish of choice
- Rare earth magnets: 4 each 1/6" x 1/8" (2mm x 3mm) (optional)
- Small wood screws (optional)
- Hanger

#### Tools

- Scroll saw blades: #3 reverse-tooth
- Drill with bits: assorted small
- Screwdriver (optional)

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



### Undersea Photo Frame Pattern

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

# Summer Alphicons



## Glue up wood scraps for a Neapolitan treat that won't melt in the sun

By Dave Van Ess

One of my favorite childhood traditions was to get together with a group of friends and hike a nearby hill with a stone ruin at the top. On the way back down, bedraggled and thirsty, we'd stop without fail at this perfect little ice cream shack. Its offerings were cool, refreshing, and, to us, the best thing we'd ever tasted. This project is my homage to those wild summer days—and, of course, the sweet treat at the end.

### Cutting and Finishing

Choose a kind of wood; I made glue-ups of red oak, pine, and cherry to give the ice cream cones a Neapolitan look. Cut the wood to size and sand with 120-grit sandpaper, working up through progressively finer grits until smooth. Photocopy the pattern (scale it up or down as needed). Cover the wood with blue painter's tape (or any appropriate tape) and attach the pattern to the tape with spray adhesive. Cut out the alphicons, remove any excess sawdust, and finish as desired; I used boiled linseed oil because of the rich tone it imparts to hardwoods.

### Materials & Tools

#### Materials

- Wood, such as pine, oak, and cherry,  $\frac{3}{4}$ " (1.9cm) thick; each  $1\frac{1}{2}$ " x  $2\frac{1}{2}$ " (3.8cm x 6.4cm)
- Sandpaper
- Wood glue (optional)
- Tape: blue painter's
- Spray adhesive
- Finish, such as boiled linseed oil

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

#### Tools

- Scroll saw blades: #3 reverse-tooth
- Drill press with bits: assorted small
- Vacuum
- Clamps (optional)

### WANT MORE ALPHABETS?

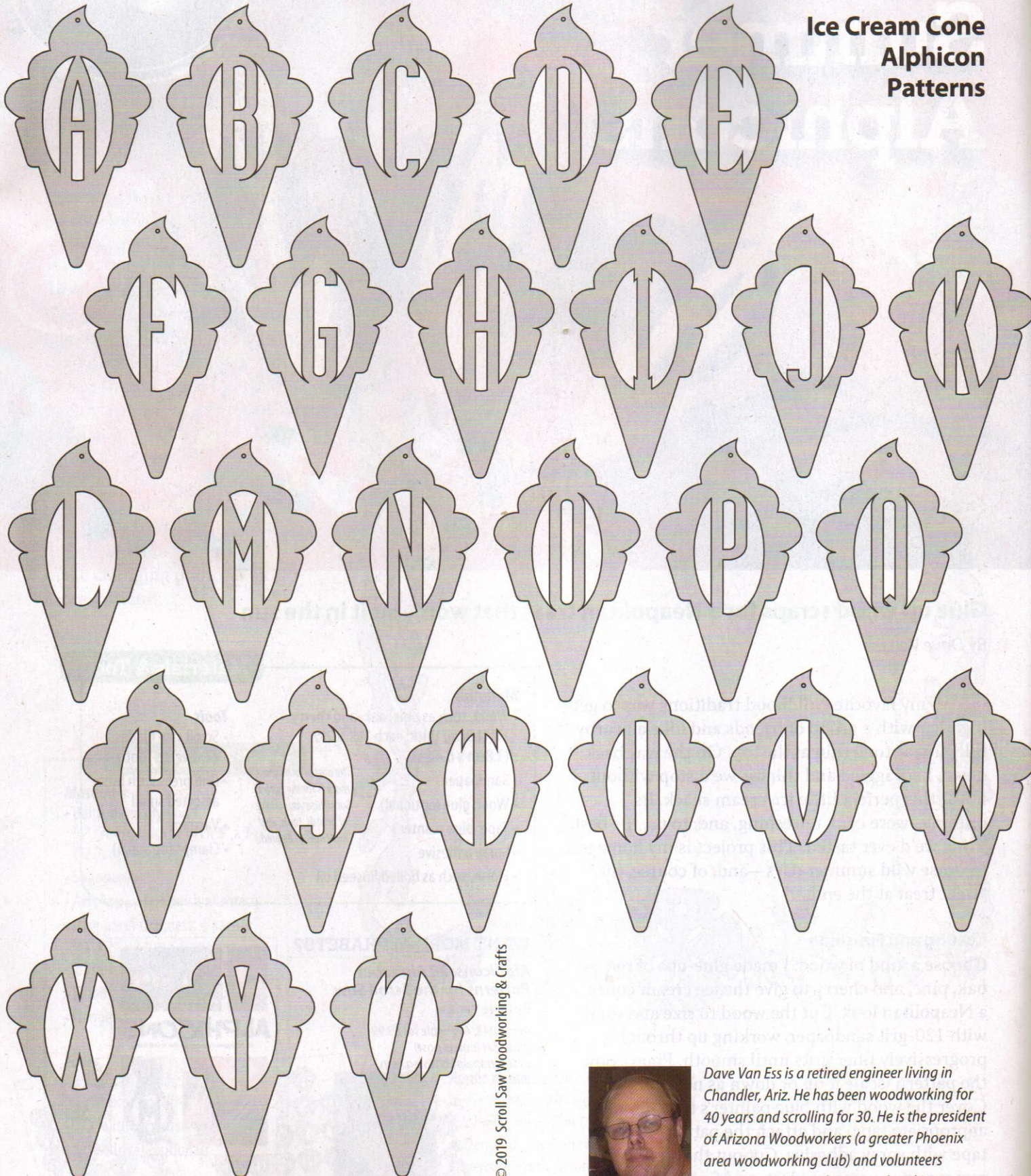
#### Alphicons: 28 Alphabet Patterns for the Scroll Saw

By Dave Van Ess

Item 9944. Available for \$9.99 plus S&H (parcel post) at [foxchapelpublishing.com](http://foxchapelpublishing.com), 800-457-9112.



# Ice Cream Cone Alphicon Patterns



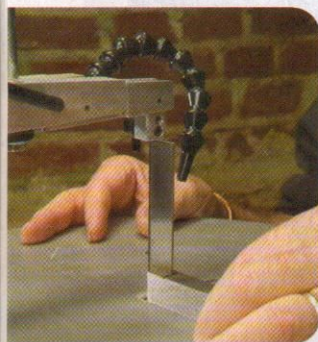
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Dave Van Ess is a retired engineer living in Chandler, Ariz. He has been woodworking for 40 years and scrolling for 30. He is the president of Arizona Woodworkers (a greater Phoenix area woodworking club) and volunteers one day a week teaching woodworking to four-year-olds at a local daycare. Contact him at [davevaness21@gmail.com](mailto:davevaness21@gmail.com).



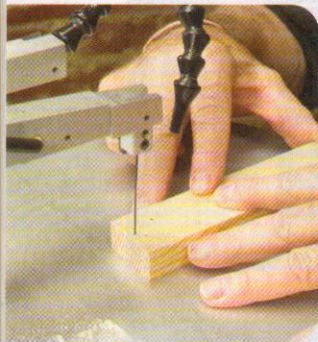
*To avoid repetitive instructions, this page is included in each issue to assist novice scrollers with basic scrolling techniques.*



## Squaring Your Table

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

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

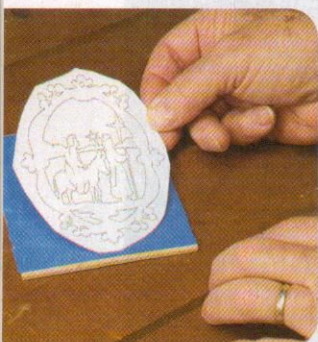


The cutting-through method is also popular. Saw through a piece of scrap wood at least 3/4" (1.9cm) thick and check the angle of the cut using a square. Adjust the table until you get a perfectly square cut.

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

## Attaching Patterns

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



You can also use graphite or carbon transfer paper. Place the pattern on the blank and slip a sheet of transfer paper

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

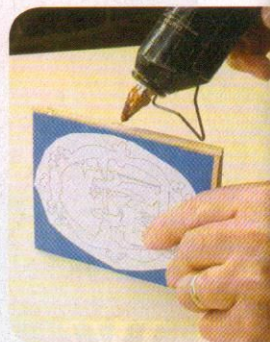
## Stack Cutting

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

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

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

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



## Blade Tension

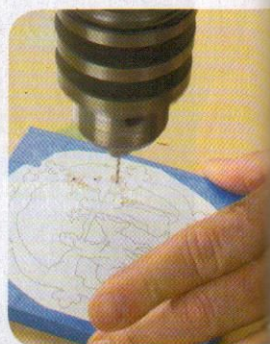
Before inserting a blade, completely remove the tension. Clamp both ends of the blade into the blade holders and adjust the tension. Push on the blade with your finger. It should flex no more than 1/8" (3mm) forward, backward, or side to side.

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

## Blade-Entry Holes

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

If you have the space, use a larger bit—it will make it easier to thread the blades through. For thin veining cuts, use the smallest bit the blade will fit through.



## Removing Patterns

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

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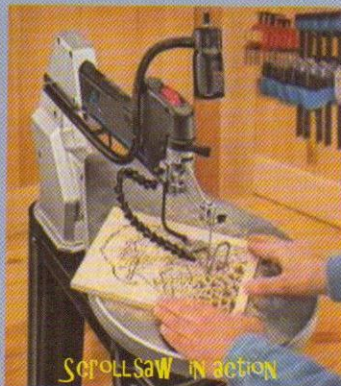


Fretwork

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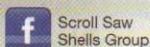
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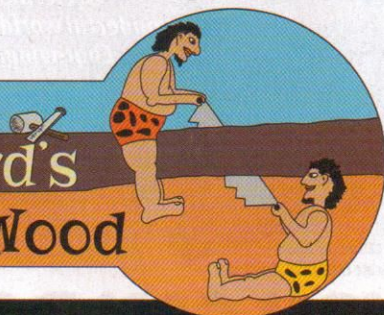
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# Tomer Markowitz

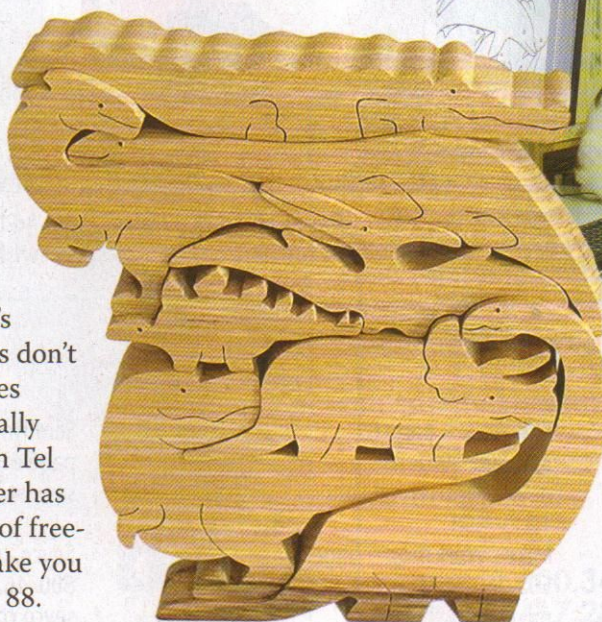
**This creator doesn't find toy design the least bit puzzling**

By Kaylee Schofield

**T**omer Markowitz's wooden whimsies don't just keep your eyes busy—some literally rock. A web designer based in Tel Aviv, Israel, 37-year-old Tomer has built his business on a series of free-standing puzzles that will make you smile whether you're eight or 88.



Tomer at work in his studio under the vigilant gaze of his cat, Mitzi.



**SSW: What's your background?**

**Tomer:** I started drawing when I was old enough to hold a pencil without sticking it in my eye. My formal education came later, when I took 3D software classes after finishing my military service. After that I worked as a 3D animator and later went on to study graphic design at Shenkar College of Engineering and Design, one of Israel's leading design schools.

**SSW: Why did you choose puzzles as a medium?**

**Tomer:** It all started when a friend of a friend sent me a very crude sketch of a kitten puzzle that he wanted to produce for his shop. I told him that I couldn't use that sketch and would have to design it from scratch. We both really liked the end result, so he asked if I could make him a dinosaur puzzle. From then on I started making new designs.

My friend, Alon Levinson, cuts all the puzzles out; his partnership is essential. Without his input and technical knowledge, I wouldn't be able to make these products. We've actually known each other since age seven; we used to rollerblade and skate together as boys, and

started collaborating on these puzzles around five years ago.

**SSW: Where do you draw your inspiration from?**

**Tomer:** I'm motivated by nature, but I'm most inspired by the process; it's very trial-and-error and always morphing.

When I begin to draw on paper, I already have a rough theme in mind. I use a bunch of images for reference and start with the largest animal for the base; this makes the freestanding piece more stable. From this point on, it is a quest.

I test the negative space around the first animal to see how I can use it for the next one. So I never know what the final design will look like until it's done!

**SSW: What else do you hope to design in the future?**

**Tomer:** My four-year-old nephew loves cars and trucks, so I'll probably make a tower of those next—maybe throw in a robot or a jet fighter, too. Who knows!

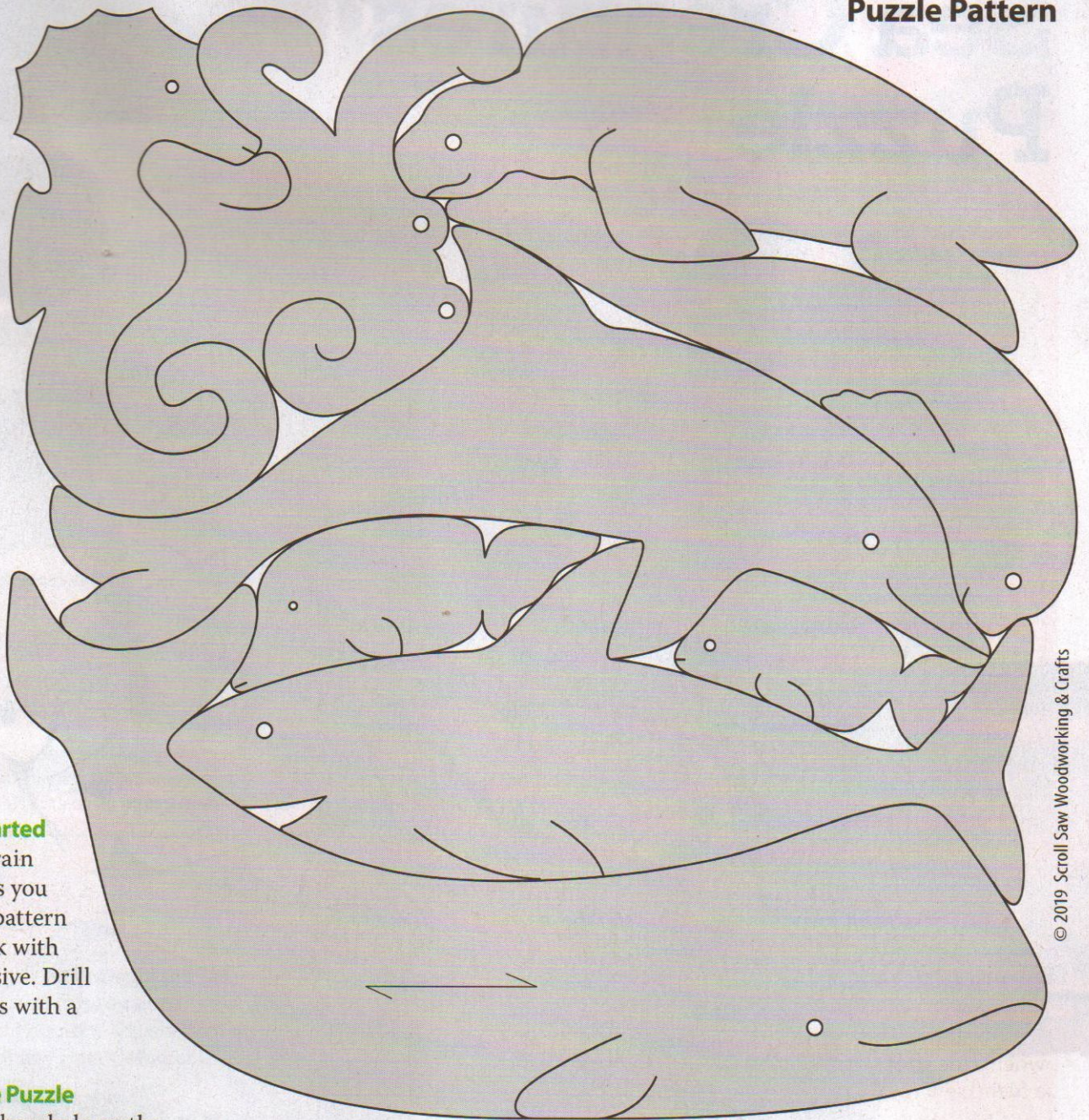
*Tomer Markowitz is a freelance graphic designer who lives in Tel Aviv, Israel.*

*Find him on Etsy as Fineshmecker.*

*Alon Levinson lives in Israel with his wife, Ofira, and son, Guri. He started scrolling a decade ago, and sells his work at craft fairs in Israel. Find him on Etsy as PuzzlesOn.*



## Sea Creatures Puzzle Pattern



### Getting Started

Note the grain direction as you attach the pattern to the blank with spray adhesive. Drill the eyeholes with a drill press.

### Making the Puzzle

Start with the whale on the bottom and work your way up. When cutting, try to focus only on the animal you are cutting. It doesn't matter as much if you don't follow the line exactly. The more important thing is to cut smoothly without leaving jagged lines behind.

After cutting each animal, remove the fuzzies with sandpaper. Cut the smile and definition lines. Then, round the perimeter of each piece with a router and small roundover bit. Remove the pattern and sand everything smooth with 150-grit sandpaper in a palm sander. Work up progressively through the grits until you reach 320. Apply mineral oil and let it dry overnight.

### Materials & Tools

#### Materials

- African walnut,  $1\frac{3}{16}$ " (2.1cm) thick: sized for pattern
- Spray adhesive
- Sandpaper
- Finish: mineral oil

- Scroll saw blades: #5 reverse-tooth
- Router with bit: small roundover
- Palm sander
- Paintbrushes
- Files: triangular

#### Tools

- Drill press with bits: assorted small

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

# Sea Creatures Puzzle



**kid'sScroll**  
Family Workshop Project

**Transform a square of wood into a freestanding toy that really rocks**

By Tomer Markowitz  
Cut by Alon Levinson

I've combined nine marine animals into this "rocking puzzle" that's great for adults and children. Because the base is curved, the whole thing rocks from side to side like it's floating. For kids (ages 3 and older), it's a fun puzzle and balancing game. For adults, it's an attractive decorative piece. Being roughly square, it's easy to ship. It's also economical because you don't waste much wood when cutting.

(Continued on page 70)

**Pégas®**  
The New Era in Scrolling.

**NEW**

## Pégas 14" Scroll Band Saw



No. 90.700  
MSRP \$1,470.00

The Pégas® Scroll Band Saw is a precision machine using Pégas® Scroll Bandsaw blades, the finest and most accurate blades ever produced.

- Cast-iron frame for higher longevity and stability
- Balanced aluminium wheels to avoid vibrations
- 2 speeds
- Blade protection guard
- Safety switch system
- The cast-iron table, with a 40° tilting capability
- Bench stand
- 2 blades included, #9 and #12



### Pégas® Scroll Band Saw Blades

The geometry of Pégas® tooth blades has been carefully studied to eliminate vibrations during the cutting process. Such efficient and accurate cutting produces a high-quality finish for hard and soft wood of thickness up to 6" (150 mm).

These precision blades enable risk-free cutting of very tight curves with radii below .0787" (2 mm). The various blade dimensions meet all needs regardless of the wood species, width, and complexity of the items to be sawn.

For more information on this unique and innovative machine, visit: <https://www.scies.ch/scroll-band-saw.html>  
Product in-use videos at: <https://www.scies.ch/product-in-use.html>

## Pégas 21" Scroll Saw

### Key Features:

- Head tilts left and right (45°/35°)
- Upper Arm can be raised
- Speed Regulator adjusts from 400 to 1500 rpm
- Blower and Dust Collector

### Unique Features:

- Extra-light, easy to use Blade Chuck Head
- Special coating on table enables wood to glide easily
- Reinforced chassis reduces vibration
- Improved mechanical parts reduce stress

The Pégas® Scroll Saw was developed in Switzerland and made in Taiwan to the rigorous specifications and quality requirements of Scies Miniatures, a division of Grobet USA.



**THE MOST QUIET, COMFORTABLE, DURABLE, SMOOTH OPERATING SCROLL SAW MACHINE AVAILABLE ON THE MARKET.**

	MSRP
No. 90.750	\$719.00
No. 90.750, 90.751 - saw with stand	788.00
No. 90.750, 90.751, 90.752 - saw with stand and foot control	822.00

Each scroll saw comes with a sample set of 18 Pégas blades, instructions, a blade selection chart, and spare parts for the blade chuck head.

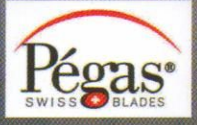
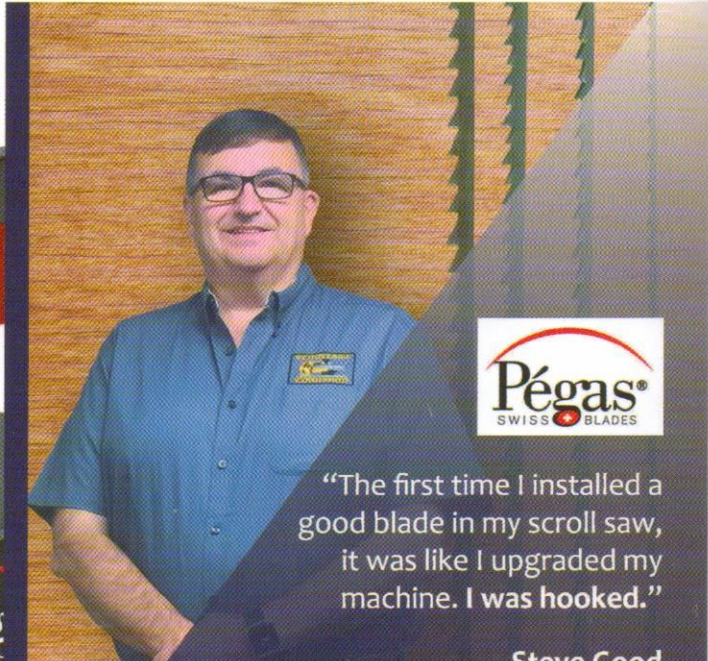
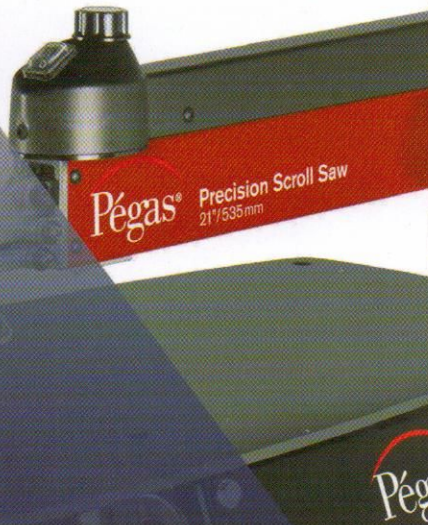


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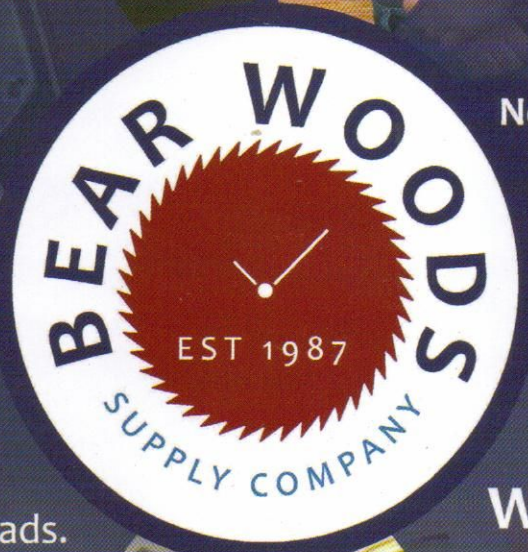
"The first time I installed a good blade in my scroll saw, it was like I upgraded my machine. I was hooked."

- Steve Good  
Scroll Saw Workshop

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German made blades by:



**Upgrade your Scroll Saw**

Pegas Blade Chuck Heads.

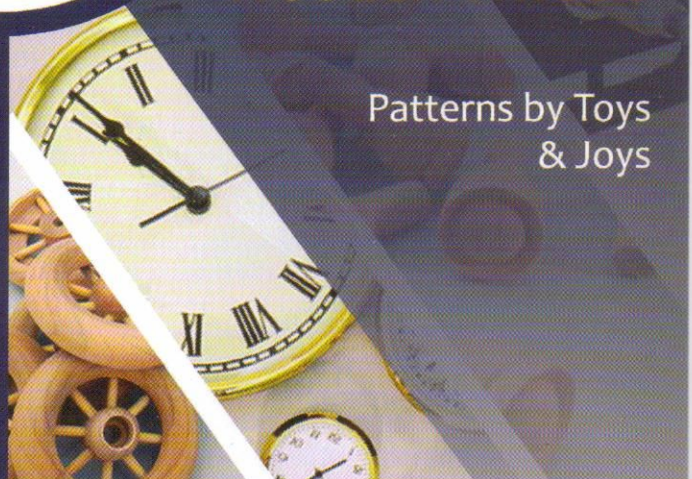
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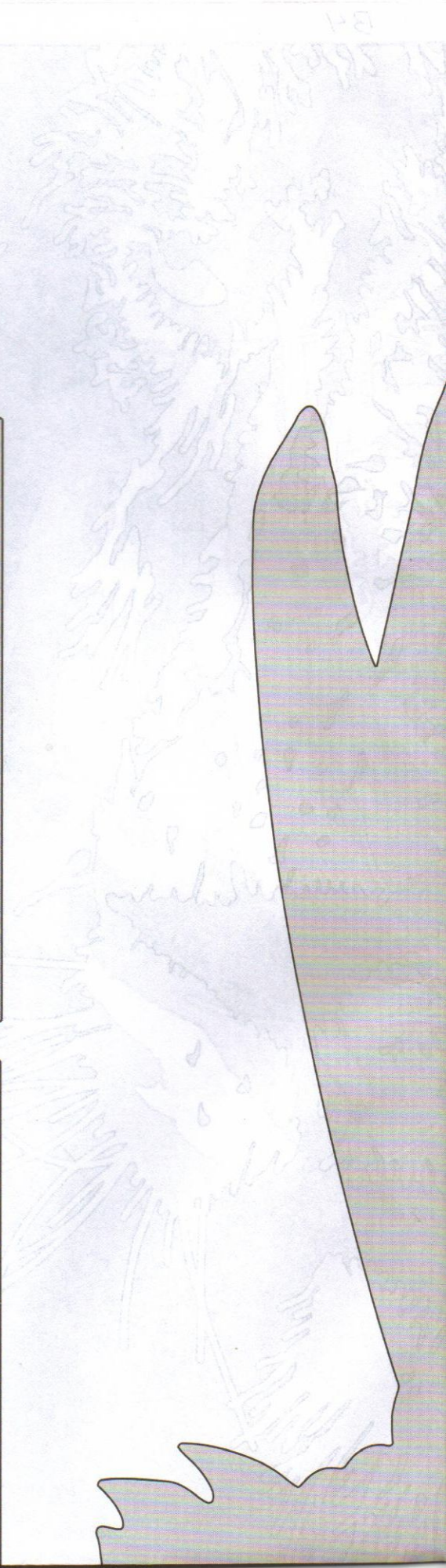
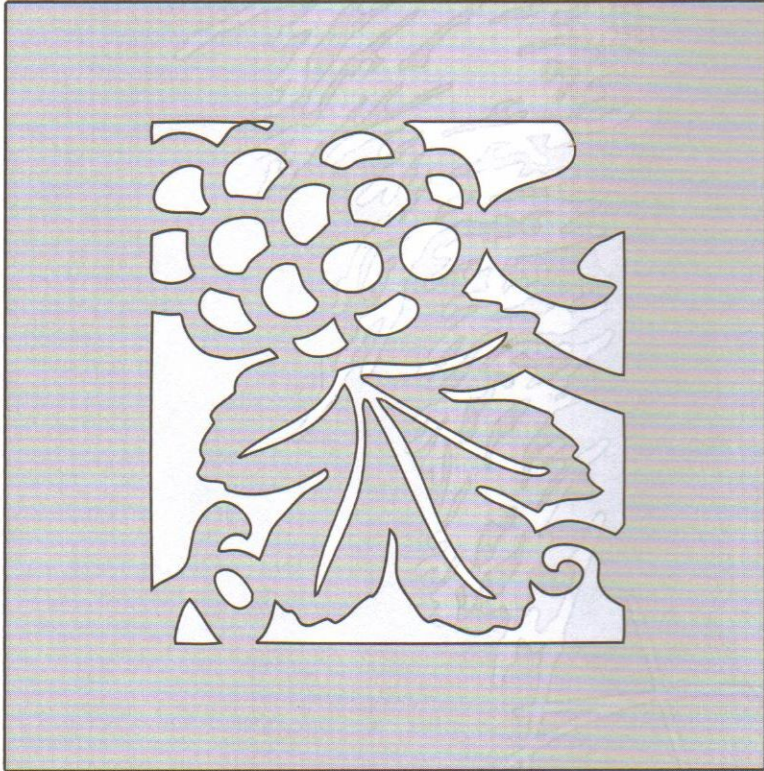


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**Fretwork Wine Box**

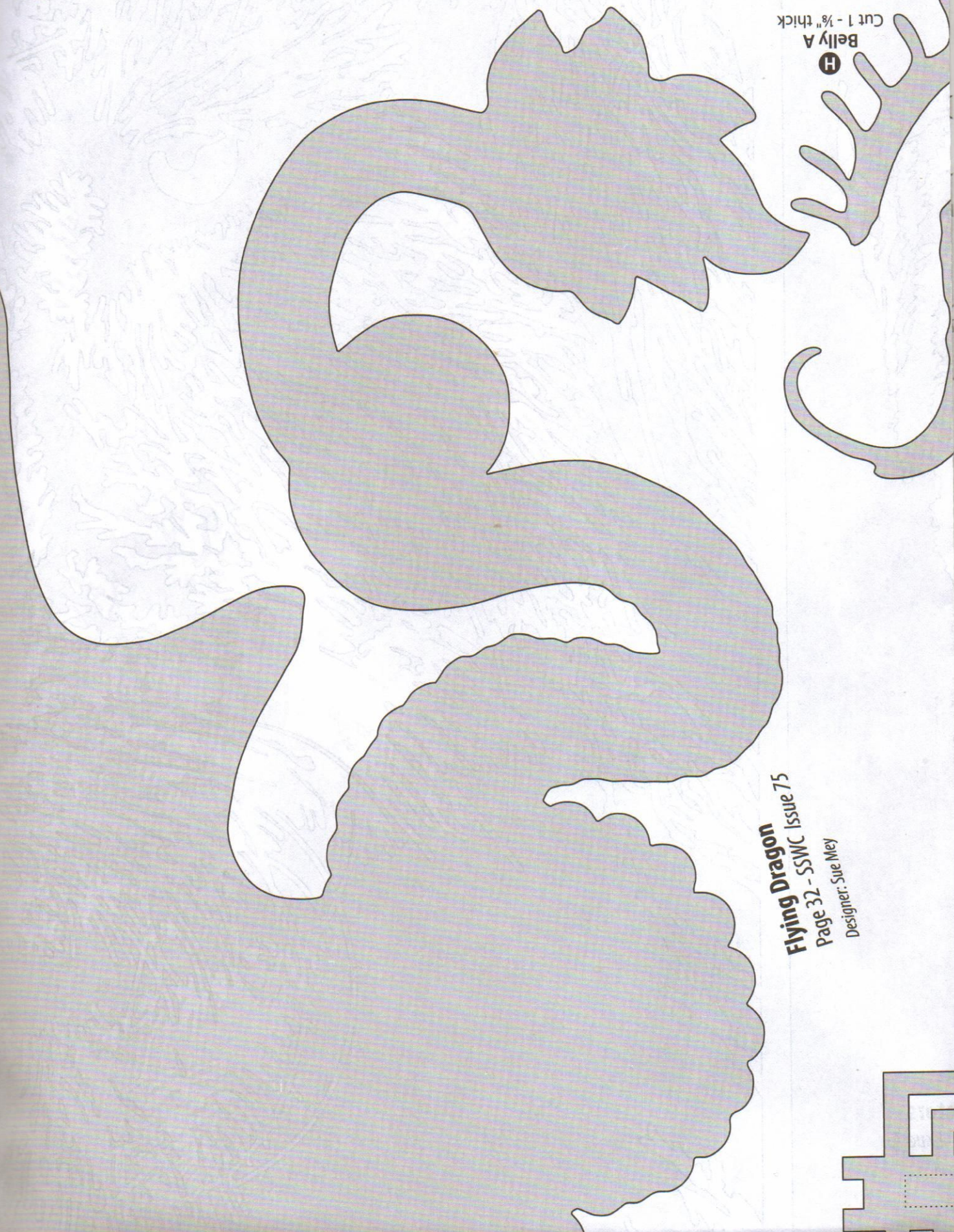
Page 30 - SSWC Issue 75

Designer: Sue Mey

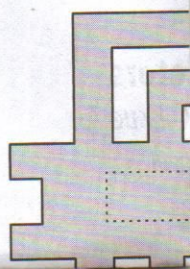


A2

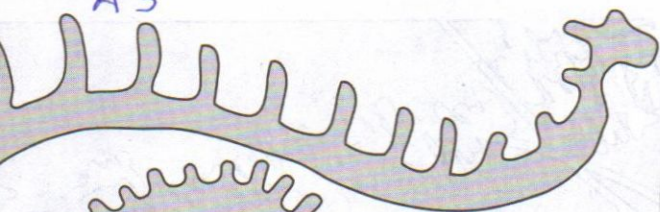
H  
Belly A  
Cut 1 - 1/8" thick



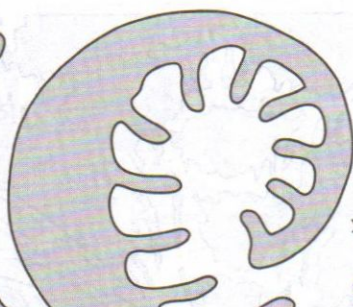
**Flying Dragon**  
Page 32 - SSWC Issue 75  
Designer: Sue Mey



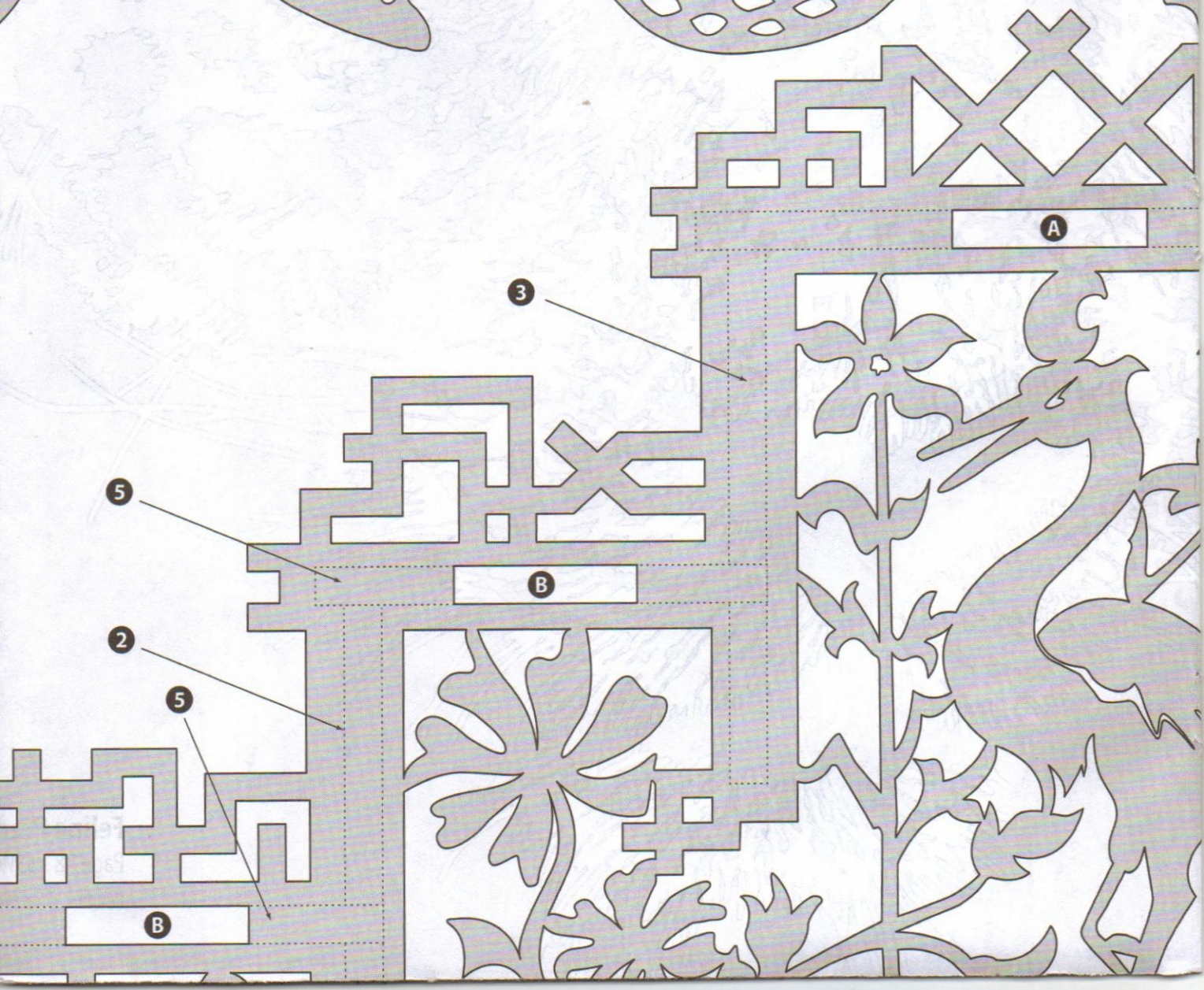
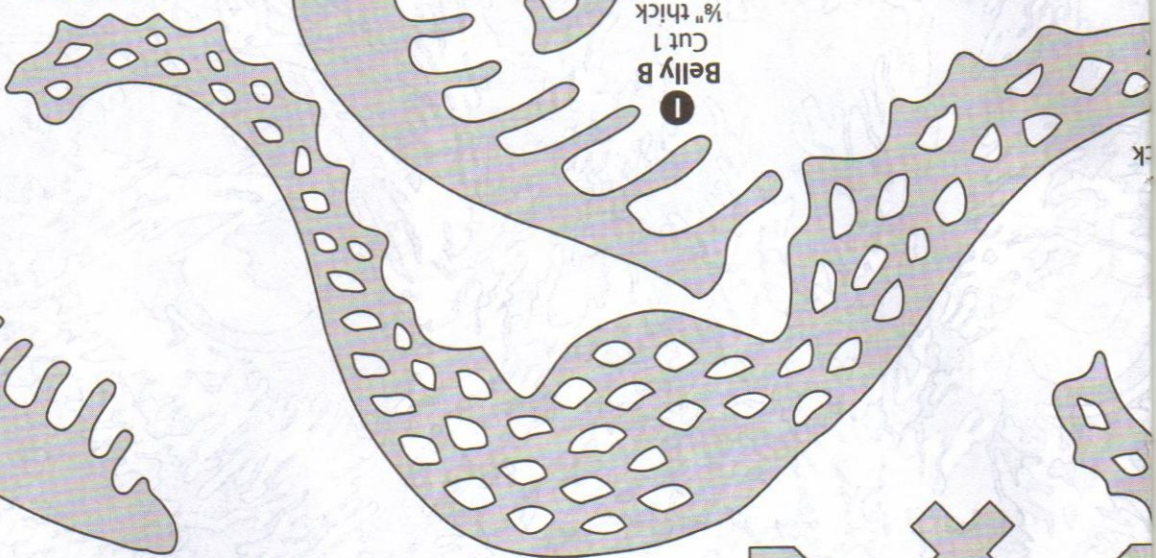
A 3



Tail A  
Cut 1  
1/8" thick  
J



Belly B  
Cut 1  
1/8" thick  
I

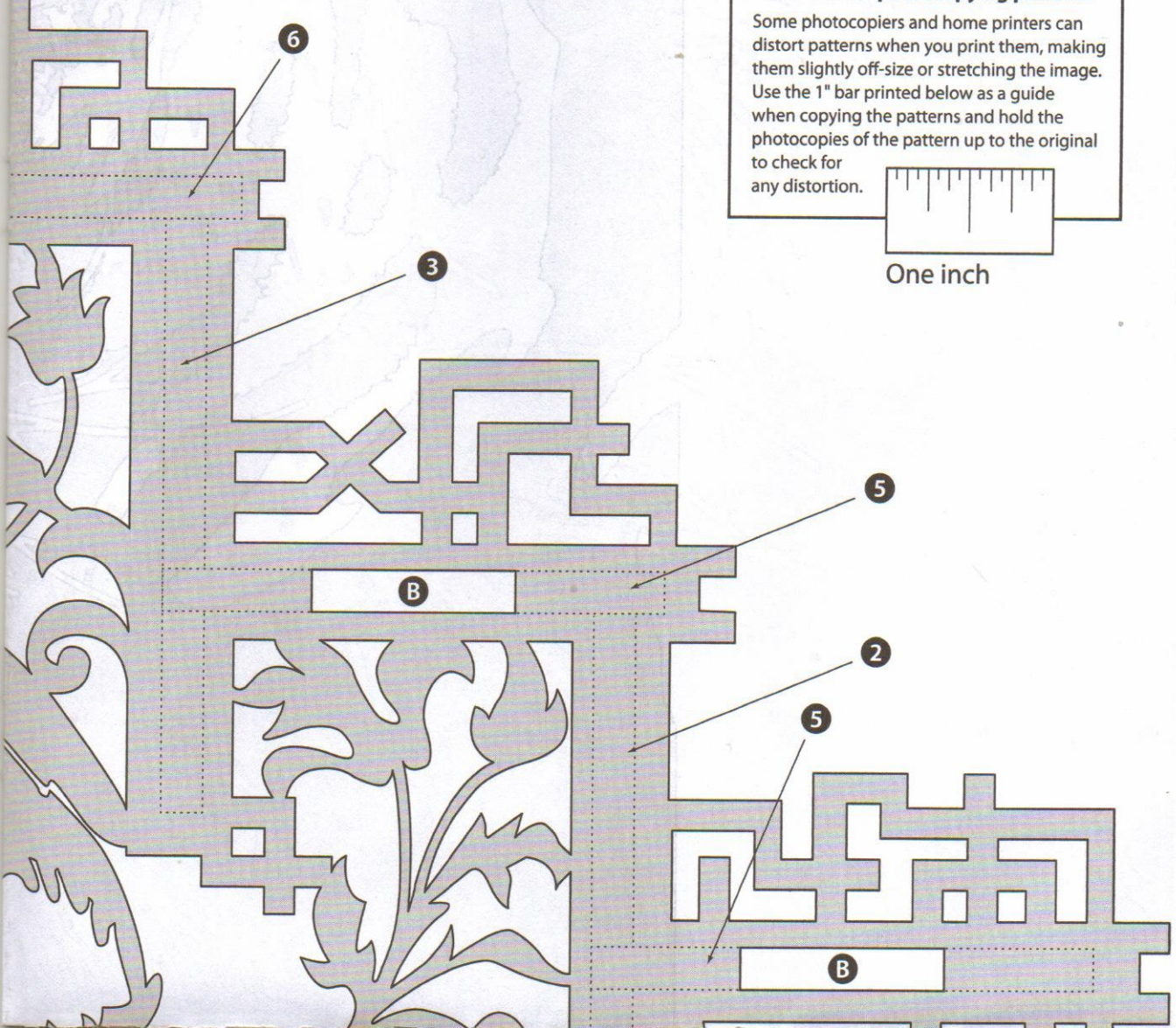


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All patterns on this pullout section: © 2019 Scroll Saw Woodworking & Crafts

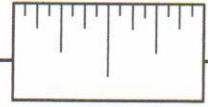
Japanese-Inspired Fretwork Shelf .....	20	Floral Still Life .....	36
Fretwork Wine Box .....	30	Feline Predators .....	38
Flying Dragon .....	32		

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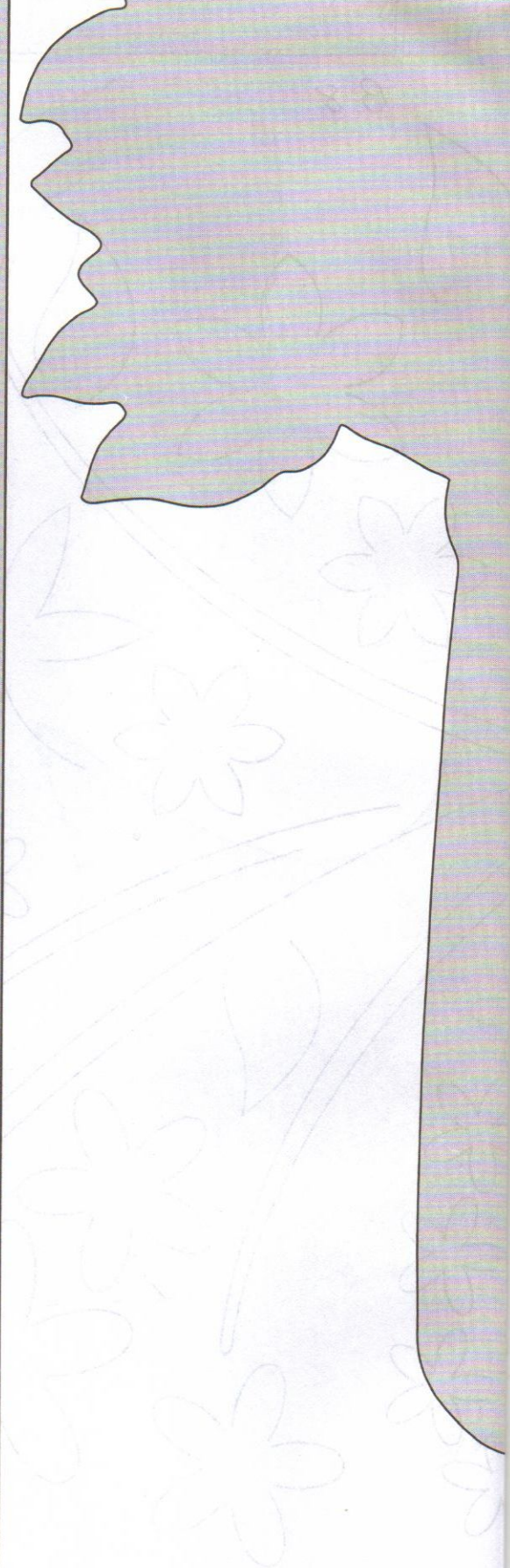
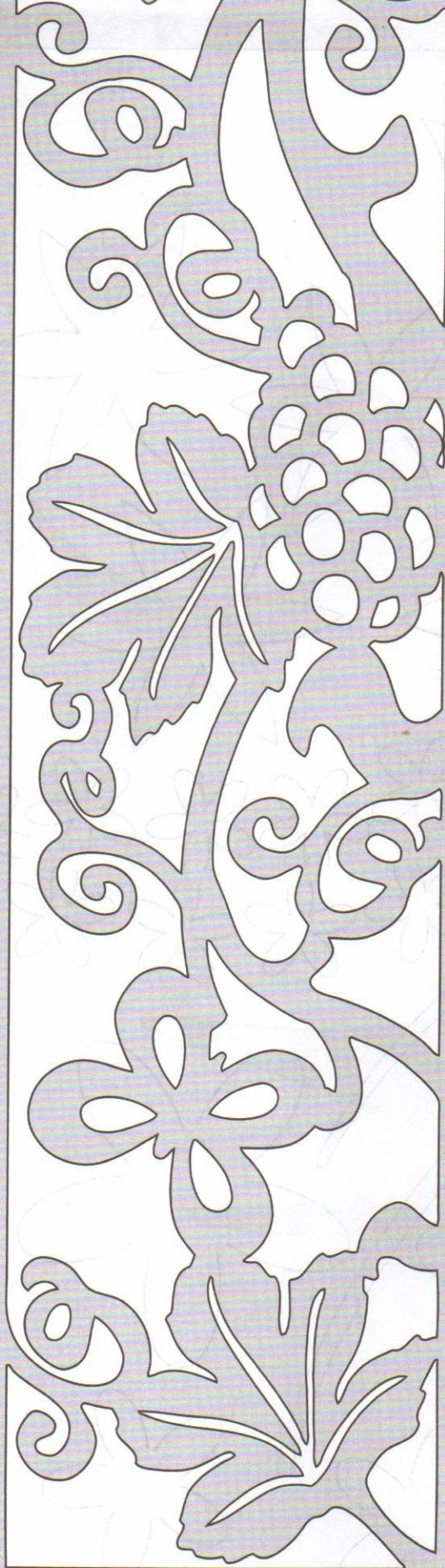
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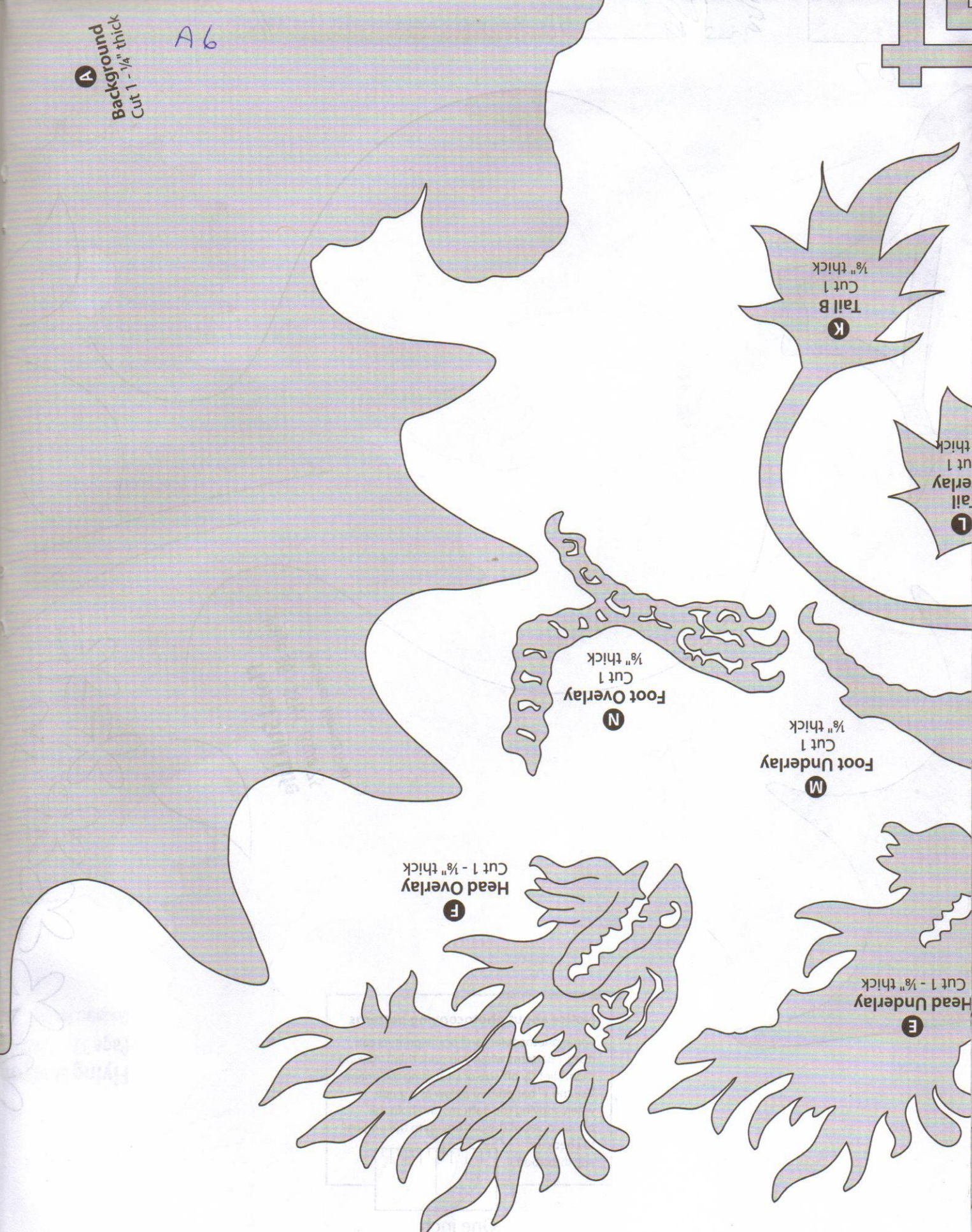
One inch

A5

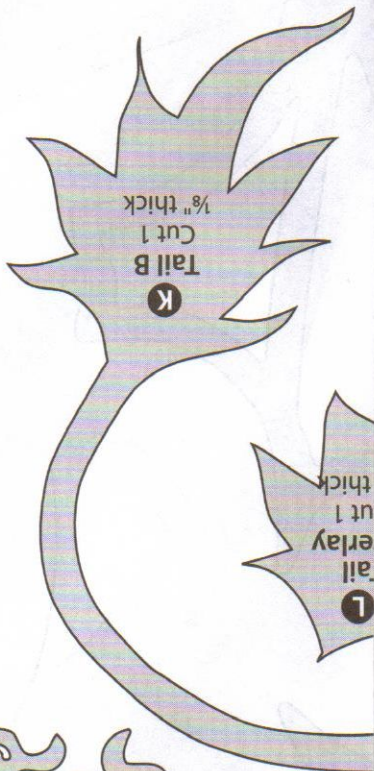


**A**  
Background  
Cut 1 - 1/4" thick

A6

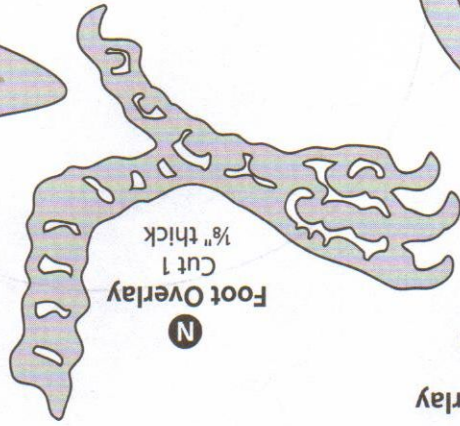


**K**  
Tail B  
Cut 1  
1/8" thick



**L**  
all  
erlay  
ut 1  
thick

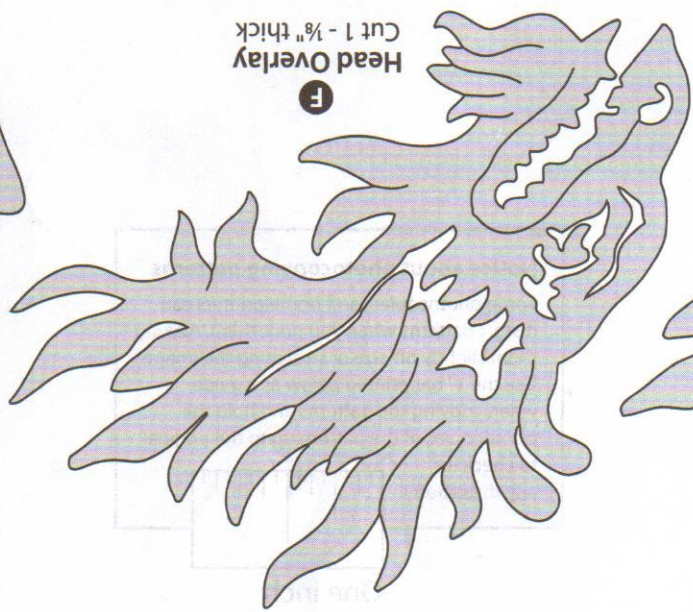
**N**  
Foot Overlay  
Cut 1  
1/8" thick



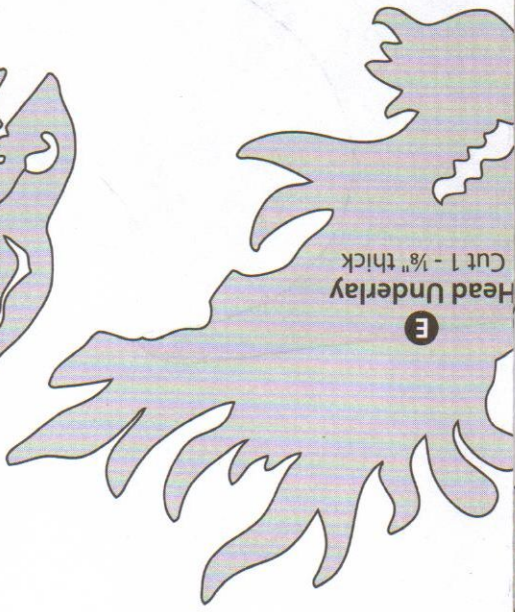
**M**  
Foot Underlay  
Cut 1  
1/8" thick



**E**  
Head Overlay  
Cut 1 - 1/8" thick



**E**  
Head Underlay  
Cut 1 - 1/8" thick



A7

C

B

A

5  
Shelf  
Cut 4

6  
Shelf  
Cut 1

C

4  
Shelf  
Cut 1

8/1  
AO  
L

A8

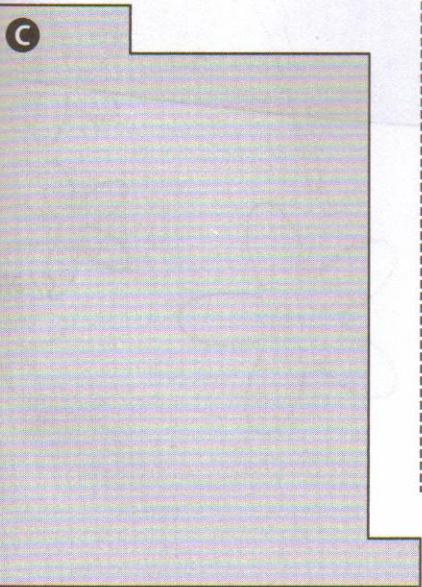
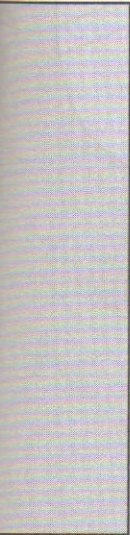
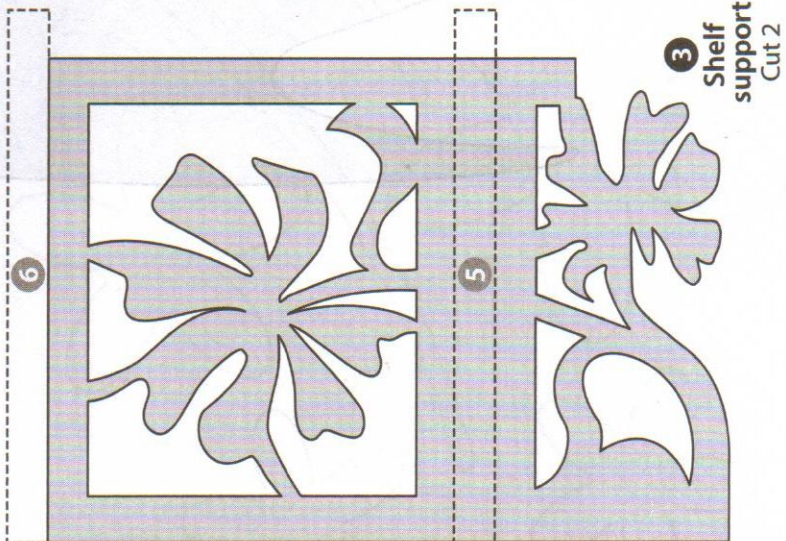
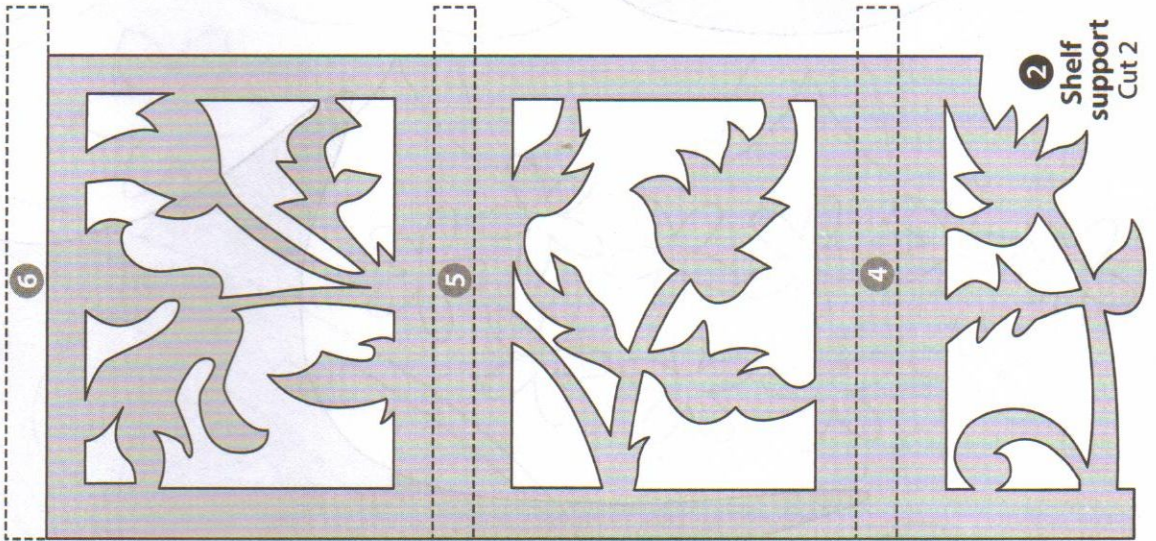
C

4

# Japanese-Inspired Fretwork Shelf

Page 20 - SSWC Issue 75

Designer: John A. Nelson



B1

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Mount Joy, PA 17523

Woodworking  
Magazine

100% unless otherwise indicated

2019 2nd Woodworking & Design

2019

30 Feline Still Life

30 Feline Predators

32 Feline Predators (continued)

Notice about photographic errors

Some photographs and illustrations in this issue contain errors. We apologize for these errors and will correct them in the next issue. Use the "I" and "E" buttons on the right side of the page when copying the text and hold the photo of the page in question to check for any distortion.



Grid

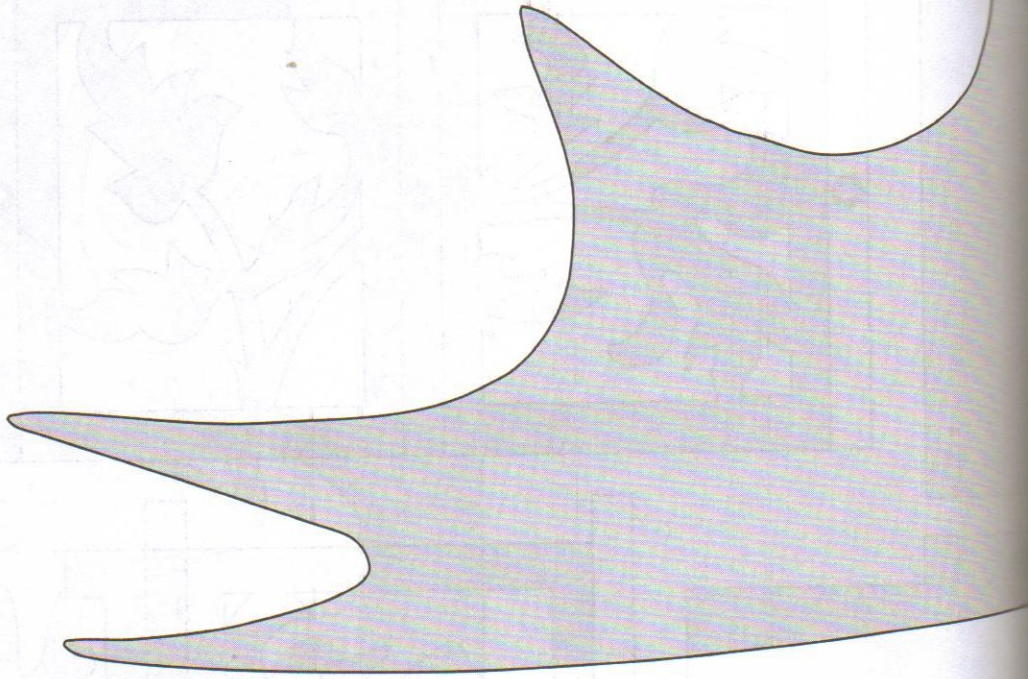
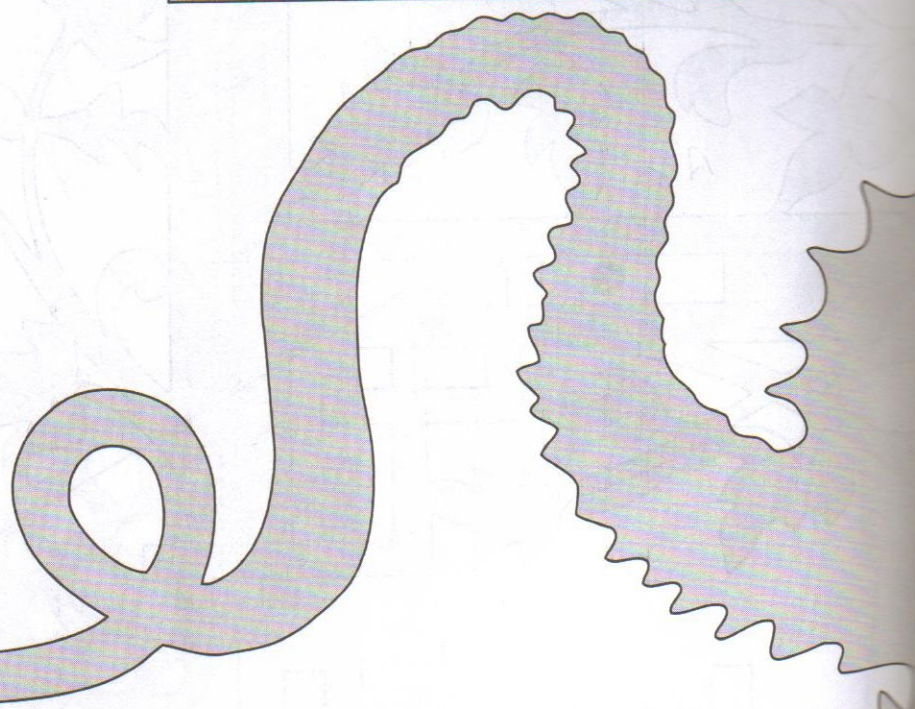
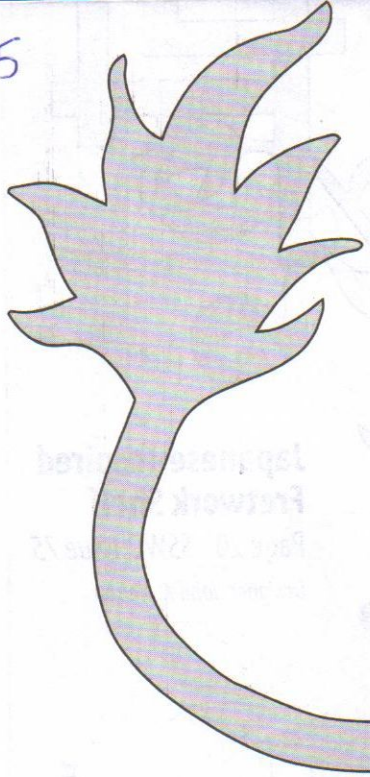








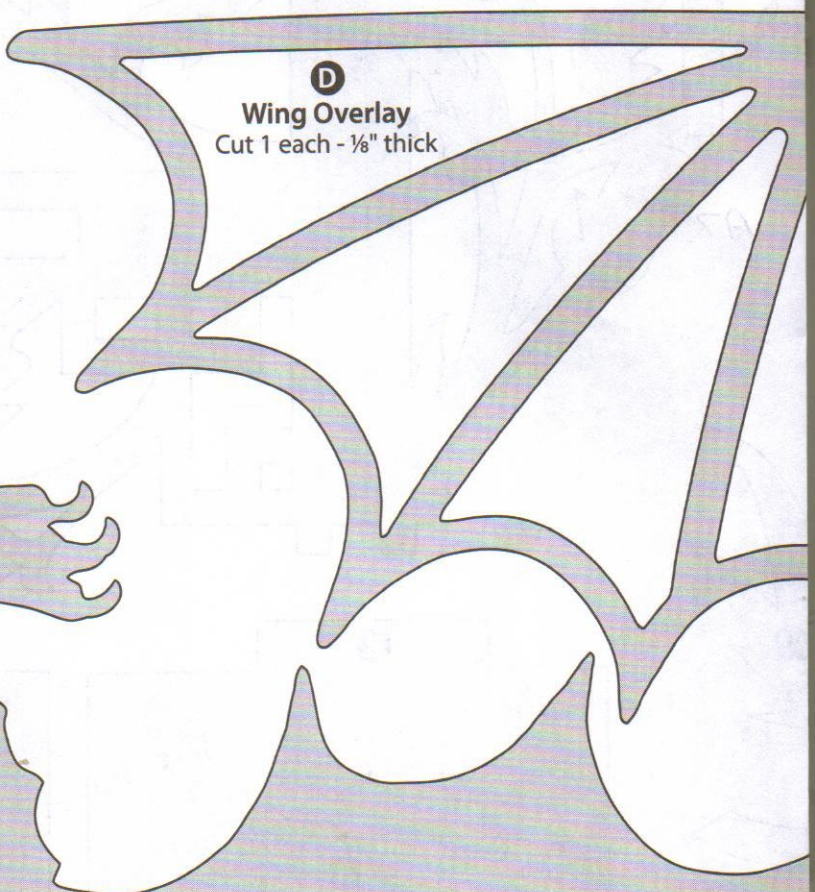
B5



B6

**D**  
Wing Overlay  
Cut 1 each - 1/8" thick

**B**  
Dragon Body  
Cut 1 - 1/4" thick



B7

**Floral Still Life**  
Page 36 - SSWC Issue 75  
Designer: Mareike Grün

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One inch

