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Woodworking

SPRING 2019
ISSUE 74

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- Ornate Wall Caddy
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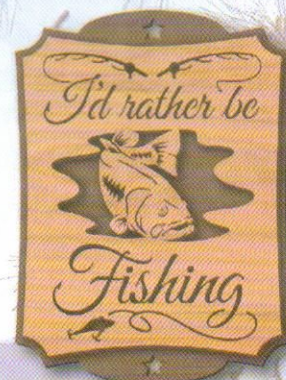
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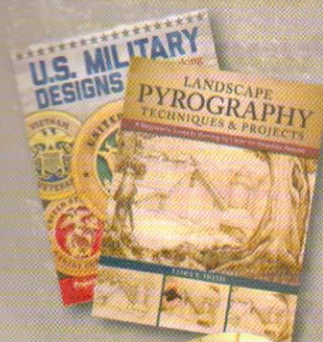
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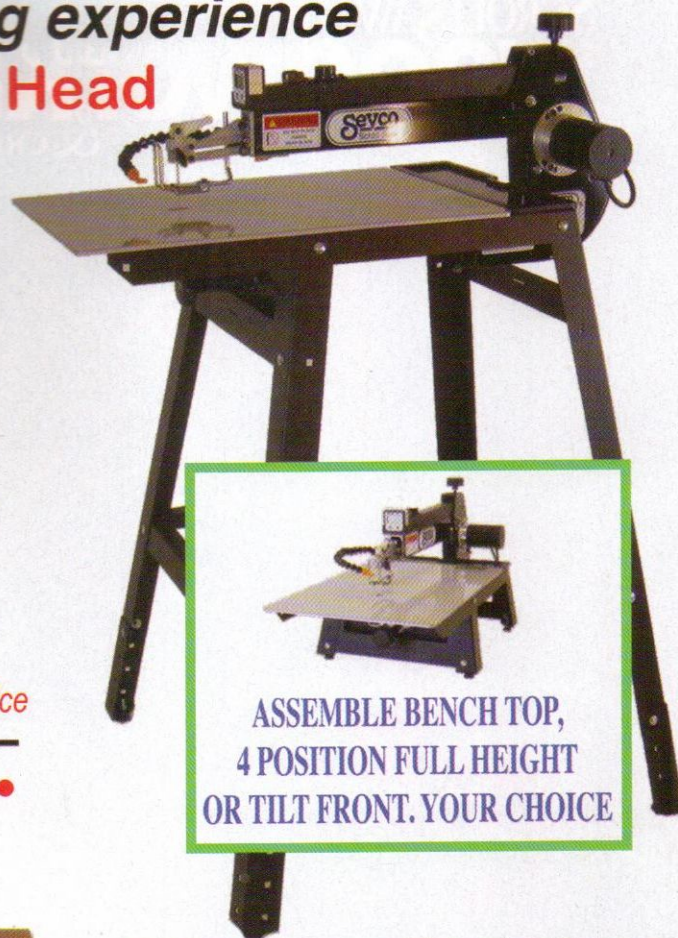
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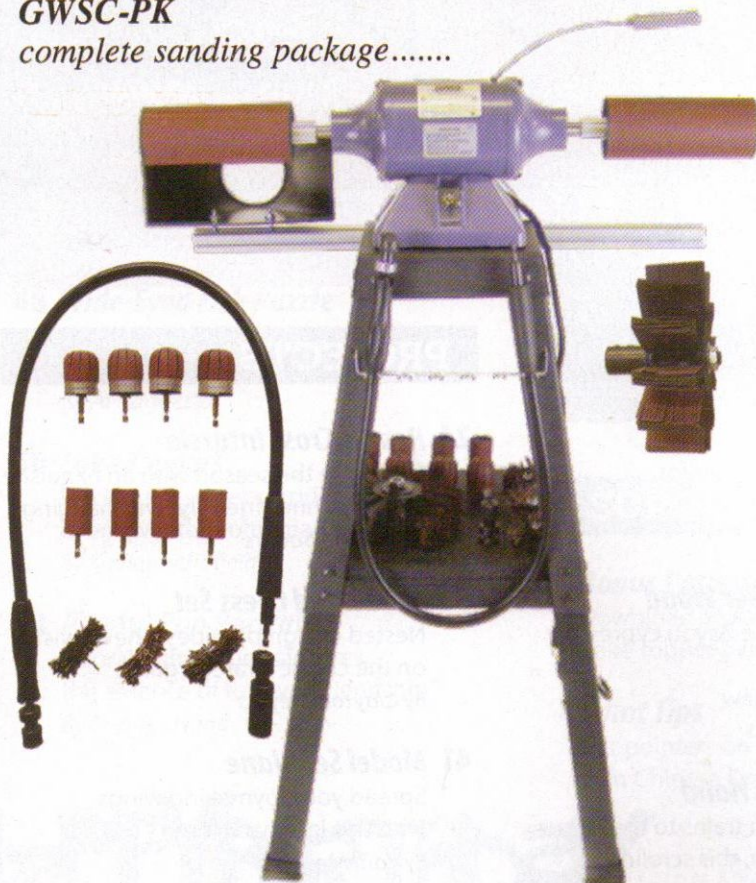


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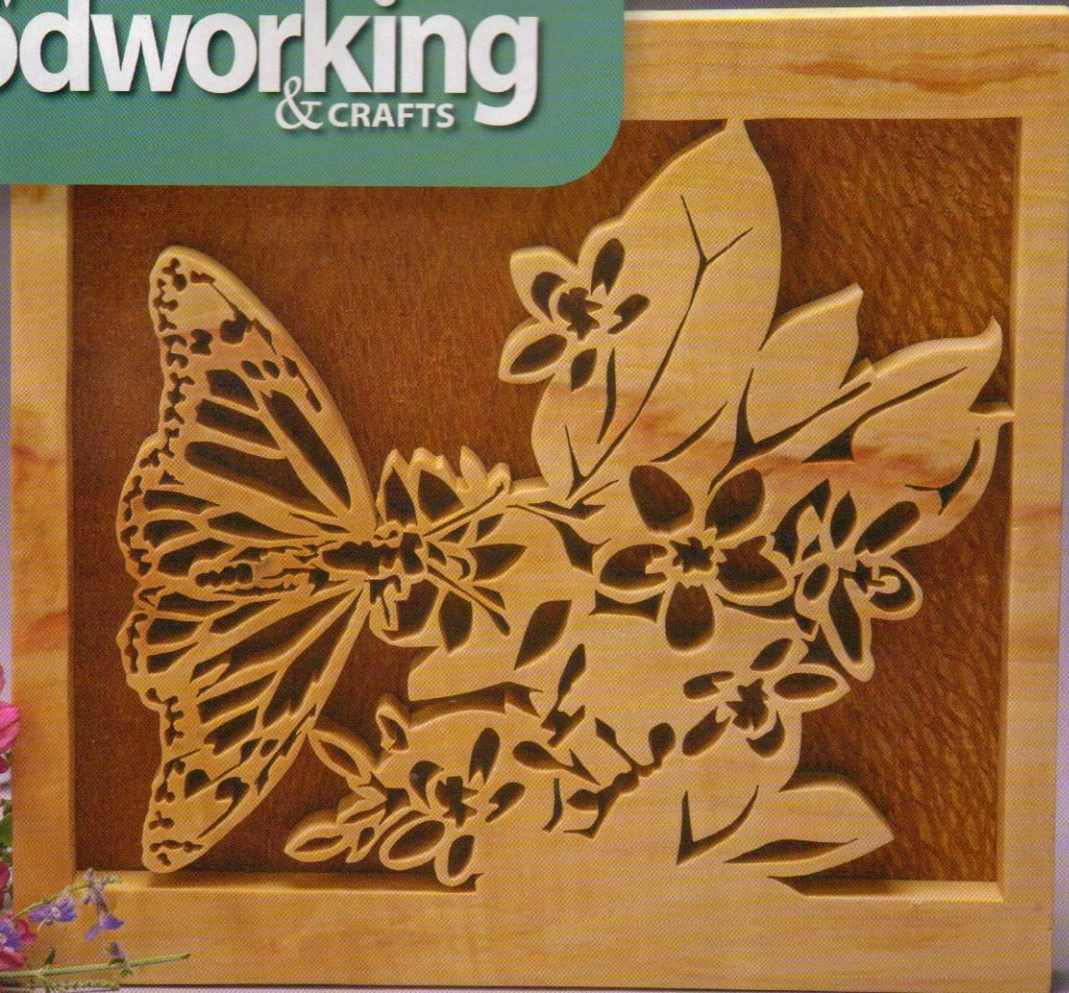


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• Bonus Pattern

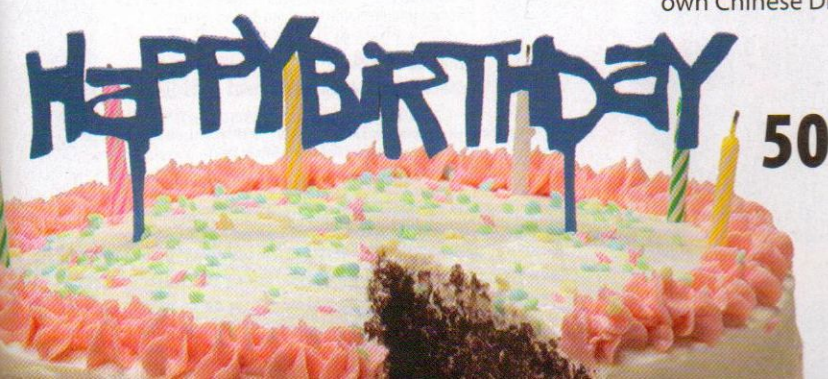
Download an extra non-birthday Cake Topper pattern (pg. 50).

• Paint Tips

Get pointers on how to color your own Chinese Dragon Puzzle (pg. 20).

• Free Projects

For fresh, fun projects to ring in spring, visit scrollsawer.com/category/how-to/spring.



WIN THE DRAGON!

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That's Good Wood!

You could say, quite accurately, that the people who put out this magazine are truly appreciative of quality wood—wood with rich color and dense grain, wood that cuts cleanly and finishes beautifully.

You could also say, quite accurately, that this crew is sometimes totally *bonkers* about such wood. It's a passion you might recognize in yourself.

Take, for example, the "sinker cypress" discovered by Blue Bayou Sunken Treasure in southern Louisiana (see page 44). Located by sonar in backwater bayous, these harvested cypress logs, some of them hundreds of years old, sank over a century ago on their way to the mill. Now resurrected and sold by Blue Bayou, the wood is special and rare—just the thing to send the SSW&C team around the bend. The second I heard about it I requested samples. After we stopped ooh-ing and ah-ing over them we handed some out to artisans Carole Rothman and Janette Square to see what they'd come up with, and the saws in our own shop started buzzing. If you love wood like we do, I think you'll enjoy the results (page 46).

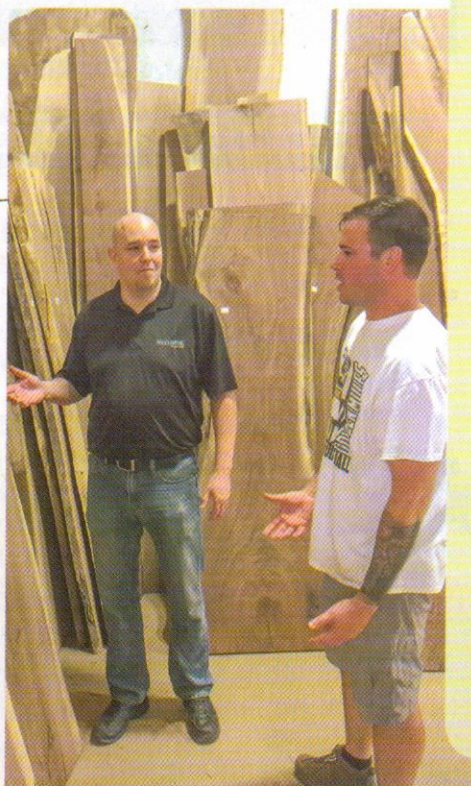
Of course, just like the Blue Bayou boys, we're always on the hunt for good wood. In fact, one of my first official functions here, a few months back, was to pile into a van with the staff for a visit to Groff & Groff Lumber in Quarryville, Pa. There, owner Doug Grove gave us a tour of his impressive operation, which sources fine woods from all over the world. We left with an education in modern milling and armloads of interesting wood—for wood nuts, a darn good day.

Enjoy the issue!

Cheers,

John Atwood
John Atwood
atwood@foxchapelpublishing.com

Groff & Groff owner Doug Grove (right) shows off some gorgeous walnut slabs to SSW&C Technical Editor Bob Duncan.



SCROLLSAW woodworking & CRAFTS

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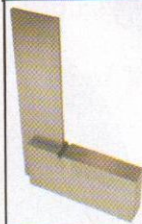
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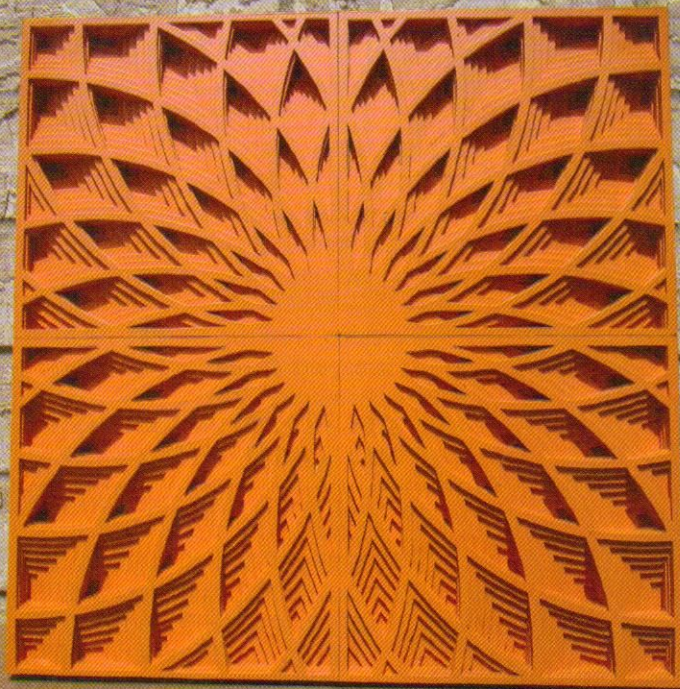
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I See Turtles

I discovered SpectraPly while making comfort birds and found myself thinking, *Why not re-saw this stuff in ½" (1.3cm) strips and use it for inlays?* When I saw Kip Travis' "Sea Turtle Box" in SSW 72, I couldn't wait to use the plywood to make inlay turtles of my own. I used all different colors, and no two are exactly alike. I finished them with Zinsser wood sealer and two coats of spray varnish.

Ron Oszucik
Neosho, Wis.



Sunburst Shadowbox

I completed this project based on Gabriel Schama's "Art Deco Shadow Box" (Issue #70). Instead of just one box, I stack-cut four of each layer and combined the completed squares to make a sunburst, using ⅛" (3mm) Baltic birch plywood for the fretwork and walnut edging for the trim. I added backing and hooks and finished the sunburst with clear polyurethane for a nice shine.

Steve Mertens
Longmont, Colo.

OUR MOOSETAKE

The "Useful Moose" project in SSW#73 contained an error in the dimensions for the Front (Part A). These parts should be ½" x 1" x 4⅞" (1.3cm x 2.5cm x 12.4cm), not ½" x 1" x 5¼" (1.3cm x 2.5cm x 13.3cm). We apologize for the error.



Full of Hot Air

I've been using SpectraPly in projects for almost two years and was thrilled to see it featured in your product review (Issue #72). I use mine a little differently—I buy it in 2" (5.1cm) blanks and rip them down to 1/8" (3mm) thickness. Then, I can glue and shape the pieces based on the project. This hot air balloon was inspired by a pattern from scrolleronline.com.

Jim Maciag

Redford Township, Mich.



Fox Hunt

Raymond Peterek of Rosharon, Texas, and Brian Harvey of Kirkville, N.Y., were randomly drawn from the participants who located the fox in our last issue (Winter 2018, Issue 73). The fox was hiding among Alison Tanner's Timeless Ornaments on page 21.

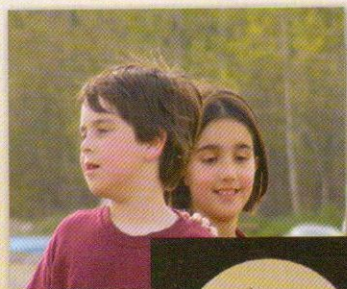
Find the fox in this issue, and tell us the page number and location. Two readers randomly selected from all correct replies will receive a \$25 Fox Chapel Publishing gift certificate. Entries must be received by January 20, 2019, to be eligible. **NOTE:** The contest fox is an outline drawing that would 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.

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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.

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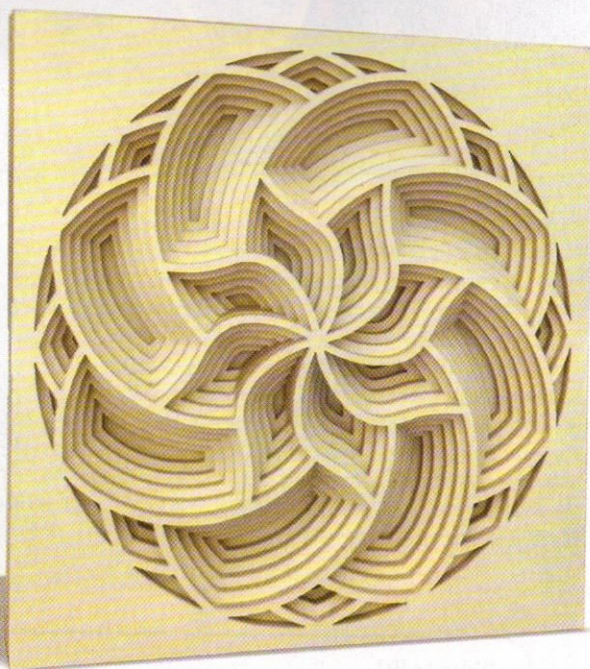
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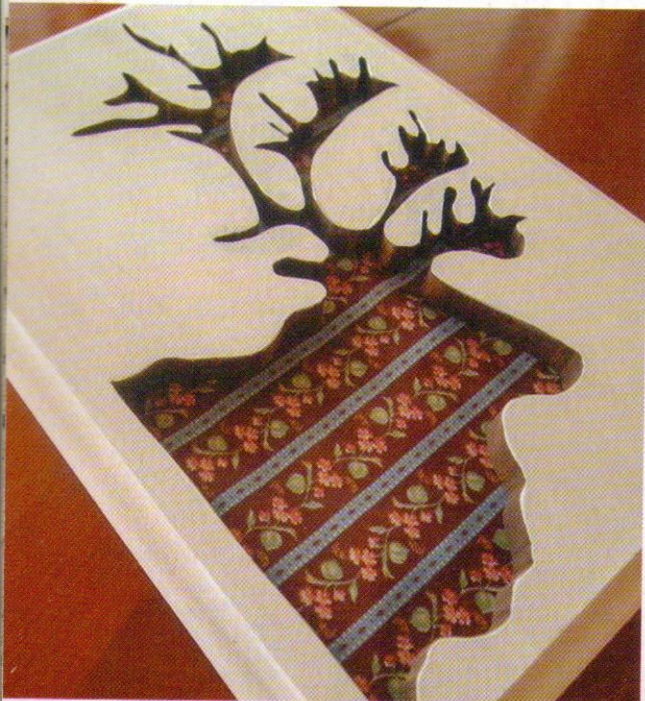
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Alex Fox Kherson, Ukraine

Alex specializes in intricate wooden mind puzzles, ornaments, and fretwork. He cut this 7" (17.8cm) square wall ornament from plywood. Find more of his work on Etsy at AlexFoxUA.



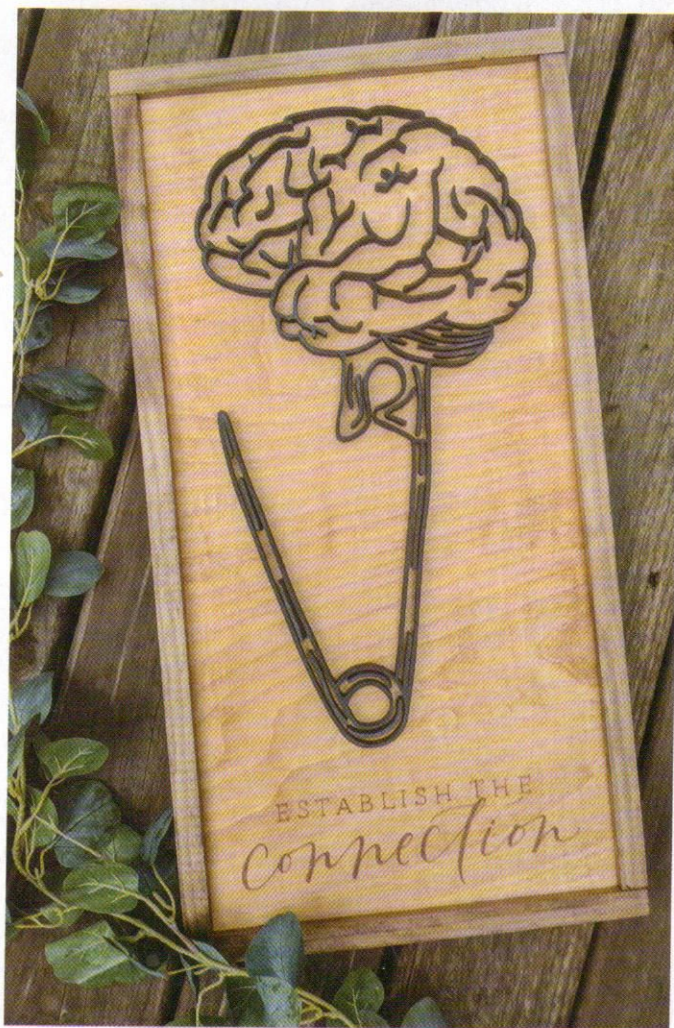
Bethany SyWassink Marshalltown, Iowa

Bethany cut this 12" by 18" (30.5cm by 45.7cm) *Reindeer Silhouette Plaque* using pine from her grandfather's barn. She backed the piece in floral fabric to emphasize the creature's distinctive shape. Find more of Bethany's creations at realitydaydream.com.



Robin Oczus Green Bay, Wis.

Robin discovered woodworking while searching for a creative outlet after the birth of her second child—and scrolling stuck. She created this 12" by 24" (30.5cm by 61cm) sign for a local family chiropractic clinic. "When the safety pin is open, the connection with your nervous system is interrupted. Put the safety pin back together and the system becomes smooth again," Robin said. She finished the piece with Minwax golden oak, Rust-Oleum gloss black, and a clear gloss polyurethane. More of Robin's work can be seen at robinoczus.com.

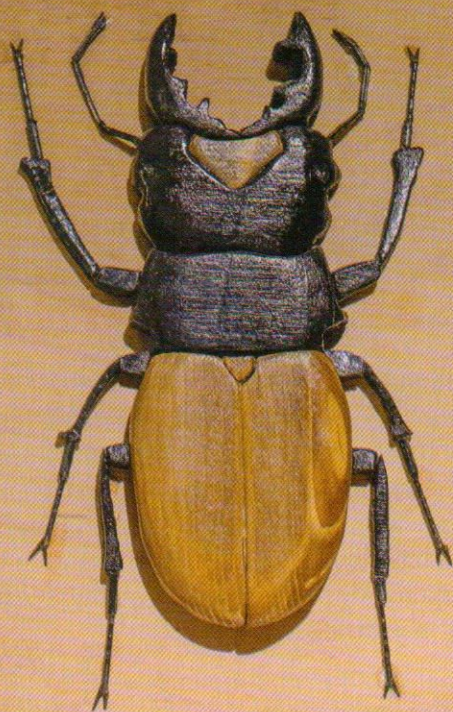


**Hector Garcia** *Los Angeles, Calif.*

Hector has been scrolling for three years and manages several scroll saw pages on Facebook. He made this 5½" by 11" (14cm by 27.9cm) Teardrop trailer out of pine, poplar, and birch plywood, and used different stains for the multicolor effect. Find more of Hector's work at facebook.com/hector.a.garcia.566.

**Ian Glastonbury** *Lincoln, England*

"I could not think of anything more suitable than making trees from trees," Ian said. He cut this 7" by 7 7/16" (17.7cm by 18.9cm) silhouette from sycamore. For more of Ian's work, visit TheHairyScroller on Etsy.

**Gokhan Coral** *Mersin, Turkey*

A longtime biologist and wildlife photographer, Gokhan takes a highly technical approach to wood art. He cut this 52-piece male stag beetle segmentation from spruce, finishing it with a natural polish that he prepares using olive oil and wax. "The males of this species possess sumptuous horn-like chins, which they use to fight off other male competitors during mating season," he said. Find Gokhan at facebook.com/coralgokhan.

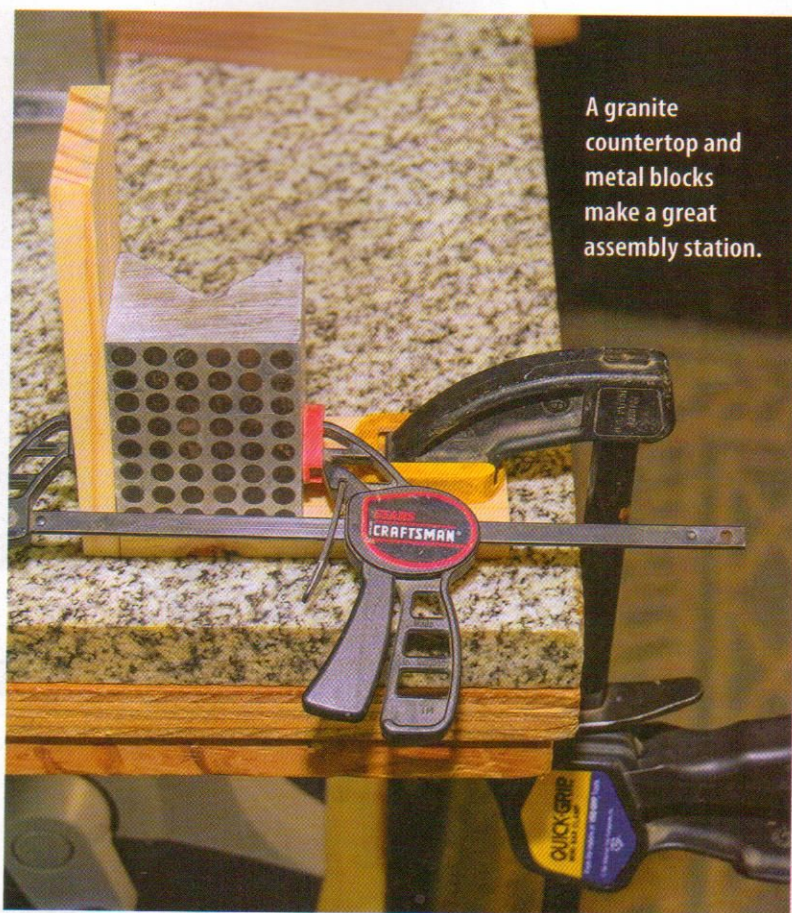
Share Your Latest Work!

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.

Around **TOP TIP** the Clock

I assemble many things that require a flat surface, such as clocks, intarsia, or jointed items. For me, a quick-and-dirty solution was to repurpose an old bathroom cabinet. I put wheels on it and added some drawers. For the top, I used a piece of quality $\frac{3}{4}$ " (1.9cm) plywood, which was big enough to provide me some overhang for clamping. I then came across a piece of polished granite countertop at a thrift shop. It provides a hard, flat surface, and any glue that gets on it is easily scraped off with a razor blade. For clamping at a perfect 90° angle, I use square blocks and pieces of metal, but you can buy clamping squares from many sources online.

Rolf Beuttenmuller
Bellport, N.Y.



A granite countertop and metal blocks make a great assembly station.



It's Curtains for Lost Clamps

If you, like me, are always misplacing (or tripping over) your many clamps, here is a simple storage solution—get a cheap metal curtain rod and screw it into a wall in your shop. Mine expands from 24" (61cm) to 48" (1.2m); I got it from Wal-Mart for around a dollar. It's a great way to keep clamps accessible and in one place.

Jerry Walters
Arvada, Colo.

Submit and win! Send your favorite tip to Scroll Saw Woodworking & Crafts 1970 Broad St., East Petersburg, Pa., 17520, or e-mail editors@scrollsawer.com. The Top Tip in each issue wins a \$25 Fox Chapel Gift Card.



Storage with Spice

I was about to toss my old spice rack out, but my wife talked me into using it for storing all the loose screws, bolts, and miscellaneous hardware that I keep around the house. This one has a built-in Lazy Susan and each bottle has a handy flip-lid for dispensing. I just love my new little storage center.

Charles Hand
St. Catharines, Ont.

Storing small parts in a spice rack is a recipe for convenience.



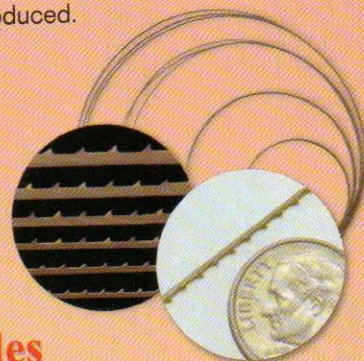
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- Safety switch system
- The cast-iron table, with a 40° tilting capability
- Bench stand
- 2 blades included, #9 and #12



No. 90.700
MSRP \$1,470.00

Introductory Price \$1,296.00

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.



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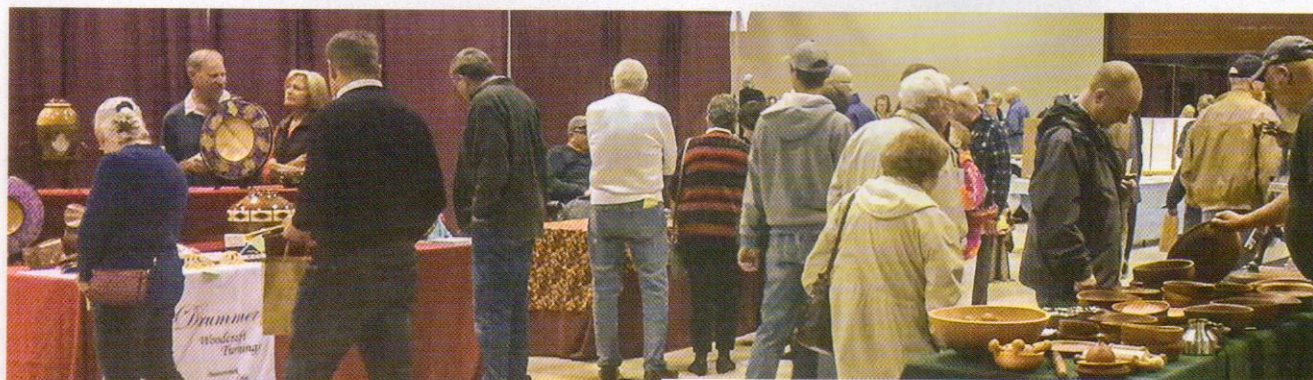
	MSRP	Introductory Price
No. 90.750 - Scroll Saw	\$719.00	\$649.00
No. 90.755 - Scroll Saw + Stand	789.00	719.00
No. 90.760 - Scroll Saw + Stand + Foot Peddle	799.00	739.00

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.



Phone: 800-847-4188 • 800-998-4467 • Fax: 800-243-2432 • 800-758-4467
email: pegas@grobetusa.com

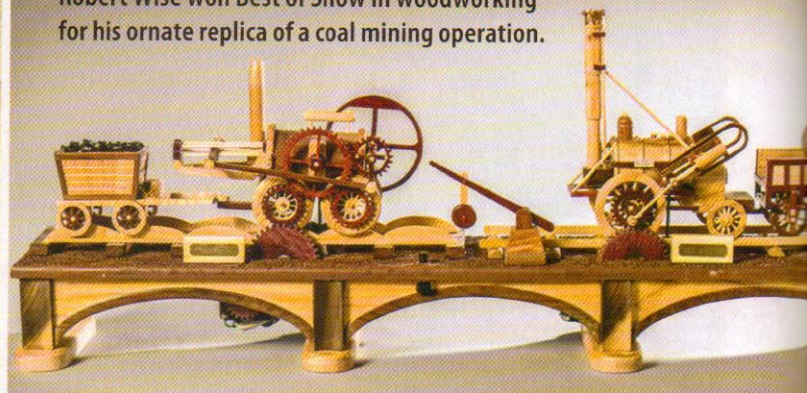




Artistry in Wood

October 13-14, 2018

Robert Wise won Best of Show in woodworking for his ornate replica of a coal mining operation.



This year's Artistry in Wood Show lived up to its billing. Organized by the Dayton Carvers Guild and held at the Roberts Centre in Wilmington, Ohio, the event featured talent from 21 different states, ranging from scrollers to turners, carvers, and pyrographers. There were 155 exhibitors, 20 vendors, and 3,400 guests in all.

Scrollsawer Robert Wise, Jr., took home the Best of Show prize in woodworking, while Dick Reese and James Dupler won second and third respectively. Jeff Vollmer demonstrated his puzzle-box-making technique on the big stage, and Scott Phillips, host of the celebrated TV show *The American Woodshop*, answered audience questions and shared his tips for woodworking success. Markus Zaugg of Pegás Swiss Blades exhibited several new products for scrollers, including a new scroll saw model and the one-of-a-kind Pegás scroll band saw, coming to U.S. markets in 2019.

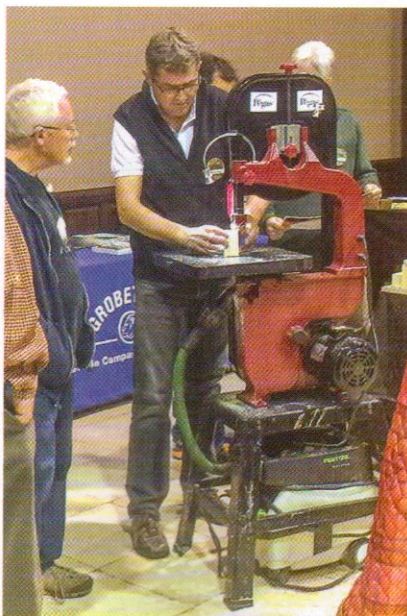
The Saturday night banquet, a popular kids' project space, several raffles, and a silent auction rounded off the weekend. Young wood artists made and took home a total of 120 gizmos and toys, and the Dayton Carvers Guild plans to donate \$5,000 of the show proceeds to United Rehabilitation Services.

If you're in the area next year, stop in—we guarantee an unforgettable experience. Hope to see you in 2019!

For more information, visit daytoncarvers.com/artistryinwood.



Keith Howard displayed his wood spirits, which he colors with a special natural process.

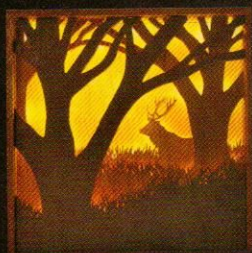
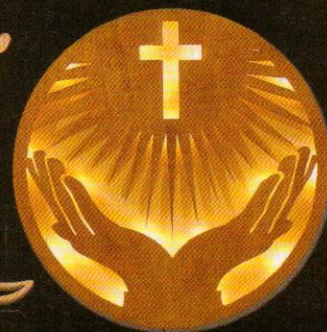
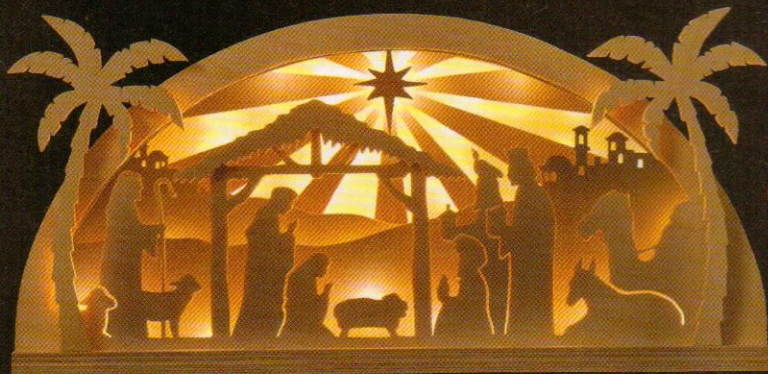


Scrollers and carvers alike were enthralled by the new Pegás scroll band saw.

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Portable Spray Shelter

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and Home Depot stores

Many scrollers share shop space in the garage with bikes, lawnmowers, and other family possessions. Which means most spray finishes have to be applied outside, and only when weather conditions permit. HomeRight's portable spray shelter solves that problem.

It comes in three sizes; the small one (pictured at right) is large enough for almost any scroll saw project and folds down to a disc the size of a bicycle tire. Simply remove it from the case and the springy poles snap it into shape.

The shelter is enclosed on three sides and includes a rear vent that you can open after spraying to allow airflow. In our tests, it easily collected overspray from both cans and an HVLP sprayer. We also found it useful for preventing airborne dust from falling onto drying finishes.

Thrifter woodworkers who don't mind fighting with tent poles could pick up a child's play tent for about half the price and use it in a similar way. But this unit, perfectly designed for the job, comes with a practicality and ease-of-use that's simply unbeatable.



HomeRight's Spray Shelter pops up instantly to create a spacious booth for protected finishing.

Preval Sprayer

\$9.99 plus S&H at Preval.com
Also available at Lowe's, Walmart, and Sherwin Williams stores

To finish small projects, you usually have to choose between a pre-mixed aerosol can and a quart-sized sprayer filled with shellac you thinned five years ago. But not anymore. The new Preval Sprayer system lets you customize and apply a small amount of finish—cord-free and with little waste.

Consisting of a replaceable pressurized aerosol can and a glass jar to hold the finish, the Preval system applies any brush finish (thinned with the appropriate solvent) in a fine, even spray. Whatever you are spraying—paint, shellac, lacquer, or even varnish—this tool allows you to mix up just the amount you need.

Because the glass reservoir holds only 6oz (177ml) of finish, and each aerosol container allows you to apply just 16oz (473ml), you wouldn't want to use the Preval Sprayer on a set of kitchen cabinets. But it's the perfect size for most scroll saw projects.

A starter kit, which includes one reservoir and can of aerosol, is available for \$9.99. I suggest the V-Grip universal handle for \$7.99 as well; it fits onto any spray can and gives you more control (and comfort). Refill cans of aerosol are \$6.99 (with volume discounts available).

Spray any finish for small projects or touch-ups.



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Pégas Scroll Saw

Introductory price: \$649, \$719 with stand
MRSP: \$719, \$799 with stand
Call 800-847-4188 or
e-mail sales@grobetusa.com
to find a local retailer

The first branded Pégas Scroll Saw to hit the market does so with a bang, combining Swiss engineering with a proven design to set a new standard for higher-priced saws.

These new units, made in the same factory as Excalibur saws (as well as Jet, King, Seyco, and a few brands sold in other countries), match the quality of those popular saws but include a key upgrade: they come with the revolutionary Pégas Blade Chuck Heads pre-installed.

Like Excalibur saws, the Pégas features a tilting arm controlled by a rack and pinion system that allows you to dial in an angle quickly and accurately. It also has a spring-loaded locating pin and matching holes for common angles, such as 0°, 45°, and 22½°, to make it even easier to orient the arm. (Follow the instructions in the owner's manual to check these angles when you get your saw; after I squared my blade to the table, I had to adjust the angle guide and locating pin to zero it in.) And conveniently, Pégas put the power switch and speed control at the front of the saw arm.

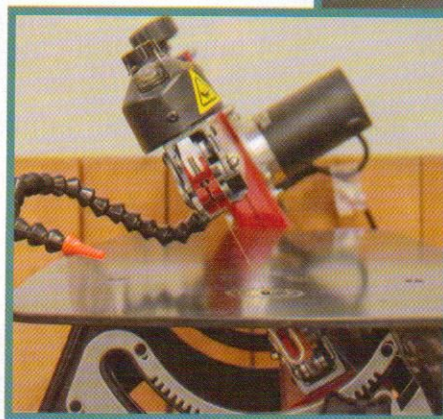
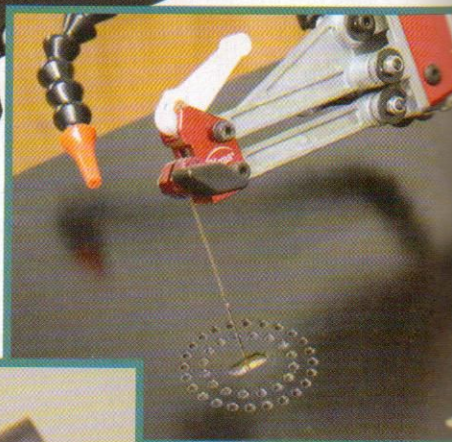
Most importantly, however, Pégas pre-installed their Blade Chuck Heads on the saw. This upgrade, a \$90 value, reduces vibration noticeably and holds blades super-securely—incredibly, we put them on our shop saws nearly a year ago and have not had a single blade slip out of place since. (See our review of them at scrollsawer.com/2019/09/07/product-review-pegas-blade-chuck-heads/.)

The table is large enough to support most projects, and since the saw arm lifts and stays in place, you can top- or bottom-feed when cutting fretwork. (One quibble: the dust collection cover made it a challenge to change blades, so I removed it.)

A strong dust blower easily moves sawdust off pattern lines, but the pop-n'-lock joint where the blower nozzle connects with the air tubing is undersized. To tighten the fit and keep the nozzle in position, I wrapped a short piece of tape around the male end of the connection. Helpfully, a longer-than-usual nozzle makes positioning the blower easier.



Built-in Pégas Blade Chuck Heads reduce vibration and hold blades securely.



The new Pégas features a tilting arm controlled by a rack and pinion system.

The introductory price for the Pégas saw and stand, \$719, puts it in the same range as the King 16" with a stand (\$730), the Hegner 14-E at \$795, the at PS Wood 21" at \$799, and the Seyco ST-21 at \$879. What sets it apart is the addition of those terrific chuck heads, which keep it running quietly and smoothly at any cutting speed.

To compare the new Pégas Scroll Saw with similarly priced models, check out our reviews at scrollsawer.com/category/product-reviews/saw-review/.

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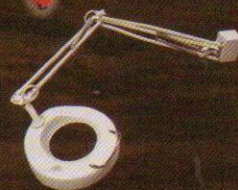
Footswitch



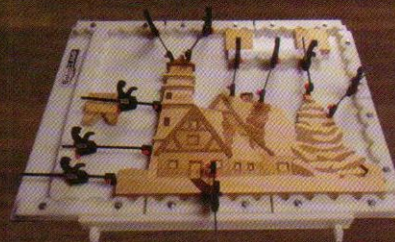
Accessory table



Machinist's square



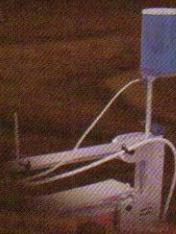
Mag light



Bishop Clamp System



Chair legs



Drip tank

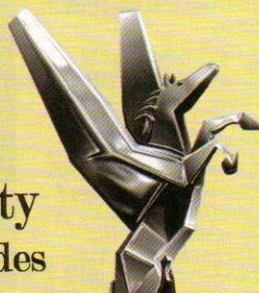
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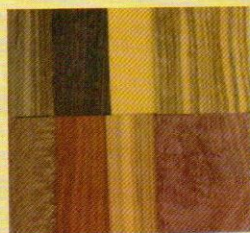
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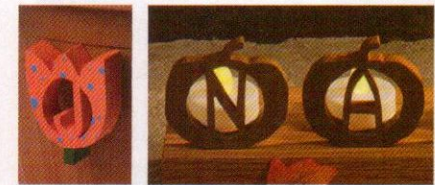
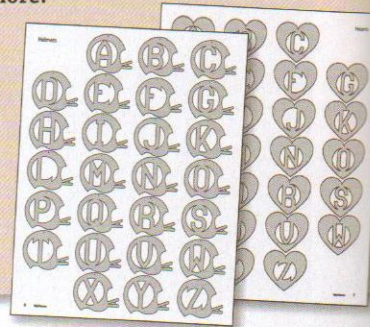
This ready-to-cut pattern library features 26 complete scroll-friendly alphabets that put a delightful spin on the traditional ABCs. Each monogram combines the shape of a letter within a clever presentation of a theme.

From pumpkins and football helmets to trophies, hearts and Christmas trees, use these patterns to create messages that are as engaging as they are informative. Never be at a loss for words again!

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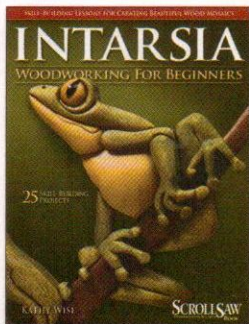
ALPHICONS

28 Alphabet Patterns for the Scroll Saw

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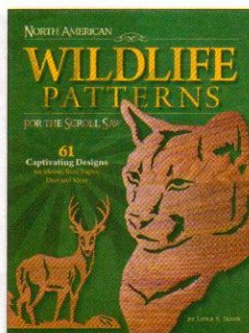


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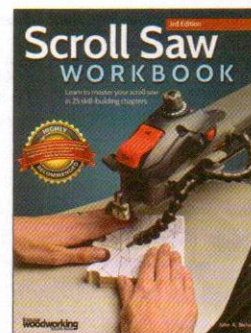
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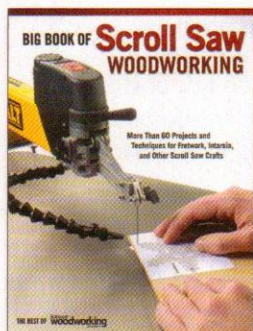
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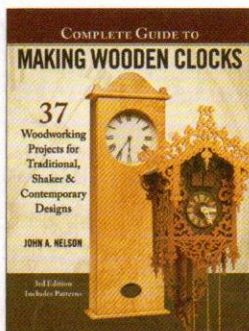
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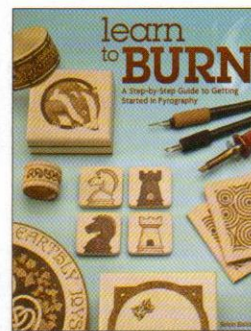
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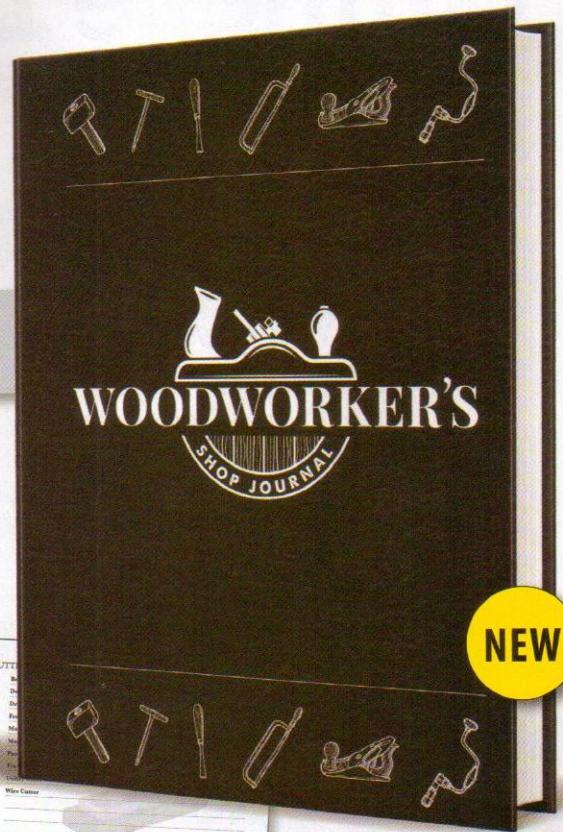
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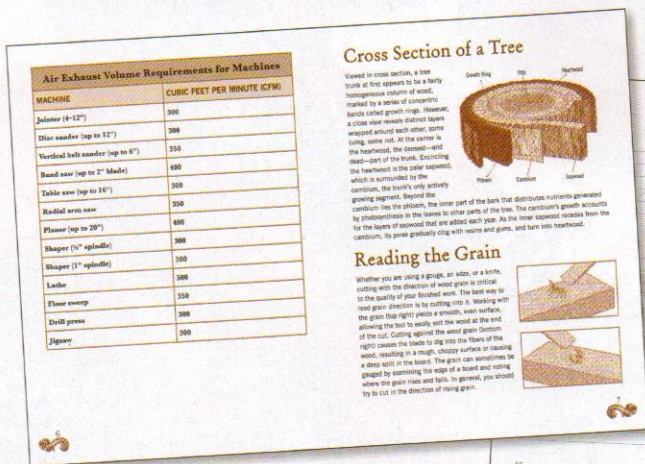
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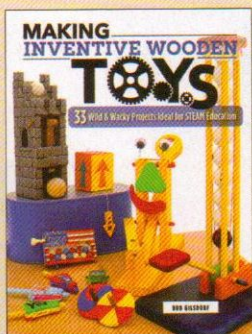
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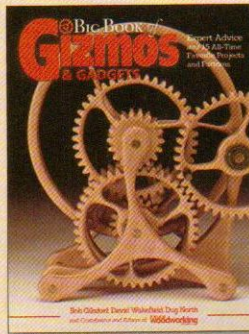
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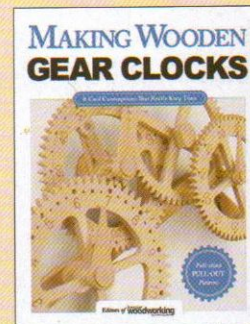
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Chinese Dragon Puzzle

Bring luck to your scroll saw with this take on a Chinese New Year classic

By John A. Nelson

Cut by "the other" John A. Nelson

Painted by Kristen Scanlan



The dragon is a favorite of Tolkien-lovers, *Game of Thrones* fans, and students of Chinese mythology—and it's no wonder. Powerful, clever, and mysterious, these creatures are said to reward respect with security and good luck. I added lots of movement to my version to evoke the undulating choreography in a traditional Chinese New Year dragon dance. I chose a rich cherry for the distinctive grain, but you can use any interesting hardwood you prefer.

Making the Dragon Puzzle

Cover the wood with blue painter's tape. Attach a copy of the pattern to the tape using spray adhesive. Make sure the grain flows horizontally.

Cut the pieces, starting with the base. Set the base pieces aside to make the project easier to handle. Then, do the same for the claws and head, saving the torso and tail for last. Drill a hole for the eye. Sand the pieces by hand, working up progressively through the grits until you reach 320. For attractive hardwoods, finish with Danish oil or a clear spray lacquer; for bland woods, paint with your choice of bright acrylics.



ON THE WEB

PAINT TIPS
Go to our website for dragon painting tips and a video.

scrollsawer.com

Materials & Tools

Materials

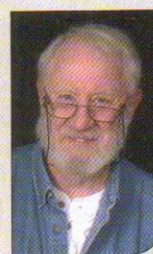
- Cherry or maple, $\frac{3}{4}$ " (1.9cm) thick: $9\frac{3}{4}$ " x 15" (24.8cm x 38.1cm)
- Spray adhesive, temporary-bond
- Tape: blue painter's
- Sandpaper: 120, 220, 320
- Acrylic paint (optional)
- Finish, such as clear spray lacquer or Danish oil

Tools

- Scroll saw blades: #5 reverse-tooth
- Drill with bits: assorted small

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

Pattern for the **CHINESE DRAGON PUZZLE** is in the pullout section.

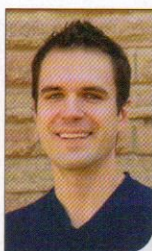


Dragon designer John A. Nelson is the author of *Fox Chapel's popular Scroll Saw Workbook*, available at foxchapelpublishing.com.

Butterfly Pattern



© 2019 Scroll Saw Woodworking & Crafts



Jacob Fowler designed his first scroll saw project when he was five years old. He now spends most of his time designing fantasy and animal patterns with his father, Wayne.

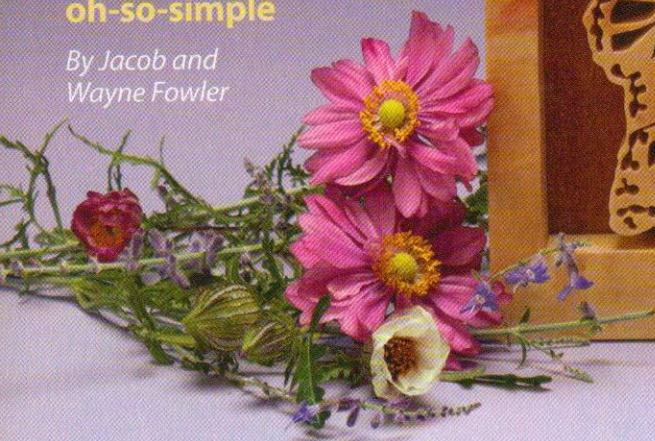
Wayne Fowler has published nearly 150 articles since 1998. His work has won awards at a local craft guild and several science fiction conventions.



Spring Takes Wing

This monarch butterfly project is fresh, elegant, and oh-so-simple

By Jacob and Wayne Fowler



This attractive monarch butterfly pattern works well for lighter hardwoods with character. I cut mine from box elder with red highlights. I chose Australian lacewood for the backing, but you can use any contrasting hardwood you prefer, or leave the piece backless for a minimalist look.

Getting Started

First, make a copy of the pattern and rough trim it to the outer shape of the butterfly rectangle. Cover the top of the wood with clear packaging tape, and then stick the pattern to the tape with spray adhesive. Drill the blade-entry holes for the frets.

Cutting and Finishing

Start with the interior cuts. Finally, cut the exterior of the rectangle. Peel off the tape and pattern and sand the face by hand or with a disc or belt sander. If you struggle to make straight lines on the saw, this is an opportunity to straighten out the exterior lines of the rectangle.

If you decide to use a backing board, use the butterfly piece as a template on a $\frac{1}{4}$ " (6mm)-thick piece of wood that looks attractive behind it. With a piece of very fine sandpaper, do a final hand-sand to remove any remaining burrs. Then, glue and clamp the backing board to the butterfly piece. When it is dry, brush with Danish oil or another finish of your choice.

Materials & Tools

Materials

- Interesting, light hardwood, such as box elder or spalted maple: $\frac{1}{2}$ " to $\frac{3}{4}$ " (1.3 to 1.9cm) thick: 8" x 8 $\frac{1}{4}$ " (20.3cm x 21cm)
- Backing board, $\frac{1}{4}$ " (6mm) thick, same dimensions as butterfly piece (optional)
- Sandpaper: 220 or 320 grit
- Spray adhesive, temporary-bond
- Clear packing tape
- Finish, such as Danish oil
- Wood glue (optional)

Tools

- Scroll saw blades: #4 reverse-tooth
- Drill press with bit: $\frac{3}{64}$ " (1.2mm)-dia.
- Clamps (optional)
- Belt or disc sander (optional)

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

Rose & Cross Intarsia

Celebrate the season with an exquisite (and beginner-friendly) wall hanging

By Janette Square
Designed by Teri Clark

The rose has long been a symbol of love and mourning—but also, as it happens, of hope. This season, as Easter approaches and winter gives way to new life, surprise your loved ones with an intarsia project that's meaningful and simple to make. If you've never experimented with intarsia before, so much the better; this design is a perfect place to start.

Getting Started

Cut a photocopy of the pattern into individual pieces. Apply spray adhesive to the back of the pieces and position them on the wood. Pay attention to the grain direction, especially for the rose petals. The figure of the wood should give the illusion that they're bending as the rose opens.

Pattern for the **ROSE & CROSS INTARSIA** is in the pullout section.

materials & tools

MATERIALS

- Red wood, such as red cedar, 1" (2.5cm) thick: 2" x 2¼" (5.1cm x 5.7cm)
- Green wood, such as poplar, ¾" (2.2cm) thick: 1" x 4" (2.5cm x 10.2cm)
- Dark wood, such as walnut, ½" (1.3cm) thick: 4" x 8" (10.2cm x 20.3cm)

- Baltic birch plywood, ⅛" (3mm) thick: backing board, sized for pattern
- Tape: packaging
- Spray adhesive
- Sandpaper: 120, 220 grits
- Gel varnish: satin
- Rags

- Wood glue
- Hanger

TOOLS

- Scroll saw blades: #2, #7 reverse-tooth
- Sanders: flex drum or pneumatic, mop

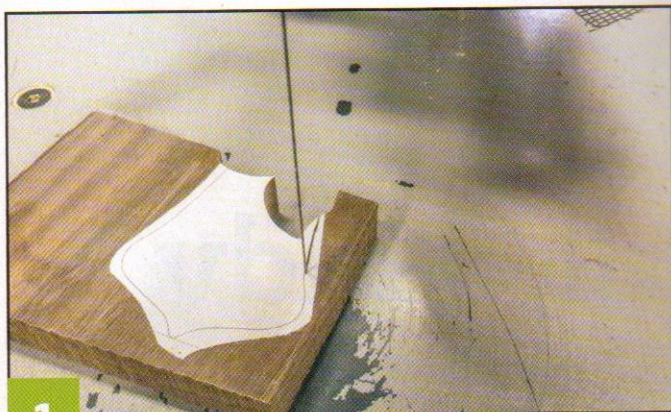
The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.



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



Teri Clark lives in Sandy, Ore.



1

Cut the pieces. Use a #7 reverse-tooth blade for the long, straight cuts and a #2 reverse-tooth blade for the finer details. Number the back of each piece to keep them straight and to avoid shaping the wrong sides.



2

Dry assemble the cut pieces. I organize them on a photocopy of the pattern. Check the fit and flow of the grain. Now is the time to make any adjustments. Sand or recut the pieces to ensure a tight fit.



3

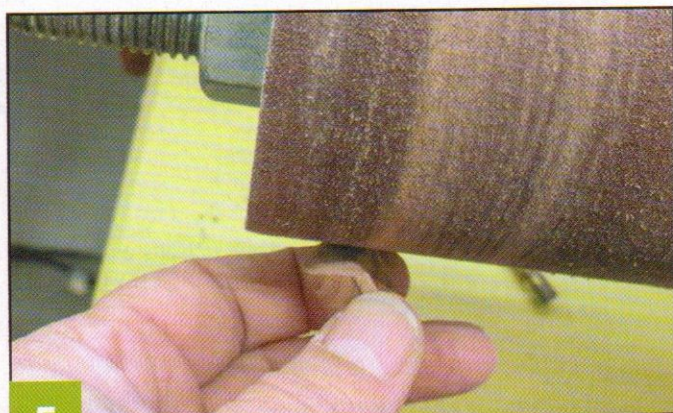
Shape the cross pieces. To emphasize the overall shape of the cross, I just rounded the outer edges slightly with a mop sander.



4

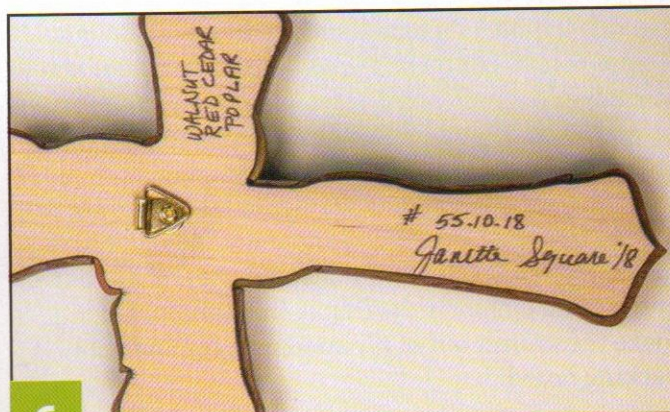
Shape the stem and leaves.

Round the stem with a flex drum sander. When shaping the leaves, think about how they might bend in relation to the stem. Use an oscillating spindle sander with a small drum to shape the leaves where the edges curl up (such as the lower leaves surrounding the rose petals). Use a pneumatic sanding drum to shape the leaves that bulge outward, such as those on the stem, and the leaves that angle down sharply, such as those above the rosebud.



5

Shape the rose petals. Use the flex drum sander. Taper the outer petals drastically toward the background to make it look like they wrap around the center petals. Taper the larger center petals, but allow them to bulge slightly in the center so they have a different texture from the other petals. Shape the small center petal into a slightly rounded pyramid.



6

Edge-glue the pieces together. Apply gel varnish to the top and sides of the project and remove any excess. Allow the finish to dry. Place the finished cross on the backing board. Trace around the project and cut inside the lines to make the backing board. Glue the cross to the backing board and let it dry. Attach a hanger to the back, sign it, and write down the woods you used.

Victorian Wall Caddy

Simple construction and a lively bird design make this project a tweet to build and display

By Rolf Beuttenmuller

Designed by John A. Nelson

Birds and botanicals were the decorations of choice during the Victorian Era—more prosperous households added their likeness to furniture, wallpaper, and even silverware! I designed this elegant wall caddy with the Victorians in mind, simplifying it slightly for a more modern feel.

Prepping and Cutting

Glue up the blank for the back piece if you plan to use hardwood. Cut it to its rough shape. Stack together two blanks for A and two blanks for B. Cover all of the blanks with blue painter's tape and attach the patterns to the tape with spray adhesive. Drill blade-entry holes and cut the frets. Separate the stack and bevel the sides of A, B, and C to the marked angles. Pay attention to the orientation of the piece, especially on B because one side has an 11° angle and the other has a 34° angle. It's possible to cut these angles by adjusting your scroll saw table, but I use a disc sander. That way, I can sneak up on the angle and make tight-fitting joints. Sand all of the pieces smooth.

Next, use a pencil and washer to trace around the back onto a piece of contrasting wood; I use maple plywood. This backing board highlights your cutting and supports the fragile fretwork. If you make the project out of plywood, you can omit the backing board.

Assembling and Finishing

Cover the glue joints with blue painter's tape. Apply two coats of spray lacquer, sanding lightly between coats. Then, remove the tape and apply glue sparingly to the joint areas on the sides (A, B, and C) and the bottom. Use blue painter's tape to hold the sides

and bottom assembly together while the glue dries. For additional strength, I drilled small holes where the sides join the bottom and drove decorative brass-plated brads into the holes. Depending on the position of these brads, you might need to cut some shorter so they don't interfere with the other brads.

Position this assembly on the backing board, and hold it in place with blue painter's tape. Drill screw pilot holes through the back and backing board with a #42 wire size bit and matching holes in the edges of the A, B, and C bottom assembly with a #47 bit. Apply glue to the edges of the assembly and to the back wherever possible. Drive #4 by ¾" (1.9cm)-long wood screws through the backing board into the back and assembly to lock it in place.

Materials & Tools

Materials

- Sapele, ¾" (5mm) thick: back, 11" (27.9cm) square; shelf, 4" x 8" (10.2cm x 20.3cm); sides, 3 each 3" x 5" (7.6cm x 12.7cm)
- Maple plywood, ¼" (6mm) thick: 12" (30.5cm) square
- Spray adhesive
- Sandpaper
- Blue painter's tape
- Wood glue
- Finish, such as clear spray lacquer
- Brads: small brass
- Wood screws, #4: ¾" (1.9cm) long
- Sawtooth hanger

Tools

- Scroll saw blades: #3 reverse-tooth
- Drill with bits: assorted small, #42, #47 wire size
- Washer
- Pencil
- Clamps
- Hammer
- Screwdriver

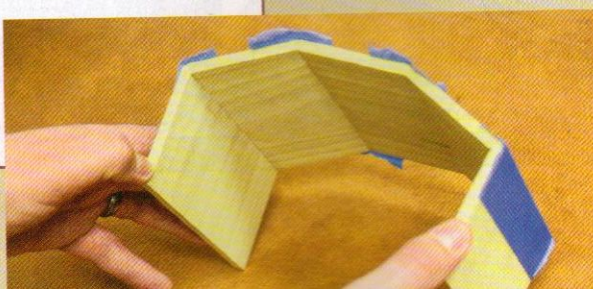
The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

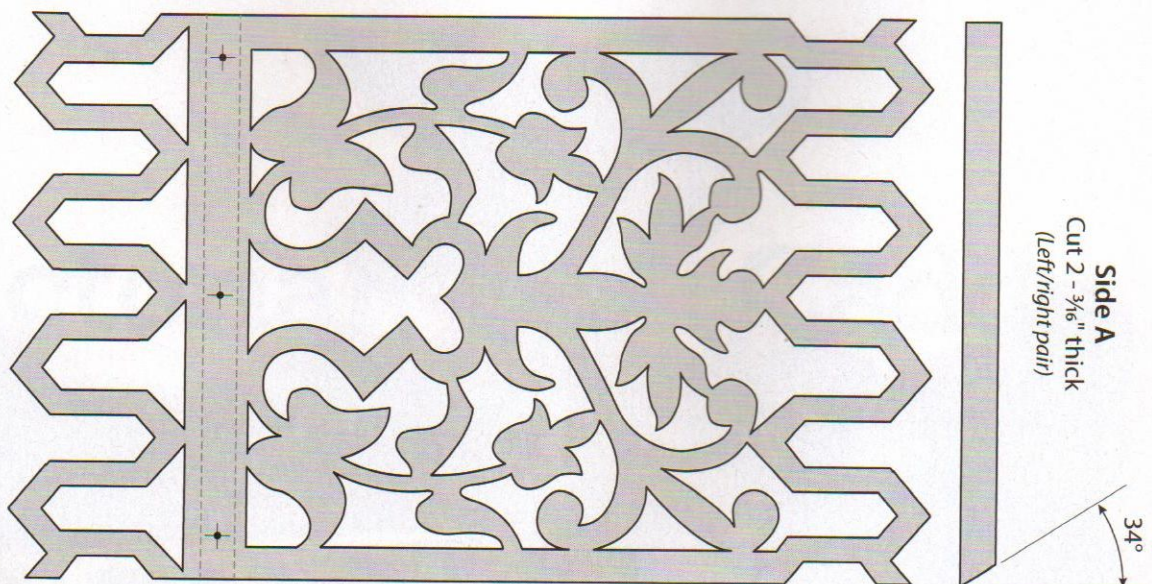


TIP

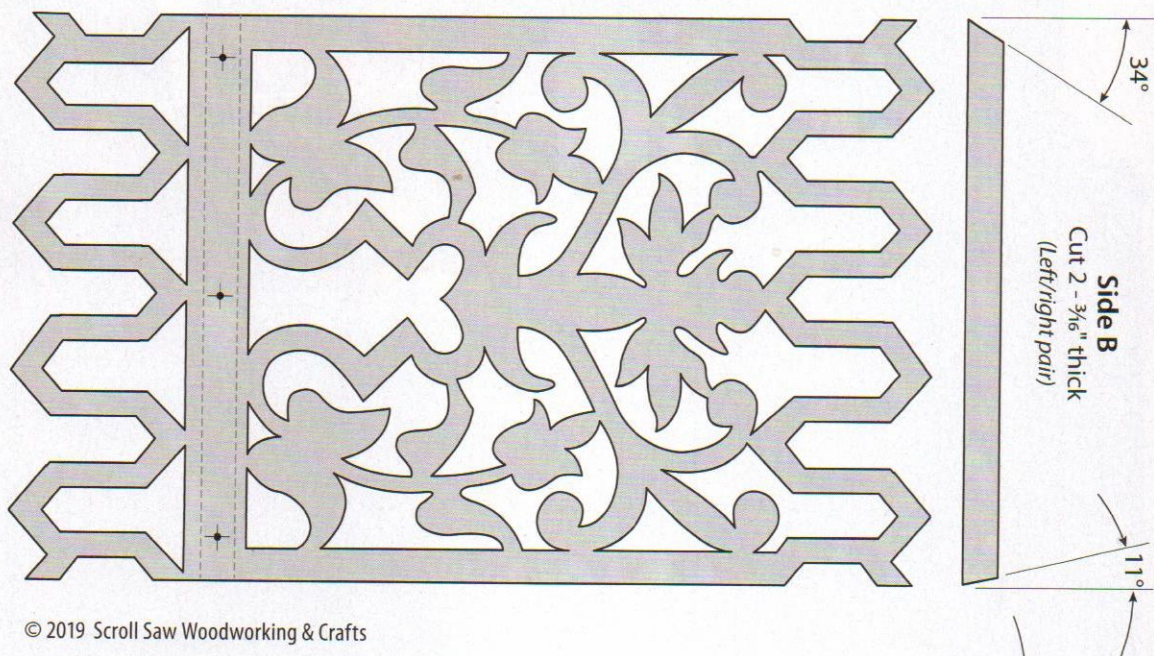
SUPPORT DURING ASSEMBLY

To help align and support the sides of the caddy while assembling the project, join the sides together with blue painter's tape. Leave in place until the glue has dried.

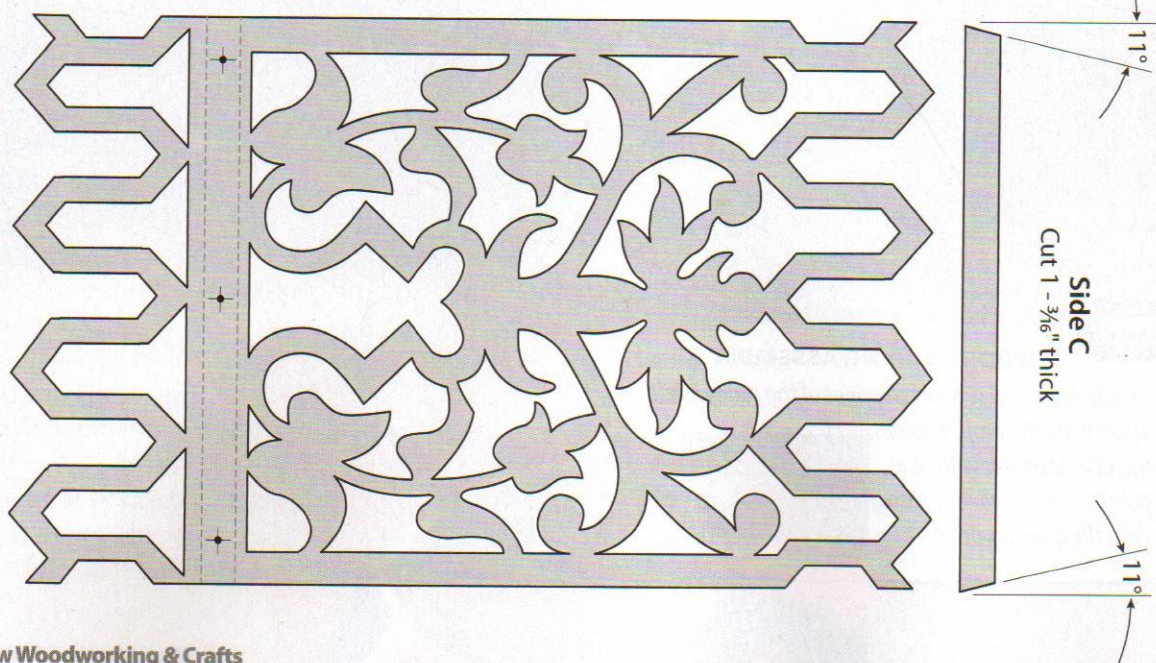


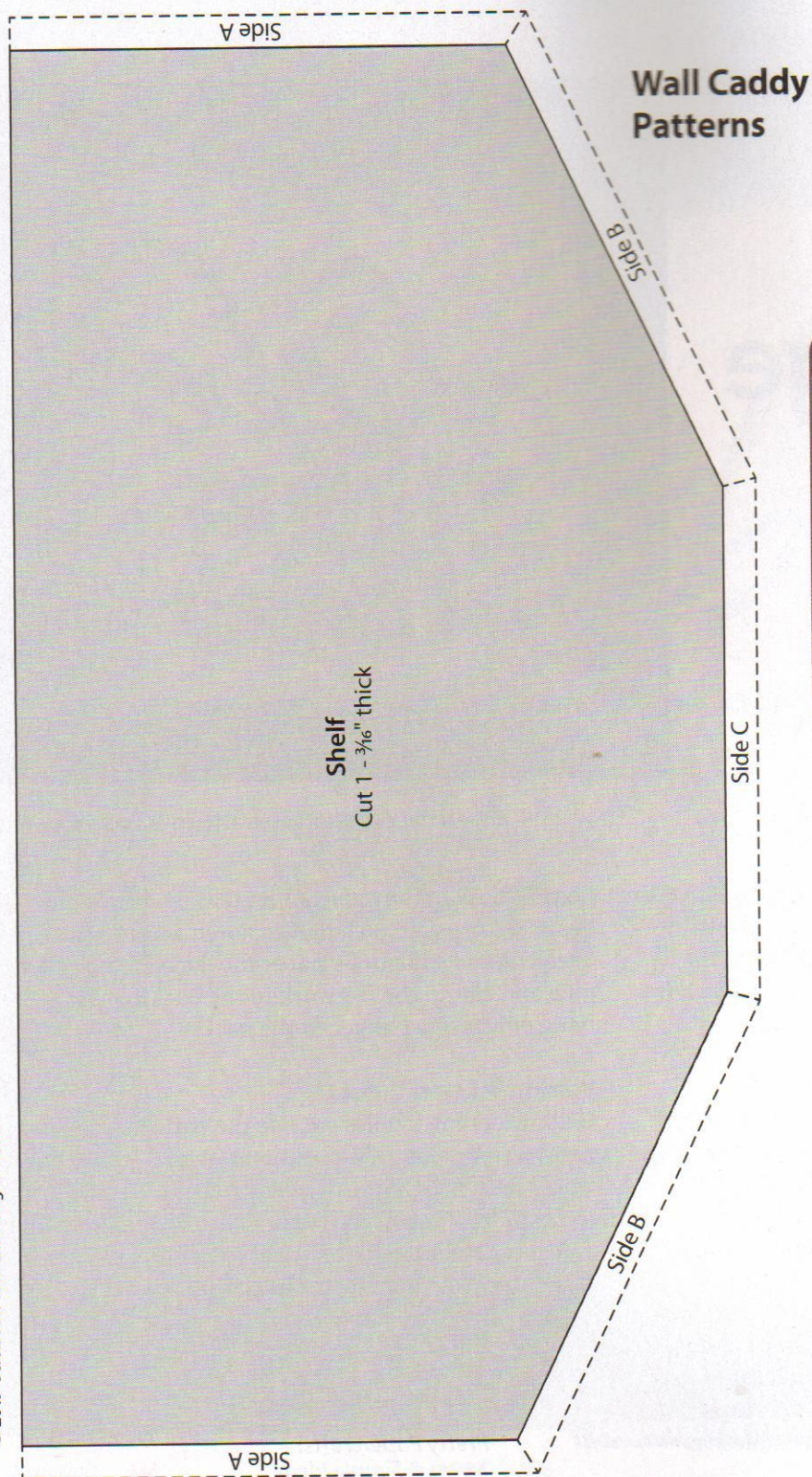


Wall Caddy Patterns



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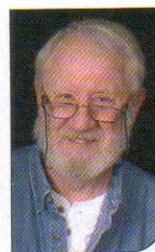


Wall Caddy Patterns

TIP

EASY BACKING BOARD

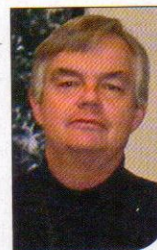
When creating a backing board for delicate fretwork, trace the outline of the project onto a contrasting piece of wood using a washer and pencil. This will create a cutting line that matches the contours of the project.



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

Additional pattern for the **VICTORIAN WALL CADDY** is in the pullout section.

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.



The Language of Love

Forget cards and candy hearts—express your ardor with a note that lasts!

By Mareike Grün
Cut by Mindy Kinsey



Make letter cutouts from an attractive hardwood or two.

Love isn't just what you say—it's what you do. And this workable word art project, derived from a papercraft pattern, is a little bit of both! Use it to decorate your home for Valentine's Day or make a few to give out as gifts for a loved one's wedding.

Getting Started

Decide which version you want to make—the fretwork piece or the letter cutouts. You can cut the letters out of plywood or an attractive hardwood with an interesting backing showing through, or cut the individual letters from a variety of wood types and glue them to an attractive background.

Sand the pieces with progressively finer sandpaper up to 220-grit. Remove any sanding dust and sandwich the project wood between layers of plywood for stability. Cover the blanks with blue painter's tape. Attach the patterns to the tape with spray adhesive.

Version A: Fretwork Letters

Drill blade entry holes *inside* the letters and carefully cut along the lines. Cut the perimeter of the heart in the center of Love's "o" and set it aside. Discard the rest of the waste wood and sand away any fuzzies. Decide if you want to stain or paint the board or the backing

board. Mask off any glue joint areas, and finish as desired; I brushed on a light-colored acrylic paint and used colored scrapbook paper for the backing. Then, glue and clamp the fretwork to the backing. Frame and hang or attach a hanger to the back.

Version B: Letter Cutouts

Drill blade-entry holes *outside* the pattern lines and carefully cut along the perimeter of each group of words or hearts. Sand away any fuzzies. Decide where to position them on the backing board, and then glue and clamp them in place. After the glue is dry, apply a clear spray finish. Attach a hanger to the back.

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.





Materials

- Wood, such as mahogany, 1/4" (6mm) thick: 10" (25.4cm) square
- Tape: blue painter's
- Spray adhesive
- Finish: paint, Danish oil, or clear spray
- Scrapbook paper (optional)
- Glue

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

Materials & Tools

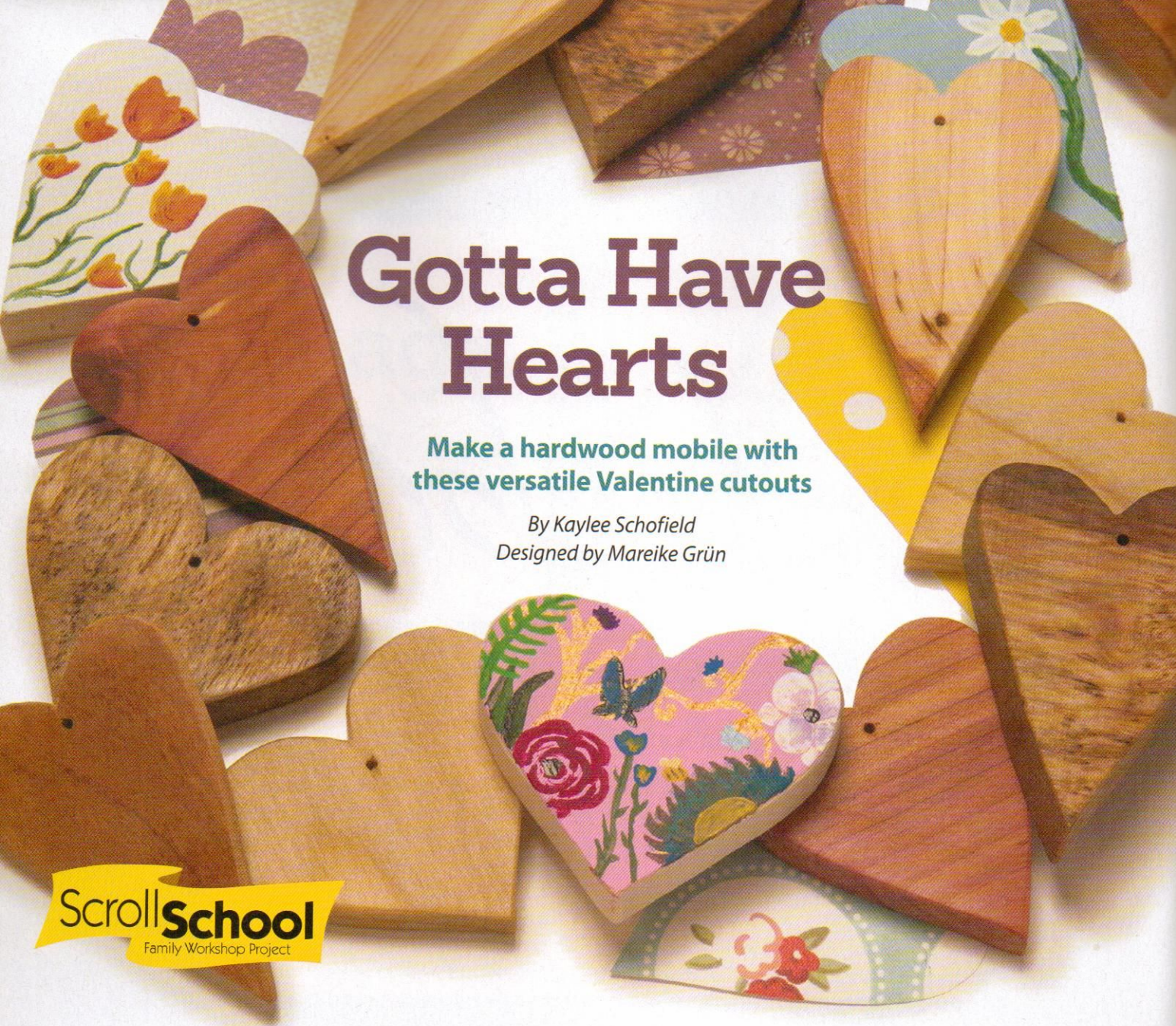
- Hanger: D-ring

Tools

- Scroll saw blades: 2/0 MGT, #3 super-skip
- Drill with bits: assorted small
- Clamps
- Screwdriver (to attach hanger)

Cut fretwork letters from plywood and back it with scrapbook paper.

Pattern for *THE LANGUAGE OF LOVE* is in the pullout section.



Gotta Have Hearts

Make a hardwood mobile with these versatile Valentine cutouts

By Kaylee Schofield
Designed by Mareike Grün

Scroll**School**
Family Workshop Project

Simple cutouts are a perfect first project for children because they're easy to make and don't take up much time; they also allow you to tailor one craft day to many different preferences. These cutout hearts are adaptable to virtually any project you have in mind—and they're a perfect excuse to give attractive scrap wood a new lease on life.

Cutting and Finishing

Choose a kind (or kinds) of wood; I used an assortment of $\frac{1}{4}$ " (6mm) hardwood scraps from around the workshop, such as cherry, walnut, and aromatic cedar. Sand the pieces with 120-grit sandpaper. Photocopy the patterns for as many hearts as you'd like—I

made 11. Transfer them to the blanks using spray adhesive. If you plan to leave the hearts unpainted, orient the patterns over the most interesting parts of the wood, such as unique grain patterns or the boundary between heartwood and sapwood.

Cut out the hearts, and drill a small hole in the top of each. Sand again with 120-grit sandpaper, working up progressively through the grits until you reach 320. Round the sharp edges slightly, if desired. If using attractive hardwood, finish with spray lacquer or Danish oil; if using bland wood, finish with acrylic paint or cover with patterned craft paper using cyanoacrylate (CA) glue.

You can use these hearts to make any number of decorations

A mobile. Place a paper plate facedown on a piece of $\frac{1}{4}$ " (6mm) Baltic birch plywood and draw around it. Make two of these circles. Stack them and drill a hole in each of the four "corners." Sand them with 220-grit sandpaper to remove fuzzies. Remove the top layer, and then drill small holes across the surface of the bottom circle—one for every heart you plan to hang. Hang the hearts from the holes using string or fishing line, securing them to the top of the first circle with blue painter's tape. Cover the top of the first circle with CA glue, and press the other circle down firmly on top of it. Clamp and let dry. Hang using your ribbon or twine of choice.

A keepsake box. Increase the pattern size and attach one of the heart designs to the top of a 2" (5.1cm)-thick piece of hardwood, such as walnut. Carefully cut out the heart. Measure and cut off $\frac{1}{4}$ " (6mm) from the top and bottom of the scrap. Set them aside. Sketch a heart in the center of the remaining scrap, and cut it out. Reattach the bottom with wood glue and add hinges to the top, so the box can open and close.

Gift adornments. Add a personal touch to any gift bag or basket with some hearts and a little glue or string.



Patterns for **GOTTA HAVE HEARTS** are in the pullout section.

Materials & Tools

Materials

- Assorted scrap wood, such as cherry, walnut, or aromatic cedar, $\frac{1}{4}$ " (6mm)-thick: sized for pattern
- Spray adhesive
- Sandpaper: 120, 220, 320 grits
- Finish: Danish oil or acrylic paint

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 with bits: assorted small
- Paintbrushes (optional)

FURTHER READING

Pretty Papercrafts: Sweet & Simple Ideas for the Modern Crafter

By Mareike Grün

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Elegant Serving Tray

Dress up a store-bought platter with this lacy fretwork pattern

Designed by Sue Mey

By Bob Duncan

A person only needs so many clocks, shelves, and trivets. However, there is an easy way to incorporate fretwork into other household appliances. I cut this design from thin wood to add character to a pre-made serving tray we purchased online.

Once you work out your technique, you can experiment with similar projects, such as cutting a puzzle or intarsia from thin wood and embedding it in a tray; the self-leveling epoxy will smooth the surface and create a scene that looks “frozen” in time.

Getting Started

Purchase (or make) the tray, cut the wood to fit tightly on the bottom, and size the pattern to fit the wood. Depending on the proportions of your tray, you might need to size the pattern to fit the length or width of the wood and center the pattern on the other dimension. For example, if you size the pattern to fit the length of your board, don't try to distort the pattern to fill the width. Just center the pattern on the width of the board. When you cover the pattern with self-leveling epoxy finish, the epoxy will fill in the excess.

Create a stack of blanks. It's difficult to cut thin wood accurately, so either plan to make several trays—they make great presents—or do what I did and stack the thin wood with a much thicker piece to create a matching trivet (see inset). Secure the stack, and cover

the top board with blue painter's tape. Attach the pattern to the tape with spray adhesive, and drill any required blade-entry holes.

Cutting the Fretwork

Choose a blade based on the final size of the pattern and the wood you're cutting. Since I was cutting plywood and ash, I used a #5 reverse-tooth blade. Some of the smaller frets were a little challenging to cut, but I kept breaking smaller blades. Cut the smaller frets first, then go back to cut the larger frets. Save the scraps from the largest frets and re-insert them at the end to make it easier to sand the piece. When you've cut all the frets, cut around the perimeter. Then, separate the stack and sand as needed.

Finishing the Tray

Stain or paint the fretwork as desired, but do not apply any surface finish (varnish, lacquer, shellac, or oil). I sanded off the finish in a few places that the fretwork would cover on the top surface of the tray bottom and used cyanoacrylate (CA) glue to lock the fretwork in place. After the glue sets, mix the epoxy finish according to the manufacturer's instructions. Make more than you think you'll need! The last thing you want to do is have to mix up more epoxy in the middle of the process. I used a rubber spatula from an auto body shop to spread the epoxy out and push it into all the frets.

Once you've filled the frets and any areas around the fretwork, place the tray on a perfectly flat surface and allow the epoxy to cure. The self-leveling process relies on the tray being perfectly flat, because the epoxy will smooth itself out. If the tray is tilted at all, you will end up with an uneven finish.

Materials & Tools

Materials

- Tray
- Baltic birch plywood or wood of choice. $\frac{1}{16}$ " to $\frac{1}{8}$ " (2mm to 3mm) thick: sized to fit the tray
- Hardwood of choice, $\frac{3}{4}$ " (1.9cm) thick: sized to fit tray (optional)
- Tape: blue painter's
- Spray adhesive
- Sandpaper
- Stain or paint (optional)
- Cyanoacrylate (CA) glue
- Self-leveling epoxy bar-top finish

Tools

- Scroll saw blades: #5 reverse-tooth
- Drill with bits: assorted small
- Sander
- Auto body spatulas
- Mixing container

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. She can be contacted at suem@storage.co.za. Her pattern book, *Lighted Scroll Saw Projects*, is available from schifferbooks.com and other outlets.



Pattern for the *ELEGANT SERVING TRAY* is in the pullout section.



Hardwood Chess Set

Nested design provides a new twist on the classic strategy game

By Clayton Meyers

This chess set uses compound cutting to create three-dimensional pieces. The end product makes an excellent conversation piece and will turn heads when on display.

Compound cutting is a technique that involves cutting on two sides of the blank to create a 3D piece. After you cut one side, you tape the scrap back onto the blank, rotate it 90°, and make the second set of cuts. Remove the scrap and the 3D piece is revealed.

But don't let the description above fool you. This is a challenging and time-consuming project. However, with patience and a steady hand, you can complete it in style.

Getting Started

Choose your wood for this project. I suggest an attractive hardwood with a tight grain pattern. Domestic hardwoods, such as maple, walnut, and cherry, can be found at most lumberyards. Exotic tropical hardwoods, such as purpleheart and zebrawood, also work well.

Start by cutting the blanks to size. The patterns are sized for a 1½" (3.8cm)-square blank. Make sure

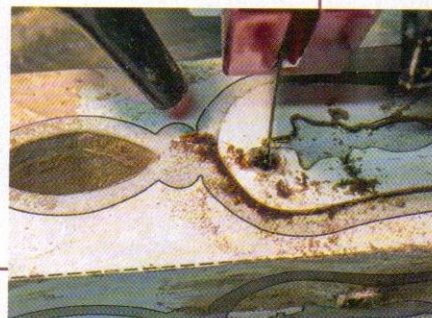
the blank is perfectly square. Then, measure each pattern and cut each blank to length.

Next, make sure your blade is exactly square with the table (See Sidebar). If the blade is not square to the table, you will end up overcutting in some areas and undercutting in others. This leads to ugly tool marks on your final product. Additionally, plan to go through two to three blades per piece. Change blades often; dull blades burn the wood and cut more slowly.

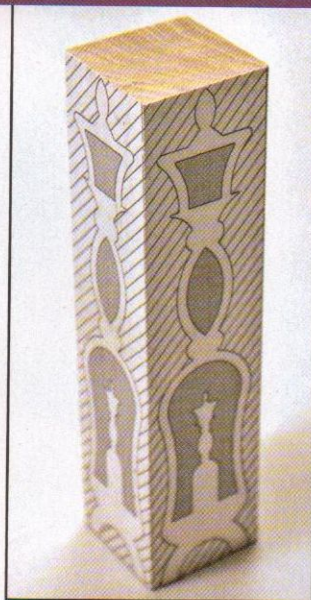
TIP

SIGN OF A DULL BLADE

Don't be afraid to get a new blade. When cutting thick hardwood, it may not always be clear when your blade is dull. Look for discolored sawdust. If the dust is darker than the wood itself, change blades. You will find it easier to cut.

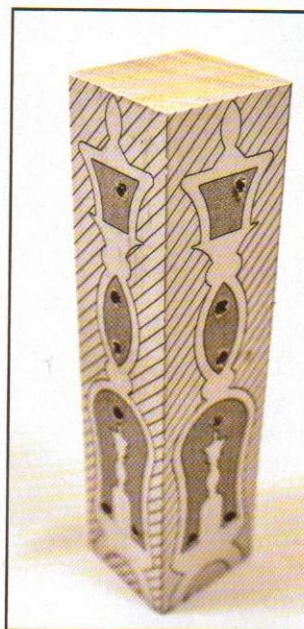


PREPARING TO CUT



1

Cut the patterns. Make a scoring cut along the fold line with a knife; this helps you get a sharp fold. Apply spray adhesive to the back. Align the fold with the corner of the blank and press the pattern into place. Use a miter saw or table saw to trim the blank precisely at the bottom of the feet and remove some of the excess from the top.

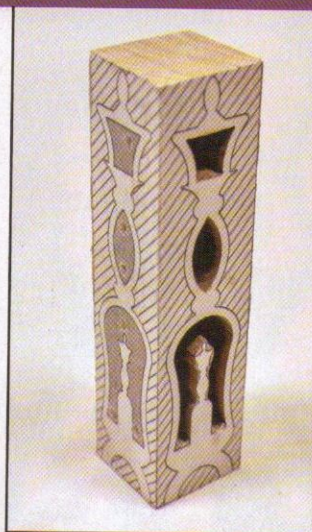


2

Drill the blade-entry holes on both sides using a drill press. Use a bit just large enough to fit your scroll saw blade through, and make sure the hole is perfectly square to the top of the blank. Position the holes near the corners so you don't need to cut sharp corners. Lightly sand the sides opposite to the patterns to remove any burrs from the drilling process. Wrap all four sides of the blank with clear packaging tape to secure the pattern and to help prevent burning.

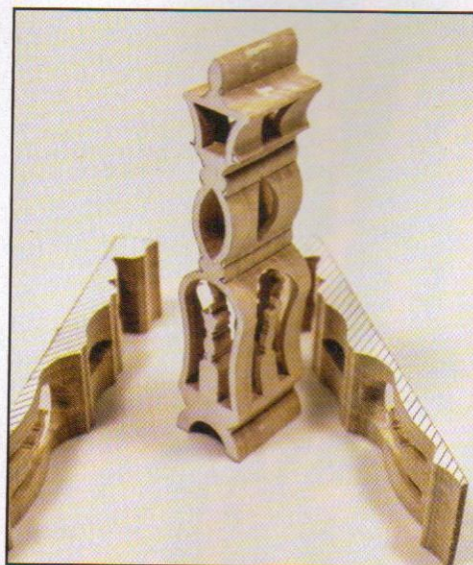


CUTTING THE PIECES



3

Make the inside cuts. I use a #5 skip-tooth blade to remove the excess wood. This blade cuts fast without being hard to control or leaving excessive blade marks. Rotate the blank 90° and repeat the process on the other side. Switch to a #1 skip-tooth blade to cut the more delicate details.



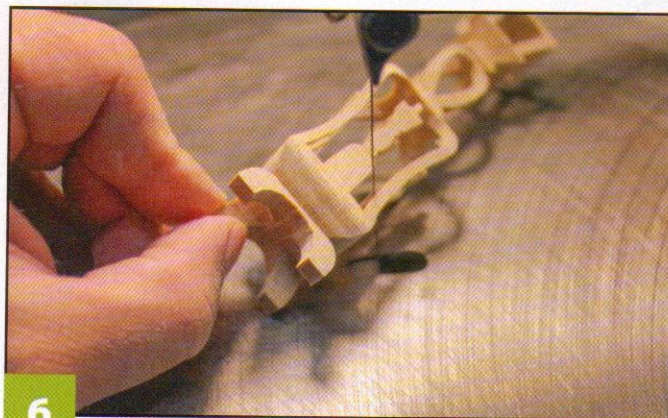
4

Switch back to the first side. Cut around the perimeter using a #3 skip-tooth blade. While this blade cuts slowly, you must make this cut accurately on the first pass. Start at the bottom of the piece and keep the blade directly on the line. At sharp corners, cut all the way into the corner, back out slightly, and make the turn. Be gentle with the scrap; you'll tape it back in place to cut the second side. Cut out at the top. Repeat for the other half of the first side. Go back and clean up any corners.



5

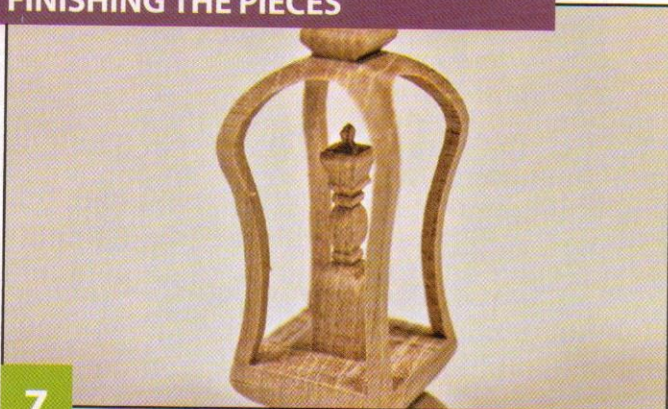
Remove all sawdust and chips from the piece and scrap. Use clear packaging tape to secure the scrap back to the chess piece. Rotate the blank 90° and use the process explained in Step 4 to cut along the perimeter of the other side. Remove the piece from the scrap. Note the "shadows" of the inside figure on all four sides of the piece. They'll be removed in Step 6.



6

Remove the shadows from all four sides. While it's possible to use a rotary tool or a coping saw, if you are careful, you can cut it away with a scroll saw. Use a #2/0 blade and insert it into the inside cut. Set your saw to the slowest possible speed; any slip or blade chatter will crack and ruin the chess piece. Hold the piece at an angle and carefully cut the shadow on two sides at a time. Do not cut into the frame or the inner piece.

FINISHING THE PIECES



7

Remove any small burs. Use 220-grit sandpaper or jeweler's files. Apply two coats of Minwax high-gloss polyurethane or your finish of choice. I string the pieces on fishing line and dip them directly into the can of finish. Lift them out and use a small paintbrush to remove the excess.

Squaring your Blade

Use a small square to make sure your blade is square from side to side. Then, secure the top of the blade as far back in the upper blade clamp as possible. Hold the blade against a small square as you clamp the bottom of the blade. Run your saw on the slowest speed possible and let the blade scrape against the edge of a piece of wood that you know is 100% square. Just let the tips of the blade teeth barely scratch the wood. If you notice it is scratching more at the top or bottom, adjust the blade accordingly. Adjust the blade at the bottom clamp only. This way, when you release the top of the blade to move from inside cut to inside cut, you can push the blade all the way to the back of the clamp and know you are still square.



Materials & Tools

Materials

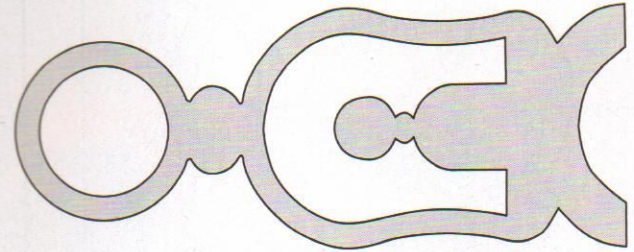
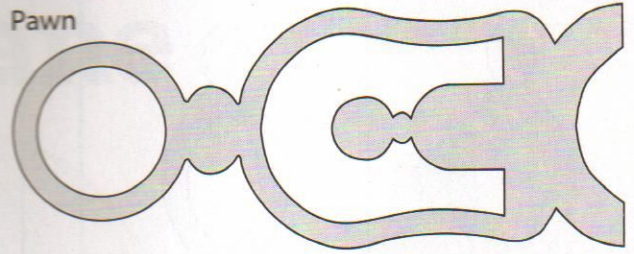
- Hardwood, such as maple, walnut, or cherry, 1½" (3.8cm) square: assorted lengths from 3½" (8.9cm) to 6⅝" (16.8cm)
- Spray adhesive
- Clear packaging tape
- Sandpaper: 220-grit
- Finish, such as Minwax high-gloss polyurethane
- Fishing line

Tools

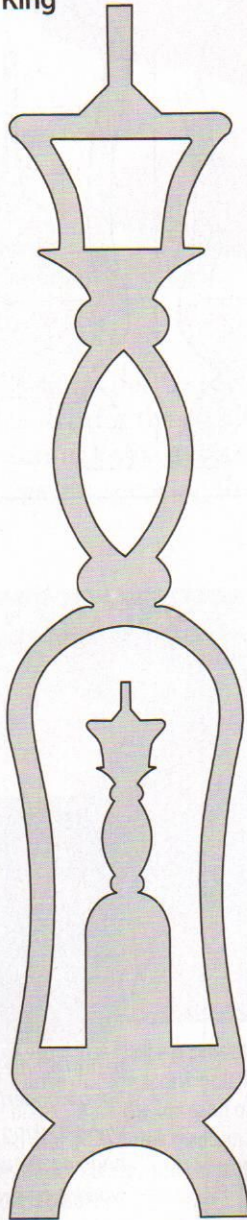
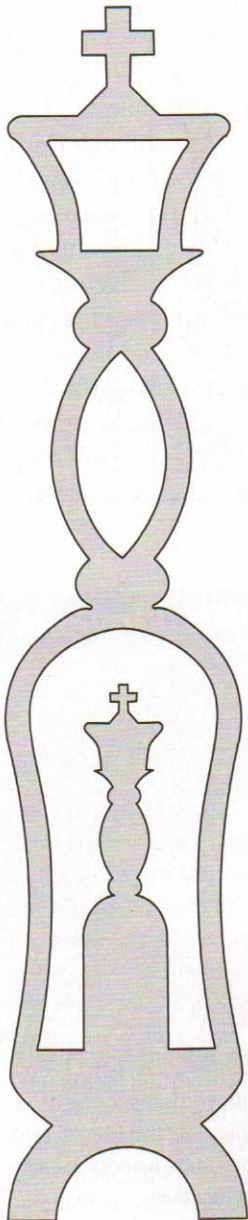
- Saw: table or miter
- Scroll saw blades: #5, #3, #1, #2/0 skip tooth
- Rotary tool or coping saw (optional)
- Drill press with bits: assorted small
- Jeweler's files
- Paintbrush: small

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

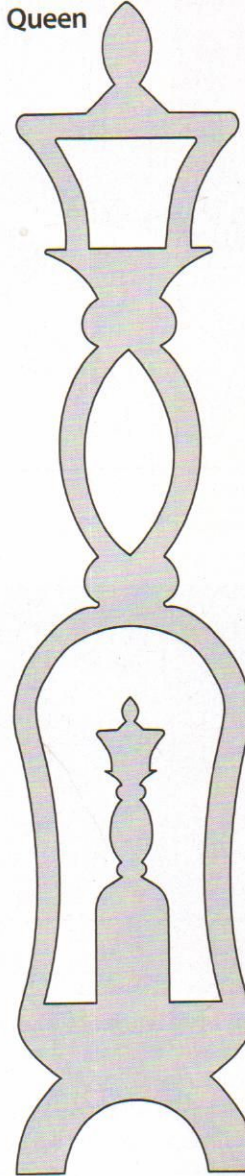
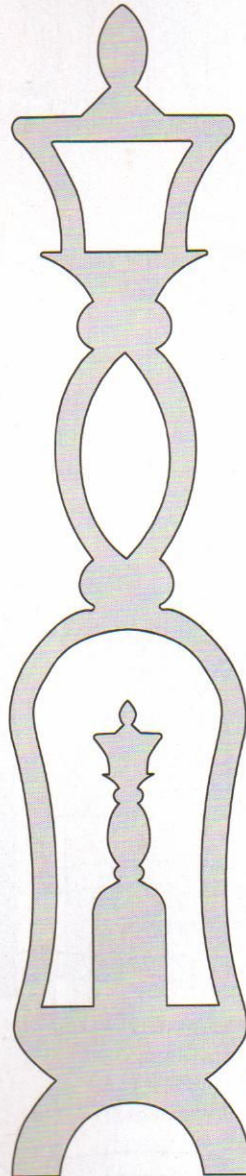
Pawn



King



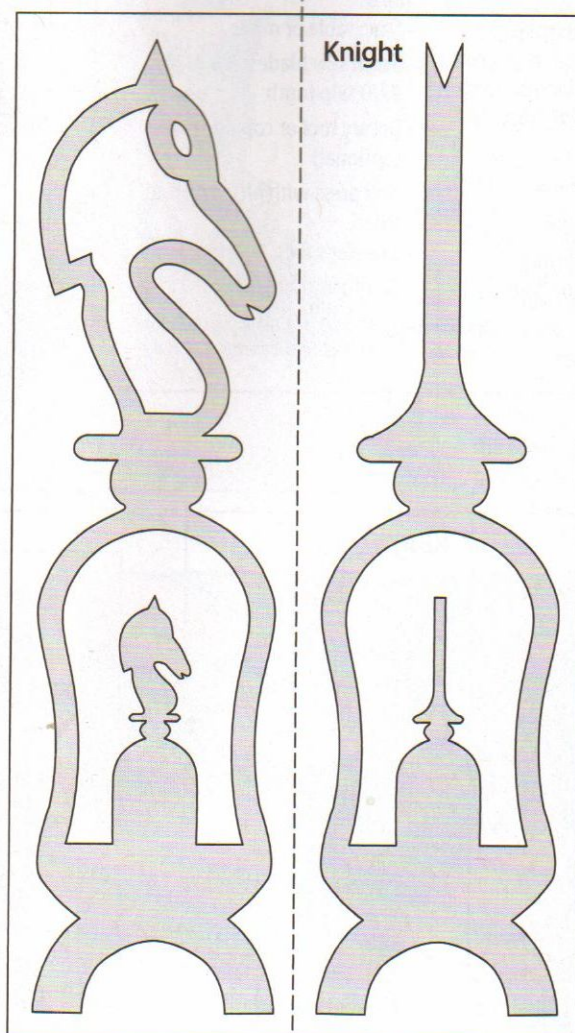
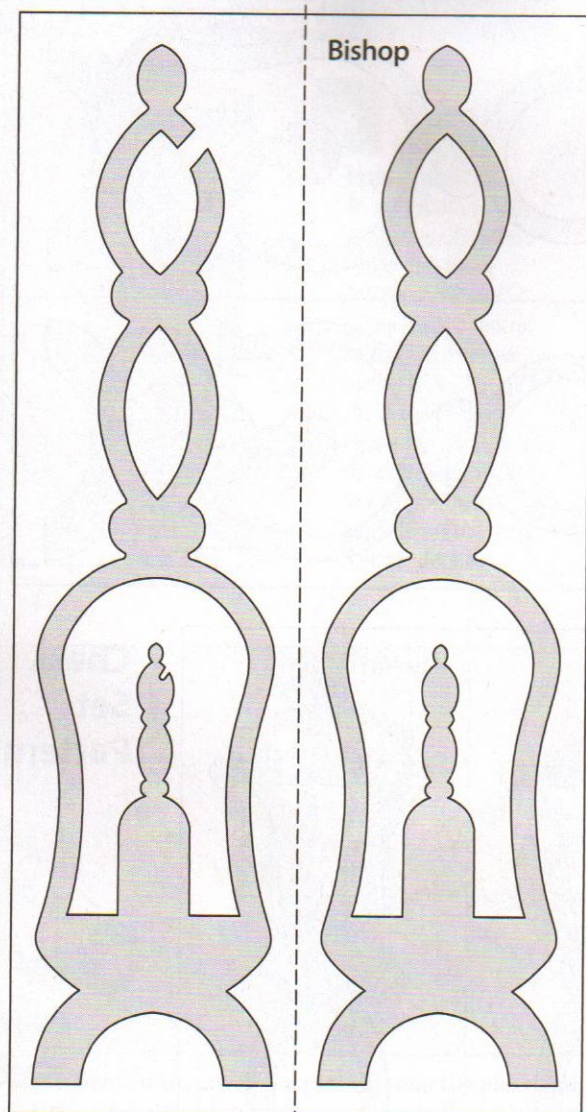
Queen



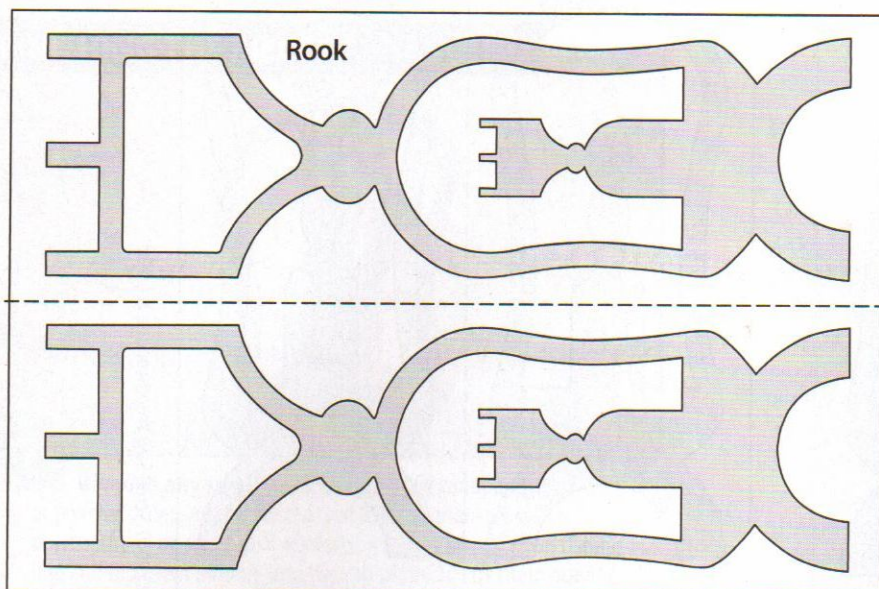
Chess Set Patterns

© 2019 Scroll Saw Woodworking & Crafts

Chess Set Patterns



© 2019 Scroll Saw Woodworking & Crafts



Clayton Meyers is a 36-year-old product development engineer who lives in northern Indiana. He started using the scroll saw with his dad when he was 6 years old. It became a form of meditation for him; it's a way

to turn off the stress after a long day. Clayton has a wonderful wife who is supportive of his woodworking hobbies, and two kids who enjoy hanging out with him in the woodshop and working on projects together.

Model Seaplane

Spread your toymaking wings with this jaunty children's classic

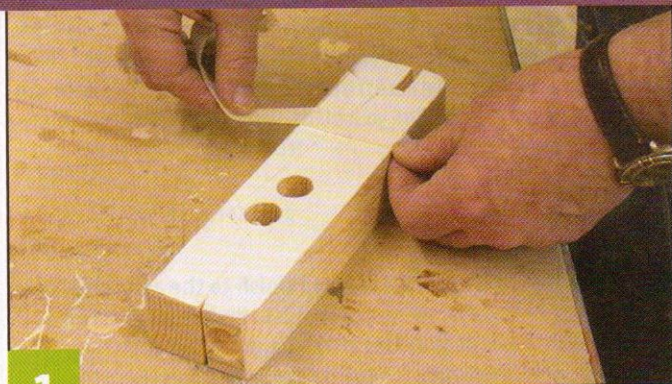
By Paul Meisel



Seaplanes, also known as float planes, are fixed-wing aircraft capable of taking off and landing on water. Some are used recreationally, but others play a key role in safety operations, from dropping water on forest fires to providing access to undeveloped areas.

Making this seaplane is simplified by the use of several wood turnings, including candle cups (for the engines), plastic propellers (which look like they're spinning), a large screw hole button (for the nose cone), and axle pegs (for securing the propellers, wings, and floats).

MAKING THE WINGS, FUSELAGE, & FLOATS



1 **Attach the side and top view fuselage patterns to the blank.** Drill the hole in the nose (for the screw hole button). Make sure it's centered on the blank. Mark the location of the windows with a scratch awl and drill both holes through. Cut the side profile, tape the cut pieces back in place, and then cut the top profile. Use a #9 or #12 skip-tooth blade.



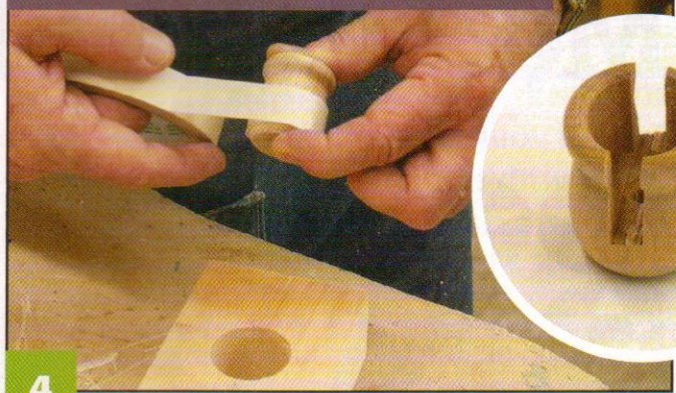
2 **Transfer the wing and tail patterns to the blanks.** Use a scratch awl to mark the center of the holes in the wing. Switch to a smaller blade, such as a #2 skip-tooth. Cut the wing and tail. Position the wing on top, and drill $\frac{5}{32}$ " (4mm)-diameter holes through the wings into the fuselage. Separate the two, and redrill $\frac{3}{16}$ " (5mm)-diameter holes through the wing. Attach the wing with glue and two axle pegs. Glue the tail in place.



3

Refer to the pattern and cut the floats to length. Sand the ends to shape on a disc or belt sander. Transfer the patterns for the flat mount to the blank and mark the locations of the holes with a scratch awl. Position the float mounts on the floats, and drill $\frac{5}{32}$ " (4mm)-diameter holes through the mount into the float. Redrill the holes in the mount with a $\frac{3}{16}$ " (5mm)-diameter bit. Attach the mounts to the floats with glue and axle pegs. Position the assembly on the bottom of the fuselage, drill holes, and attach with glue and axle pegs.

ADDING THE PROPELLERS



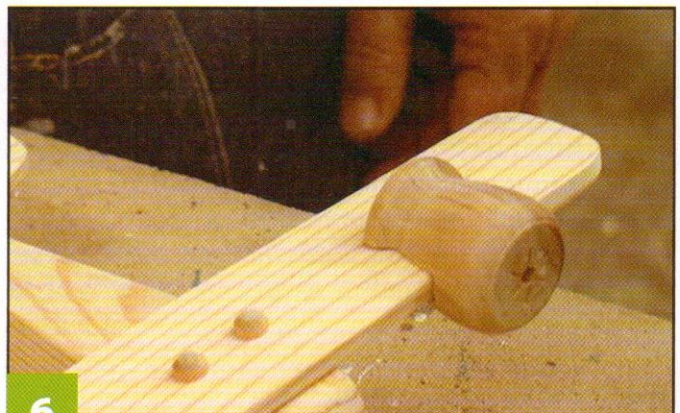
4

Cut the slots for the candle cups. To cut the slots with a scroll saw, lay the candle cup on its side and screw it to a block of scrap wood. Mark and cut the slots with a #5 skip-tooth blade. An easier way to cut them is using a table saw with a custom jig. To make the jig, cut a 3" (7.6cm)-wide by at least $4\frac{3}{8}$ " (11.1cm)-long piece of wood. Drill a $1\frac{3}{8}$ " (3.5cm)-diameter hole in the center. Wrap masking tape around the candle cup until it fits tightly in the hole in the jig.



5

Position the candle cup in the jig with the top facing down. Make sure it's flush with the bottom of the jig. Set up a $\frac{1}{4}$ " (6mm)-wide dado blade in the table saw and set the saw to cut a $\frac{7}{8}$ " (2.2cm)-deep slot. Position the rip fence so the blade cuts down the center of the cup. Repeat for the second candle cup. Redrill the hole in the bottom of the cup with a $\frac{7}{32}$ " (5.5mm)-diameter bit.



6

Glue the candle cups to the wing. If not purchasing pre-cut plastic discs for the propellers, stack together two pieces of clear plastic (with the protective paper cover in place), cover the stack with blue painter's tape, and attach the pattern to the tape. Drill the hole in the center and cut the perimeter with a #5 skip-tooth blade. Cut the acrylic carefully, because if the blade gets too hot, the plastic can weld back together behind your blade. Carefully remove any burrs with fine-grit sandpaper.

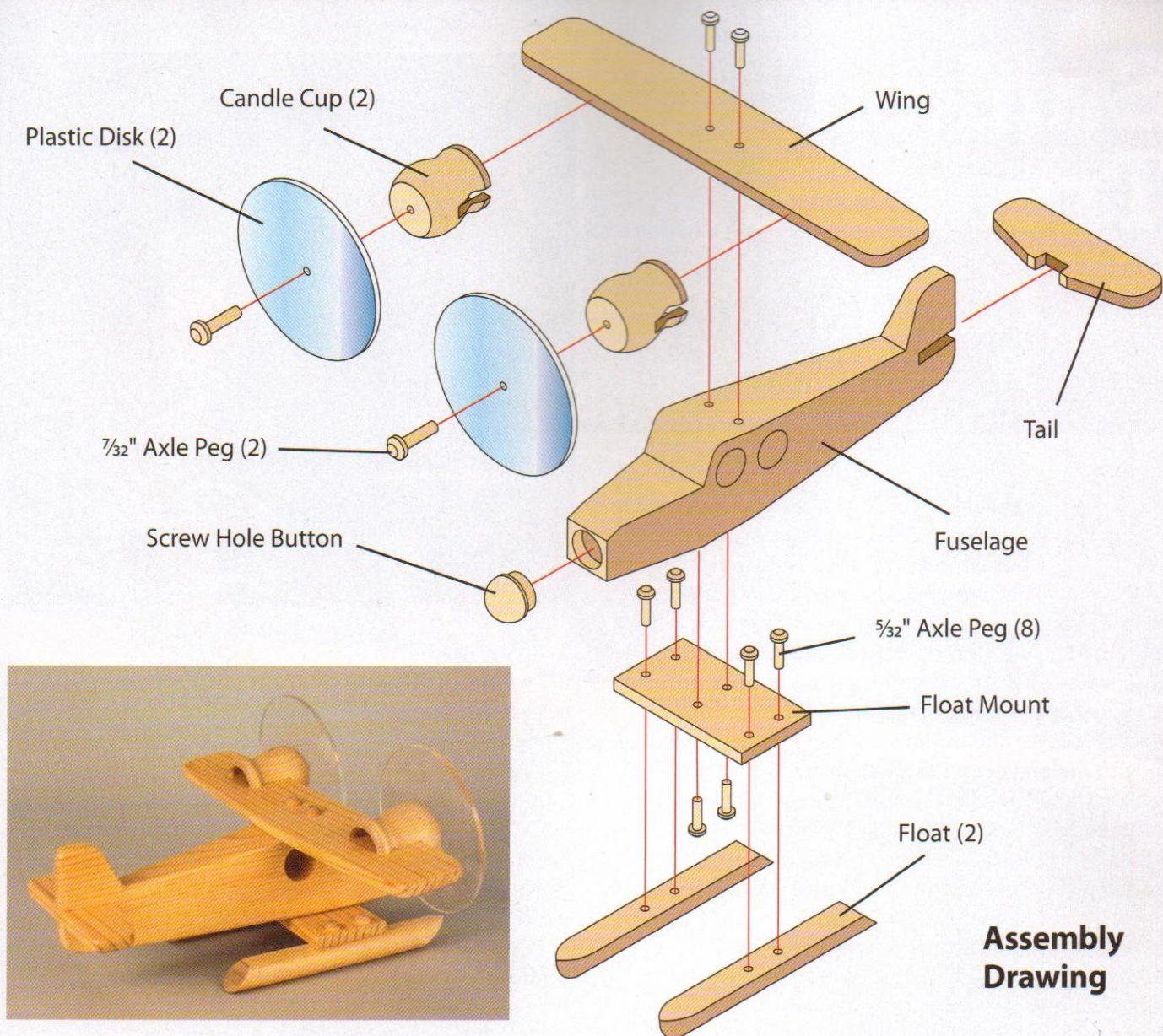
FINISHING THE SEAPLANE



7

Apply clear wood finish to the assembly.

Don't forget to apply finish to the heads of the two axle pegs used to attach the propellers. After the finish dries, remove the protective paper from the propellers and install them on the candle cups using the axle pegs.



Assembly Drawing

Materials & Tools

Materials

- Maple, 1/4" (6mm)-thick: wing, tail, float mounts, 3" x 24" (7.6cm x 61cm)* (#1322)
- Construction 2x4: fuselage, candle cup cutting jig, at least 14" (35.6cm) long
- Tape: blue painter's, masking
- Spray adhesive
- Sandpaper
- Wood glue
- Clear acrylic plastic propellers: 2 each 3 1/2" (8.9cm dia.) * (#7582) or clear acrylic plastic, 1/8" (3mm) thick: 2 each 3 1/2" (8.9cm) square
- Candle cups, 1 1/2" (3.4cm) dia: 2 each* (#CC1)
- Screw hole button: 3/4" (1.9cm)-dia.* (#1436)

- Axle pegs, 7/32" (5.5mm)-dia.: 2 each 1 1/8" (2.9cm) long * (#AP1)
- Axle pegs, 5/32" (4mm)-dia.: 8 each 5/8" (1.6cm) long * (#AP6)
- Dowel, 5/8" (1.6cm)-dia. 12" (30.5cm)-long* (7167A)
- Finish, such as polyurethane varnish

SPECIAL SOURCES

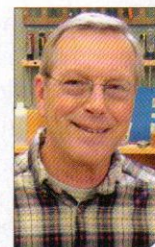
All of the parts marked with an * are available from Meisel Hardware Specialties, 800-441-9870, meiselwoodhobby.com. A parts kit (#8008)* contains all of the marked parts except the maple.

Tools

- Scroll saw blades, such as Olson: #2 skip-tooth, #5 skip-tooth, #9 or #12 skip-tooth
- Drill press with bits: 5/32" (4mm), 3/16" (5mm), 7/32" (5.5mm), 1/4" (6mm)-dia. twist; 3/4" (19mm), 1 3/8" (35mm)-dia. spade or Forstner
- Table saw with 1/4" (6mm)-wide dado blade (optional)
- Paintbrushes
- Hammer
- Scratch awl

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

Patterns for the **MODEL SEAPLANE** are in the pullout section.



Paul Meisel and his team at Meisel Hardware Specialties have designed over 3,500 projects and plans for

the home hobbyist woodworker. We have brought you over 30 projects from Paul's collection in past issues of Scroll Saw Woodworking & Crafts.

Sunken Treasure

A team hunts underwater for some very special wood

By Kaylee Schofield

Archaeologists, pawnshop dealers, humble carvers of wood—everyone loves a good buried treasure story. Naturally, the bayous of southern Louisiana, moss-hung and misty, are a breeding ground for such tall tales. But for one local operation, hunting for lost treasure isn't just an old pirate yarn—it's what they do.

Blue Bayou Sunken Treasure appeared in 2017 when tree lover and millowner Glen Holcomb teamed up with lifelong diver Beau Babineaux to rescue sunken wood from local waters and make it available commercially. Known as “sinker” cypress, this wood is prized by woodworkers for its beauty, durability, and availability—especially because Louisiana cypress is now protected and rare.

But this buried treasure story dates much further back—to the early 1700s, when loggers began harvesting water-loving cypress trees for their abundance and size. This led to a cypress boom in Louisiana from the early 1800s to the 1930s. “The problem,” said Beau, “was that they had too many guys cutting trees down and not enough sawmills. The loggers put the cut trees into holding areas 500 yards long, waiting in the water for a spot to open. Some got waterlogged and the loggers cut them loose. Our job is to find these logs that were ‘lost’ on the way to the mill.” (You may have seen “Shelby the Swamp Man” attempt similar rescues on cable TV.)

So nearly every day, Beau rows a barge out into the bayou, using sonar to locate the lost trees, most of which are buried under seven to ten feet of water and four feet of mud. Harvesting them means fending off snapping turtles, water snakes, alligators, and Beau's personal nemesis, wasps (he's allergic). Rescuing just one tree is a three-day process—dive to the bottom (with no breathing apparatus), break the suction under the wood using a pole and a water pump, tie it off, pull it up with a hand-cranked winch, and drag it to shore. And some of these trees approach 800 years



Logs rescued from the bed of the bayou reveal vibrant-colored grain when milled.

old with a girth to match. (According to Glen, the largest specimen they've found is 70 feet high and 36 inches across).

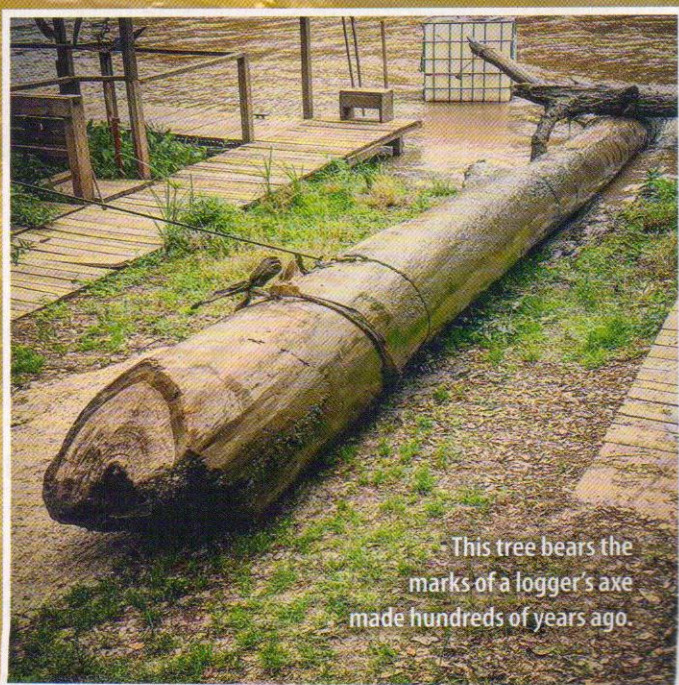
After reaching Blue Bayou's warehouse to be kiln-dried, though, sinker cypress looks like any other tree. It's only when it hits the mill that the difference becomes apparent. Old sinker cypress has a tight grain, is insect-resistant, and won't rot (which is why it's often used in coffins and beehive boxes). “The pressure and mud keep the sap from migrating out of the tree,” said Glen, “so the colors you get are just beautiful.” Beau has populated his house with it, constructing sinker wood tables, porches, and even a boat.

Part of the appeal of Blue Bayou's business model is that they don't harm living trees; in fact, Glen even hopes to expand the company by selling wood from other diving operations. But he doesn't stop there. “Reforestation is also part of the plan,” he said. “I'm installing 20 acres of new cypress by the bayou. Really, the trees are why we're all here.”

And for those who wonder whether the team has discovered anything else lying under the mud, Beau was quick to share. He recently found a 30-foot sunken *bateau*, a boat once used for logging, with an intact propeller still attached. He's found other sinker wood, too, such as tupelo, cottonwood, black walnut, and long-leaf pine—as well as remnants of bridges, dams, and other architectural structures. However, he's still holding out hope for a shinier trophy. “The old man who first showed me how to dive always said, ‘Beau, you're gonna find pirate gold in that bayou one day.’”

For more info, visit bluebayousunkentreasure.com.

Beau Babineaux rescues a
"sinker" cypress log.



This tree bears the
marks of a logger's axe
made hundreds of years ago.

“ They had too many guys cutting trees down and not enough sawmills. Our job is to find these logs that were ‘lost’ on the way to the mill.”

Working with Sinker Wood

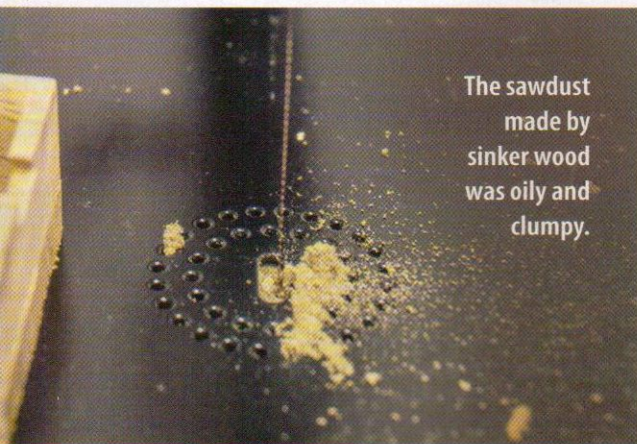
Experts evaluate Blue Bayou cypress for various projects

By the Staff of Scroll Saw Woodworking & Crafts

Blue Bayou “sinker cypress” is uniquely colored with a dense, pronounced grain. We gave a piece to Carole Rothman, who was taken by its “nuanced brownish-greenish-gold cast,” especially compared to regular cypress wood, which is “light and fresh looking, but lacks character.”

We found the wood light and easy to cut despite its dense appearance. Our editorial assistant, Kaylee, made Dave Danchuk’s puzzle box from Issue #47 using just a #3 super-skip blade. Carole made a stunning scrolled bowl using a #7 blade, noting that she could have used a #5 without difficulty. Janette Square, who made an attractive intarsia starfish, found the wood “fairly easy to work with,” commenting that “cutting seemed similar to fir or other dense conifers.”

One thing we all noticed was that the wood produced oily sawdust that clumped during cutting and quickly loaded up any sandpaper we used on it.



The sawdust made by sinker wood was oily and clumpy.



Carole Rothman’s beautiful scrolled bowl makes full use of the unique grain figures of sinker cypress. Get the pattern in our Summer 2019 issue.



We highlighted the wood's distinctive grain by transforming it into a puzzle box.

Janette Square displayed the rich hues of sinker cypress in an intarsia starfish of her own design.



Applications

You can use sinker cypress for almost any DIY project you put your mind to. It works well for centerpieces such as vases or bowls, and keepsake items like boxes, pens, picture frames, or simple jewelry. The interesting grain lends itself to intarsia and puzzle projects, specifically those that call for a natural finish. Because of its softness, though, we would not recommend this wood for delicate fretwork and other intricate projects.

Safety

Always take extra precautions when working with an unfamiliar wood. We wore eyeglasses and masks rated to filter down to 0.1 micron, not only because cypress dust is an irritant, but because wood that has been around moisture for a significant amount of time may contain fungus or other dangerous microbes. Just be careful!

Pricing

Blue Bayou's sinker cypress costs \$10 per rough-cut board foot and \$12 per planed board foot, making it cheaper than exotic hardwoods such as wenge (which costs \$15-\$25 per rough-cut board foot depending on your location) but slightly pricier than domestic varieties like walnut or cherry, which can run you anywhere from \$5-\$13 for the same.

Conclusion

Attractive and rare, Blue Bayou's sinker cypress is a great option for scrollers who want to add to their repertoire and try something new. But for us, the main draw is the story surrounding the wood; you're not simply holding it, you're holding the history of a place, unique in all the world.

For more information or to place an order, visit bluebayousunkentreasure.com.

Pecky cypress is graced with nature's fretwork.



Walnut and Pecky Cypress

Blue Bayou also sells walnut and pecky cypress. The pecky cypress has evidence of insect damage but retains enough structure for small projects, such as these tealight holders made by Carole Rothman. You could also fill the holes with a bar top epoxy to make a rustic yet stylish table or bench.

The walnut was harder and denser than most walnut we've cut. It dulled blades quickly and would burnish or scorch the wood if we were not careful. We also observed more checks, either due to the character of the wood itself or how it was dried after coming out of the bayou. This wood is beautiful when cut and finished; just be aware that checks may be hidden inside, and that could destroy your project.

Our technical editor, Bob, cut out one of Clayton Meyers' compound chess pieces (see page 36) from this dark black wood. Unfortunately, several checks corresponded with the delicate rails. While he was able to glue them together, the grain in that area was stretched and relatively flimsy, breaking to pieces as he sanded it. The wood lends itself better to projects without such delicate bridges.



The sinker walnut, while rich and beautiful, lacks the strength to hold delicate cuts without breaking.

Most jigsaw puzzles use round keys or knobs to connect the pieces, but my Wide-Eyed Fish Puzzle is held together by a series of fin-shaped grooves. It looks easy to assemble, but once you separate the pieces, it takes a sharp eye to fit them back in the correct places.

I designed this project as a freestanding wood puzzle with a base that helps to hold the pieces together. Cut from quality wood, this makes a stunning display piece as well as a fun puzzle to work with. You could also modify the design slightly to make a beautiful and colorful flat puzzle, cut from a thinner wood and painted with acrylic paints. Either way, it makes a nice project for the scroll sawyer.

Cutting the Puzzle

Decide if you want to increase or reduce the size of the puzzle and make a photocopy of the pattern in the desired size; you may want to enlarge it to minimize the choking risk for smaller children. While I've made my puzzle from cherry, walnut, maple, and other hardwoods, softer varieties look nice as well. If you plan to paint it, use inexpensive wood, such as pine.

Cover the wood with clear packaging tape and attach the pattern with spray adhesive or a glue stick. Then, cut the puzzle. While it's possible to cut the entire project with a scroll saw, I used a Forstner bit to drill the eyeholes and softened the edges with a router in a router table and a small roundover bit. After cutting the pieces, soften the edges with a sanding wheel in a drill press. After sanding everything smooth, apply a finish, such as clear acrylic spray.

Pattern for the **WIDE-EYED FISH PUZZLE** is in the pullout section.

Materials & Tools

Materials

- Hardwood, such as cherry, walnut, or maple, or inexpensive wood, such as pine, $\frac{3}{4}$ " (1.9cm): 6" x 9" (15.2cm x 22.9cm)
- Spray adhesive or glue stick
- Tape: clear packaging
- Sandpaper
- Finish: clear acrylic spray, or assorted acrylic paints

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

Tools

- Scroll saw blades: #9 reverse-tooth
- Drill press with bit: $\frac{5}{8}$ " (1.6cm)-dia. Forstner
- Sanding wheel

Wide-Eyed Fish Puzzle

Freestanding design is easy to cut but challenging to assemble

By Al Baggetta





Al Baggetta is a retired English teacher and former musician who took a liking to scroll sawing. Visit his pattern site at baggetta.com/pebooks/puzzle_patterns.htm.



Cake Toppers

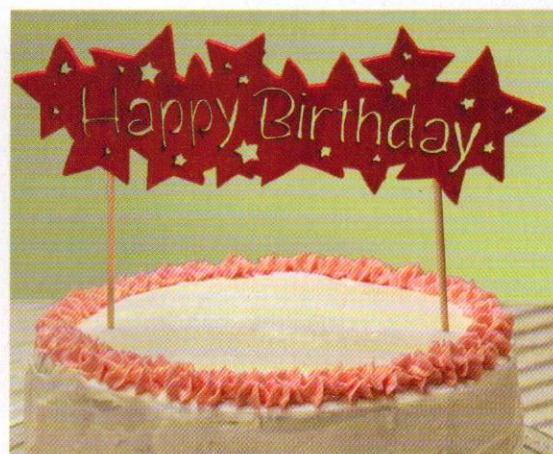
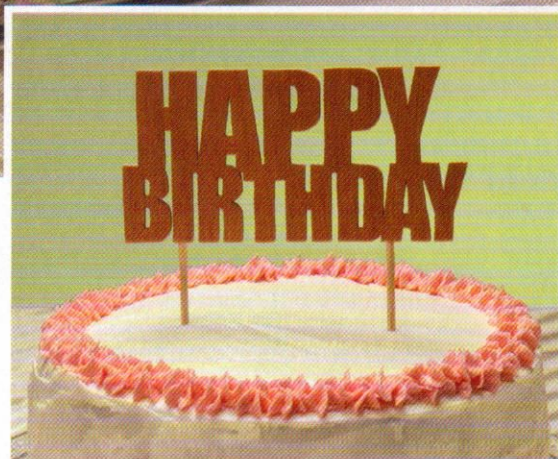
Deck out a sweet surprise with an even sweeter homemade message

By Kaylee Schofield

Designed by Jon Deck

Cut by Bob Duncan, Jon Deck, and Kaylee Schofield

Every victory, big or small, is an excuse for cake—and a birthday is a big victory, no matter how you slice it! That's why we've designed three different cake topper patterns for your decorating pleasure. You can cut them from plywood or an attractive hardwood, and go for a muted finish or loads of vivid color. You could even skip the cake and cut off the stakes, sticking the decorative message to a gift box or enlarging the pattern to make a wall banner for your next big party.



HAPPY BIRTHDAY

Cake Topper Patterns

Additional pattern for
the **CAKE TOPPERS** is in the
pullout section.

ON THE WEB Bonus non-birthday cake
topper pattern online.
www.scrollsawer.com

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Cutting and Finishing

Increase or decrease the pattern size as desired. Cut the wood to size and cover it with blue painter's tape. Attach the pattern to the tape with spray adhesive.

Make all inner cuts first, letting the saw do the work and holding the project firmly against the table to avoid wobbling. We used a #3 reverse-tooth blade for the entire project. If using a thin wood such as 1/4" (6mm) plywood, stack-cut for additional control and take your time; these pieces can easily snap. Switch to a new blade if necessary, and cut the perimeter. You can either include the stick sections in your initial cutting to make a one-piece topper or use wooden skewers later.

Gently hand-sand with 220-grit sandpaper to remove any fuzzies. If adding skewers, cut them to size and drill holes in the topper base, securing them with wood glue. Let the assembly dry. Finish with a clear semi-gloss spray lacquer or spray paint in the color of your choice. Allow the finish to dry thoroughly before use.

Materials & Tools

Materials

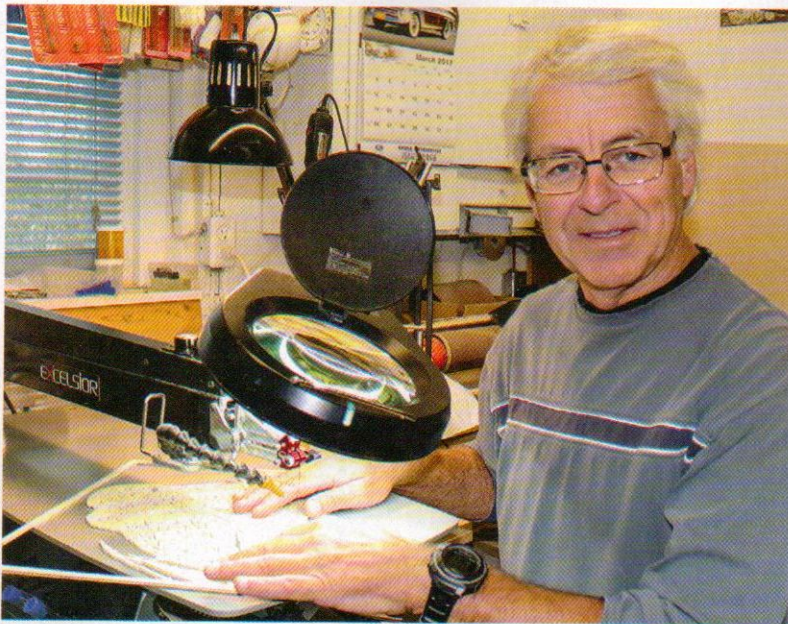
- Wood, 1/4" to 1/2" (6mm to 1.3cm) thick: sized for pattern
- Spray adhesive
- Tape: blue painter's
- Sandpaper: 220 grit
- Skewers, wooden 3/32" dia.: sized for pattern (optional)
- Wood glue (optional)
- Finish: clear semi-gloss spray lacquer or spray paint

Tools

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

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

WARNING: Because this project will come in contact with food, choose a nontoxic wood for the stakes. Many common hardwoods—such as maple, cherry, or oak—are fine, but some exotic tropical hardwoods can be dangerous. Every commercial finish is food-safe when fully cured, but if you have any concerns, use shellac or a nontoxic acrylic paint, or simply leave the skewers unfinished.



SPOTLIGHT

Charles Hand

From fretwork steam trains to the smallest dog whisker, this scroller doesn't waste an inch

By Kaylee Schofield

Whether you design satellites or stacked fretwork, the devil's in the details—but details have never been a problem for Charles Hand. From art school to careers in photography and mechanical design, Charles' work has always called for a razor-sharp focus and an engineer's immaculate precision. Earlier this year, I sat down with Charles, who has been scrolling for 14 years, to discuss the inspiration for his patterns and some tips for scrollers hoping to kick their work up a notch.

SSW&C: What inspired you to start scrolling?

Charles: I have always been interested in art and drawing. My parents enrolled me in an art school outside Montreal when I was a child, and I went on to study electronic design. After graduating from technical school, I was hired by a large aerospace company to design mechanical and electronic devices for the space industry. I had a small involvement with the first NASA Shuttle program, along with various satellite programs. As my skills with art and isometric drawings developed, I also became the company's graphic designer.

One day my boss came into my office and said, "Charlie, do you know anything about cameras?" and asked me to take some company photos. Back then, I really didn't know which end was the lens! I ended up working alongside a professional photographer in the Montreal region and learned a great deal from him—and had a ton of fun doing it.

In early 2005, I started to scroll saw for a hobby, something to do during those long cold months in Canada. That same year, I started designing my own patterns. I also purchased every scroll saw magazine that I could get my hands on. In all, I have approximately 300 scroll saw magazines and books.

SSW&C: Can you share your process for creating patterns?

Charles: My camera goes wherever I do, in case I see something I want to make into a design. Once I love a photo enough, I transform it into a pattern using a slew of computer programs—Autocad, CorelDraw, and the like. Naturally, I use a large monitor, as it is the only way to design a detailed portrait or pattern. Each one takes 15 to 30 hours to complete. I was one of the pioneers for Computer-Aided Engineering drawings back in the early '80s. I actually designed drawings on a computer before GM did, so I guess I am really dating myself!

SSW&C: How do you cut such intricate fretwork without breaking the wood?

Charles: I always stack-cut two or three layers of 1/8" (3mm)-thick plywood. This way, the thin bridges get some support.

SSW&C: Which woods and finishes work best for the delicate portraits you make?

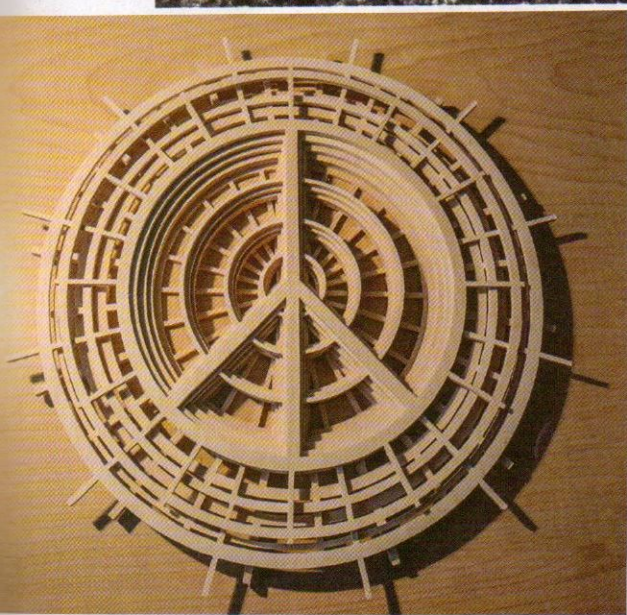
Charles: My materials of choice are Baltic birch plywood and either clear spray lacquer or Danish oil; they're reliable and don't take attention away from the star of the show—the intricate cutting.

SSW&C: Do you have any tips for beginning scrollers?

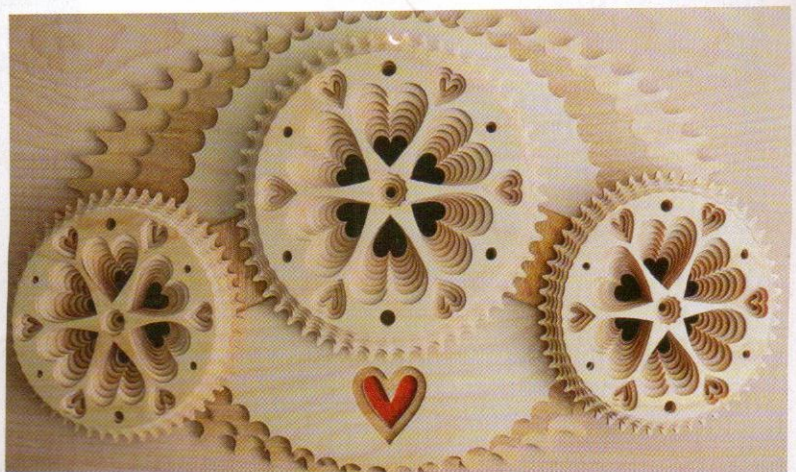
Charles: We all know what moisture can do to our tools. Every few weeks, wipe everything, including your scroll saw table, down with WD-40; it leaves a nice, smooth surface while protecting your valuable equipment from rust.

Another tip: with fretwork, sand thoroughly before you cut and very carefully afterward, fitting the cut out parts back in where possible before doing so. Otherwise, you'll go to all that work and have nothing but broken pieces to show for it!

For more information, visit scrollsawart4u.weebly.com.



Charles often creates fretwork pieces with nature-inspired designs. Some of his latest projects are intricately layered, shown at left and below.



Playful Pup Portrait

Adorable fretwork captures the essence of fur-ever friendship

By Charles Hand

Who doesn't love a cute, cuddly puppy? These playful creatures are the ultimate in companionship—and they're never late for dinner or walks in the park. When cutting, resist the urge to make the fur look even and neat; I designed this portrait with a puppy's unkempt, fuzzy fur in mind.

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. Press out any air bubbles. 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 cutout pieces before sanding to protect the delicate bridges. Use needle files to clean up the tight areas.

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 backside 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).

Materials & Tools

Materials

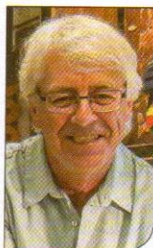
- Baltic birch plywood, ⅛" (3mm) thick: 11" x 14" (27.9cm x 35.6cm)
- Sandpaper: 180 to 220 grit
- Tack cloth
- Tape: blue painter's
- White shelf paper, such as Con-Tact® removable adhesive creative covering
- Spray adhesive: Elmer's or 3M Super 77
- Finish: clear spray lacquer (optional)
- Felt backing, 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: ⅜" (1.2mm) dia. or #56 wire size, ⅛" (2mm) dia. or #53 wire size
- Palm sander
- Needle files
- Air compressor (optional)

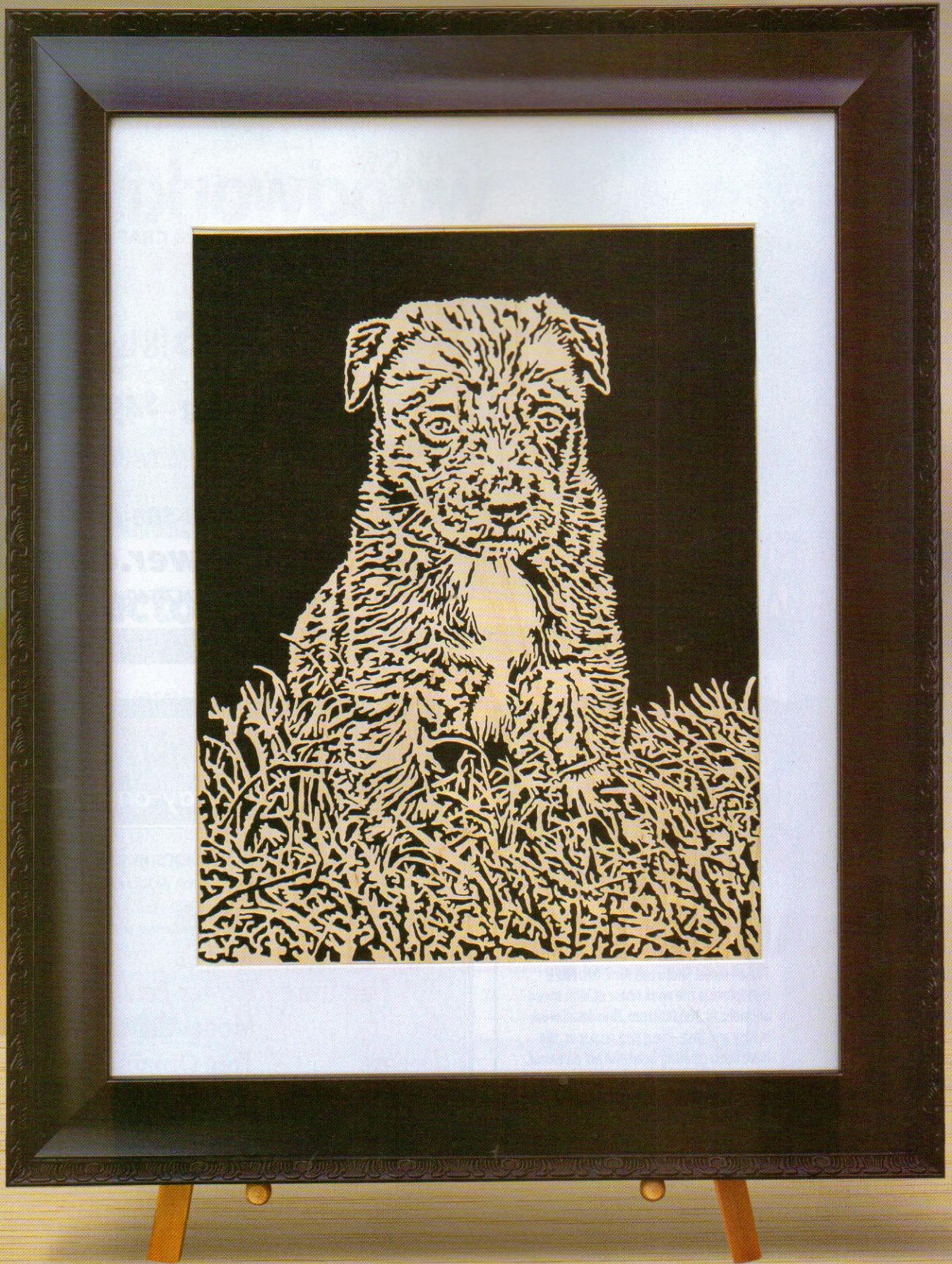
The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Pattern for the **PLAYFUL PUP PORTRAIT** is in the pullout section.



Charles Hand is retired from a career in electrical/mechanical design, graphic arts, and senior project management. He enjoys intarsia, fretwork, segmentation, inlay, and just about everything there is to cut with a scroll saw. Charles has won Best of Show and several other awards for his work, and designs at local craft and woodworking shows. For more information and a tutorial on Charles' Con-Tact®

paper method and framing technique, or for more of his patterns, visit scrollsawart4u.weebly.com.



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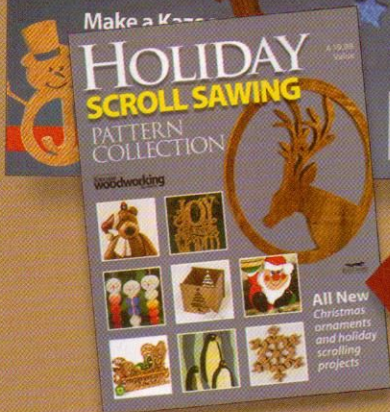
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“Smart” Jukebox Intarsia

Scroll a nostalgic appliance with a 21st-century twist

By Carol and Homer Bishop

We used to see a jukebox in the corner of every pub, diner, or soda shop—just drop in a few coins and play your favorite song. This jukebox project is designed to hold a Bluetooth or smart speaker. Alexa, please play Oldies Playlist!

Getting Started

As with all projects, it is best to start with a new blade that has been squared to the table, as this will ensure a clean and good fit. Use the pattern transfer method that works best for you. Make several copies of the pattern and save the original for later use. Adjust the holes to suit your speaker size. We used an Amazon Echo Dot (\$40).



PREPPING & CUTTING



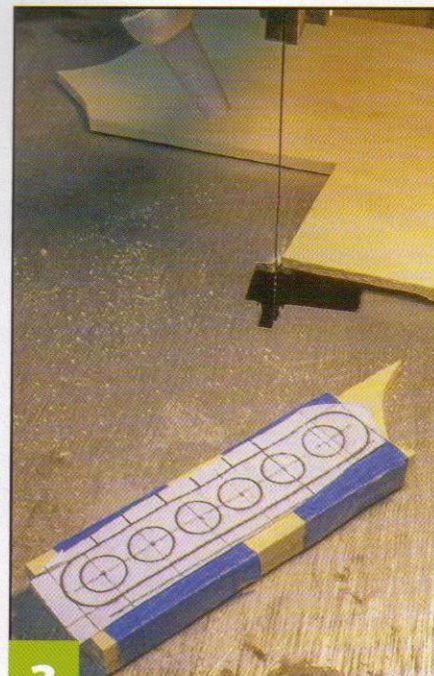
1

Drill any required blade-entry holes. Then, cut the pieces. Remove any burrs or saw fuzz with a flap sander and place the cut pieces on a copy of the pattern to keep things organized. Check the fit and make any required adjustments as you work.



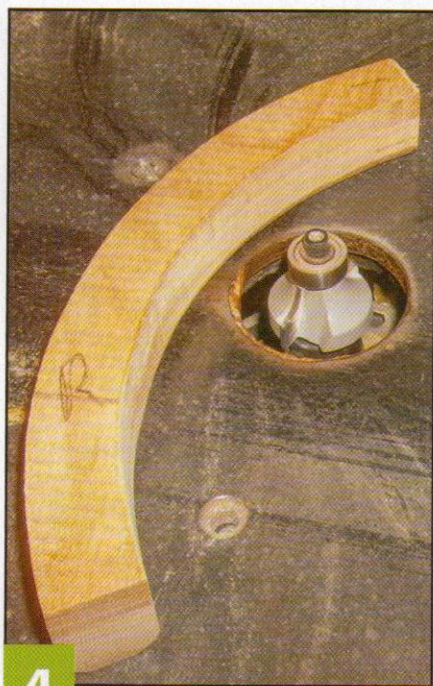
2

Check the fit of the speaker in the hole. It should fit tightly. If the fit is loose, use pieces of paper as a shim to wedge it into place. While this project is designed for a round speaker, you could adapt the grill pattern to accommodate a round or oval speaker.



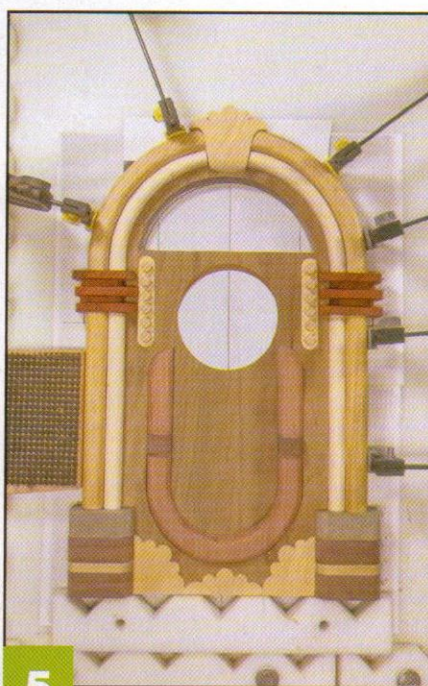
3

Stack and tape the wood for the pushbutton bases. Drill the $\frac{5}{16}$ " (8mm)-diameter holes and cut them. Cut all 12 of the $\frac{5}{16}$ " (8mm)-diameter dowels to $\frac{3}{8}$ " (1cm) long.



4

Round the four upright and arch pieces. Use a router with a roundover bit. Then, round the decorative front pieces.



5

Use the upper crescent piece to draw new cut lines on the arch pieces. Cut them to accommodate the upper crescent piece. Then, undercut the upper crescent piece so it fits over the body piece. Test the fit of the pieces.

ASSEMBLING & FINISHING



6

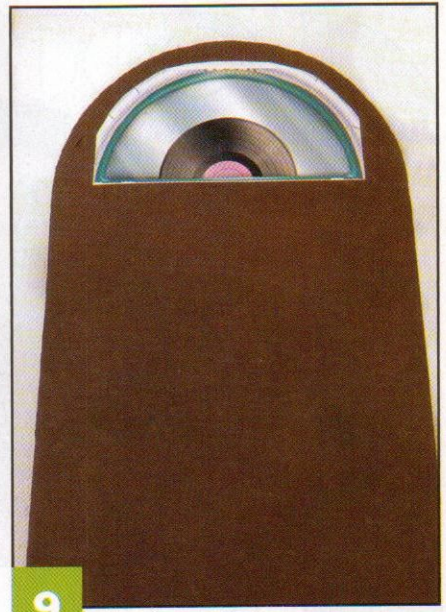
Glue and clamp the main structure of the jukebox together. Add weight, such as sandbags, to the surface to make sure everything dries flat.



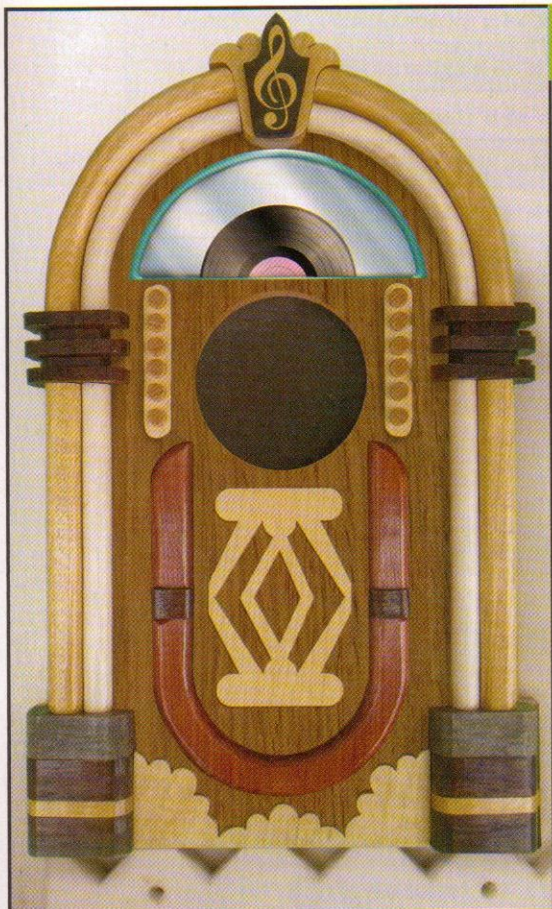
7 **Cut the treble clef base.** If you have experience doing inlay work, you could use a white wood, such as holly, and inlay the treble clef into the walnut. You could also just cut the treble clef from thin wood or veneer and glue it to the top of the treble clef base.



8 **Apply clear spray finish to all of the pieces.** We applied the finish to the main body of the jukebox before adding the details. Mask the glue joints if desired; we use craft glue, so we usually don't bother.



9 **Place the assembled jukebox on tempered hardboard.** Trace around the outside and mark the location of the speaker and window decal. Cut the perimeter, copy the window decal onto photo paper, and glue it in place with spray adhesive. Mark the location of the charging cord and drill a hole in the backing board for the cord.



10 **Glue the backing board to the intarsia.** Then, glue on the details. Use weights to hold everything in place while the glue dries. Attach a hanger to the back. Fit the speaker and charging cord into the hole and use tape to secure the charging cord for the speaker, brining it down to the bottom.

Materials & Tools

Materials

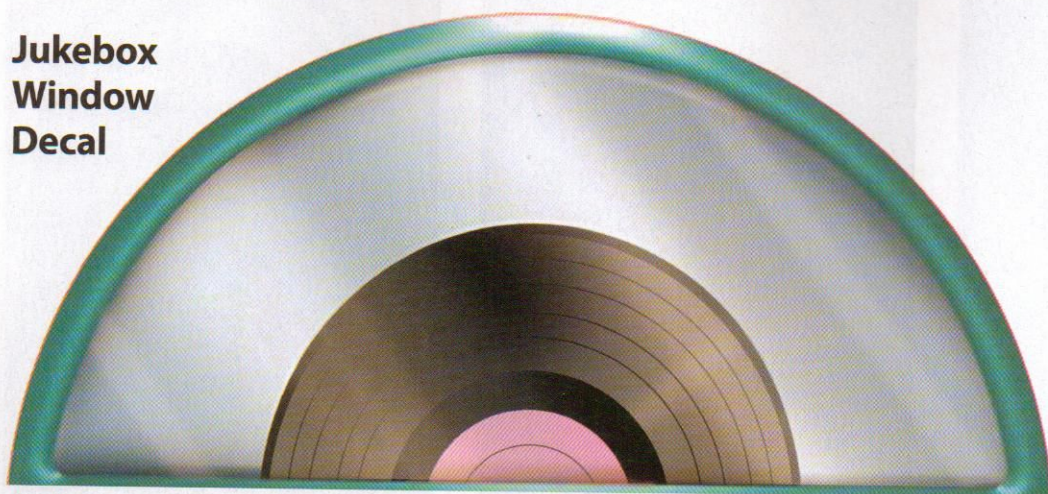
- Assorted colorful woods, see Parts List for the woods we used
- Dowels, $\frac{5}{16}$ " (8mm) dia.: 12 each $\frac{3}{8}$ " (1cm) long
- Tempered hardboard: sized for pattern
- Spray adhesive: temporary bond
- Sandpaper
- Fine-tip black marker or pencil
- Finish: clear spray
- Bluetooth or smart speaker
- Masking tape
- Glue: wood or craft
- Photo paper
- Hanger (optional)

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

Tools

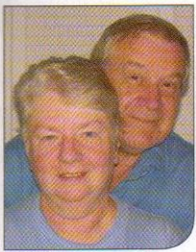
- Scroll saw blades: #4, #7 skip-tooth
- Flap sander
- Drill press with bits: assorted small, $\frac{5}{16}$ " (8mm)-dia. twist
- Assorted sanders and shaping tools
- Router in router table with bit: roundover
- Clamps and sandbags

Jukebox Window Decal



Parts List

	Part	Quantity	Materials	Dimensions	Presentation
A	Outer arch	2	Yellowheart, $\frac{3}{4}$ " (1.9cm) thick	4 $\frac{1}{4}$ " x 4 $\frac{1}{2}$ " (10.8cm x 11.4cm)	Pattern
B	Inner arch	2	Aspen, $\frac{5}{8}$ " (1.6cm) thick	3 $\frac{5}{8}$ " x 3 $\frac{7}{8}$ " (9.2cm x 9.8cm)	Pattern
C	Outer upright	2	Yellowheart, $\frac{3}{4}$ " (1.9cm) thick	$\frac{5}{8}$ " x 5 $\frac{7}{8}$ " (1.6cm x 14.9cm)	Pattern
D	Inner upright	2	Aspen, $\frac{5}{8}$ " (1.6cm) thick	$\frac{1}{2}$ " x 5 $\frac{7}{8}$ " (1.3cm x 14.9cm)	Pattern
E	Body	1	Black oak, $\frac{3}{8}$ " (1cm) thick	6 $\frac{1}{4}$ " x 13" (15.9cm x 33cm)	Pattern
F1	Front decoration (upper)	2	Aromatic red cedar, $\frac{5}{8}$ " (1.6cm) thick	$\frac{3}{4}$ " x 2 $\frac{5}{8}$ " (1.9cm x 6.7cm)	Pattern
F2	Front decoration (lower)	1	Aromatic red cedar, $\frac{5}{8}$ " (1.6cm) thick	3 $\frac{1}{4}$ " x 4 $\frac{5}{8}$ " (8.3cm x 11.7cm)	Pattern
G	Front decoration inset	2	Walnut, $\frac{5}{8}$ " (1.6cm) thick	$\frac{3}{4}$ " x $\frac{1}{2}$ " (1.9cm x 1.3cm)	Pattern
H	Grill (optional)	1	Yellowheart, $\frac{3}{8}$ " (1cm) thick	2 $\frac{5}{8}$ " x 4" (6.7cm x 10cm)	Pattern
I	Top accent	1	Yellowheart, $\frac{7}{8}$ " (2.2cm) thick	2" x 2 $\frac{1}{2}$ " (5.1cm x 6.4cm)	Pattern
J	Treble clef base	1	Walnut, $\frac{1}{8}$ " (3mm) thick	1 $\frac{1}{4}$ " x 2 $\frac{1}{8}$ " (3.2cm x 5.4cm)	Pattern
K	Bottom trim	1	Yellowheart, $\frac{1}{8}$ " (3mm) thick	1 $\frac{3}{4}$ " x 5 $\frac{1}{2}$ " (4.4cm x 14cm)	Pattern
L	Button base	2	Yellowheart, $\frac{1}{8}$ " (3mm) thick	$\frac{1}{2}$ " x 2 $\frac{3}{4}$ " (1.3cm x 7cm)	Pattern
M	Button	12	Dowel, $\frac{5}{16}$ " (8mm) dia.	$\frac{3}{8}$ " (1cm) long	Dimensions
N	Upright decoration (wide)	6	Padauk, $\frac{1}{4}$ " (6mm) thick	1" x 1 $\frac{7}{8}$ " (2.5cm x 4.8cm)	Profile A
O	Upright decoration (narrow)	4	Padauk, $\frac{1}{4}$ " (6mm) thick	$\frac{5}{8}$ " x 1 $\frac{1}{4}$ " (1.6cm x 3.2cm)	Profile B
P	Base decoration (thick)	6	Blue pine, walnut, $\frac{3}{4}$ " (1.9cm) thick	1" x 1 $\frac{7}{8}$ " (2.5cm x 4.8cm)	Profile A
Q	Base decoration (thin)	2	Yellowheart, $\frac{1}{4}$ " (6mm) thick	1" x 1 $\frac{7}{8}$ " (2.5cm x 4.8cm)	Profile A
R	Backing board	1	Tempered hardboard, $\frac{1}{8}$ " (3mm) thick	8 $\frac{1}{2}$ " x 14 $\frac{1}{8}$ " (21.6cm x 35.9cm)	Pattern



Carol Bishop and her husband, the late Homer Bishop, cut and designed intarsia patterns for years.

Jukebox Patterns

Front decoration inset
Cut 2 $\frac{5}{8}$ " thick

Additional patterns for the "SMART" JUKEBOX INTARSIA are in the pullout section.

Profile A

Profile B

K Bottom trim
Cut 1 - $\frac{1}{8}$ " thick

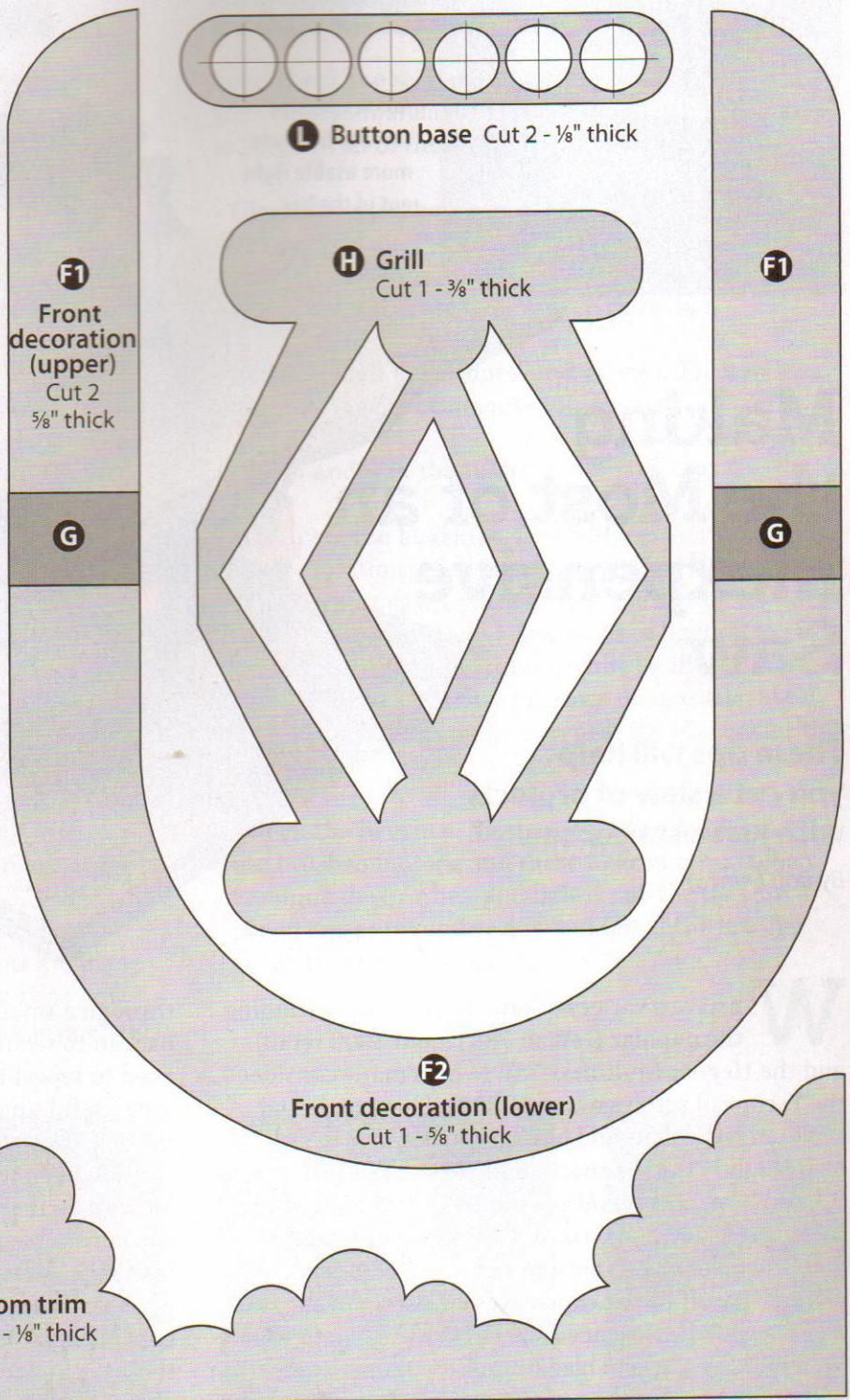
J Treble clef base
Cut 1 - $\frac{1}{8}$ " thick

I Top accent
Cut 1 - $\frac{7}{8}$ " thick

L Button base Cut 2 - $\frac{1}{8}$ " thick

H Grill
Cut 1 - $\frac{3}{8}$ " thick

F2 Front decoration (lower)
Cut 1 - $\frac{5}{8}$ " thick



Treble clef



An inexpensive saw can be made more usable right out of the box.

Making the Most of an Inexpensive Saw

These tips will help you cut a slew of projects with just a starter saw

By Bob Duncan



Stabilizing the base, adding an auxiliary table, and upgrading the dust blower will work wonders.

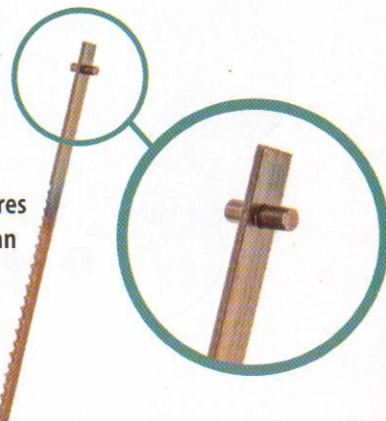
We have a variety of saws in our shop, including the popular DeWalt 788 (about \$500 retail) and the Hegner Multimax 18V (which many consider the Ferrari of scroll saws at \$1,500). These high-end saws only use plain-end blades, which range in size from slightly thicker than a hair to $\frac{1}{8}$ " (3mm) wide. But we also have entry-level saws in the \$70 to \$200 range, including the Ryobi, Grizzly, Chicago Machinery, and Sears, which use both pin-end and plain-end blades (Grizzly's least expensive saw uses only pin-end blades). Most experienced scrollers steer clear of these saws because pin-end blades limit the scope of projects you can make, and their clamps for plain-end blades don't work that well.

The main challenge is, pin-end blades are larger than plain-ends—and the typical tooth pattern is aggressive. There are also fewer varieties available; it's a challenge to find reverse-tooth blades, and spiral pin-ends do not exist. Additionally, when drilling blade-entry holes, you need to account for the pin, which means most blade-entry holes must be at least $\frac{1}{4}$ " (6mm) in diameter. Sometimes you can drive the pin out with a hammer, which allows you to fit the blade

through a smaller hole. Then, you need to push the pin back in to secure the blade into the holder. And you need to repeat this entire process for every single fret (one useful tip is to replace the pin with a safety pin to make it easy to slip off and on).

However, with a bit of work, you can do quite a lot with an inexpensive saw. With pin-end blades, you can cut simple intarsia, toys and simple gizmos, and furniture. Fretwork that features large open frets is possible. In fact, if the project includes long, straight cuts or slight curves, the large blades actually make these cuts easier. But for fretwork portraits, puzzles, segmentation, and complex intarsia, you'll need to switch to plain-end blades—which will work a lot better if you make some modifications to the clamps (which I'll get to below).

A pin-end blade requires a larger entry hole than a plain-end one.



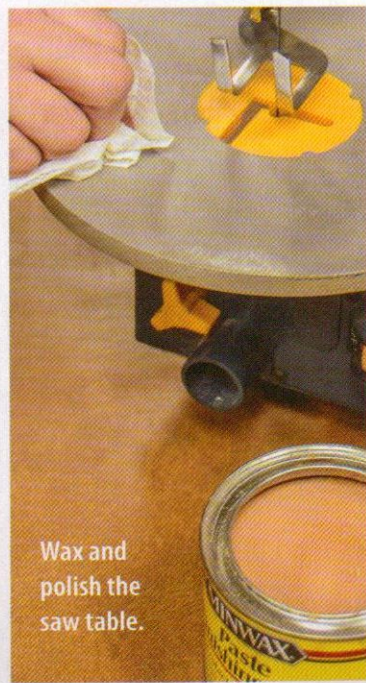
SET UP A NEW SAW

Start by finding your owner's manual. Most can be found online if you lost yours. Look at the section on setting up and adjusting your saw. Go through all of the steps carefully, making sure to do the following:

- **Clean the saw thoroughly.** Often, new saws are covered with a light oil to keep them from rusting before purchase. Use a citrus or solvent degreaser to remove this oil.
- **Mount the saw securely.** Decide if you want to permanently mount the saw on a bench or if you'd prefer to mount it on a piece of $\frac{3}{4}$ " (1.9cm)-thick plywood that you can move around and clamp as needed. Either way, use the largest bolt that will fit through the holes in the saw base.
- **Check to make sure all of the bolts and nuts on the saw are tight.** Things can loosen up during transport, so make sure everything is tight before you start using your saw.
- **Apply paste wax to the saw table.** This will help the wood slide smoothly during cutting. Choose a woodworking paste wax; some automotive waxes contain silicone that will interfere with finishes.
- **Square the blade to the table.** Most cuts are made with the saw square to the table, so take time now to dial it in properly. Then, adjust the angle guide to reflect the position of the saw table.



Tighten all screws, nuts, and bolts.

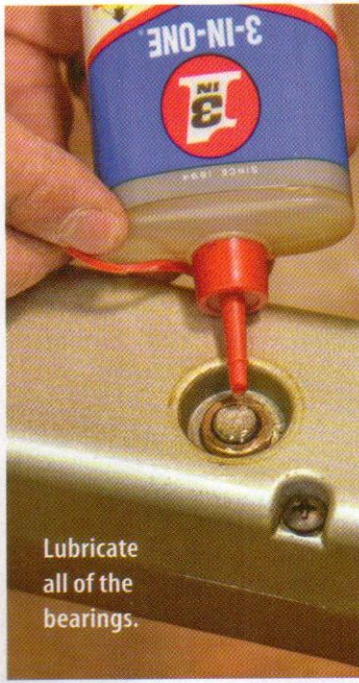


Wax and polish the saw table.

TUNE UP AN OLDER SAW

First, check the section on regular maintenance in your owner's manual (find it online if lost). Make sure to perform all of these maintenance tasks now:

- **Clean the saw thoroughly.** Use a vacuum and compressed air. Pay extra attention to the motor vents (if it has any) and the switch. If enough sawdust builds up in this area, the switch could fail.
- **Retighten all bolts, nuts, and screws.** The saw's normal vibration can loosen things up.
- **Polish and wax the table.**
- **Lubricate the bearings.** Check the owner's manual for the location. Use compressed air to blow out any dust. In most cases, you can turn the saw on its side, open the port, and add a few drops of light oil to the bearings. Let the saw sit for a while to allow the oil to soak in. Some saws have bearings on one side, but if yours has bearings on both, repeat the process for the other side.
- **Check the brushes.** Most inexpensive scroll saws use brushed motors, and these wear out over time. Examine the brushes, and lightly rub the tip with a pencil eraser to remove any buildup. If the brushes are short, replace them.



Lubricate all of the bearings.



Check the motor's brushes.

Reduce Vibration

Because their parts are not machined with as much precision, inexpensive saws vibrate more. To combat that, lock the saw down. Bolt it to a heavy piece of wood that you can clamp to a solid bench, secure it directly to a bench, or build a dedicated stand that you can either bolt to the floor or stabilize with heavy weights. The more solid the stand, the less the saw will vibrate. Slip a piece of thick rubber padding between the saw and the bench to further reduce vibration.

Optimize the Saw Table

Make sure the saw table is flat, especially in the area around the blade. Most inexpensive saws have a plastic table insert around the blade, but there is so much space around it that small pieces can fall through the gap. Also, these inserts seldom sit flat. An easy solution is to tape a piece of cardstock over your table with a small hole for the blade to fit through. More complex solutions involve making a new insert from wood that fits flush with the table or adding an auxiliary table on top of the original.

If your saw table gets scratched up or rusty, sand it smooth again. Start with 220-grit sandpaper. Then, switch to wet/dry sandpaper and wet sand the table. Start with 320-grit wrapped around a sanding block. Dip the sandpaper in water, sand for a few minutes, and dip again. The water removes any embedded metal

particles that could scratch the table as you sand. Repeat with 400-grit sandpaper. Wipe off the excess water, and then wipe everything again with lacquer thinner. Immediately apply paste wax, allow it to set a few minutes, and buff with a soft cloth. Apply a second coat of wax if desired.

Examine the Blade Clamps

Make sure the ends of your blade clamping screws are flat. Sand them flat (See Blade Clamp Modifications, below), and remove any oil or oily residue; scroll saw blades are coated with a light oil to keep them from rusting in the package.

If the clamps use two screws to help center the blade, make sure the blade is properly centered. You may need to remove and flatten the end of the stationary screw as well. Apply threadlocker to the stationary screw before threading it back in. Once the screw is positioned correctly, let it set overnight.

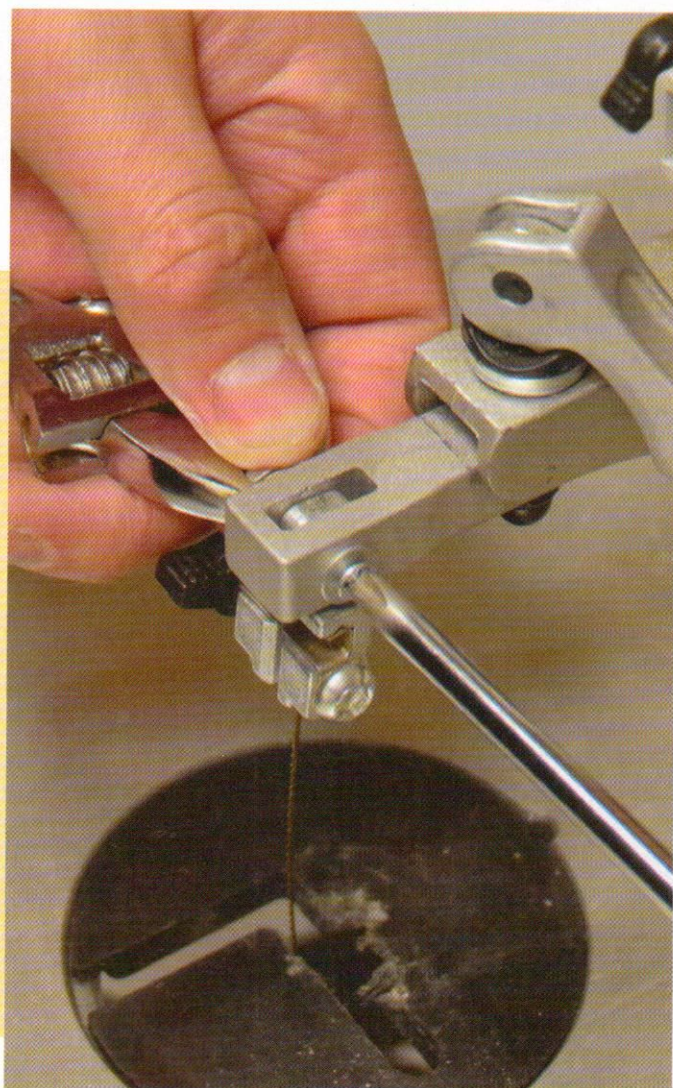
(Continued on page 66)

Blade Clamp Modifications

The screws in an inexpensive saw's blade clamps are often cupped on the bottom. This means that the screw is only touching the blade in one or two spots. If you sand the end of the screw flat, it has more surface area touching the blade and will hold it more securely.

On some saws, such as the Porter Cable, the blade clamp assemblies swing back and forth. This can make it a challenge to clamp blades securely. In most cases, you can drive out the pin holding the assembly in place and substitute a machine screw, washers, and a nut, which allows you to reduce or prevent the swinging. (Visit scrollsawer.com/2018/05/23/hacking-porter-cable-scroll-saw/ for a video showing how I modified a Porter Cable scroll saw.)

If you struggle to tighten a thumbscrew enough to hold the blade, replace it with a set screw or hex bolt, and tighten and loosen with an Allen wrench or nut driver. Or, if you have space, you can trace around the thumbscrew and make a custom wrench from a scrap of wood to help you tighten it further.



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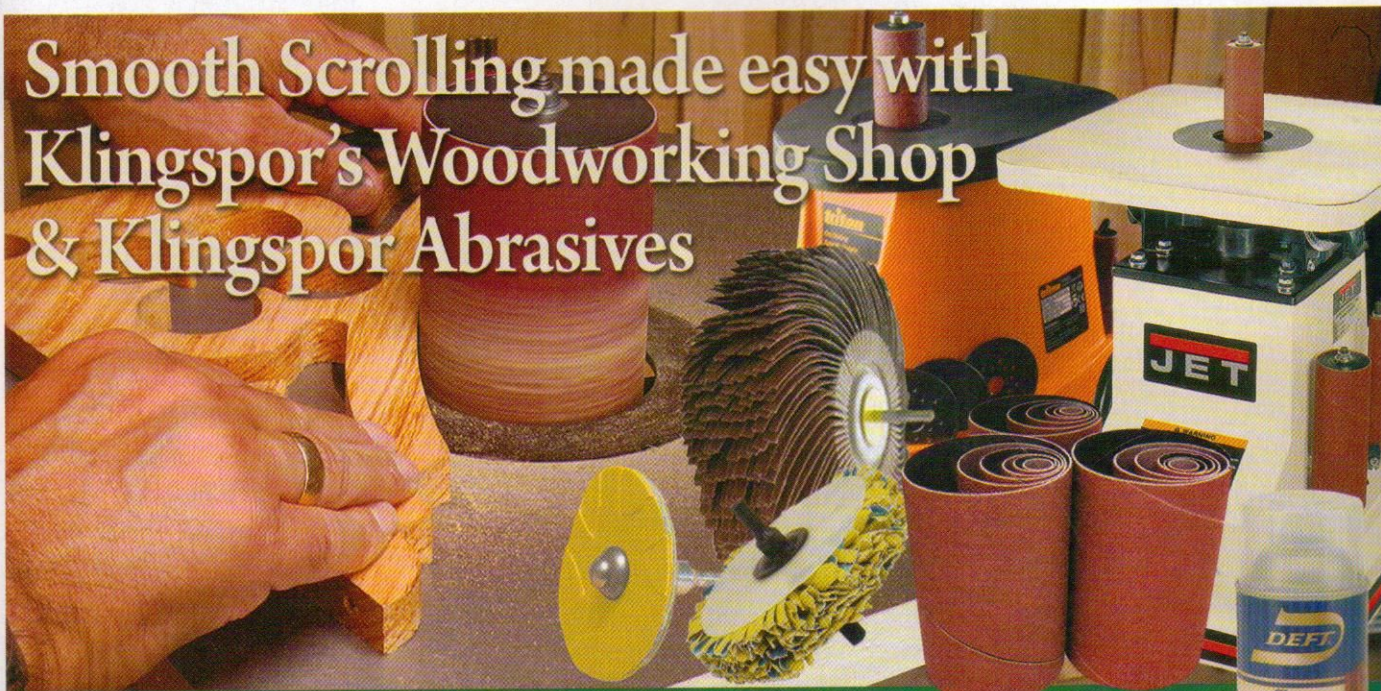
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Trouble-Shooting

Loose Nuts and Bolts

If some nuts or bolts are always loosening, secure them with medium-strength threadlocker, such as Loctite Blue®. Apply it to the threads, and then tighten as normal. Allow it to dry for 24 hours. After that, you'll need to use tools to loosen the nut or bolt.

Low-Power Dust Blower

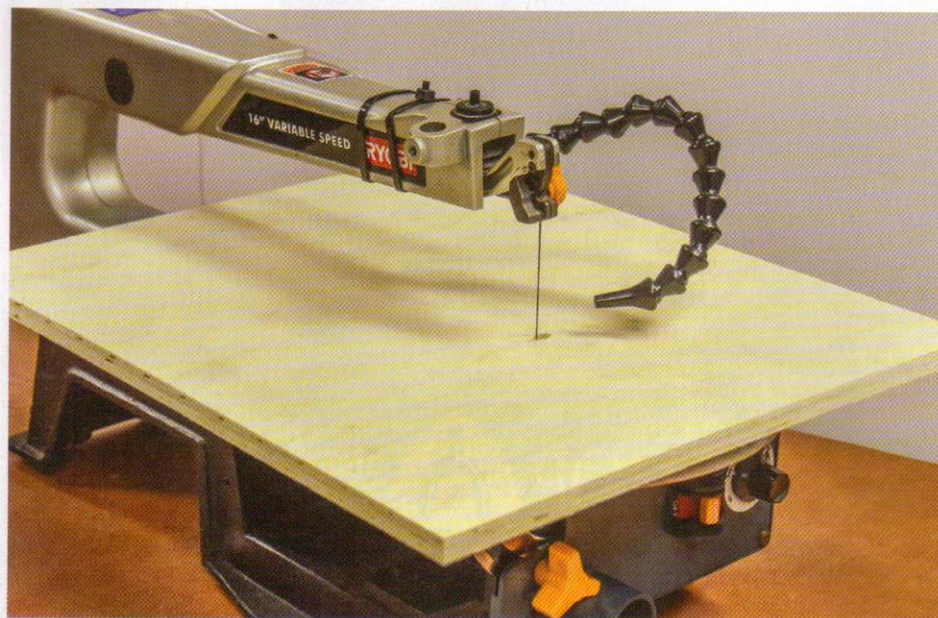
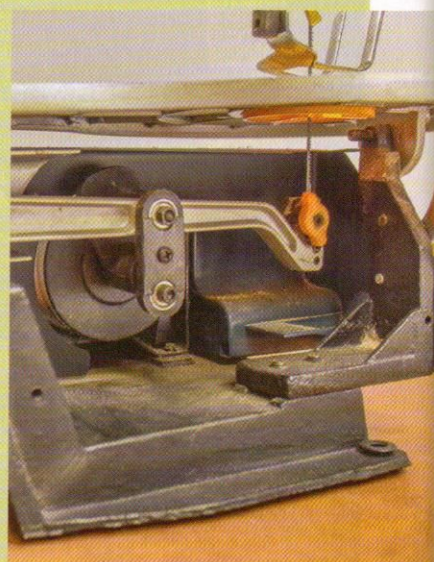
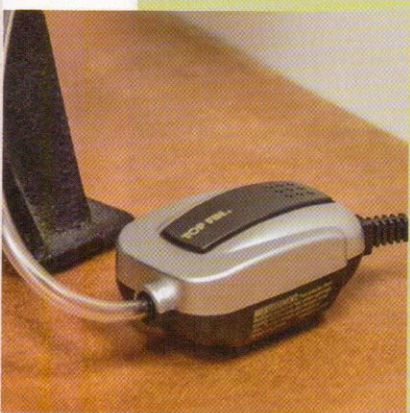
If the integrated dust blower isn't moving enough air, replace it with an inexpensive fish tank air pump. In most cases, you can attach the pump directly to the integrated blower nozzle, but if not, you can purchase one from a variety of scroll saw retailers, including Seyco (Seyco.com).

Hold Down Issues

The hold downs that come with every saw tend to get in the way. To cut tight corners, you need to position your fingers near the blade as a pivot point, and the hold downs are right where you need to put your fingers. I don't know many scrollers who use them. If your dust blower is integrated into the hold down, look at getting an after-market substitute (see Low-Power Dust Blower).

Difficult Blade Access

Most high end saws are open on the bottom, giving you easy access to the bottom blade holder. Cheaper saws often have cover plates underneath that limit access to that area. I suggest removing as much of the cover plates as you can.



Making an Auxiliary Table

Most tables on inexpensive saws are somewhat small. Cut a larger piece of MDF or plywood. Place the wood on the saw table and mark the location of the blade hole. Drill a 1/4" (6mm) diameter (or larger) hole to accommodate the blade. You can embed magnets in, or add cleats to, the bottom of the auxiliary table to hold it to the original.

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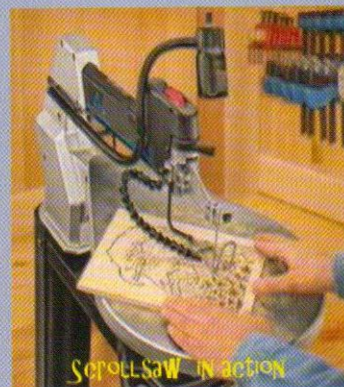


FretWork...

Intarsia



Marquetry



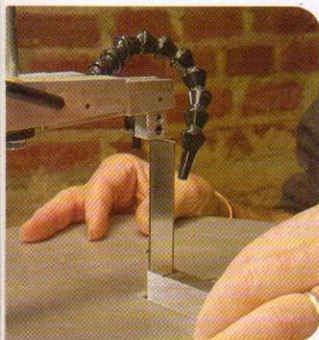
Scrollsaw in action

Scrollsaw Association of the World

Scrollers come in all ages, sizes, genders, and interests. Some prefer cutting fretwork, others create beautiful artwork in wood intarsia, while still others cut beautiful plaques with messages, and others work on the intricate designs of marquetry. Consider joining the thousands of Scroll Saw artists by...

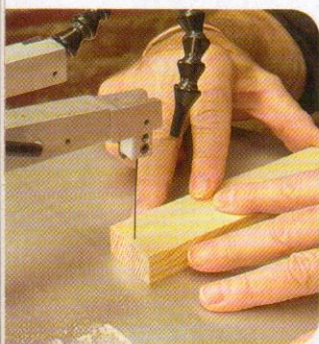
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To avoid repetitive instructions, this page is included in each issue to assist novice scrollers with basic scrolling techniques.



Squaring Your Table

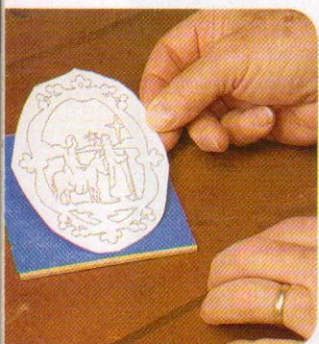
Most scroll saws have an adjustable table that allows you to make cuts at different angles. There are times when you want the saw set at an angle, but most cutting is done with the blade perpendicular to the table. If the table is even slightly off-square, the cuts will be angled. This interferes with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



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

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

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



Attaching Patterns

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

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

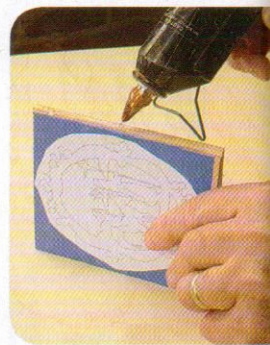
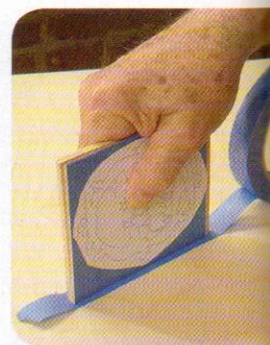
Stack Cutting

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

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

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

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



Blade Tension

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

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

Blade-Entry Holes

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

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



Removing Patterns

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

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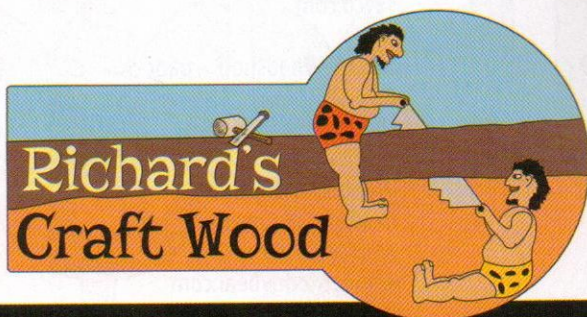
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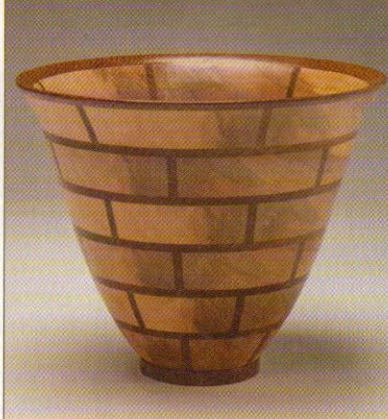


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Dave Van Ness is a retired engineer living in Chandler, Ariz. He has been woodworking for 40 years and scrolling for 30. He is the president of Arizona Woodworkers (a greater Phoenix area woodworking club) and volunteers one day a week teaching woodworking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

Tulip Alphicon Patterns



Spring Alphicons



Nothing says "fresh" like a bunch of colorful cutout tulips

By Dave Van Ess

Ralph Waldo Emerson once said that "the earth laughs in flowers," and these tulip alphicons are guaranteed to make you and your loved ones grin in kind. They're simple, cheery, and perfect for ushering in spring after a rough winter. Stick them to your favorite indoor flowerpot or cut off the stems and add dowels to the bottoms to make a bouquet of flowers. ("MARRY ME, HONEY" is an even dozen and a romantic way to propose.) My one rule is this: be inventive!

Cutting and Finishing

Choose a kind of wood; these patterns work well for both soft woods and hard woods. 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. For bland wood, I use acrylic paint, and for attractive hardwoods, I brush on an oil finish.

Materials & Tools

Materials

- Wood, such as pine, $\frac{3}{4}$ " (1.9cm) thick: each $1\frac{1}{2}$ " x 2" (3.8cm x 5.1cm)
- Sandpaper
- Tape: blue painter's
- Spray adhesive
- Finish, such as acrylic paint or Danish 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

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By Dave Van Ess

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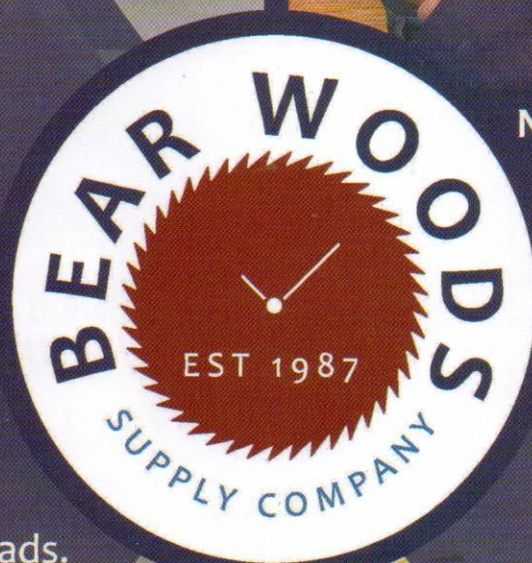
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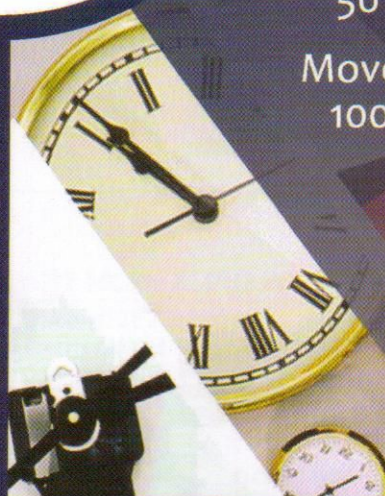
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C Outer upright
Cut 2
 $\frac{3}{4}$ " thick

D Inner upright
Cut 2
 $\frac{5}{8}$ " thick

P

P

O

P

Base
decorations

Bottom
trim
K

G

F1

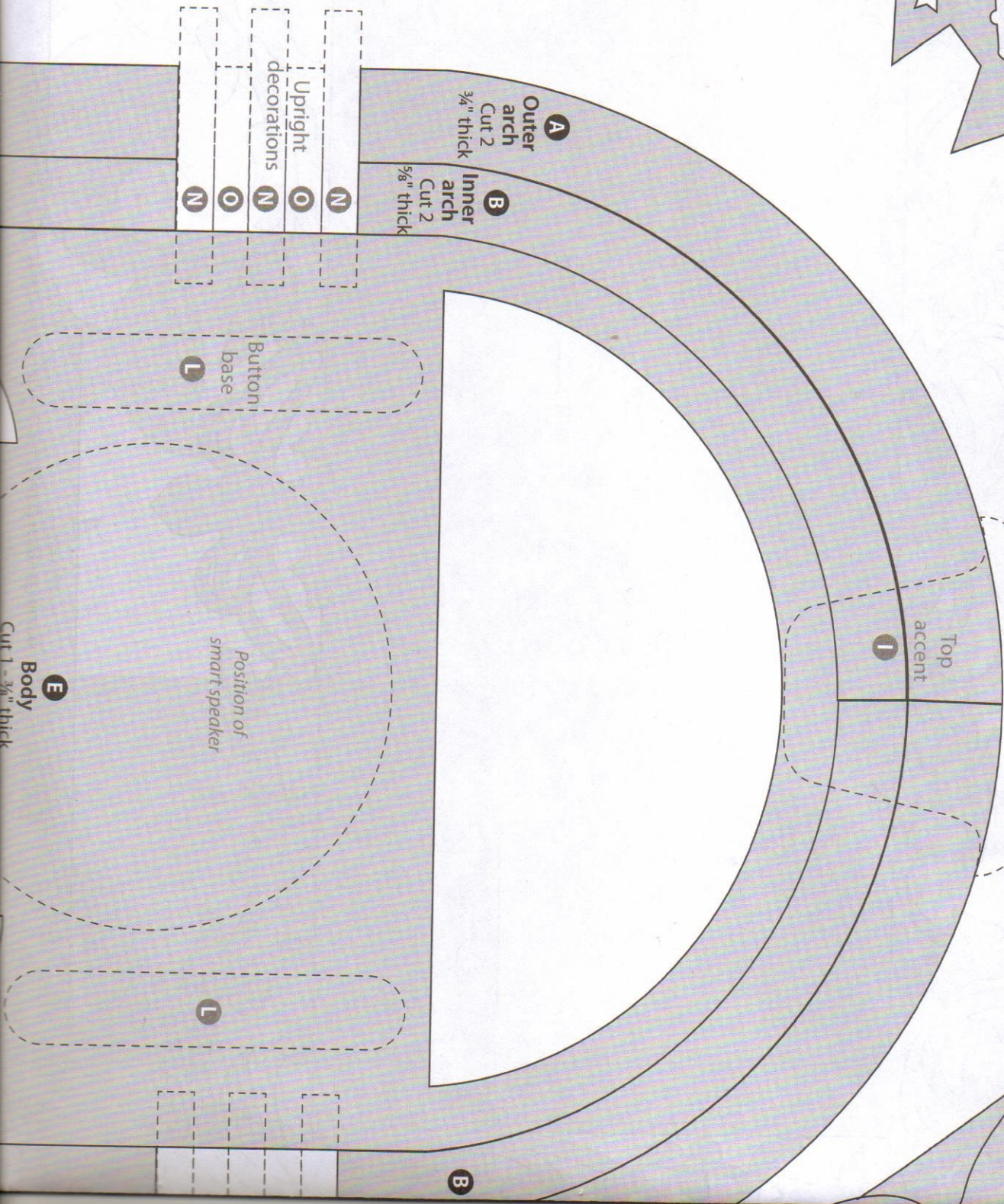
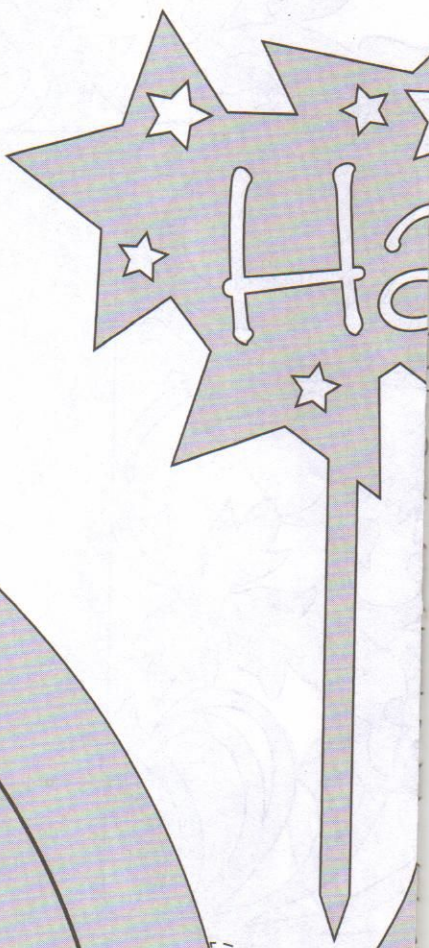
H Grill

F2

G

F1

D



A

Outer arch

Cut 2

3/4" thick

B

Inner arch

Cut 2

5/8" thick

D

Top accent

C

E

Body

L

Button base

N

Upright decorations

O

N

O

N

Cut 1 - 3 3/4" thick

L

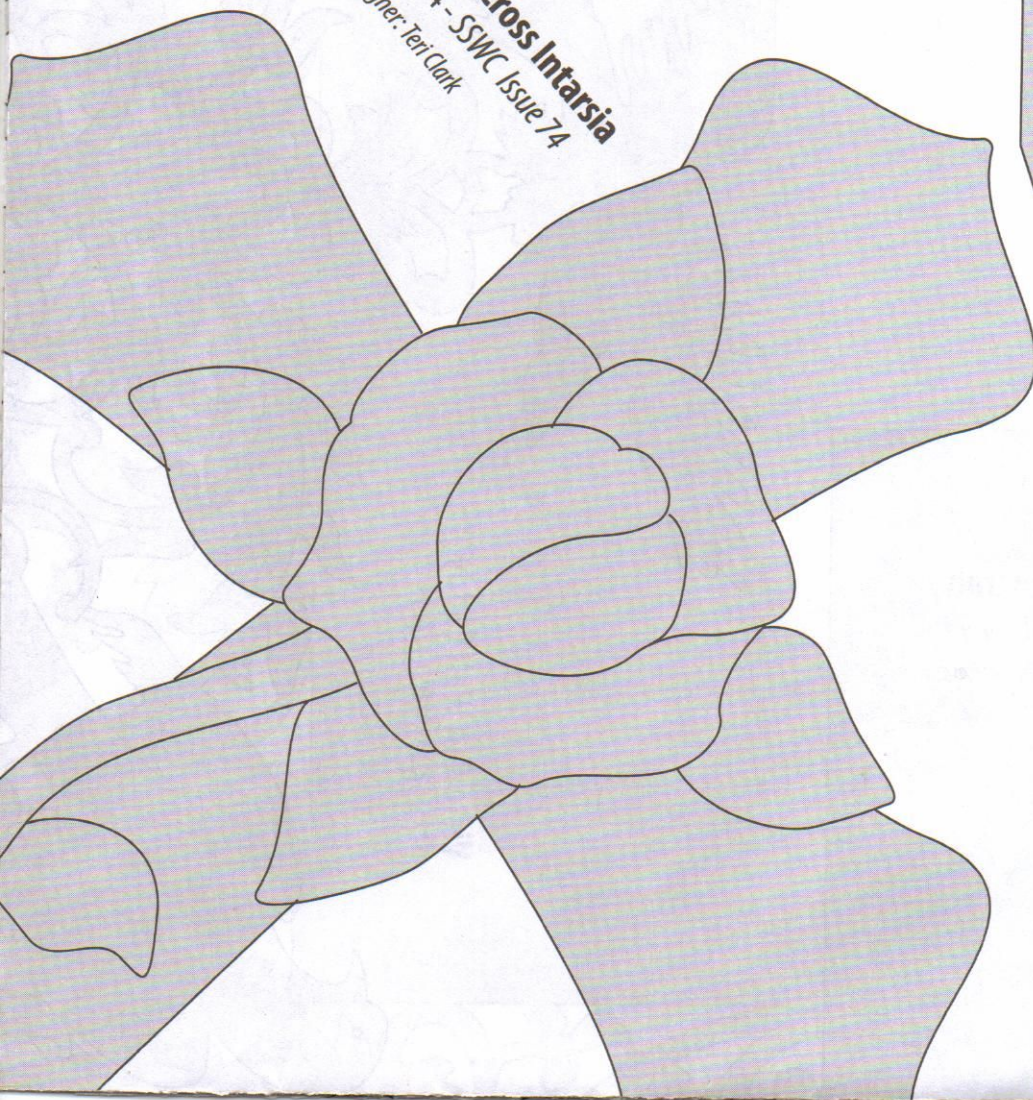
Cake Toppers

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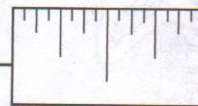
Designer: Jon Deck



Rose & Cross Intarsia
Page 24 - SSWC Issue 74
Designer: Teri Clark

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One inch

124

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Chinese Dragon Puzzle	20	Elegant Serving Tray	34
Rose & Cross Intarsia	24	Model Seaplane	41
Victorian Wall Caddy	26	Wide-Eyed Fish Puzzle	48
The Language of Love	30	Cake Toppers	50
Gotta Have Hearts	32	Playful Pup Portrait	54
		"Smart" Jukebox Intarsia	57

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The Language of Love
Page 30 - SSWC Issue 74
Designer: Mareike Grün



35

P

Q

P

P

C



**Elegant
Serving Tray**

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Designer: Sue Mey

"Smart" Jukebox Intarsia

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Designer: Homer and Carol Bishop

R

Backing board
Cut 1 - 1/8" thick

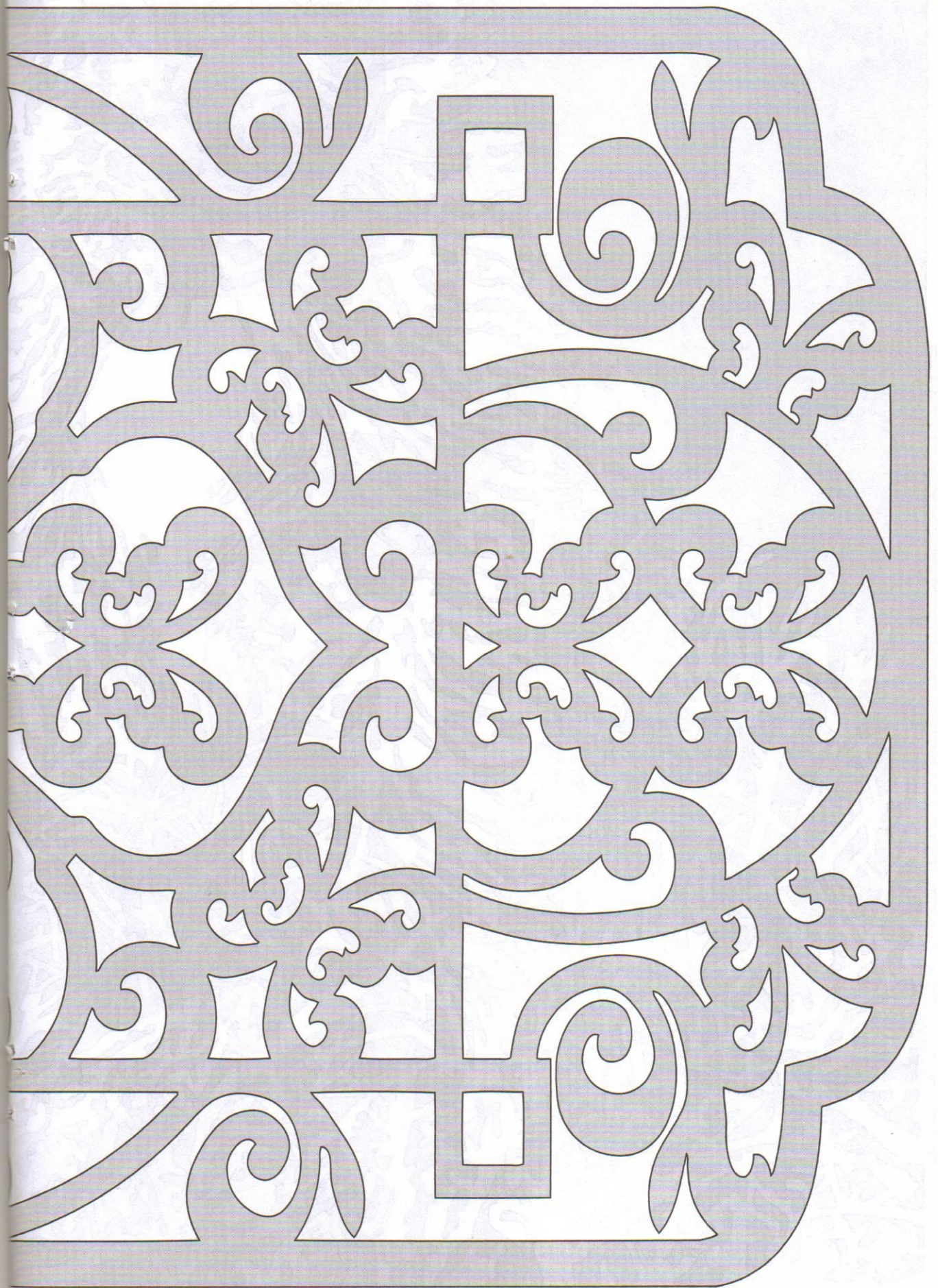
Ab

N O N O N

A

A7

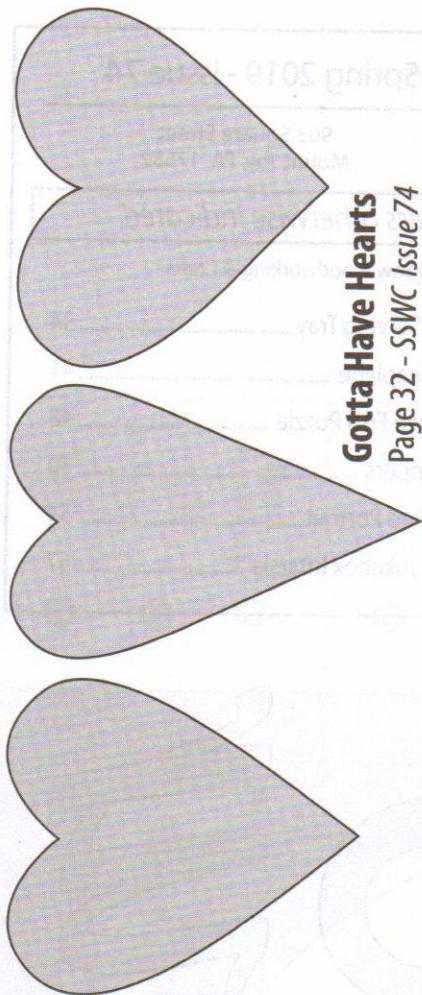




Gotta Have Hearts

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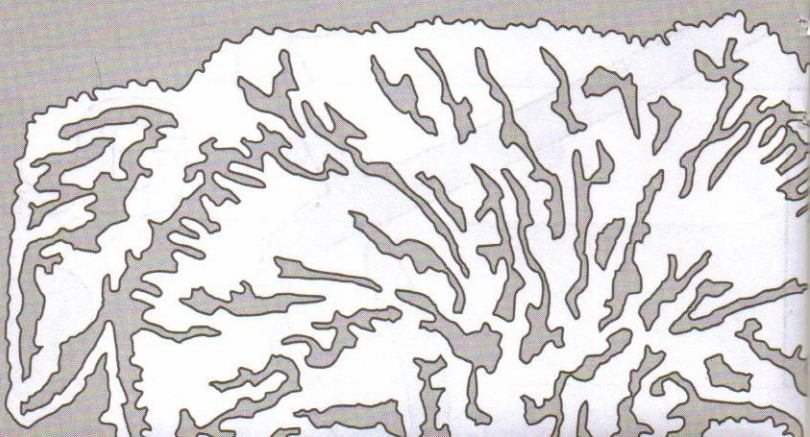
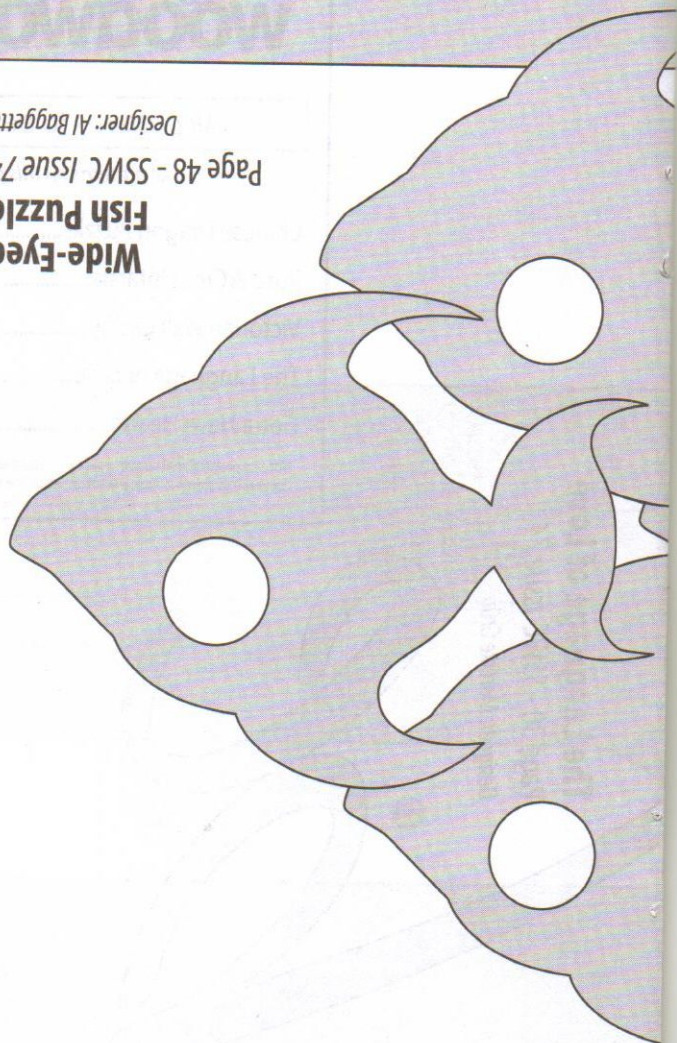
Designer: Mareike Grün



**Wide-Eyed
Fish Puzzle**

Designer: Al Baggetta

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Playful Pup Portrait

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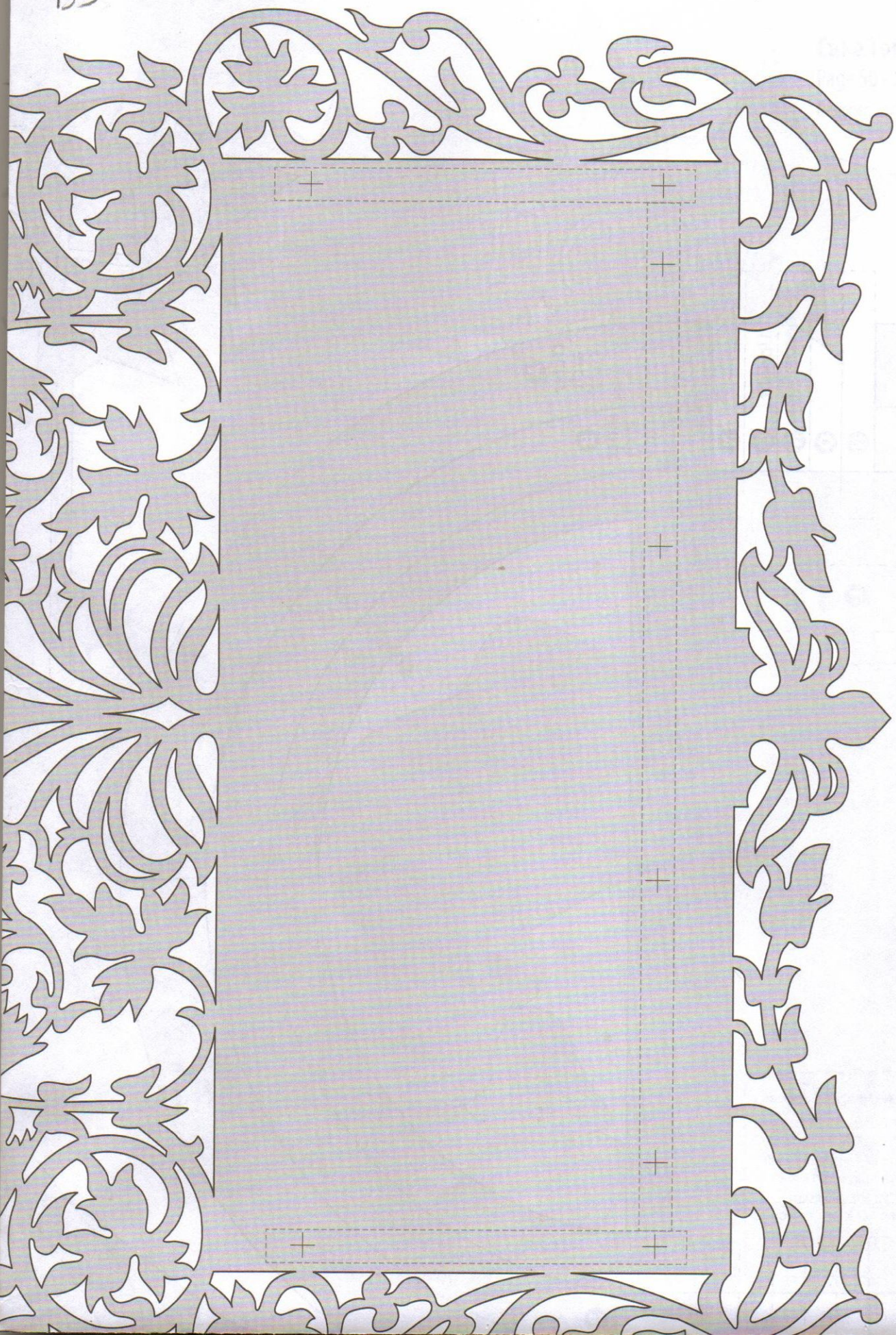
Designer: Charles Hand

Victorian Wall Caddy

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Designer: John A. Nelson

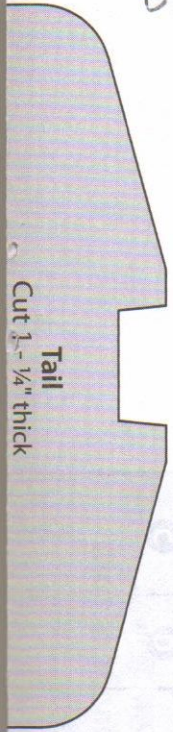
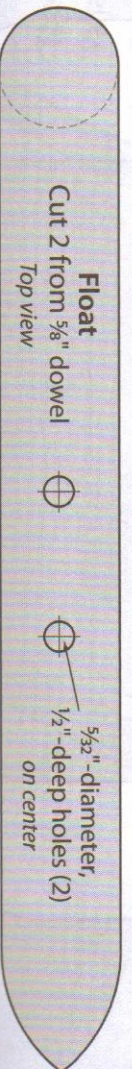
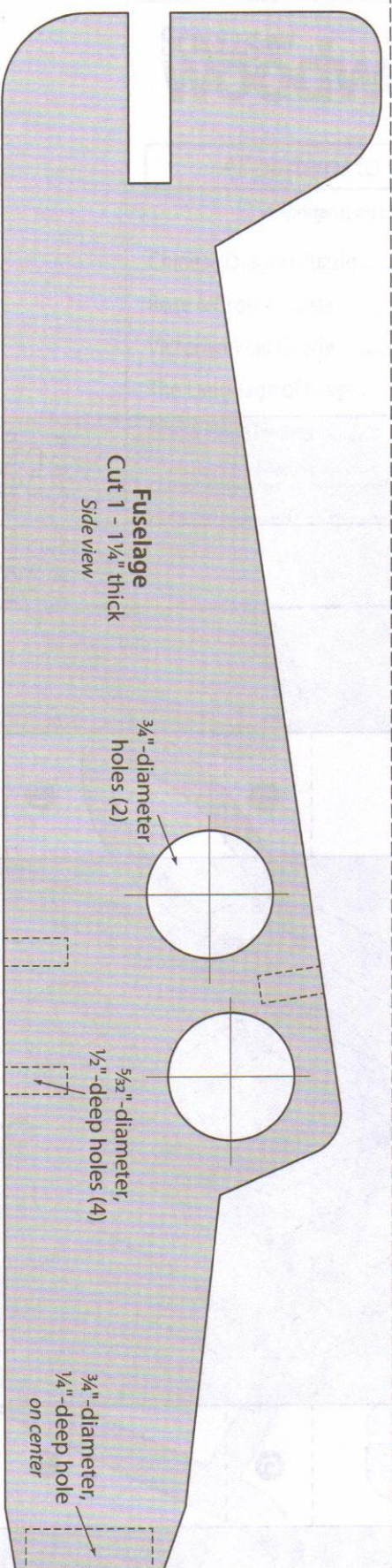
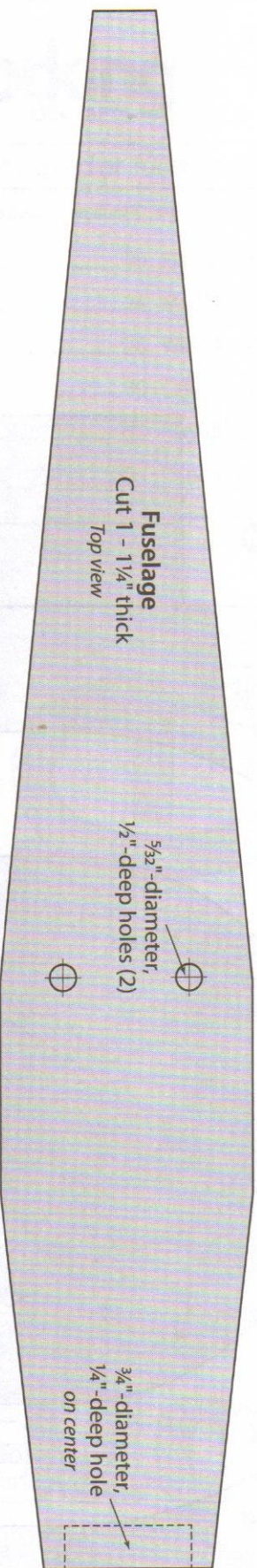
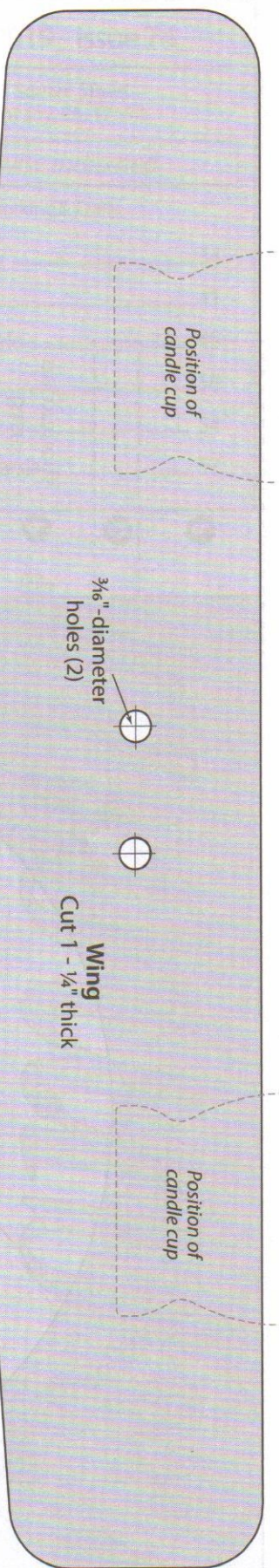




45°

Float
Cut 2 from $\frac{3}{8}$ " dowel
Side view







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**Chinese Dragon Puzzle**

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Designer: John A. Nelson