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SUMMER 2017
ISSUE 67

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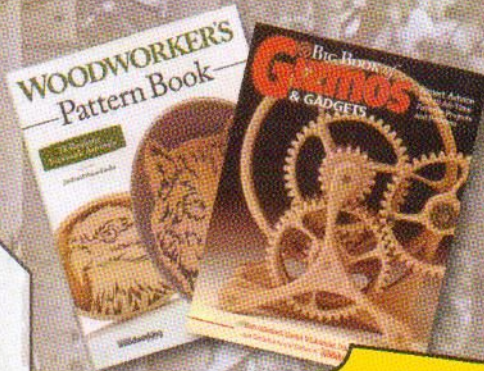
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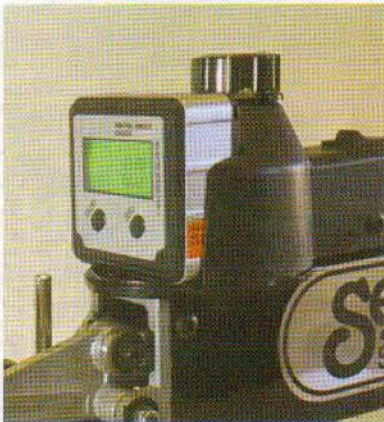
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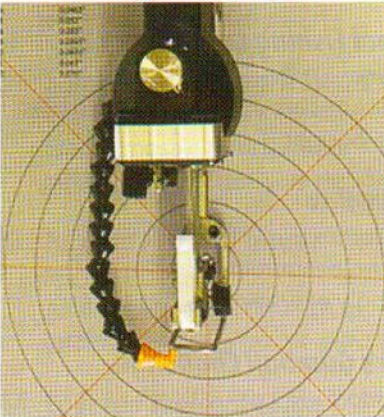
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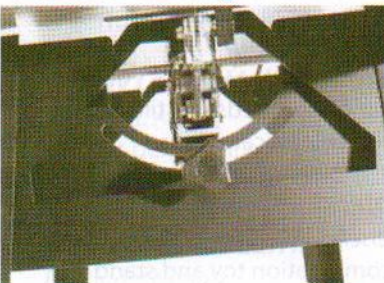
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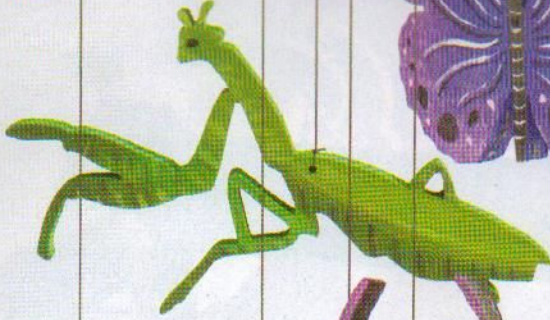
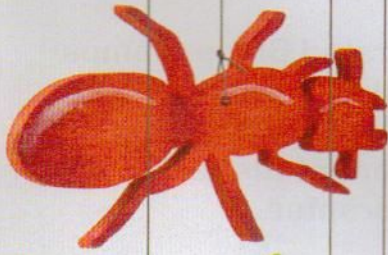
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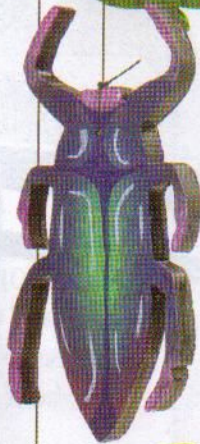
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Learn how to make a realistic mane for a magnificent lion

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• Online Exclusive! Meet the Artist

Barrie Casement "saw" Manhattan's St. Patrick's Cathedral in a unique way

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Po-saw-bilities!

Holy cow, two new saws in one year! We had no sooner received and begun testing the saw from Jet when we heard rumors of the one from Seyco. What a pleasure! Three of us spent days cutting different kinds of projects, using various types and thicknesses of wood, sizes of blades, scrolling techniques, and head angles. We sawed, made notes, compared thoughts, vacuumed up sawdust, and, on one notable occasion, I smashed a finger pretty good. We discussed, debated, revisited, and revised.

But, after all that, we don't—can't—tell you which saw is best. They both use some time-honored design features and they both make some innovations. They are each good at some types of cutting and challenged by others. They both have possibilities, but the best saw depends on you, on the projects you like to make, and on the way you use a saw. We'll give you the data, but you'll have to decide for yourself. You'll find our review on page 16. We'd love to hear your thoughts on both saws on our forum (forum.scrollsawer.com) or Facebook page (www.facebook.com/SSWmag).

Next, lath art. Who knew?! The first time John Nielson brought the idea to our notice, I'll admit we declined. We'd heard it was popular in the 1960s but didn't last. Ah, but fashion is cyclical. The next thing I knew, I was practically tripping over lath art scenes online, in friends' photos, and in person. When John asked again, I was happy to say yes. If you've never tried intarsia because of the sanding, take a look at lath art—especially if you like making puzzles. Our project is on page 20.

There are plenty more fun possibilities in this issue. We painted Sue Mey's welcome sign (page 44) and Tom St. Aubin's insect mobile (page 56), but you can do them in hardwood if you prefer. Theresa Ekdorf backed her swan silhouette (page 36) in white wood; I've been thinking of doing a version with a painted acrylic backer so it looks like stained glass. Ronald Nelson's earrings (page 66) were inspired by compound-cut Christmas ornaments; grab that idea and run with it. And Bob Gilsdorf specifically invites you to reimagine his Gumball Challenge (page 46) and send photos—we're working on a book with Bob and would love to include a gallery of your snapshots.

One final note. We include metric conversions for our international readers—in millimeters, because we were told that's how people overseas do woodworking. But I can't believe anyone would choose to measure 1,000 millimeters instead of 1 meter. Or even 152 millimeters instead of 15.2 centimeters. The world uses the metric system because it's easy and logical, and we've been making it hard. No more! Starting with this issue, we have centimeters and meters. In this one we still have millimeters for measurements up to 100mm, but they'll be updated to centimeters next time. (Don't worry, the inches are staying exactly the same.)

Have fun, be safe, and keep in touch!

M Kinsey
Mindy Kinsey
Kinsey@FoxChapelPublishing.com

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

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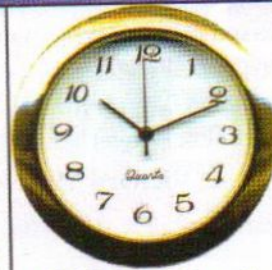
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Scrolling Inspiration

I enjoyed the article "Creative Projects from Coloring Books" in *Scroll Saw Woodworking & Crafts* Spring 2017 (Issue 66). I made this project based on a coloring page from *Color-by-Numbers Masterpieces*. I cut the pieces from $\frac{3}{8}$ " (10mm) poplar and then used TransTint® Dye to color the pieces before gluing them back together.

Richard MacDonald
Austin, Texas



I recently read the article "Creative Projects from Coloring Books" in *Scroll Saw Woodworking & Crafts* Spring 2017 (Issue 66)—I too use coloring book pages for inspiration! I often use the free images at www.colorings.net to make intarsia patterns.

Don Mundy
Bethel, Ohio

Coloring books provided the inspiration for these projects made by our readers.

I loved your article "Creative Projects from Coloring Books." Your magazine arrived one week before we were having a Certified Zentangle Teacher, Suzanne Wilka, come to San Diego Seaside Scrollers to do a program on pyrography. What amazing timing.

I have used Dover coloring books for several years to do scroll saw marquetry; I took classes from Ken Cowell. The iris was taken from *Botanical Gardens Coloring Book* by Dot Barlowe. The cactus (Elpiphyllym) is from *The Cactus Coloring Book* by Stefen Bernath.

Evie Aring
El Cajon, Calif.



Fox Hunt

Nicole Baker of Lamoni, Iowa, and William Kluckhohn of Meridian, Idaho, were randomly drawn from the participants who located the fox in our last issue (Spring 2016, Issue 66). The fox was hiding in the bark beneath Woodrow the Woodpecker's tail on page 37.

Find the fox in this issue, and tell us the page number and location. Two readers randomly selected from all correct replies will receive a \$25 Fox Chapel Publishing gift certificate. Entries must be received by May 18, 2017, to be eligible. *NOTE: The contest fox is an outline drawing that would face left if his feet were on the "ground" (other foxes appearing in SSW&C don't count).*

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

Write To Us!

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



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1 Angelika Neth
Oerlinghausen, Germany
 Angelika Neth made this kestrel with a pattern from Kathy Wise's book *Woodworking the Wise Way*. Angelika used walnut, maple, smoked oak, mulberry, and red cedar. Because scrolling is not popular in Germany, Angelika and her husband set up a website for other German, Swiss, and Austrian woodworkers to use and learn from. Visit Angelika at www.scrollsawprojects.net.



2 James Bowman
Amboy, Ind.
 James Bowman got the idea to make this hat when he read "Basket-Weave Bowl" by Carole Rothman in *Scroll Saw Woodworking & Crafts* Fall 2016 (Issue 64). The hat, 5" by 11" by 13" (12.7cm by 27.9cm by 33cm), is made of poplar and walnut and finished with wipe-on poly.



3 Homer & Carol Bishop
Streator, Ill.
 Homer and Carol Bishop made this mountain landscape from scrap pieces of vinyl floor tile. The piece is 10" by 17" (25.4cm by 43.2cm). Contact the Bishops at hcbishop2005@yahoo.com.

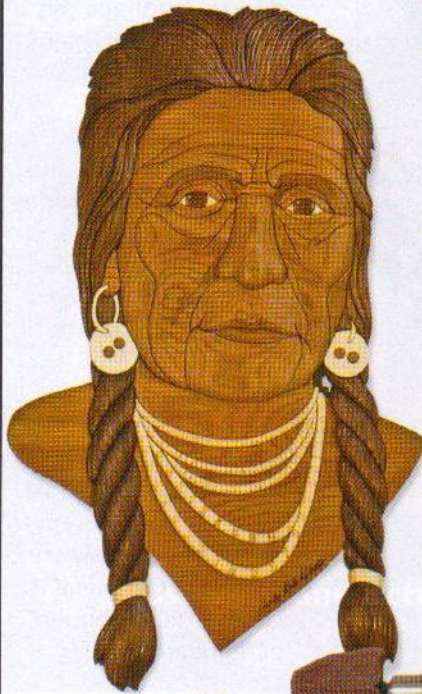
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Peter Stein, Assistant Fire Chief, Grand Island, NY



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4

4 John and Sandy Black
San Antonio, Texas
 Sandy and John Black worked together to design and shape this Marine Corps emblem for two veterans. It's made from aspen, western red cedar, yellowheart, alder, and redwood. A local trophy shop embossed the words "Semper Fidelis." Visit the Blacks online at woodartbyjohnblack.com.

5 Allen Del Sordo
Williamstown, N.J.
 Allen Del Sordo used a Volker Arnold pattern to scroll this birch plywood design. In German it is called a "lichterbogen," or "light arch."

6 Phillip Brown
Brandon, Miss.
 Phillip Brown made his own version of Paul Meisel's autograph toy from *Scroll Saw Woodworking & Crafts* Winter/Spring 2016 (Issue 62) using pine. Phillip added headlights and taillights made from painted button plugs. Contact Phillip at pbjenterprises@comcast.net.



5



6

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.

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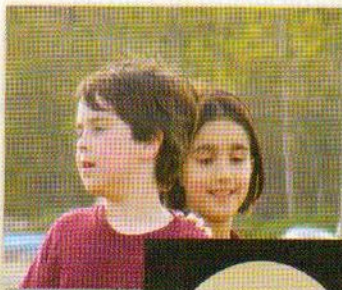
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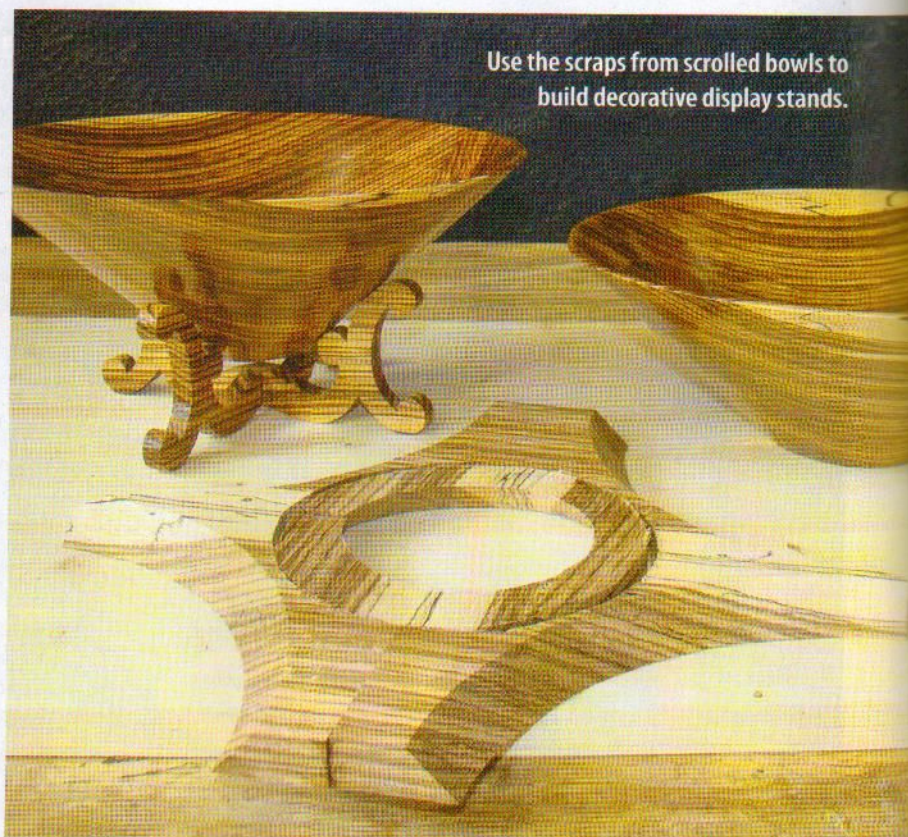


Decorative Bowl Stands

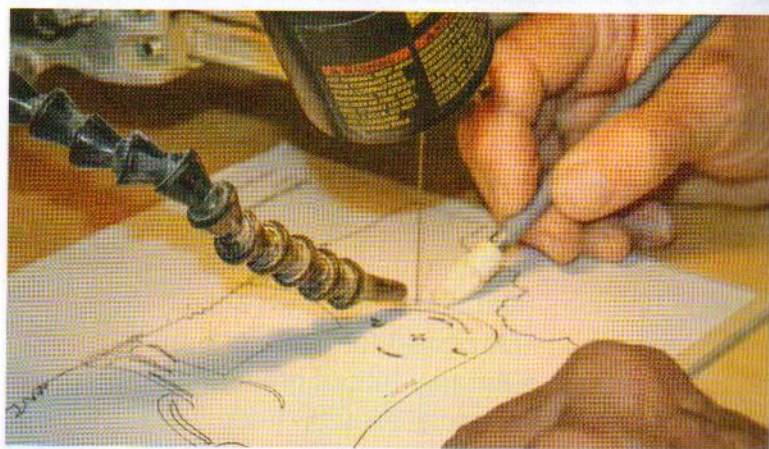


When making bowls, don't throw away your scraps, but instead use them to make a bowl stand. Take the four scrap pieces left from cutting out the base of a bowl, turn the four corners 180°, and glue them together. Mark the base of the bowl onto the wood and cut it at a 45° angle. Alternatively, make decorative legs for the bowl from 3/8" (10mm) wood.

Rick Bartels
Prairie du Chien, Wis.



Use the scraps from scrolled bowls to build decorative display stands.



Keep fingers a safe distance from blades with a slip-on eraser.

Sacrificial Finger

To keep your skin away from the blade, use a slip-on eraser on an unsharpened pencil. The eraser is small, grips the wood, and is much easier to replace than your fingertips.

Don Nichols
San Antonio, Texas

Clamping Tips

A clamp is a very helpful tool to use when scrolling. Here are some tips for using a clamp to its best advantage. Clamp a piece at its ends and not along its length, because clamping along the length of a project can cause the saw kerf to compress and bind the blade. Use wood that is flat and square to make a clamp, and make sure the bolt holes are aligned so the clamp rests flat on the scroll saw table. Chamfer the corners of a clamp and wax the surfaces to reduce friction against the saw table. Glue sandpaper to the sides of a clamp to increase gripping strength. And finally, make sure a project is pressed flat against the scroll saw table before tightening the clamp.

Dan Urban
Glen Ellyn, Ill.

A clamp can aid the scroller in many ways.



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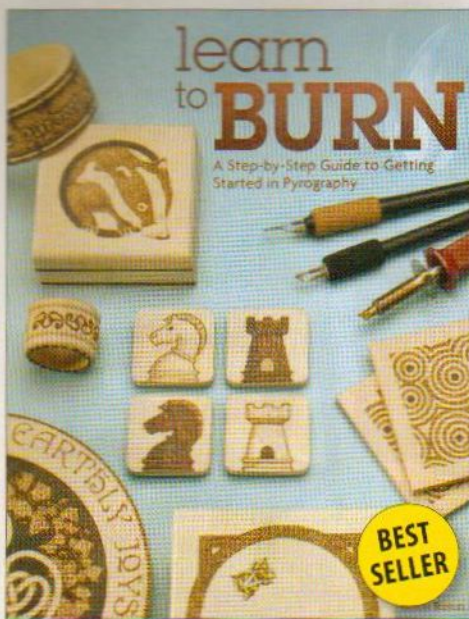


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Summer Scroll Saw Shopping Guide

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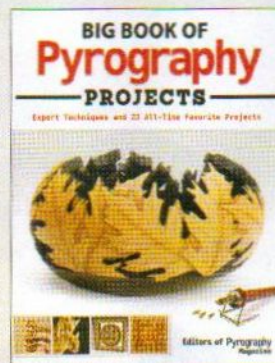
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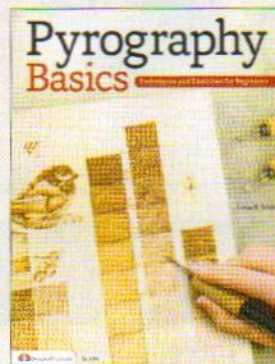
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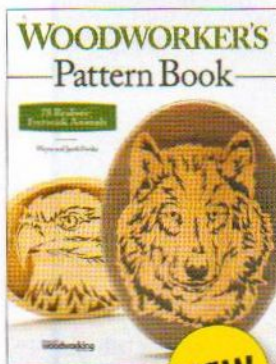
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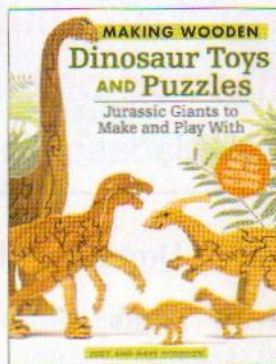
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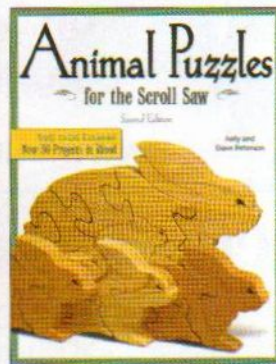
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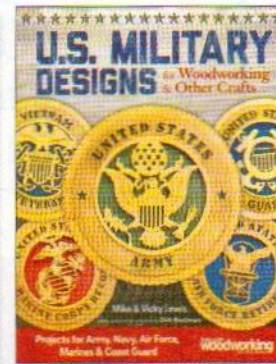
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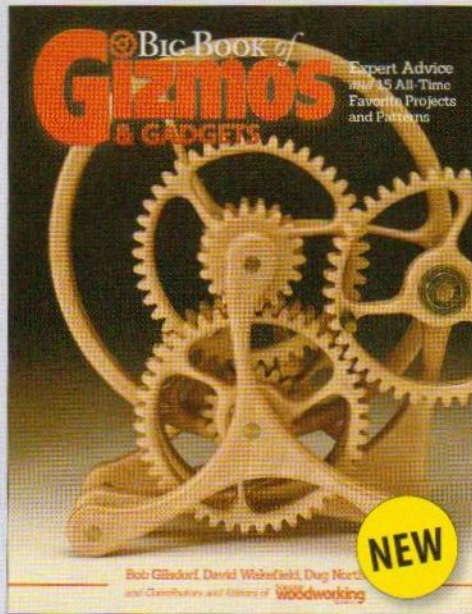
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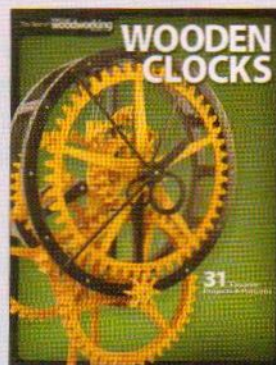
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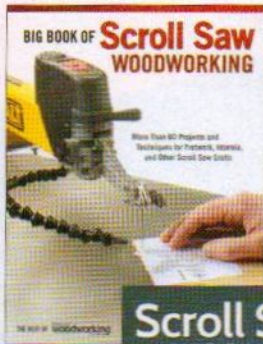
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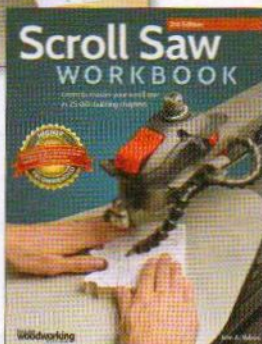
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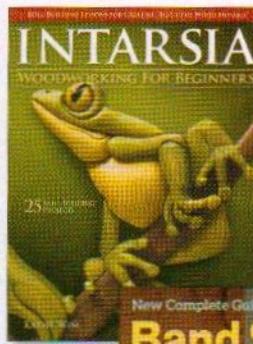
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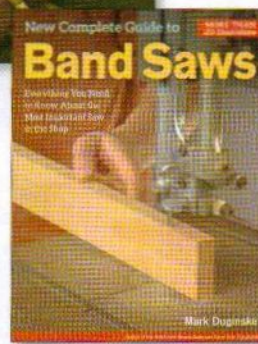
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Jet JWSS-22b

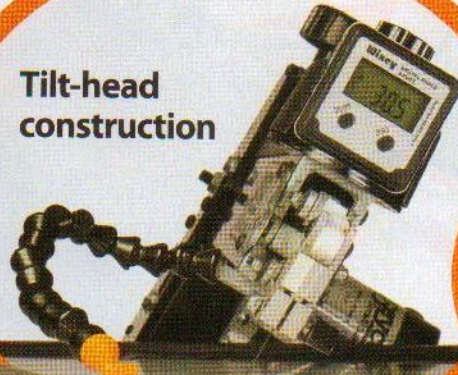
Scroll Saw



Features We Love on BOTH Saws

Both saws have similar basic features that make them easy to use. Of course there are differences in the details—check out the descriptions on the following pages for more info.

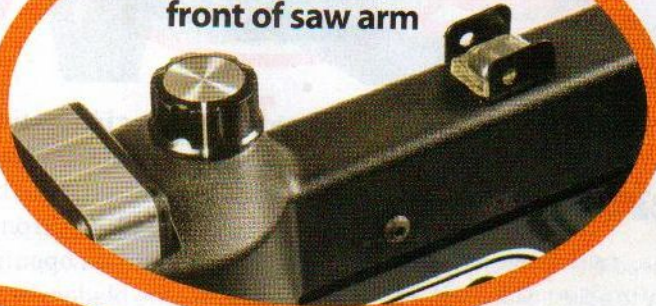
Tilt-head construction



Lift-up saw arm



Controls at top front of saw arm

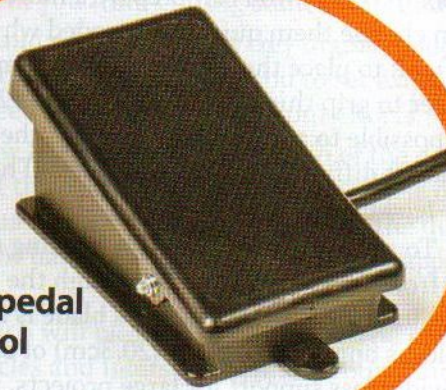


Seyco ST-21

Scroll Saw



Foot pedal control



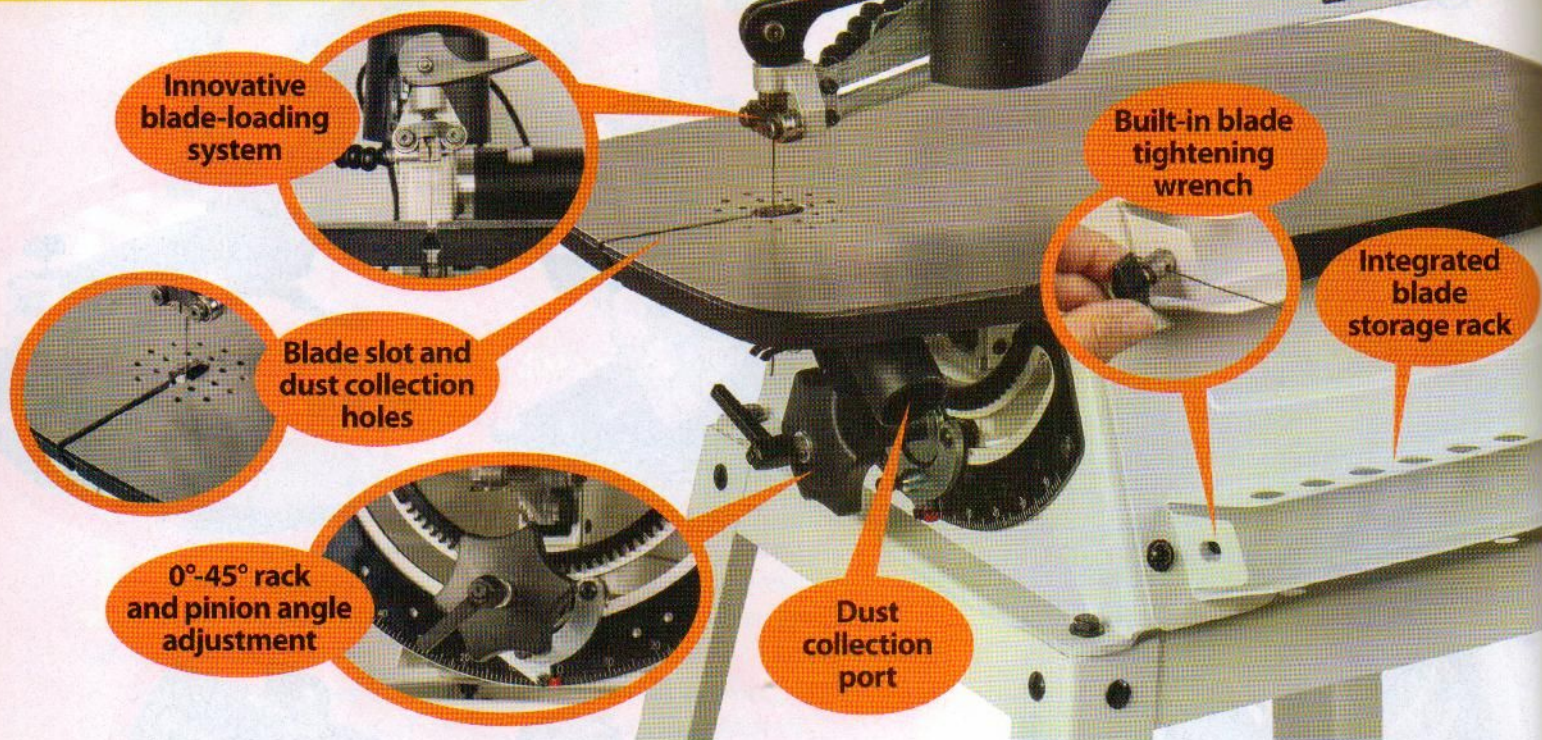
Automatic blade tensioner



Four position adjustable height legs



Jet JWSS-22b Scroll Saw



Perfect!

- The head tilts 45° each way and is easy to adjust with a rack and pinion system for cutting bowls and other angled projects.
- Built-in dust collection port helps keep your workspace cleaner.
- The quick-change blade system works well with same-size blades.

But...

- Can't top feed the blade.
- Can't cut wood thicker than 1 1/4" (32mm), which is challenging for some compound, boxes, and intarsia projects.
- The blade holding system is finicky when switching between fine and large blades.

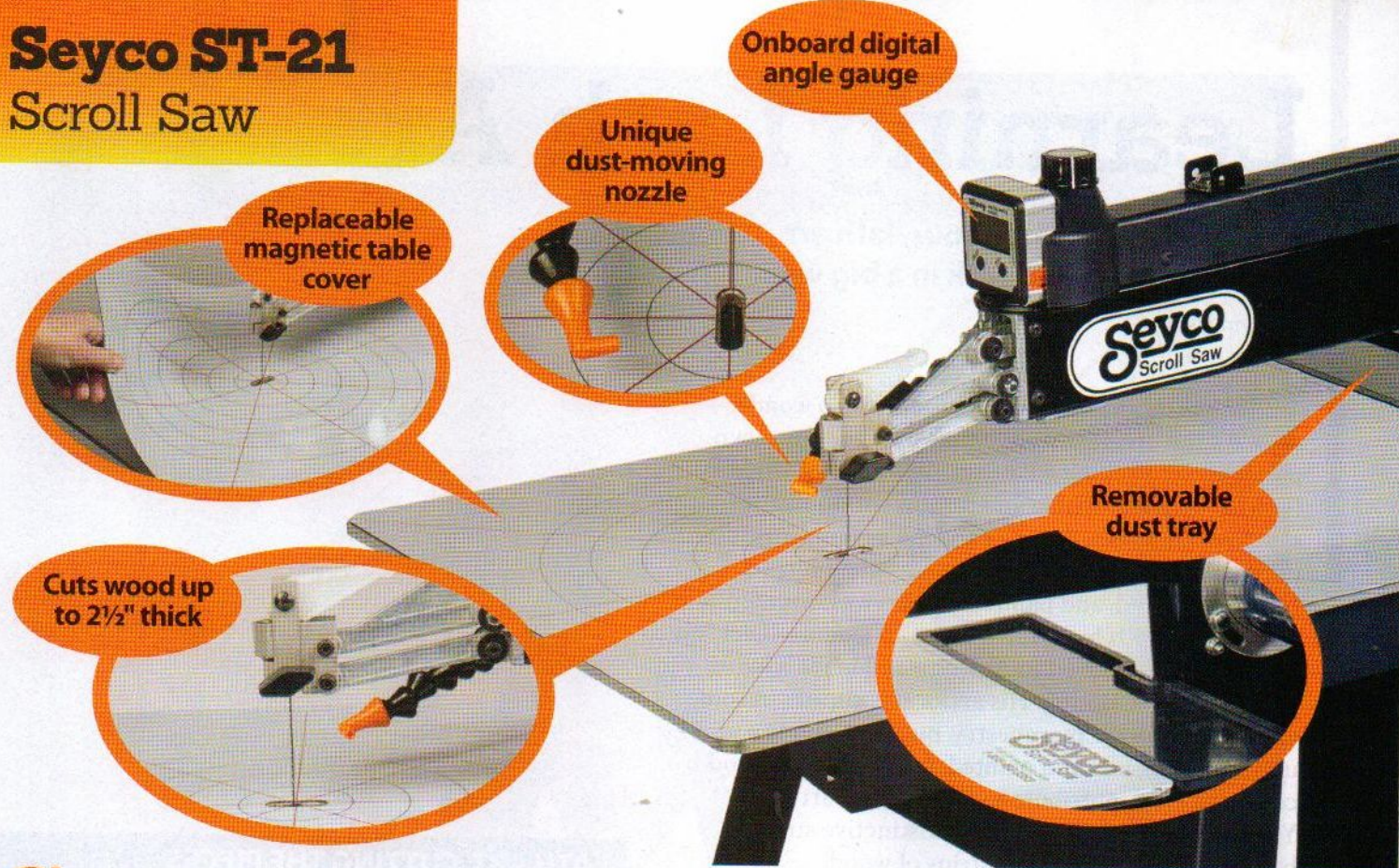
Jet's major innovation is a quick-change blade holding and tensioning system. The saw has a removable bottom holder that you remove to insert a blade using a fixture built into the saw. Then you replace the holder, sliding the vertical blade through a slot in the table. The magic happens at the top: the blade fits into an opening with an attached lever that automatically grips and tensions the blade when engaged—no thumb screws or fiddling with a tension knob. In theory, you can prepare a number of blades and holders in advance and then change them quickly as needed while sawing. In practice, we found it very difficult to place the blade in the bottom holder correctly and to get the top holder to grip thin blades, such as the #2/0 blades we used to cut thin plywood. It's possible to adjust the setscrew in the top chuck to grip small blades, but that makes it difficult to use large blades. The system also makes it impossible to top-feed blades.

To accommodate the blade holding system, Jet moved the blade closer to the front of the saw table. Although the table is similar in size to those of other saws in our workshop, the Jet's blade is about 4" (10.2cm) from the front of the table, as opposed to the 8" (20.3cm) of other saws. This thinner strip of table provides less support for large projects, requiring us to press harder on the blank to keep it flat on the table or risk angled cuts.

Overall, we enjoyed using the Jet. It cuts smoothly and with a minimum of vibration, and its power and speed were sufficient for all of our tests. Our quibbles were few—one user didn't care for the slot in the table, and another didn't like the foot pedal. However, scrollers who use a wide range of blade sizes, top feed, or cut thick wood should test the saw thoroughly to make sure it meets their needs before investing.

The MSRP for the Jet JWSS-22b is \$1,080. Visit www.JetTools.com to find a retailer.

Seyco ST-21 Scroll Saw



Created by Ray Seymore of Seyco, who has been selling Excalibur saws since 1986, this saw is intended for scrollers and has features designed specifically for these woodworkers.

Most notably, when equipped with special blades, the Seyco saw can cut wood up to 2½" (64mm) thick, which far outstrips most scroll saws. However, this comes at a cost: the head will only tilt 30° in either direction. The saw is therefore valuable for folks who cut thicker wood but can prevent you from cutting some bowls and vases.

In addition, this saw has a niche for and comes with a Wixey digital angle gauge, as well as a small engineer's square. The two combined allow you to set exact angles, but in practice, we found the reaction speed of the gauge slowed our efforts.

Unlike most scroll saws, the Seyco saw has a 90° angle on the tip of the dust blower. This required each of us to adjust the position of the blower because our standard positions didn't work. Some of us found a sweet spot that kept the dust off the line without blowing it into our eyes or hands, but others were never happy with the angled blower.

Top feeding is easy with this saw, which will please fretwork fans. The magnetic table cover is marked with concentric circles and intersecting lines around the blade hole that make finding the hole easier when it's covered by the project. (The cover also allows wood to slide easily and protects the saw table from scratches and corrosion.) The table supports blanks of any size. Instead of a dust collector, the saw has a removable dust tray at the back of the saw; we didn't find it overly useful.

We expect many types of scrollers to enjoy the Seyco Saw, although the reduced cutting angle of the head may hamper some. However, this saw's features—especially the ability to cut thicker wood and the digital angle gauge—may help it find an audience outside the hobby, as well.

*The Seyco Saw is available for \$1,153 from Seyco, www.seyco.com.
The saw is only shipped to North America.*

Perfect!

- Cuts wood up to 2½" (64mm) thick; great for compound projects, intarsia, boxes, and cutting thick stacks.
- The large table, bullseye mat, and top-feeding blade make cutting fretwork easy.
- Comes with a design-incorporated digital angle guide.

But...

- The head tilts to 30° on each side, making it challenging to cut the larger angles needed for some bowls.
- The reaction speed of the digital gauge hampers adjustments to the head tilt.

Learning Lath Art

Invented during the 1960s, lath art is fun & easy—and back in a big way

By John Nielsen

Lath art is making a comeback, and no wonder—it's fun and relatively simple to make your own patterns (see Making a Pattern, page 24), the wood (lath) is widely available and easy to cut on a scroll saw, and the finished piece can look as vintage or as polished as you like. The technique—making pictures from cut, pieced, and painted wood—was invented during the 1960s by a Dutch artist, Theodore “Dick” De Groot, who moved to America and made a living painting and sculpting. His artform is similar in some ways to intarsia or marquetry, but the wood is a uniform thickness and painted, so the natural wood color does not contribute to the finished artwork. You'll recognize lath art by the distinctive striped background formed by the strips of wood.

Getting Started

Lath is the thin strips of wood used to support plaster walls or build trellises and fences. You can buy lath at home improvement stores or cut your own $\frac{1}{4}$ " (6mm)-thick strips from 2x4s. Either buy or cut the lath *before* you copy the patterns; lath varies in width and you'll need to size the pattern to match. Choose lath that is thoroughly dry, straight, and free of large knots and pitch. Sand both sides with 60-grit sandpaper to remove any deep saw marks or burns. I use quarter-sawn lath for the veins in the flower petals, but you can use plain-sawn lath for the entire project. Don't use quarter-sawn lath for both the background and iris because strong lines in the background would compete with the lines in the flower.

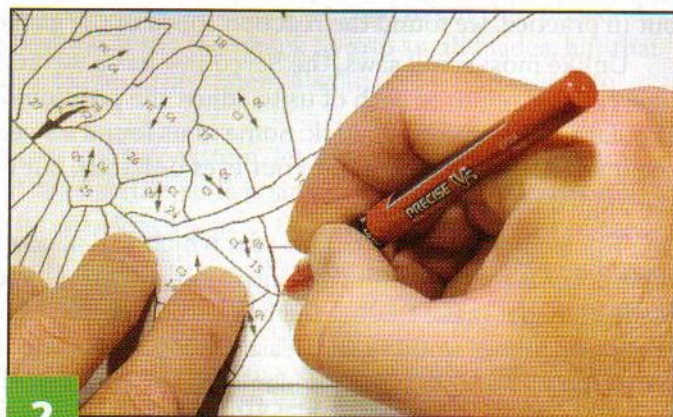
Quarter-sawn

Plain-sawn

LATH ART: CUTTING THE PIECES

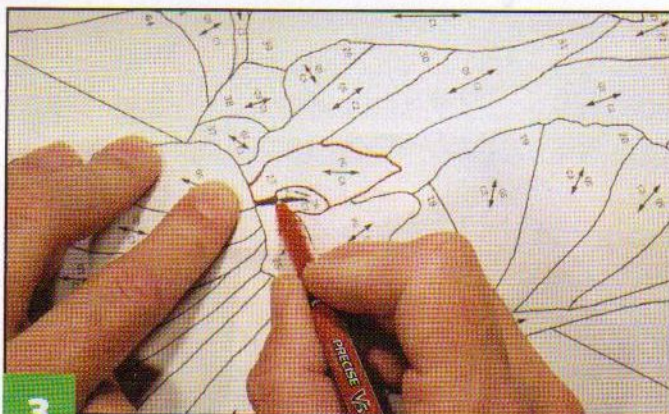
1 **Make three copies of the pattern.** If your lath is $1\frac{3}{8}$ " (35mm) wide, copy the patterns at 92% so the width of the background lines matches the width of the lath.

Use permanent adhesive to attach one copy to the tempered hardboard backing board. You will glue the cut pieces directly to the pattern-covered backing board. You will use one copy to trace the patterns onto the lath and use the final pattern for fitting the completed pieces before gluing.



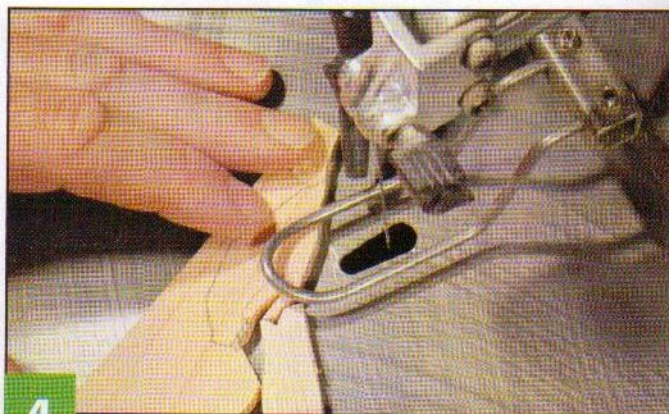
2 **Trace the background pieces onto the lath.** Fold the pattern along the bottom lines of the background pieces. Align a crease over the corner of the lath. Check the alignment by pulling the pattern tightly against the top and checking the other side. Insert the carbon paper between the pattern and the lath, making sure the carbon paper extends beyond the piece on all sides. Using an extra fine red or blue pen, trace the piece onto the lath. Use a clear straightedge to trace the outside line onto the lath.





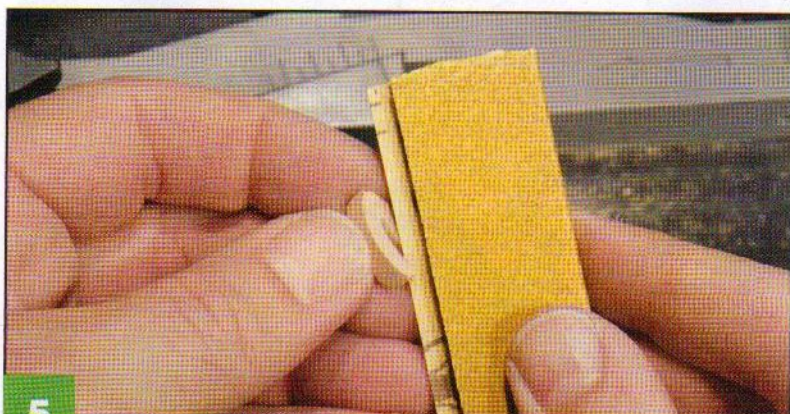
3

Trace the flower pieces onto the lath. All of the flower pieces will fit within the width of the lath. Align the arrow on the pattern with the grain direction on the lath. Use light, even pressure to trace the patterns onto the lath. Avoid retracing a pattern. If you stray from a pattern line, lift the pen and start at the beginning of the stray.



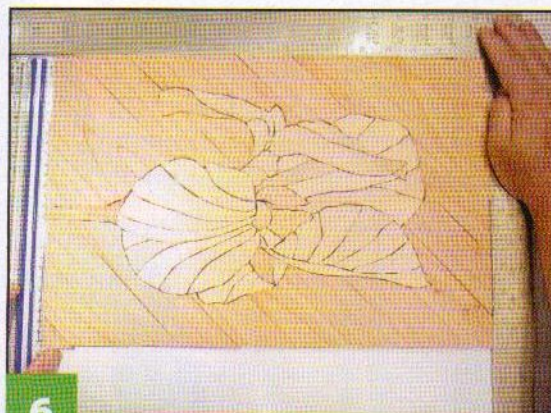
4

Cut the pieces. Use a #2/0 blade for intricate sections and a #5 reverse-tooth for less intricate pieces. I use a small scrap of wood as a "finger" to give me extra control without getting too close to the blade. Cut on the line, but the pieces in lath art will not fit exactly no matter how carefully you cut. As long as you trace the same line onto adjacent pieces, you will be okay. Place each piece on the fitting pattern as you cut them.



5

Smooth the pieces. I use a sanding bar (see tip, below). Place each piece on the fitting pattern and check that the entire piece is on or inside the lines. Mount a rotary tool on a router table and use a small sanding drum to sand down areas that protrude beyond the line, or use a sanding bar. Use a flap of sandpaper to touch up hard-to-reach areas. Remove stray marks from the surface of each piece. Number each piece on the back.



6

Use a carpenter's square to anchor the top and one side of the artwork. Use a straightedge to gently tap the open side and bottom to force the pieces into position. Use a hobby knife to gently nudge uncooperative pieces into their designated spots, being careful not to mark the surface. Check the fit of each piece and sand as necessary.

Making a Sanding Bar

Apply permanent double-sided tape to both sides of a $\frac{1}{8}$ " by 1" by 6" (3mm by 25mm by 15.2cm) aluminum bar. Align one edge of a quarter sheet of sandpaper with the edge of the bar and press it firmly in place. Tightly wrap the paper around the bar and press it onto the second piece of tape. Do not fold the paper any further.

Use a straightedge to trim the excess sandpaper, leaving a $\frac{1}{4}$ " (6mm) flap of paper extending from the bar. The flap is just stiff enough to work in very tight spaces.



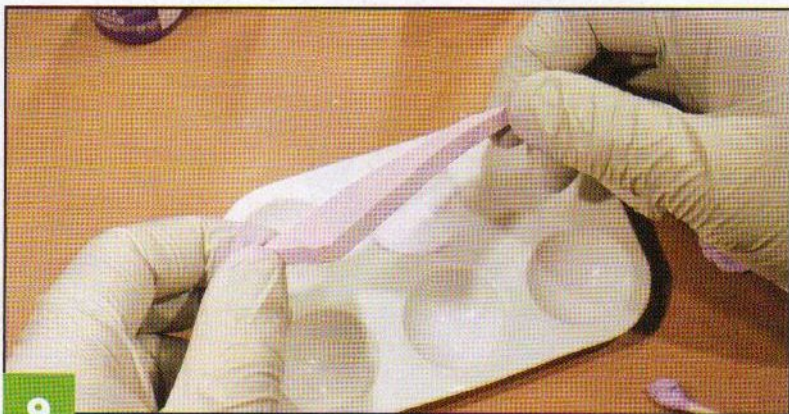
LATH ART: PAINTING THE PROJECT



7 **Thin the acrylic paints with water.** Hold the paint bottle vertically and squeeze gently to ensure uniform drops. Then, add drops of water based on the color key on the pattern. Stir the mixture, and then practice applying the paint to scrap lath to get a feel for how fast it dries. To lighten the color, dilute the mixed paint with water. Dilutions up to 50% give good results, but experiment on scrap material first.



8 **Apply the paint to the surface and all of the edges.** Use a moist cotton swab for the small pieces and a slightly moist paper towel for large pieces. Work quickly and apply a fairly heavy, uniform layer. Don't worry about the edges; just make sure there is some color over the bare wood. For best results, complete one piece at a time.

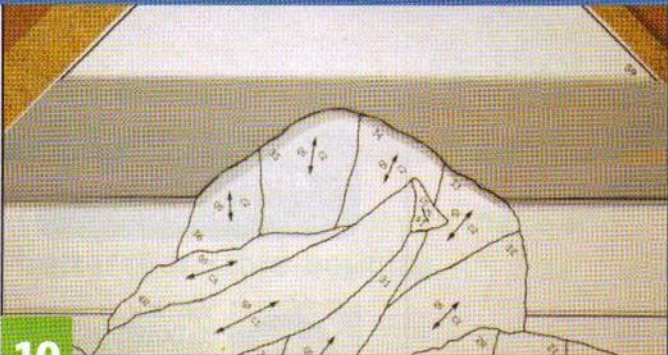


9 **Work quickly to remove excess paint from the surface.** Use a clean cotton swab or a paper towel (may be moistened). The finished product should have a uniform coating right to the edge. The coating may be thick or thin, according to your taste. A thick coat will hide the grain, while a thin coat will partially expose the grain.

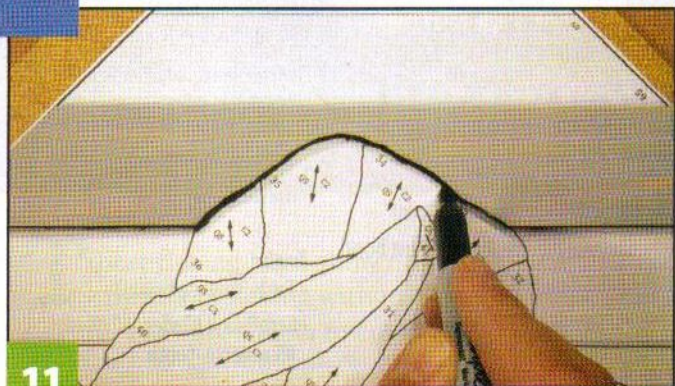
Gluing Order

Follow the glue order printed on the pattern. Begin with the piece under the number one and follow the arrow, gluing each piece in turn and ending with the piece under the arrowhead. Place each piece against a previously glued piece to check the fit. Use a hobby knife or the sanding bar to make corrections. Use a Sharpie to darken the edge where any paint has been removed. Be careful not to mark the finished surface with the Sharpie.

LATH ART: ASSEMBLING THE PROJECT



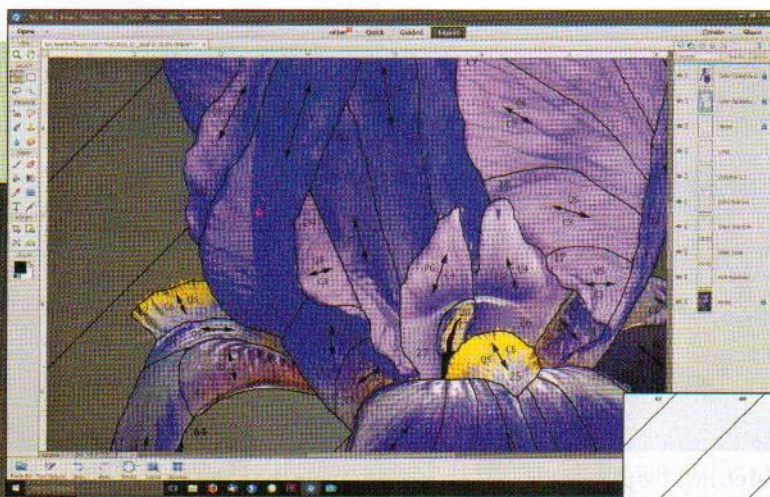
10 **Attach the background pieces.** Begin with piece 58. Go light on the glue to avoid squeeze-out. Place small drops of glue on small pieces. Carefully align the piece on the pattern. Make sure the entire piece is within the pattern lines. Take your time because the position of each piece directly affects the following piece. Allow the glue to set for a few minutes, and then outline the piece (see Step 11) before gluing the next piece.



11 **Complete the project.** Because the pieces don't fit together exactly, they will be outlined in white unless you darken the background. Use a permanent marker to outline each piece after you glue it. *Note: Don't outline the pattern before gluing because you will not be able to accurately set the pieces.* After you have glued and outlined all of the pieces, trim the finished work carefully with a table saw and add a frame.



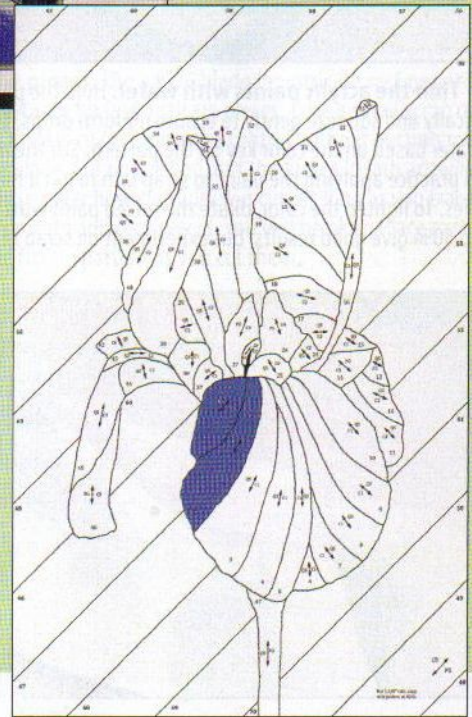
Original photo (taken in a studio setting).



Processing on the computer.

Making a Pattern

I created the pattern for this article from a photograph using Adobe Elements 13™, but you can use any photo software that supports layers and allows for basic drawing and adding text. Using the computer allows you to combine parts from many photos into a single pattern and rework areas as needed. You can use the software to scale the pattern and approximate the finished colors.



Finished pattern with color fill.

Materials & Tools

Materials:

- Patterns, full size: 3 each (copy at 92% if your lath is 1 3/8", or 35mm, wide)
- Lath, plain grain: 3 pieces 1 1/2" x 48" (38mm x 1.22m)
- Lath, quarter-sawn: 2 pieces 1 1/2" x 48" (38mm x 1.22m)
- Tempered hardboard, 1/8" (3mm) thick: 11" x 17" (27.9cm x 43.2cm)
- Spray adhesive: permanent bond
- Carbon paper
- Sandpaper
- Tape: painter's and double-sided repositionable
- Acrylic paint, such as DecoArt Americana: dioxazine purple, cadmium yellow, avocado, grey sky, snow (titanium) white, soft black

- Disposable gloves
- Wood glue, such as Titebond
- Cotton swabs
- Paper towels
- Permanent marker, such as Sharpie®: extra fine point, 2 each fine point
- Varnish, such as Kamar: matte finish

Tools:

- Table saw (optional)
- Scroll saw blades: #2/0, #5 reverse-tooth
- Carpenter's square: 24" (61cm)
- Rotary tool with small sanding drum (optional but convenient)
- Emery board or shop-made sanding bar

- Hobby knife
- Small palette or tray for mixing paint
- Straightedge: clear plastic
- Ballpoint or roller ball pen, such as Precise V5 RT extra fine (.5mm): red, blue, or black
- Brushes: fine-tip self-moistening

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

Pattern for **LEARNING LATH ART** is in the pattern pullout section.



John Nielsen has been combining lath art and photography for many years. He lives in Olympia, Wash. Contact him at john@lathartonthescrollaw.com.

Functional Fishing Lures



Functional lures are easy to make and better than store-bought

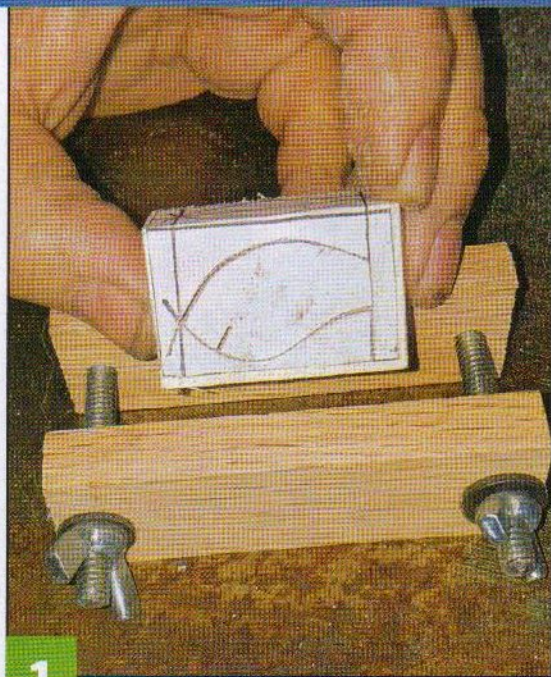
By Billy Allmon
Step photos by Scott Blackstock

These fishing lures allow me to combine my love of fishing with my love of scroll sawing. They are simple to cut and fun to finish.

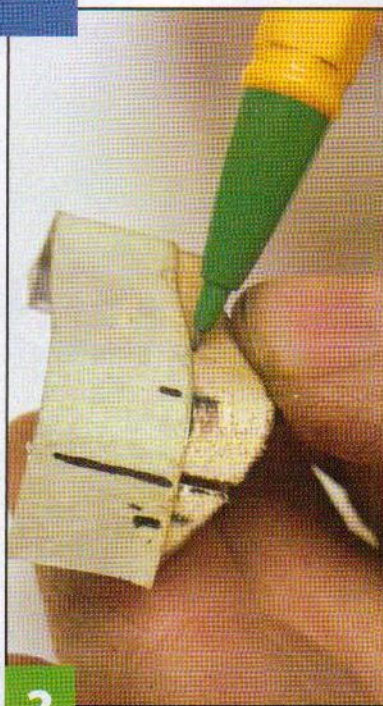
Getting Started

Cut the blank to size. Fold the pattern on the dotted line, apply glue to the back of the pattern, align the fold with the corner of the blank, and press it into place.

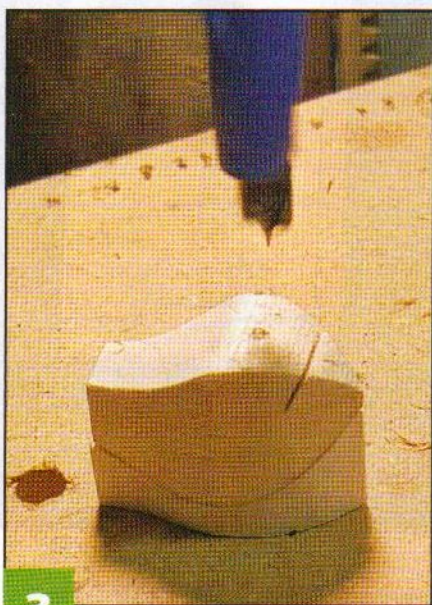
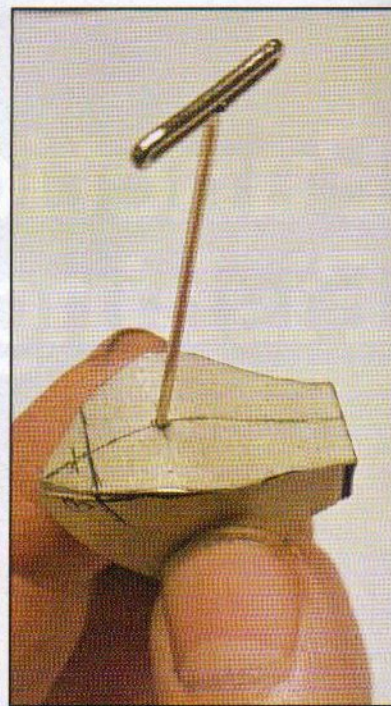
LURES: CUTTING THE SHAPE



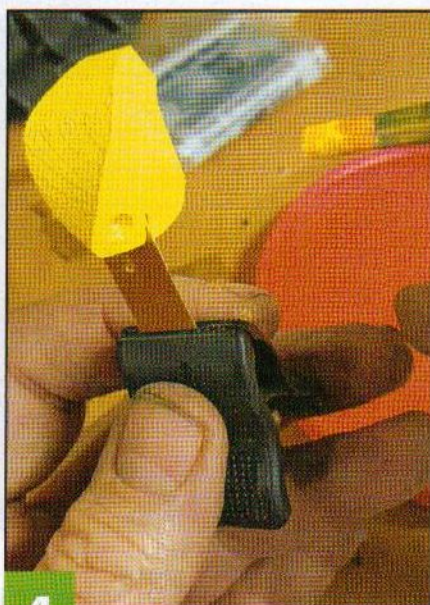
1 **Cut the side profile in one continuous cut.** Use a #5 skip-tooth blade. Remove the lure body from the blank and cut the lip slot. Replace the lure in the blank, and clamp the blank in a vise with the top profile facing up. Cut the top profile, remove the lure from the blank, and save the scrap cut from the back.



2 **Mark the hole locations.** Use the drill point template. Press a T-pin into the hole locations. Use a $\frac{1}{32}$ " (1mm)-diameter bit in a pin vise to drill $\frac{1}{4}$ " (6mm)-deep holes in the nose and tail.

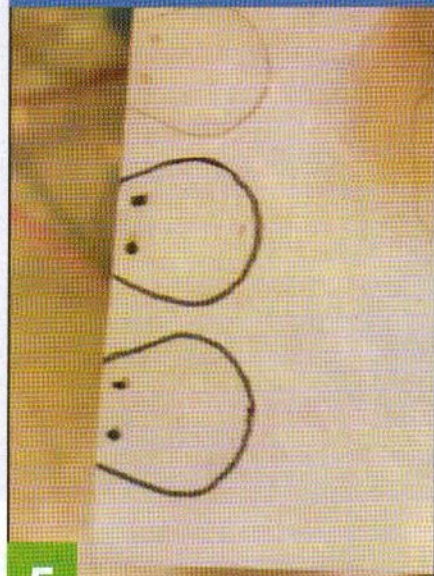


3 **Place the scrap cut from the back in Step 1 on the drill table.** Then, place the lure on the scrap and drill a $\frac{1}{4}$ " (6mm)-diameter by $\frac{1}{4}$ " (6mm)-deep hole. Press a split shot into the hole and fill it with white wood putty. Allow the putty to dry.

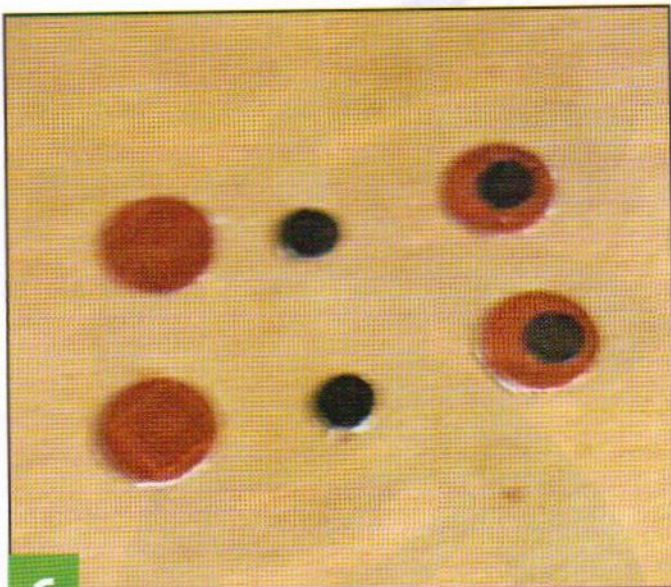


4 **Sand the body smooth.** Use an emery board and fine sandpaper. Place a piece of folded-over roof flashing in the lip slot to hold the lure. Apply a base coat of pearl white paint. Then, paint the fish whatever color you want. I use an airbrush to add some black to the back and part of the way down the side. Then, add some pink or orange to the belly and bring it up toward the nose.

LURES: ADDING HARDWARE



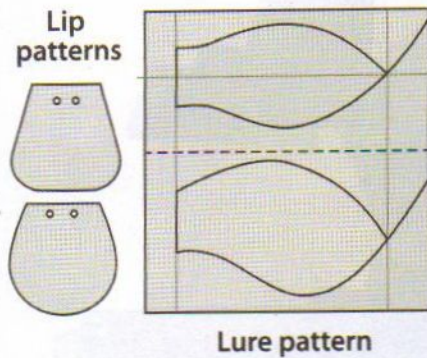
5 **Cut a rectangle of stiff plastic.** I use a parts box. Cover it with masking tape. Draw the lip pattern on the tape and punch $\frac{1}{16}$ " (2mm)-diameter holes. Cut the lip with a scroll saw and remove the tape. Place a dab of epoxy on the edge of the lip and place it into the lip slot.



6 Punch out $\frac{1}{4}$ " (6mm)-diameter disks from a colorful sticker. Then, punch out $\frac{1}{8}$ " (3mm)-diameter black disks. Place the black sticker in the corner of the colored disk to act as a pupil. Then, stick the eyes on the lure. Punch some $\frac{1}{4}$ " (6mm)-diameter black black dots to act as shad dots. Position these dots $\frac{1}{8}$ " (3mm) down from the back and $\frac{1}{4}$ " (6mm) back from each eye.

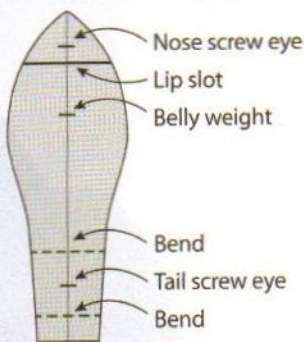


7 Cover the lip with masking tape. Add a pinch of clear glitter dust to clear epoxy. Apply two coats of epoxy over the lure body. Let it dry and remove the masking tape. Place a treble hook on a screw eye. Put a dab of cyanoacrylate (CA) glue on the threads and screw it into the tail of the lure. Snip $\frac{1}{8}$ " (3mm) off the end of the remaining screw eye, re-form the eye, and screw it into the nose.



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Drill point template



WANT MORE LURES?

Making Wooden Fishing Lures

by Rich Rousseau

Item 4468; code SSW67. Available for \$19.95 + S&H (parcel post) from Fox Chapel Publishing, 800-457-9112, www.FoxChapelPublishing.com, or your local retailer.



Materials & Tools

Materials:

- Poplar or basswood, $\frac{3}{4}$ " (19mm) thick; 1" x $1\frac{1}{8}$ " (25mm x 41mm)
- Glue stick
- Sandpaper: fine grit
- Emery board
- Plastic parts box
- Wood putty: white
- Epoxy: five-minute
- Cyanoacrylate (CA) glue, such as Super Glue®
- Acrylic paints of choice
- Glitter dust: clear
- Masking tape
- Screw eyes: $\frac{1}{8}$ " (3mm) dia.
- Split shot: $\frac{1}{4}$ " (6mm) dia.
- Treble hooks: #4
- Aluminum roof flashing
- Stickers: multicolored, black

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

Tools:

- Scroll saw blade: #5 skip-tooth
- T-pin
- Drill press with bits: $\frac{1}{4}$ " (6mm)-dia. brad point
- Pin vise with drill bit: $\frac{1}{32}$ " (1mm) dia.
- Hole punches: $\frac{1}{16}$ " (2mm), $\frac{1}{8}$ " (3mm), $\frac{1}{4}$ " (6mm) dia.
- Pliers: needle nose, flat jaw, round jaw, jewelers
- Clamp



Billy Allmon lives in Lake Worth, Texas, with his wife, Melody. He repairs nail guns for a living and has been scrolling and

woodworking for over 40 years. When he is not scrolling, he enjoys fishing and making fishing lures.

Clockopelli

Whimsical decoration is based on Southwestern-style art

By Dave Van Ess

Those familiar with Southwestern Native American art will recognize Kokopelli, the popular fertility god, healer, prankster, and storyteller. He makes a perfect spring project because Kokopelli chases away winter and brings about spring, and I've added a clock insert so the figure is useful around the house.

Making the Project

Because of the delicate nature of this piece, I made it from $\frac{1}{2}$ " (13mm)-thick Baltic birch plywood. I sized the pattern so you could fit four on a 12" (305mm)-square piece of plywood (they make great gifts, so I usually make several at a time). Photocopy the pattern and attach it to the blank with spray adhesive. Use a Forstner bit to drill a $1\frac{3}{8}$ " (35mm)-diameter hole for the clock insert.

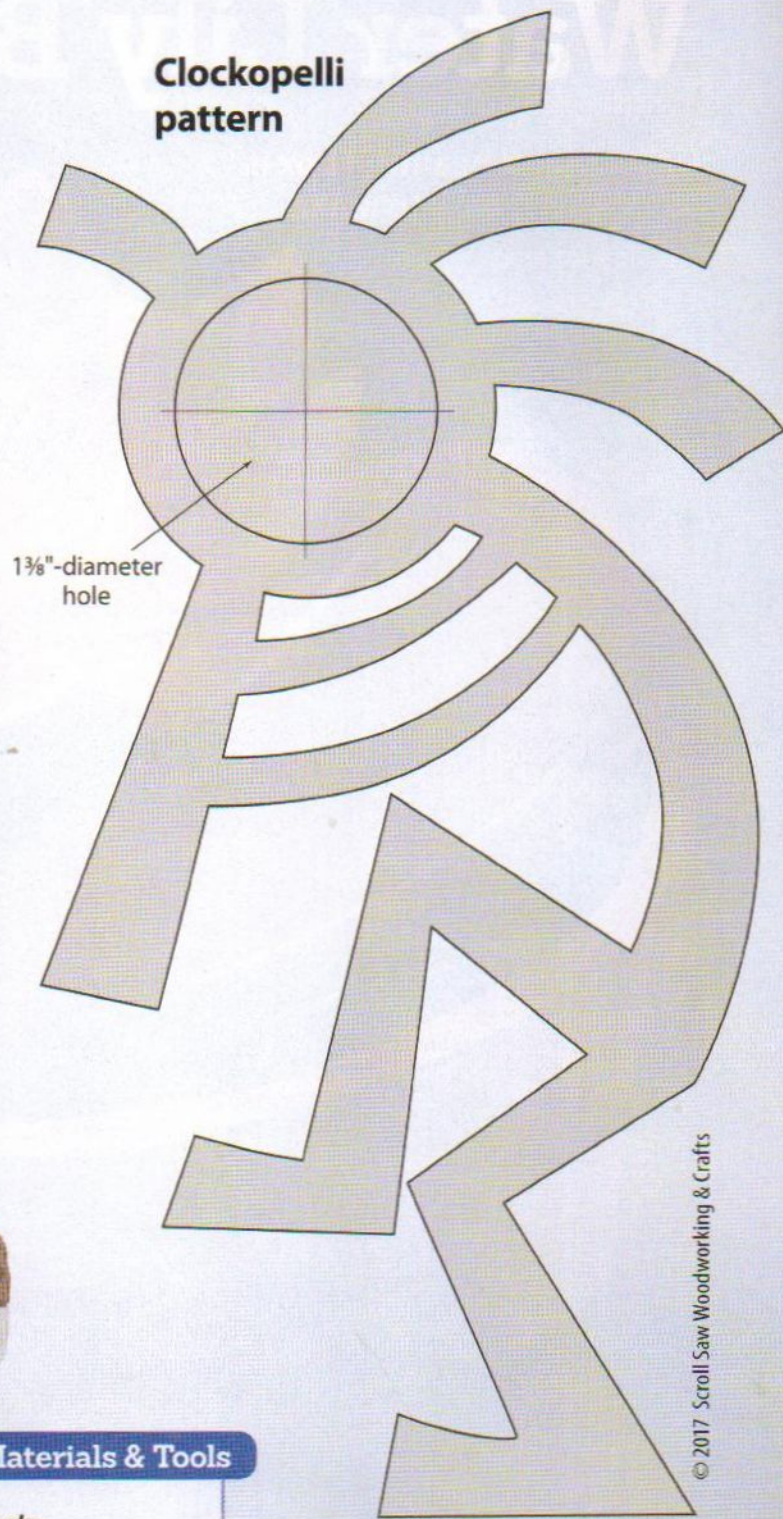
Dill blade-entry holes and cut the project. Lightly sand and round the edges (also called "breaking the edges") with 120-grit sandpaper.

Thin 1 part black Pilot Super Color Refill Ink with 11 parts denatured alcohol. Apply two coats for a really black hue. Seal the project with a couple of coats of satin spray lacquer. Add a hanger to the back if desired. To make the figures freestanding I'll sometimes use cyanoacrylate (CA) glue to attach the figures to 4" (102mm)-square travertine tiles, which give the look of a desert floor.





**Clockopelli
pattern**



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Materials:

- Baltic birch plywood, 1/2" (13mm) thick; 12" (305mm) square (to make four)
- Spray adhesive
- Clock insert or photo frame insert: 1 to 2 each, 1 7/16" (37mm) dia.
- Sandpaper: 120-grit

- Marker refill ink, such as Pilot: black
- Lacquer: spray satin
- D-ring hanger
- Travertine tiles: 4" (102mm) square (optional)
- Glue: cyanoacrylate (CA) (optional)

Materials & Tools

Tools:

- Scroll saw blades: #5 reverse-tooth
- Drill press with bits: 1/16" (2mm) dia. twist, 1 3/8" (35mm)-dia. Forstner

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



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

Water Lily Box

Delicate and beautiful box is surprisingly easy to make

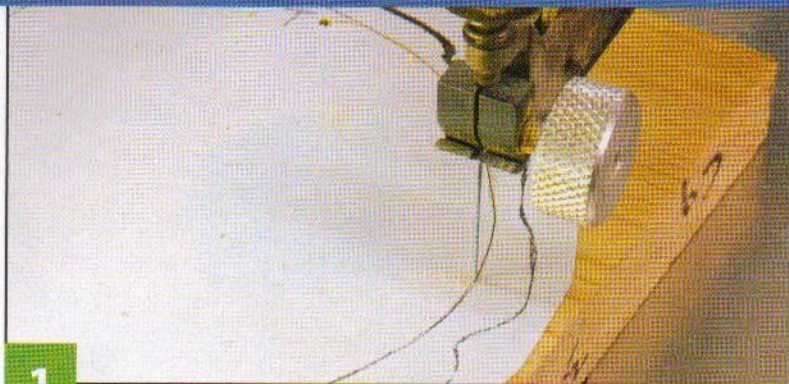
By Carole Rothman



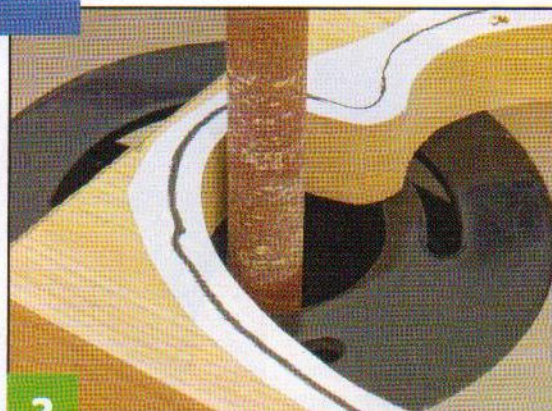
The soft colors and workability of aspen, poplar, and cypress make this dramatic box both attractive and easy to make. Although 15 petals may seem formidable, their single-curved shape is easy to sand to a delicate thinness. To make the project user-friendly I incorporated several time-savers that did not

compromise either construction or appearance. These include pre-made lily stamens instead of shop-made wooden ones; dowels to secure the lid, rather than a lid liner; and a rounded shape for the box that easily sands with a spindle sander.

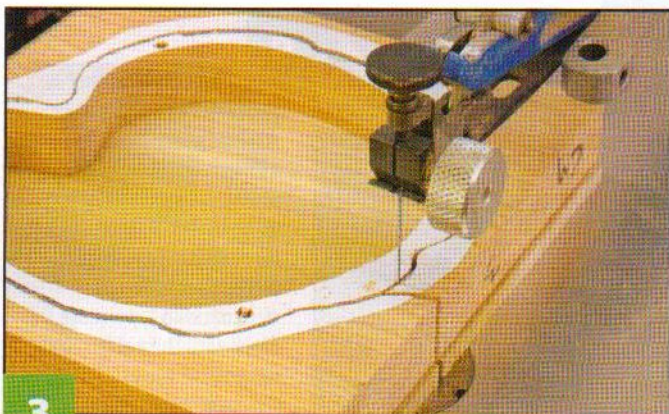
WATER LILY: MAKING THE BOX



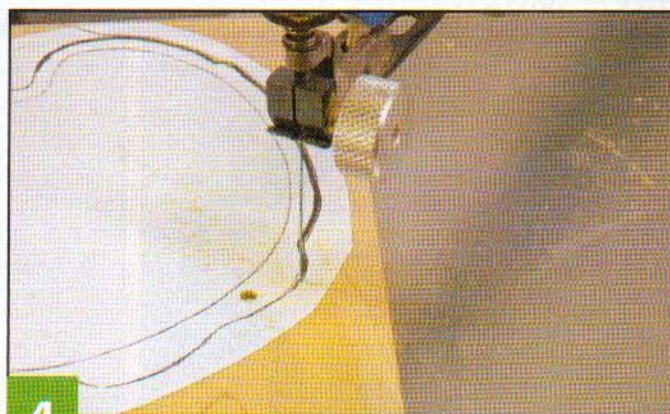
1 Attach the box sides pattern to the blank with repositionable adhesive. Drill a blade-entry hole where indicated on the pattern. Use an awl to mark the dowel drill points. Drill $\frac{3}{16}$ " (5mm)-diameter by $\frac{1}{2}$ " (13mm)-deep holes for the dowels. Cut the inside of the box with a #5 reverse-tooth blade.



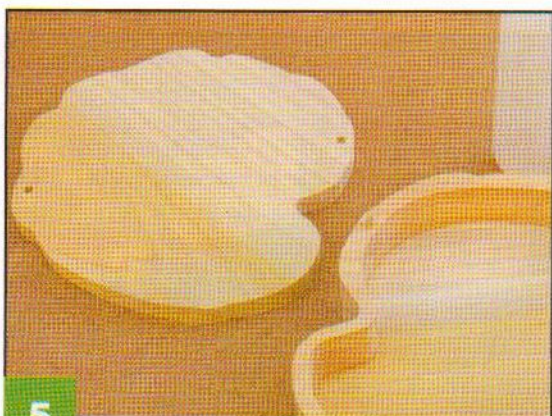
2 Sand the cutout area. Use a spindle sander. Sand the surface smooth and remove any blade marks. Be sure the lower edge is free of fuzzies.



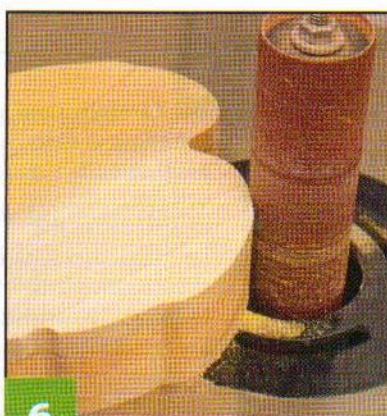
3 Glue the box bottom to the box sides. Clamp, let dry for five minutes, unclamp, and remove any squeeze-out. Re-clamp and let the glue dry thoroughly. When dry, cut along the outer perimeter to complete the box body.



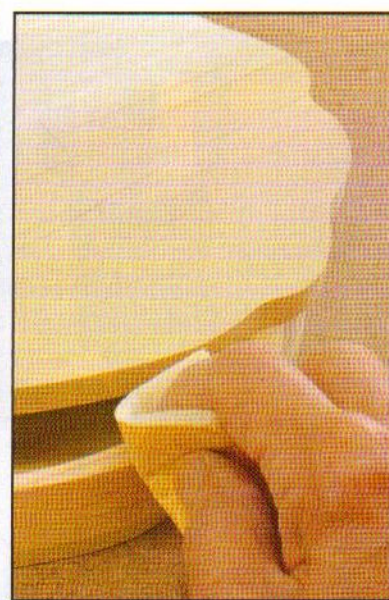
4 Attach the lid pattern to the underside of the box lid blank. Use repositionable adhesive. Mark the drill points with an awl and drill $\frac{3}{16}$ " (5mm)-diameter by $\frac{3}{16}$ " (5mm)-deep holes. Cut the perimeter of the lid.

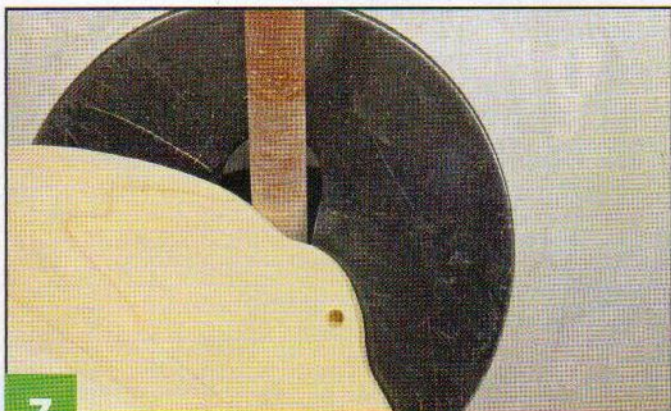


5 Check the fit of the lid dowels in the holes in the box body. Sand, if needed, until the dowels fit snugly without forcing. Glue them into place, making sure that they are fully seated in the holes. After the glue has dried, test the fit of the lid. Sand the dowels and lid holes until the lid fits easily on the dowels without excessive play and rests firmly on the box body.



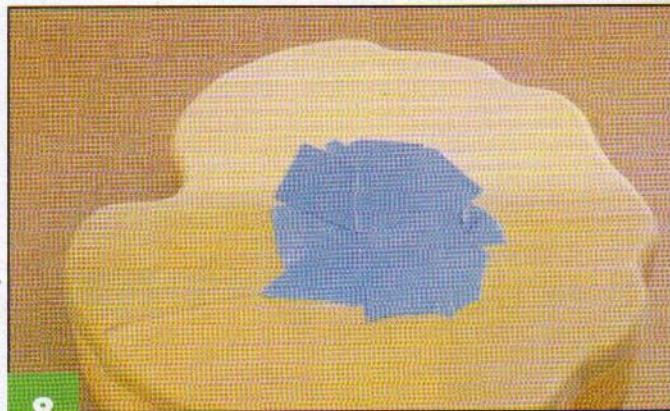
6 Place the lid on the box body. Sand the sides flush using the spindle sander. Soften the edges of the box body and lower edge of the lid by hand.





7

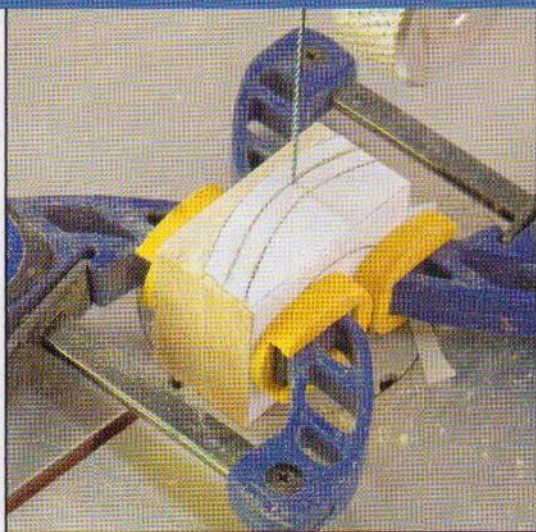
Set the spindle sander table to 45°. Use the spindle sander to bevel the top edge of the lid. Soften the bevel with a pneumatic drum or sanding mop. Sand all surfaces of the box and lid with 240-grit sandpaper.



8

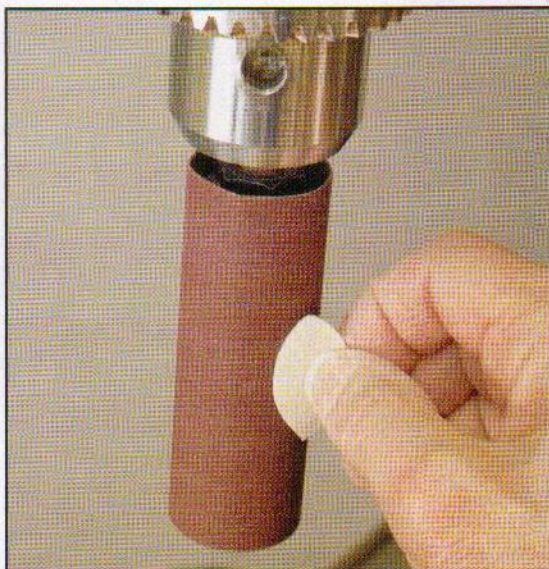
Mask the area of the lid where the petals will be placed. Apply a coat of shellac to all of the surfaces of the box and lid. Sand the surfaces smooth with 320-grit sandpaper and remove any glue spots.

WATER LILY: MAKING THE PETALS



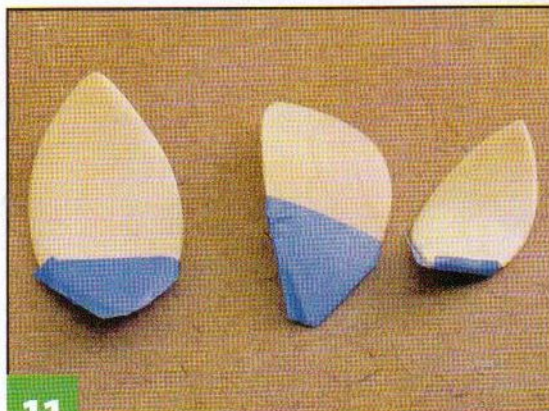
9

Attach the petal patterns to the blanks with repositionable adhesive. Cut the side profile with a #5 blade, using blocks and clamps for stability. Tape all of the pieces back together with clear packing tape, place the block with the pattern side up, and cut the profile. Cut five large and five medium petals. Cut six small petals from the three smaller blanks (two from each blank).



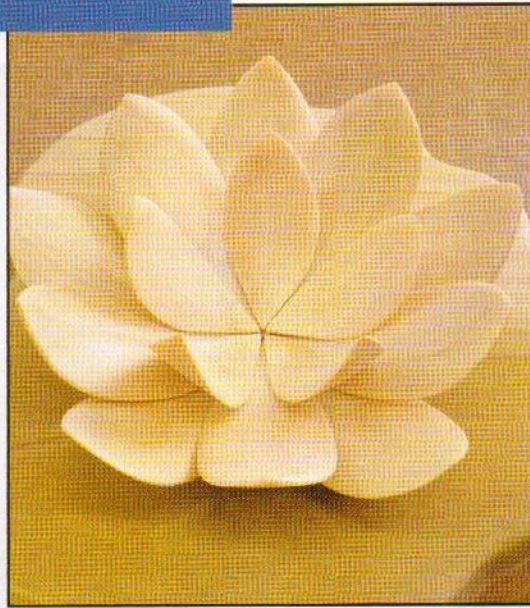
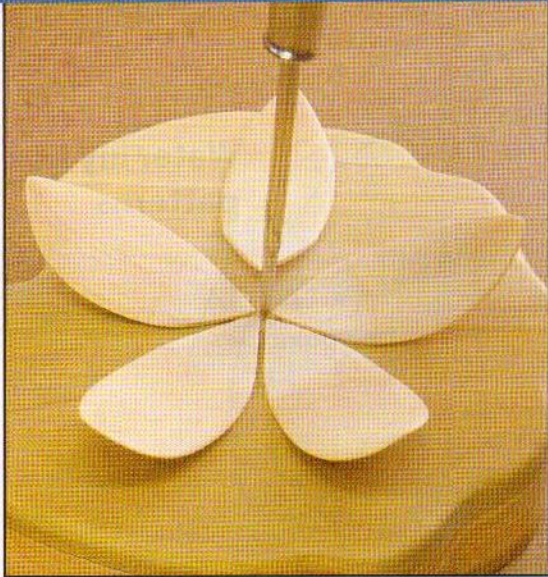
10

Carefully sand the edges of each petal smooth. Use a belt sander. If you're careful you can also sand the convex surface of the petal with the belt sander. Otherwise, use the spindle sander to smooth and thin both petal surfaces. Thin the edges and complete the sanding with a pneumatic drum, sanding to 240 grit.



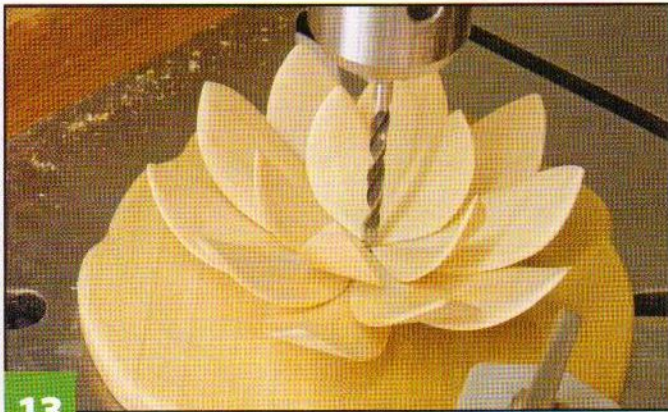
11

Mask the gluing surfaces of the petals. Apply a sealer coat of shellac. Remove the tape and sand the petals smooth with 320-grit sandpaper.



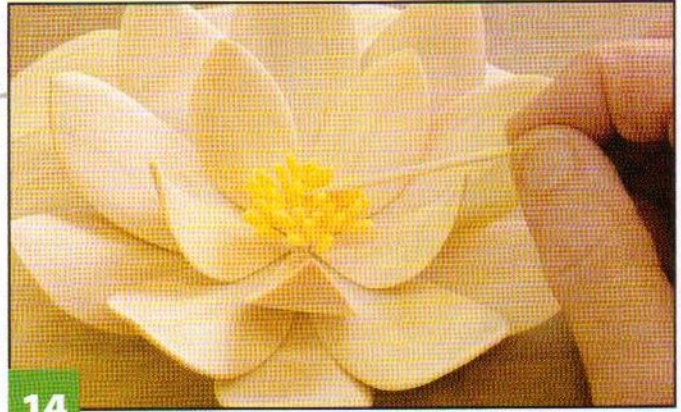
12

Attach the five large petals to the center of the box lid with separate loops of masking tape. Mark the center point of the flower with an awl. Using cyanoacrylate (CA) glue formulated for wood and working with one petal at a time, remove the tape loop, apply glue, position the petal, and hold it into place until the glue sets. Repeat with the medium and small petals, placing each petal between the petals of the tier below.



13

Clamp the box lid to the drill press table. Drill a $\frac{3}{16}$ " (5mm)-diameter by $\frac{1}{4}$ " (6mm)-deep hole in the center of the flower. Use a small marked dowel to check the depth of the hole.



14

Cut about 30 yellow lily stamens to $\frac{7}{8}$ " (22mm) long. Use CA glue to secure them in the center hole. Use tweezers and a toothpick to adjust their position. Finish the box with several coats of gloss spray lacquer.

Materials & Tools

Materials:

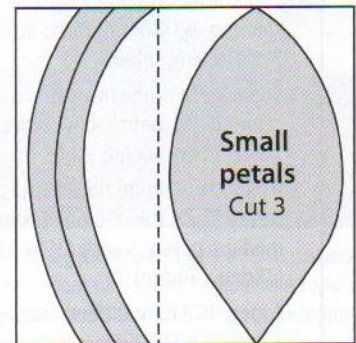
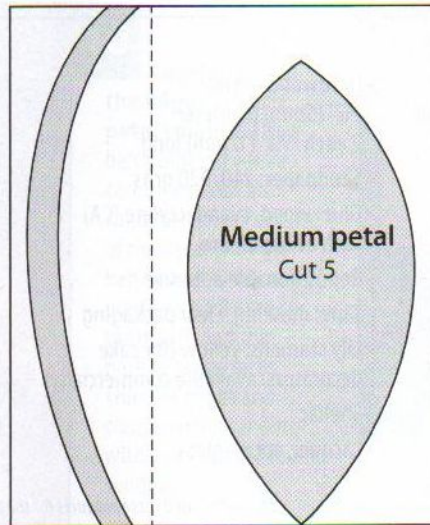
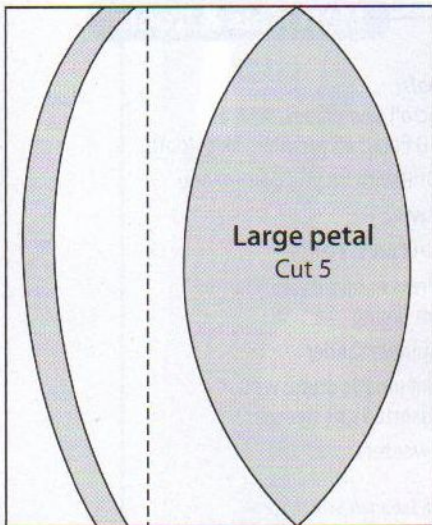
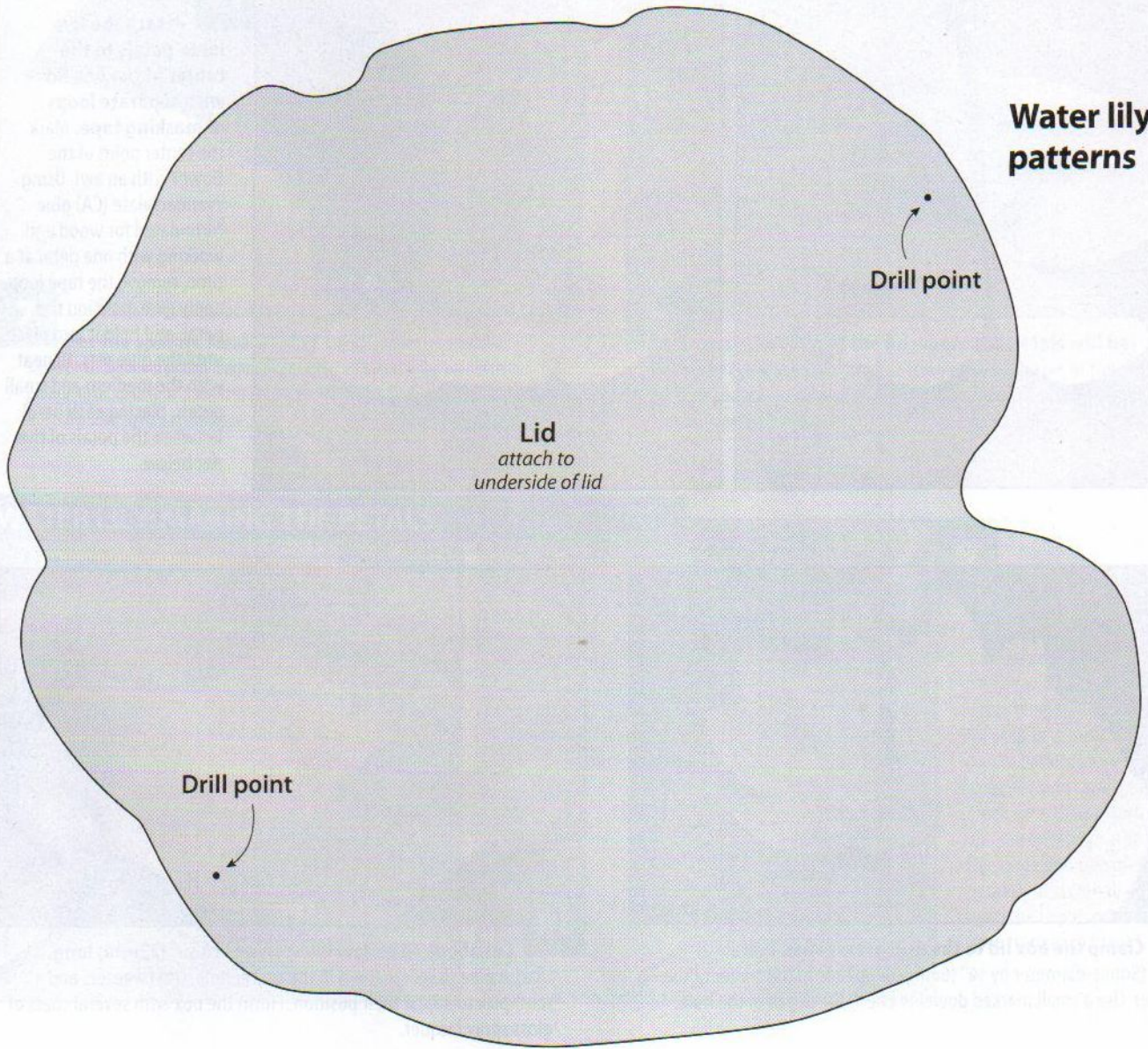
- Cypress, $\frac{3}{4}$ " to 1" (19mm to 25mm) thick; mine was $1\frac{5}{16}$ " (24mm) thick: box sides, $7\frac{1}{2}$ (19.1cm) square
- Poplar with pronounced green coloring, $\frac{3}{8}$ " (10mm) thick: box lid, $7\frac{1}{2}$ " (19.1cm) square
- Poplar with pronounced green coloring, $\frac{1}{4}$ " (6mm) thick: box bottom, $7\frac{1}{2}$ " (19.1cm) square
- Aspen, $\frac{3}{4}$ " (19mm) thick: large petals, 5 each $1\frac{1}{2}$ " x $2\frac{3}{4}$ " (38mm x 70mm); medium petals, 5 each $1\frac{1}{2}$ " x $2\frac{3}{4}$ " (38mm x 70mm)
- Aspen, $\frac{3}{4}$ " (19mm) thick: small petals, 3 each 1" x $1\frac{3}{4}$ " (25mm x 44mm)
- Hardwood dowel, $\frac{3}{16}$ " (5mm) diameter: 2 each $\frac{1}{16}$ " (17mm) long
- Sandpaper: 240, 320 grits
- Glue: wood, cyanoacrylate (CA) such as RapidFuse
- Repositionable adhesive
- Tape: masking, clear packaging
- Lily stamens: yellow (for cake decorators, available commercially)
- Shellac
- Lacquer, spray: gloss

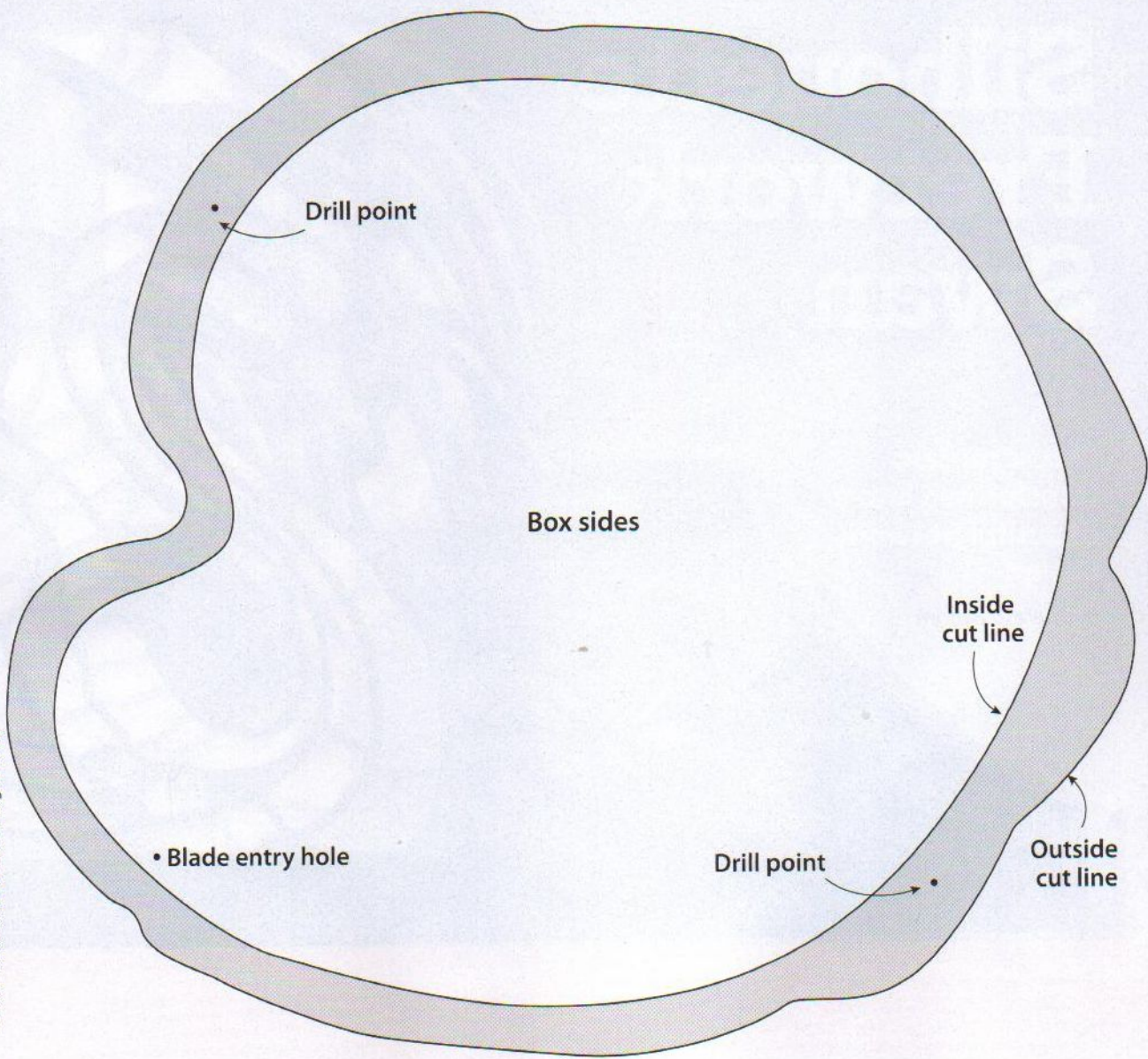
Tools:

- Scroll saw blades, such as FD Polar: #5 premium skip-tooth
- Drill with bit: $\frac{3}{16}$ " (5mm) dia.
- Awl
- Drill press clamp
- Press or boards and clamps for gluing
- Spindle sander
- Pneumatic drum, with assorted grit sleeves
- Tweezers

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

Water lily box patterns



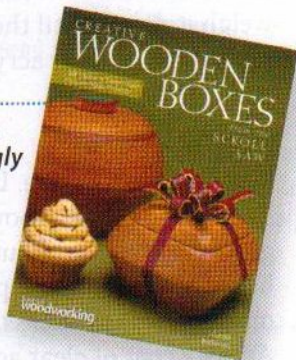


WANT MORE BOXES?

Creative Wooden Boxes from the Scroll Saw: 28 Useful & Surprisingly Easy-to-Make Projects

By Carole Rothman

Item 5410; code SSW67. Available for \$24.95 +S&H from Fox Chapel Publishing, 800-457-9112, www.FoxChapelPublishing.com, or your local retailer.



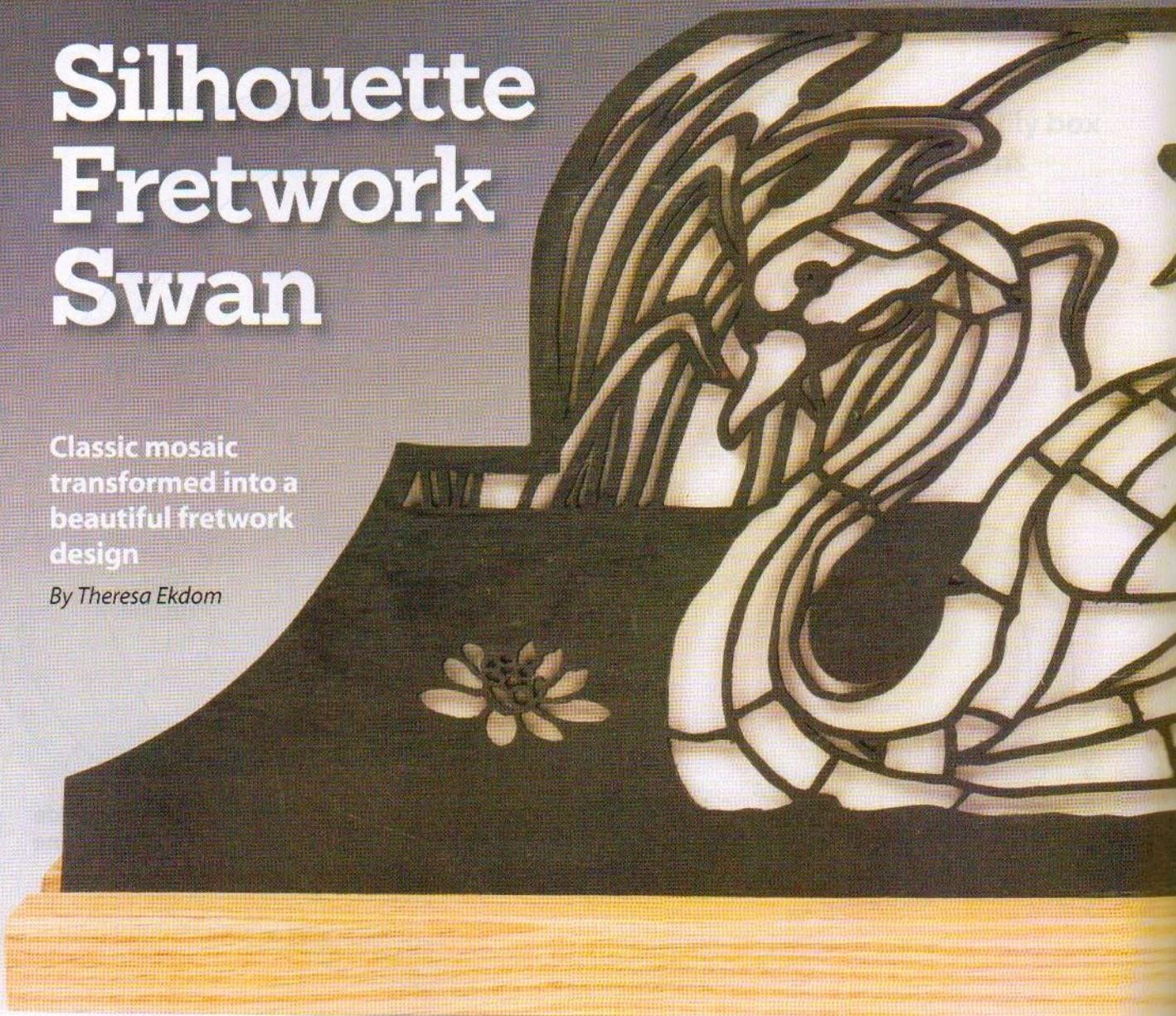
Carole Rothman of Pawling, N.Y., is a retired psychologist and college professor. She is also an award-winning cake decorator. Visit Carole online at www.scrollsawbowls.blogspot.com. You'll find her books *Creative*

Wooden Boxes from the Scroll Saw and *Wooden Bowls from the Scroll Saw* at www.foxchapelpublishing.com.

Silhouette Fretwork Swan

Classic mosaic
transformed into a
beautiful fretwork
design

By Theresa Ekdom



This piece was inspired by a mosaic that I saw atop a building in London. I was taking photos of the architecture and fell in love with this swan. I adapted it into a stained-glass-style fretwork piece.

Making the Fretwork Scene

Photocopy the pattern and attach it to the blank. Drill blade-entry holes and cut the frets with a #5 flat blade to create crisp points and corners. Use a #3 spiral blade for the lily pads. After cutting the fretwork, secure it to the backing board using hot glue. Cut the perimeter of the stack. Separate the stack and sand the pieces smooth. Dye the fretwork and the back and sides of the backing board black. After the dye dries, seal it with clear acrylic spray finish; let dry and lightly sand.

Paint the front of the backing board with white acrylic paint thinned with water. Keep the paint away from the outside edges. While the paint is wet, wipe it with a rag for a smooth coat of paint that allows the grain to show. Glue the fretwork to the backing board and weigh it down until the glue dries. Apply a few more light coats of clear acrylic spray.

Making the Base

Cut the blank to size. Use a table saw to cut a $\frac{7}{16}$ " (11mm)-wide groove in the top at a 12° angle. The groove should be about $\frac{3}{8}$ " (10mm) deep. Sand the base and round the top edges. Soak the base in tung oil, wipe off the excess, and allow it to dry thoroughly. Apply a coat of clear acrylic spray finish if desired.



Materials & Tools

Materials:

- Baltic birch plywood, $\frac{1}{8}$ " (3mm) thick: fretwork, $8\frac{1}{4}$ " x $19\frac{1}{4}$ " (21cm x 48.9cm)
- Baltic birch plywood, $\frac{1}{4}$ " (6mm) thick: backing board, $8\frac{1}{4}$ " x $19\frac{1}{4}$ " (21cm x 48.9cm)
- Oak, $\frac{3}{4}$ " (19mm) thick: base, $2\frac{3}{4}$ " x $19\frac{1}{2}$ " (70mm x 49.6cm)
- Sandpaper
- Adhesive: spray or glue stick
- Hot glue gun with sticks
- Wood glue
- Finish: clear acrylic spray
- Dye, such as Tandy leather: black
- Artist acrylic paint: white
- Tung oil spray

Tools:

- Table saw
- Drill with assorted small bits
- Scroll saw blades: #5 premium, such as FD Polar; #3 spiral, such as FD
- Paintbrush: large

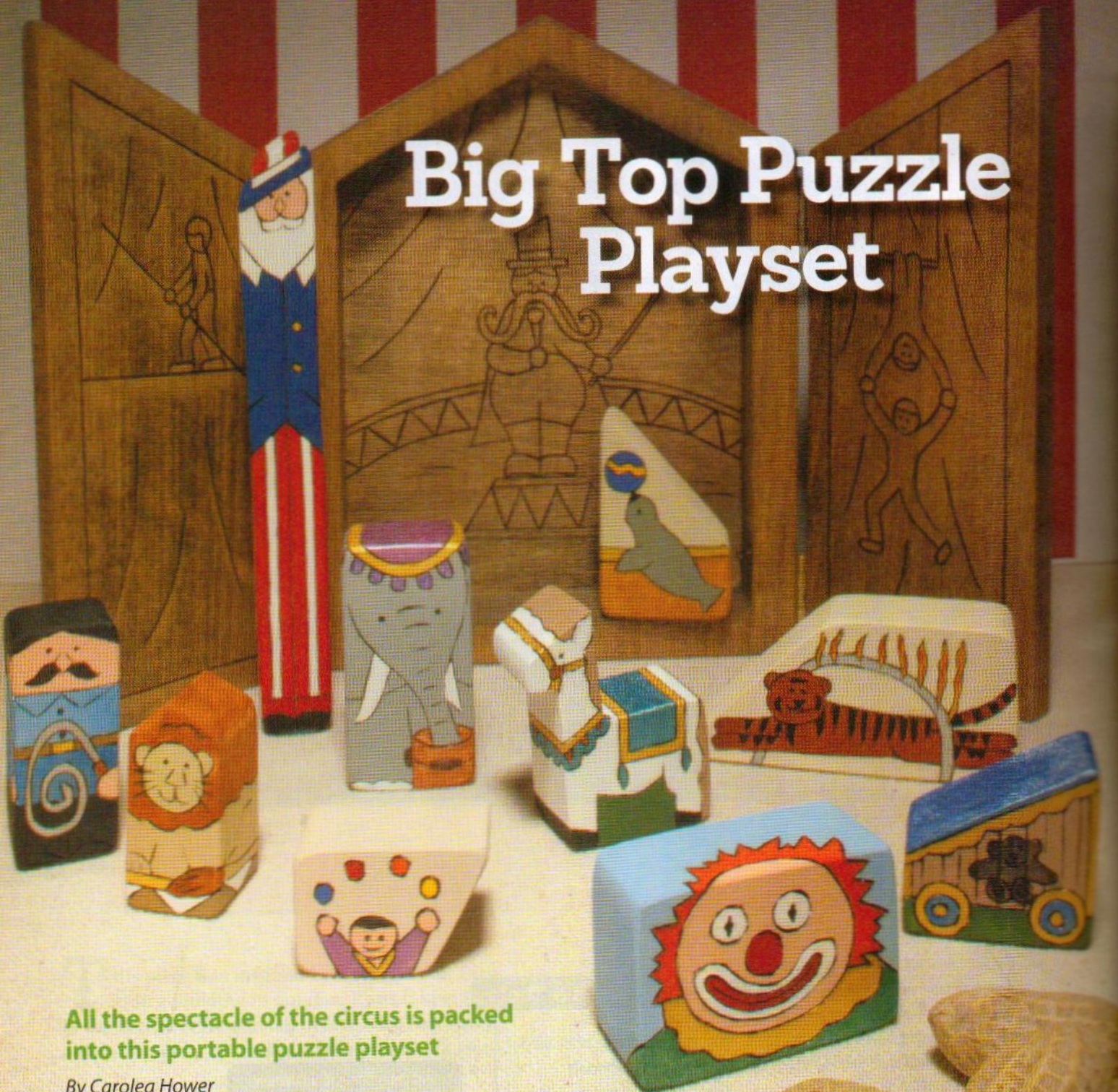
The author used these products for the project. Substitute your choice of brands, tools, and materials as desired.

Pattern for the **LONDON SWAN** is in the pattern pullout section.



Theresa Ekdorn lives in Roscommon, Mich. Contact her at tekdom@hotmail.com or www.woodngoods.artfire.com.

Big Top Puzzle Playset



All the spectacle of the circus is packed into this portable puzzle playset

By Carolea Hower

When I was growing up, having the circus come to town was almost as good as Christmas. I loved the sights and smells of the circus. My favorite acts were the elegant ringmaster and the many animals, especially the big cats. I was fascinated by the clowns with their wild costumes and amusing antics. A box of buttered popcorn and a bubbly drink topped everything off.

When I heard that Ringling Brothers Circus would be doing its final performances this year, I had to immortalize them in a puzzle. Big kids can enjoy the puzzle, while little kids can use the pieces to reenact the fun and excitement of the circus!

Getting Started

Cut the pieces to size. Transfer the pattern to the front side of the box body/puzzle pieces (B). I place a fresh laser copy of the pattern facedown on the blank and apply acetone to the back. The acetone dissolves some of the laser toner and transfers a mirror image of the pattern onto the blank. Wear gloves to protect your hands from the acetone.



Making the Puzzle

Drill a blade-entry hole at the dot on piece B. Cut the perimeter of the puzzle pieces and remove them as one piece. Hand-sand the remaining box sides. Then, cut the puzzle pieces apart. Round all of the corners and edges of the puzzle pieces with 120-grit sandpaper.

Use the individual patterns to transfer the designs to the corresponding puzzle pieces. Using the side

patterns as a guide, connect the front and back lines with a pencil and draw the side details. Transfer the ringmaster design to the front side of the box back (C). Transfer the outlines of the puzzle pieces (shown on pattern B) to the back of C to provide the solution.

Use a woodburner with a small skew tip to burn along the lines on piece C and all four sides of the puzzle pieces. Deeply burned lines help keep the paint color edges crisp when you paint. Use $\frac{3}{4}$ " (19mm)-long wire brads to attach the front of C to the back of B. Mark the vertical door line on the front of the doors (A). Cut and sand the door edges. Apply clear double-sided tape to the front side of B. Align the two box doors (A) on the tape and press down firmly.

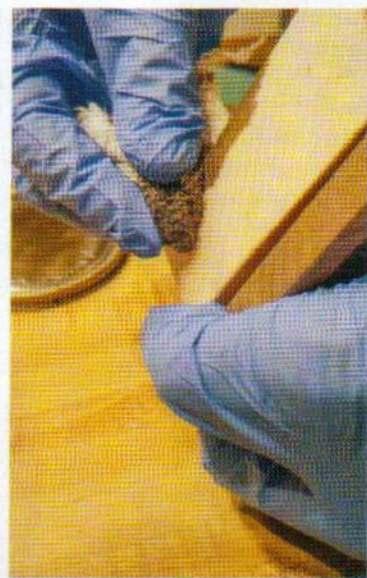


Sand the outer edges of the taped-together puzzle box. I use a disc sander and a 120-grit sanding disc. Sand until all three puzzle layers are even on all five sides. Check that the sides and bottom are square with a 6" (15.2cm) square. Leave the doors taped to the middle. Sand off the sharp edges and corners of the box.

With the doors still taped, mark the door hinge placement $\frac{1}{2}$ " (13mm) in from each corner of A and B. Attach hinges with round-head wood screws. Carefully pry open the doors with a thin knife blade and remove the tape.

Align the front and back of the door patterns with the hinged sides of the doors. Transfer the designs onto the blank and burn the lines.

Referring to the photo and the painting guide, paint the puzzle pieces. Thin the paints with water to make them easier to apply. You can control the intensity of the colors based on how much water you add. Use Minwax special walnut wood stain on the puzzle box to create a contrast from the puzzle pieces. Remove the hinges to make it easier to apply the stain. Reassemble the puzzle box when the stain is dry.



Carolea Hower is a retired physical therapist who lives on a farm with her husband, Ken. You can reach her via e-mail at caroleahower@gmail.com.

Painting Guide

Lion Tamer

Face: flesh (1)
 Hair, boots, mustache: black (1)
 Whip: metallic sterling silver (2)
 Whip handle: metallic copper (2)
 Shirt: metallic blue pearl (2)
 Trousers: metallic blue sapphire (2)
 Belt: metallic espresso (2)
 Buckle: metallic splendid gold (4)

Elephant

Body: Bridgeport grey (1)
 Toes, tusks: white (1)
 Top hat: metallic plum (2)
 Fringe: metallic amethyst (2)
 Trim: metallic splendid gold (4)
 Bucket: metallic copper (2)
 Bucket handle: burnt umber (1)

Juggler

Background: goosefeather (3)
 Shirt: metallic plum (2)
 Shirt trim: metallic splendid gold (4)
 Balls: blue bayou (1), yellow (1),
 Santa red (5), orange (3)

Clown

Face: medium flesh (1)
 Eyes, mouth: white (1)
 Nose, mouth: Santa red (5)
 Hair: orange (3)
 Collar: metallic splendid gold (4)
 Shirt: metallic Christmas green (2)
 Background: blue heaven (1)

Seal

Background: sandstone (3)
 Body: pewter gray (3)
 Ball: blue bayou (1)
 Ball strip: bright yellow (3)
 Base: raw sienna (1)
 Base trim: metallic
 splendid gold (4)

Cage Car

Car: spice brown (1),
 Bambi brown (1)
 Wheel rims, canopy:
 metallic blue sapphire (2)
 Wheels, top trim:
 metallic splendid gold (4)
 Bear: light wash of black (1)
 Grass: old ivy (2)

Lion

Body: camel (3) with raw sienna (1)
 Mane: traditional burnt sienna (5)
 Base: white (1), metallic espresso
 (2), metallic splendid gold (4)

Uncle Sam

Coat: Navy blue (1)
 Buttons: metallic splendid gold (4)
 Beard, collar, shirt sleeves, pants'
 stripes: white (1)
 Shoes: black (1)
 Hat, pants: Santa red (5)
 Face: flesh (1)

Tiger

Tiger background: ivory (1)
 Tiger body: traditional
 burnt sienna (5)
 Tiger stripes: black (1), white (1)
 Hoop: metallic sterling silver (2)
 Fire: yellow (1) blended with
 orange (3)

Horse

Body: white (1)
 Mane: Bambi brown (1)
 Grass: old ivy (2)
 Hooves: black (1)
 Blanket, tassels, neck strap:
 metallic blue topaz (2)
 Halter button, neck strap
 decorations: metallic copper (2)
 Trim on halter, blanket, neck strap:
 metallic splendid gold (4)

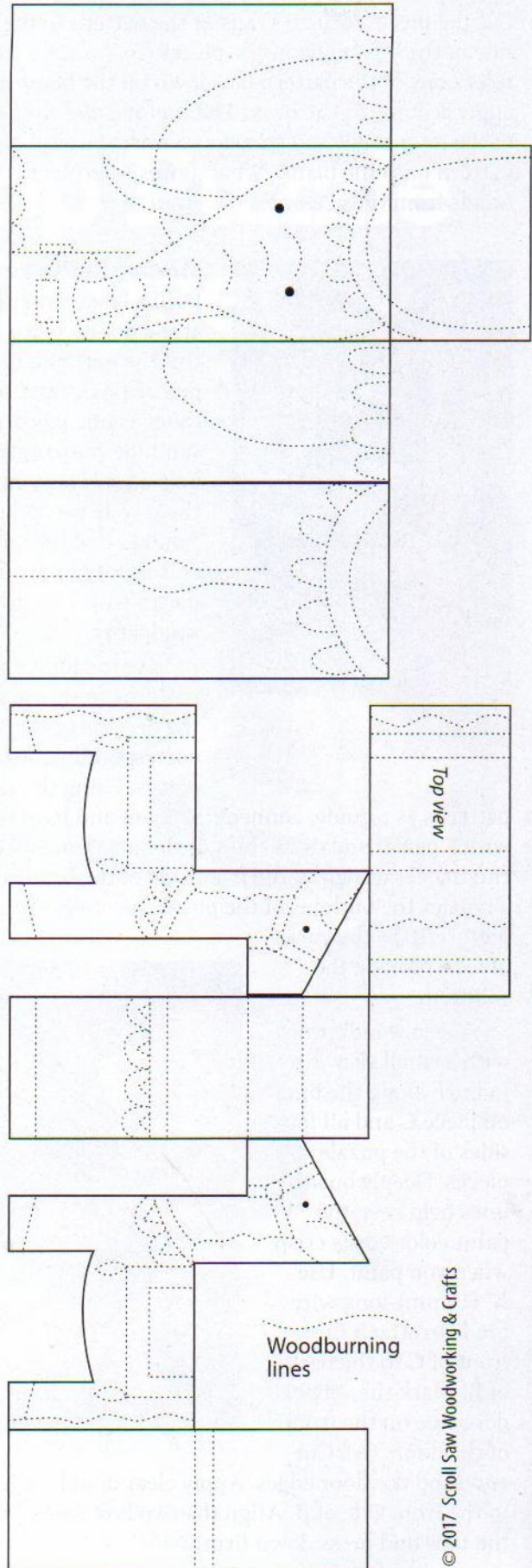
1 Delta Ceramcoat

2 Plaid FolkArt

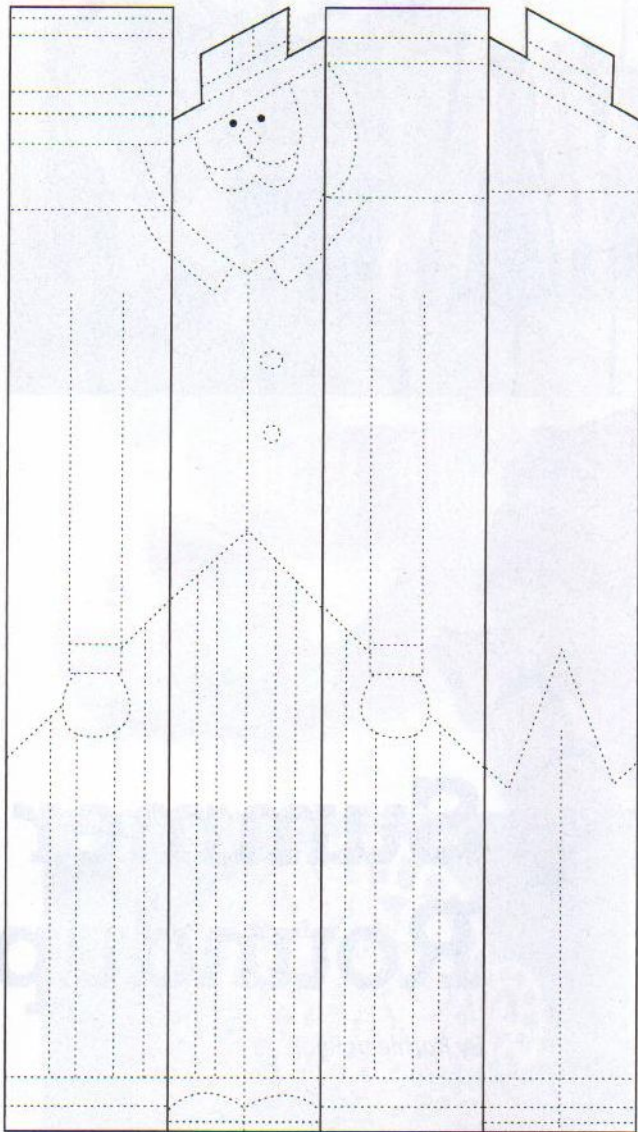
3 Plaid Apple Barrel

4 DecoArt

5 DecoArt Americana



Big top puzzle playset patterns



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Materials & Tools

Materials:

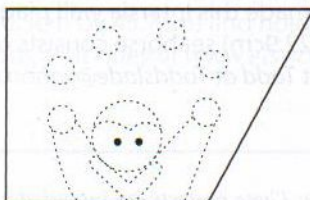
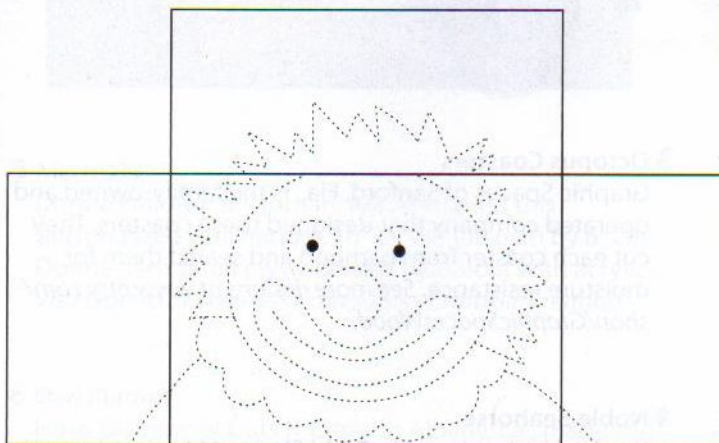
- Basswood, $\frac{3}{8}$ " (10mm) thick: A, C; 2 each 6" x 7" (15.2cm x 17.8cm)
- Basswood, $\frac{3}{4}$ " (19mm) thick: B; 6" x 7" (15.2cm x 17.8cm)
- Acetone (optional)
- Gloves (optional)
- Wire brads: $\frac{3}{4}$ " (19mm) long
- Hinges: 4 each $\frac{3}{4}$ " (19mm) square
- Phillips round head wood screws: 16 each #1 x $\frac{3}{8}$ " (10mm) long
- Wood stain, such as Minwax: special walnut
- Sandpaper, 120 grit
- Tape: clear double sided
- Acrylic paint, such as Delta Ceramcoat: flesh, medium flesh, black, spice brown, Bambi brown, raw sienna, white, Navy blue, Bridgeport grey, burnt umber, blue heaven, blue bayou, yellow, ivory; such as DecoArt: metallic splendid gold; such as Plaid FolkArt: metallic sterling silver, metallic copper, metallic blue pearl, metallic sapphire, metallic espresso, old ivy, metallic blue topaz, metallic

plum, metallic amethyst, metallic Christmas green; such as Plaid Apple Barrel, camel, orange, goosefeather, sandstone, pewter gray, bright yellow; such as DecoArt Americana: Santa red, traditional burnt sienna

Tools:

- Scroll saw blades, #7 reverse-tooth
- Measuring and marking tools: ruler, 6" (15.2cm) square, pencil
- Woodburner with small skew tip
- Disc sander with 120-grit sanding disc
- Drill with bit: #68 wire size
- Hammer
- Screwdriver: Phillips
- Paintbrushes: #03 pointer, $\frac{1}{4}$ " (6mm) shader, $\frac{1}{2}$ " (13mm) shader
- Knife

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



Woodburning
lines

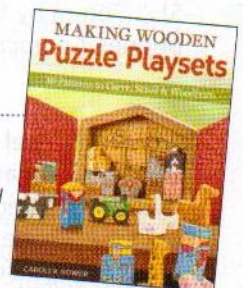
Additional patterns for the
BIG TOP PUZZLE PLAYSET are in
the pattern pullout section.

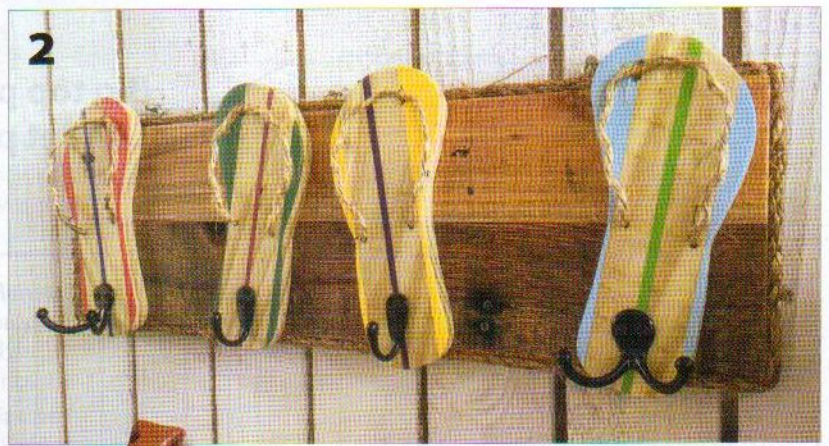
WANT MORE PLAYSETS?

Making Wooden Puzzle Playsets

by Carolea Hower

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Summer Roundup

By Kathleen Ryan

1 The Thinking Man's Mobile Phone Holder

Tired of misplacing his phone, Keith Tate of Creative Wooden Gifts in Swindon, England, made this handy holder from reclaimed pallet timber. It measures 3" by 5½" (76mm by 14cm) and accommodates most mobile phones. Contact Keith at kcwgifts@gmail.com.

2 Flip-Flop Towel Rack

Weatherproof and ready to be hung by a pool or outdoor shower, this flip-flop towel rack was created by Jimi Culhane of Fun-Key Junk in Key West, Fla. Jimi made the rack from recycled pallet wood and fence pickets with decorative hook hardware and garden rope. Visit www.funkeyjunk.com for more information.

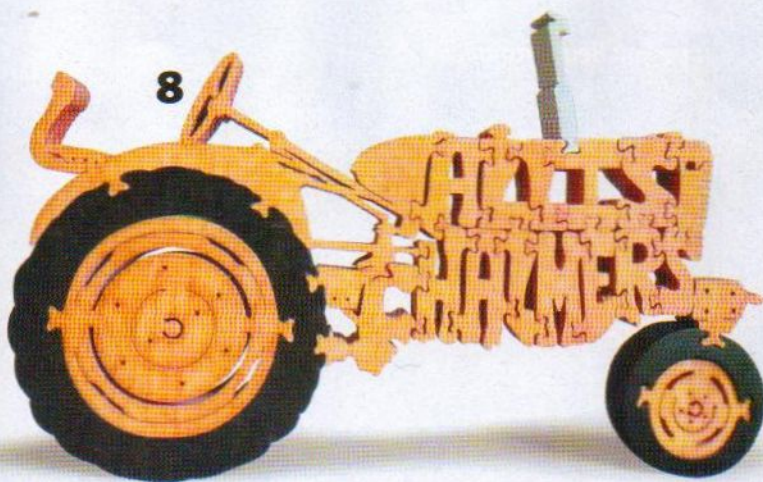
3 Octopus Coasters

Graphic Spaces of Sanford, Fla., is the family-owned and operated company that designed these coasters. They cut each coaster from bamboo and sealed them for moisture resistance. See more designs at www.etsy.com/shop/GraphicSpacesWood.

4 Noble Seahorse

Inspired by local sea life, Todd Slade of Merritt Island, Fla., designed and made this intarsia wall plaque. The 5" by 9" (12.7cm by 22.9cm) seahorse consists of 30 individual pieces. Contact Todd at Toddslade@yahoo.com.

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



5 Mermaid

Donna Waldrop of Dothan, Ala., designed this personalized wall hanger, 16" by 24" (40.6cm by 61cm). Donna used birch plywood and painted it with acrylics. Visit Donna at www.etsy.com/shop/CraftiGirlCreations.

6 Owl Planter

Huey Dufrene of Cuts N Crafts in Albany, La., made this owl planter from pressure-treated pine. It measures 12" by 18" (30.5cm by 45.7cm) and holds a standard 6" (15.2cm) pot. Visit Huey at www.etsy.com/shop/CutsN Crafts.

7 Napkin Holder

Tom Hartnett of Swoyersville, Pa., created this 5" by 7" (12.7cm by 17.8cm) floral napkin holder from a pattern designed by his wife, Barbara. Tom cut the project from Baltic plywood and finished it with a natural stain and high-gloss polyurethane. Visit Tom at www.etsy.com/shop/ScrollArtbyTom.

8 Farm Tractor Puzzle

This freestanding customized puzzle was designed by Harvey Byler and produced by the team at Puzzimals in Farmington, Ohio. Cut from cabinet-quality birch plywood, it measures 8½" (21.6cm) long and contains 21 pieces. The tractor can be designed to display any child's name. Visit Harvey at www.etsy.com/shop/Puzzimals.

Layered Welcome Sign

Give everyone who enters your home a cheerful greeting with this charming sign

By Sue Mey
Cut by Rolf Beuttenmuller



Welcome signs are one of the most useful projects you can make. Anyone can use one, which makes them easy and appreciated gifts. The three layers of this project give it depth, while the splashes of color make it cheery and unique.

Cutting the Pieces

Cut the blanks to size and attach the patterns. Drill the blade-entry holes and cut the frets. Stack together the welcome fretwork blank with its backing board, and stack the overlays with their backing boards. Then, cut the perimeters of all of the pieces. Cut a few small shims from $\frac{1}{8}$ " (3mm)-thick plywood to support the welcome lettering. Sand all of the pieces.

Assembling the Sign

Stain or paint the pieces as desired. I suggest you paint the backing board for the overlay and welcome fretwork a contrasting color from the wood or fence. Glue and clamp the backing boards to the welcome fretwork and overlay. Then, glue and clamp the fence to the background. Glue and clamp the shims, welcome fretwork, and overlays in position. Allow the glue to dry and apply several light coats of a clear finish to the completed project.

Pattern for the **LAYERED WELCOME SIGN** is in the pattern pullout section.



Materials & Tools

Materials:

- Hardwood, 1/2" (13mm) thick: background, 7 1/2" x 11 1/2" (19.1cm x 29.2cm)

- Plywood, 1/8" (3mm) thick: fence, welcome fretwork, overlays, backing boards, shims, 3 each 8 1/2" x 11 1/2" (21.6cm x 29.2cm)

- Sandpaper

- Stain and paints

- Wood glue
- Finish: clear spray

Tools:

- Scroll saw blades: #3 reverse-tooth

- Drill with assorted small bits

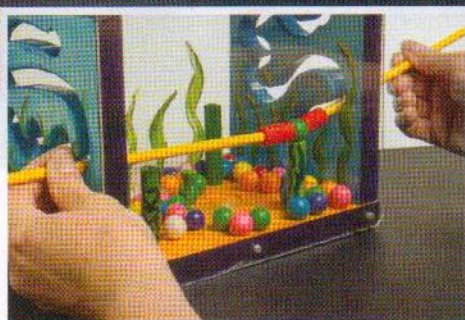
- Clamps

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



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

NEPTUNE'S Gumball Challenge



A simple idea for a toy came to mind: a gumball machine that requires the would-be bubble-blower to demonstrate a little ambidextrous skill before being rewarded with a sweet treat. Adding a little adversity between you and the gumball not only makes the toy more interactive and rewarding, but more importantly, cuts down on the number of gumball refills. Now, what type of challenge would be worthy of a tasty, colorful orb of endless chewing delight?

I never mastered chopsticks, so using one in each hand to lift a gumball out of a box seemed difficult.

As it turns out, it is quite easy. I needed to inflict more frustration so that when you earn the gumball you literally taste success. So I added a unique maze pattern for each hand and then placed some obstacles. Capturing the gumball now took some serious skill and practice. The end result looks a lot like an aquarium, but instead of exotic, shimmering fish, the tank is full of beautiful, multicolored gumballs, all doing their best to prevent themselves from getting caught.

ON THE WEB See a video of the Gumball Challenge in action.
www.scrollsawer.com

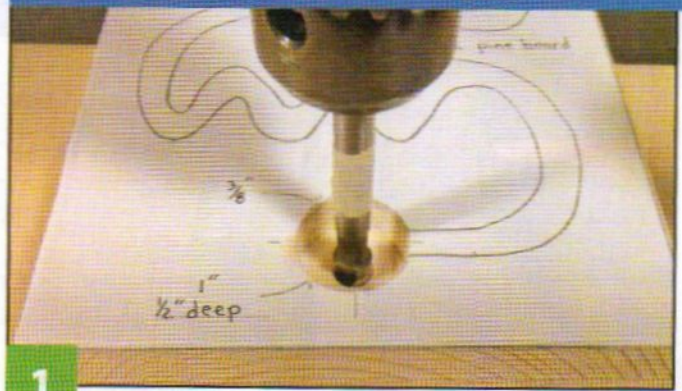
GUMBALL: CUTTING THE PIECES

Easy-to-build toy rewards your hand-eye coordination

By Bob Gilsdorf

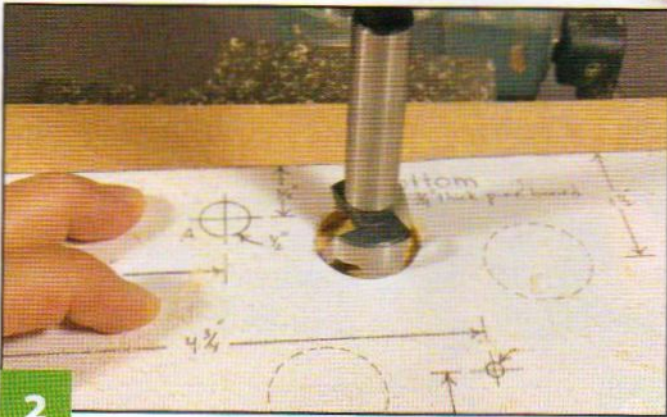
Getting Started

Cut the top (A), bottom (B), and sides (C, D) to size (see Parts List). Make sure the sides are free of knots. Cut the front and back (E) from clear acrylic. Attach the patterns to the sides and bottom (the patterns will be on the inside of the aquarium). Mark the hole locations on the top, front, and back.



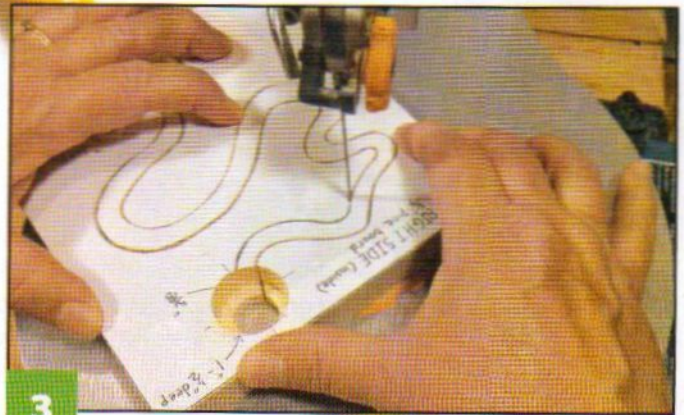
1

Drill the holes in the sides. Start with a 1" (25mm)-diameter Forstner bit to drill the stopped holes with a flat bottom. Then, drill the through-holes. Enlarge the top holes if the gumballs get stuck.



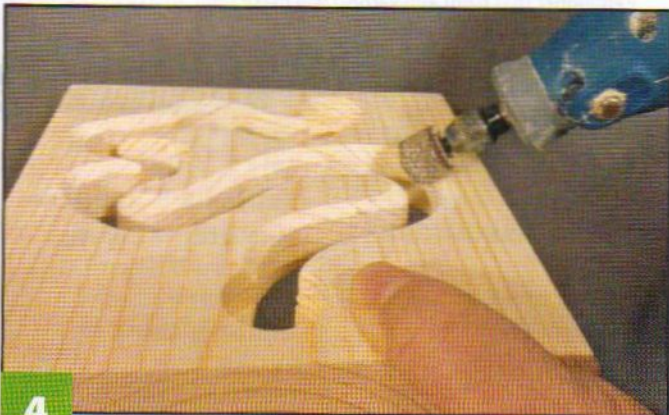
2

Drill the holes in the bottom. The shallow 1" (25mm)-diameter holes keep the gumballs from rolling to the sides. Drill the holes for the obstacles (F1 to F4) and the post (J). Drill the pilot holes for the long screws (K) and countersink the outer face. Drill the holes through the front and back.



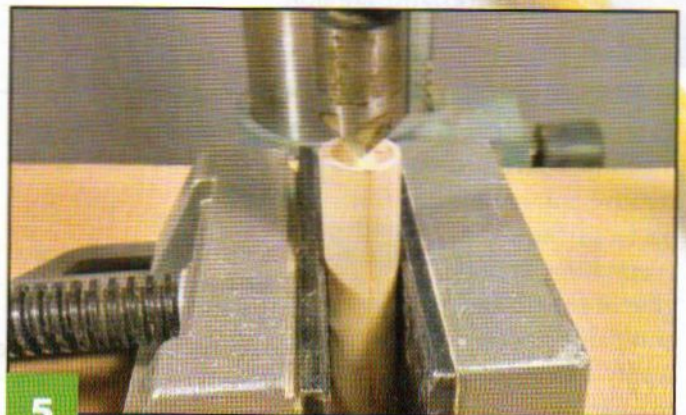
3

Make the maze cuts on the sides. Use a scroll saw. Verify the width of the cut by running a $\frac{3}{8}$ " (10mm)-diameter dowel through the mazes. Sand or cut any areas where the dowel sticks.



4

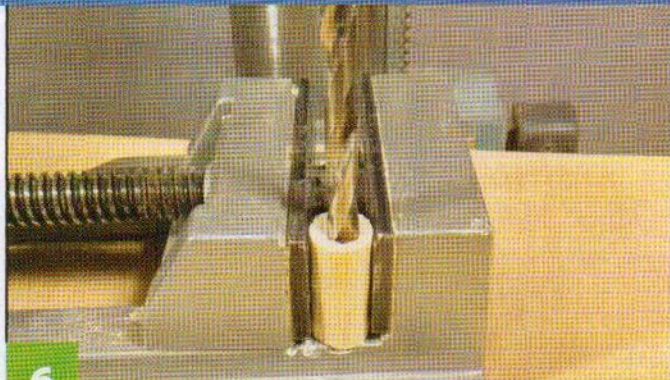
Add a $\frac{1}{8}$ " (3mm)-wide 45° bevel to both sides of the maze track. Use a sanding drum in a rotary tool. Add the bevel to the inside and outside faces to give the handles more maneuverability.



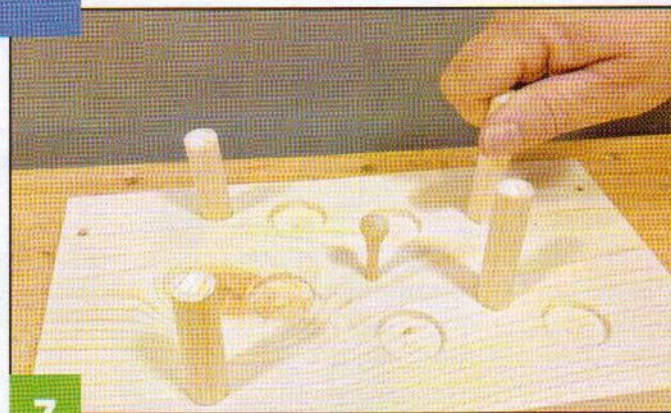
5

Cut the obstacles (F1 to F4), handles (H), and grabbers (G) to length. Once the blade is halfway through the dowel, I rotate the dowel into the blade to keep it from bouncing on the table. Use a countersink bit or a $\frac{3}{8}$ " (10mm)-diameter twist bit to put a dimple in one end of each of the obstacles and one end of each grabber.

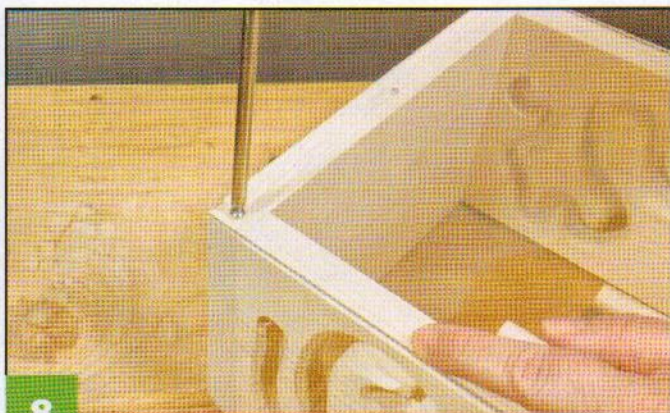
GUMBALL: ASSEMBLING THE PROJECT



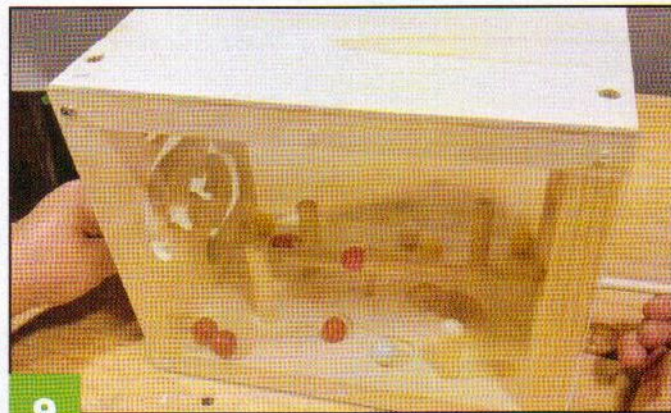
6 Drill a $\frac{1}{4}$ " (6mm)-diameter by $\frac{1}{2}$ " (13mm)-deep hole in the flat end of each grabber. Glue one end of a handle into the hole in each grabber. Then, glue a $\frac{3}{4}$ " (19mm)-diameter ball with a $\frac{1}{4}$ " (6mm)-diameter hole on the other end of each handle.



7 Press-fit the obstacles into the bottom. Do not glue them in place. Make sure you get the correct obstacle in the correct hole. Attach the sides to the top and bottom using the long screws (K). Remember, the larger side of the stepped holes in the sides faces the inside of the aquarium.



8 Place the front on the aquarium and align the top and sides. Insert an awl through the holes to mark and make starter holes. Use a hand screwdriver to screw the short screws (L) in until they lightly touch the acrylic plastic. Do not apply too much pressure or use a powered screwdriver; it will crack the acrylic. Repeat the process for the back. Mark the sides so you can reassemble it if you have to take it apart.



9 Insert 10 to 20 gumballs through one of the top holes. Insert the grabbers through the top holes and work the handles down to the bottom holes. Hold one handle in each hand. Pinch a rogue gumball between the grabbers. Carefully manipulate each handle through the maze until you reach the top and can extract the gumball through the large upper hole. Sand or cut any tight spots in the track. Remember that paint and varnish will make tight areas even tighter, so be generous with the width.

Finishing the Project

Take the gumball machine apart and remove any remaining patterns. Sand everything smooth, glue in the obstacles, and paint as desired. Apply a food-safe finish, reassemble, and then start challenging your friends and family to a contest of manual dexterity.

Materials:

- Pine, $\frac{3}{4}$ " (19mm) thick: top, bottom, sides, $5\frac{1}{2}$ " x 31" (14cm x 78.7cm)
- Clear acrylic plastic, $\frac{1}{8}$ " (3mm) thick: front, back, $7\frac{1}{2}$ " x $9\frac{1}{2}$ " (19.1cm x 24.1cm)
- Dowel, $\frac{1}{2}$ " (13mm) dia.: obstacles, grabbers, $11\frac{1}{4}$ " (28.5cm) long
- Dowel, $\frac{1}{4}$ " (6mm) dia.: handles, 24" (61cm) long
- Ball: 2 each $\frac{3}{4}$ " (19mm) dia.
- Sandpaper

- Drywall screws, coarse thread: 8 each $1\frac{1}{4}$ " (32mm) long
- Panhead screws: 12 each #4 x $\frac{3}{8}$ " (10mm) long
- Golf tee
- Gumballs: several thousand pounds, preferably unused
- Food safe finish

Tools:

- Saws
- Scroll saw blades: #5 reverse-tooth

Materials & Tools

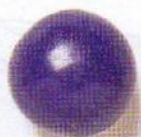
- Drill
- Awl
- Rotary tool with sanding drum
- Forstner bits: $\frac{3}{8}$ " (10mm), $\frac{1}{2}$ " (13mm), $\frac{5}{8}$ " (16mm), 1" (25mm) dia.
- Twist bit: $\frac{1}{8}$ " (3mm), $\frac{5}{32}$ " (4mm)
- Countersink bit or $\frac{3}{8}$ " (10mm)-dia. twist bit
- Screwdrivers to match screws

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

Parts List

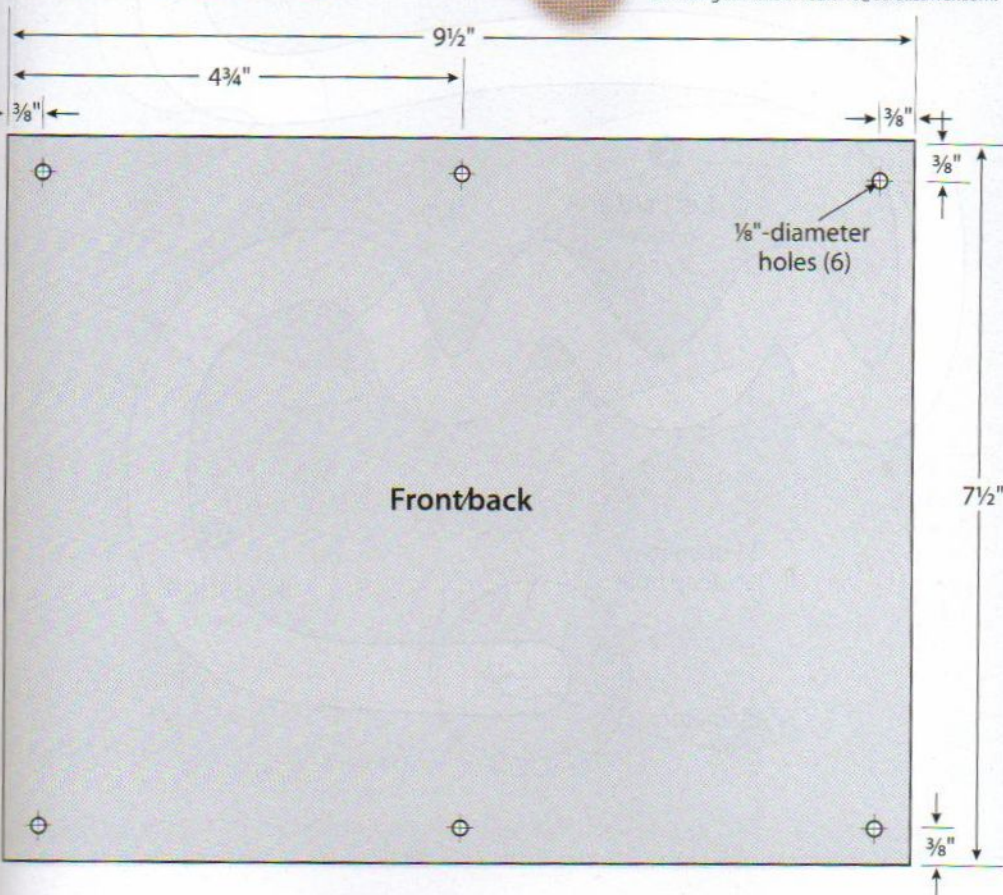
Item	Quantity	Materials	Dimensions	Presentation
A Top	1	Pine, 3/4" (19mm) thick	5 1/2" x 9 1/2" (14cm x 24.1cm)	Drawing
B Bottom	1	Pine, 3/4" (19mm) thick	5 1/2" x 9 1/2" (14cm x 24.1cm)	Drawing
C Left side	1	Pine, 3/4" (19mm) thick	5 1/2" x 6" (14cm x 15.2cm)	Pattern
D Right side	1	Pine, 3/4" (19mm) thick	5 1/2" x 6" (14cm x 15.2cm)	Pattern
E Front and Back	2	Clear acrylic plastic, 1/8" (3mm) thick	7 1/2" x 9 1/2" (19.1cm x 24.1cm)	Drawing
F Obstacle 1	1	Dowel, 1/2" (13mm) dia.	1 3/4" (44mm) long	Dimensions
G Obstacle 2	1	Dowel, 1/2" (13mm) dia.	2 1/4" (57mm) long	Dimensions
H Obstacle 3	1	Dowel, 1/2" (13mm) dia.	2 1/2" (64mm) long	Dimensions
I Obstacle 4	1	Dowel, 1/2" (13mm) dia.	2 3/4" (70mm) long	Dimensions
J Grabbers	2	Dowel, 1/2" (13mm) dia.	1" (25mm) long	Dimensions
K Handles	2	Dowel, 1/4" (6mm) dia.	12" (30.5cm)	Dimensions
L Ball	2	Wooden ball, 3/4" (19mm) dia.	1/4" (6mm)-dia. x 1/2" (13mm)-deep hole in center	Dimensions
M Post	1	Golf Tee	N/A	Dimensions
N Long screws	8	Drywall screws, coarse thread	1 1/4" (32mm) long	Dimensions
O Short screws	12	Panhead screws, #4	3/8" (10mm) long	Dimensions

Gumball challenge measured drawing



Send us pictures of your finished and decorated machines. Bob might choose your idea to share in his upcoming book!

E-mail #gumballs to: editors@scrollsawer.com.

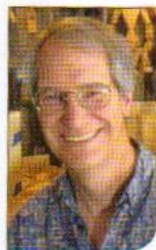


WANT MORE TOYS?

Zany Wooden Toys That Whiz, Spin, Pop, and Fly
by Bob Gilsdorf

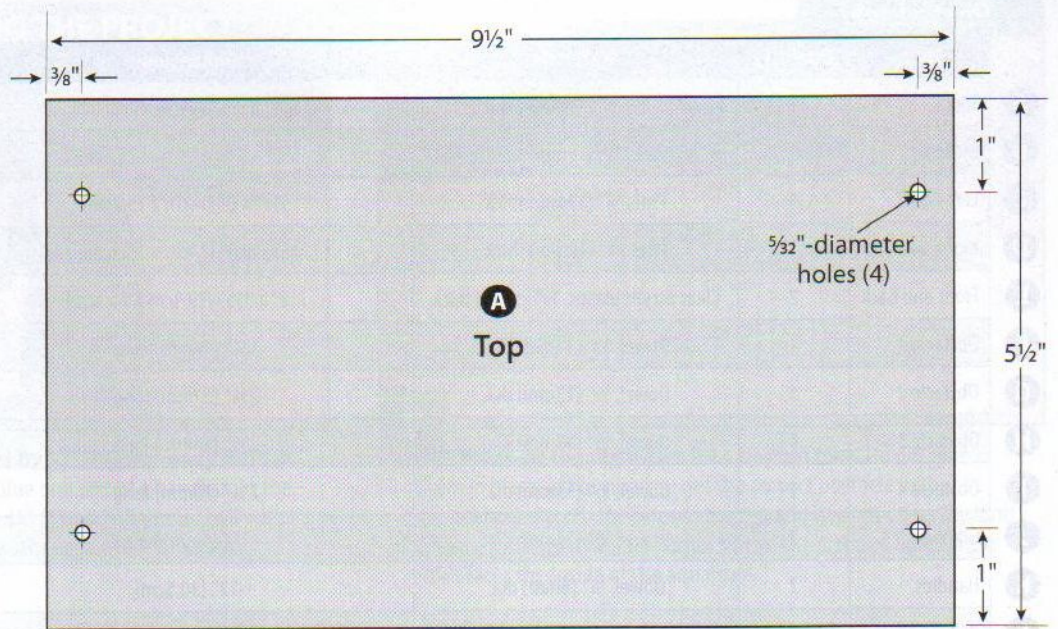


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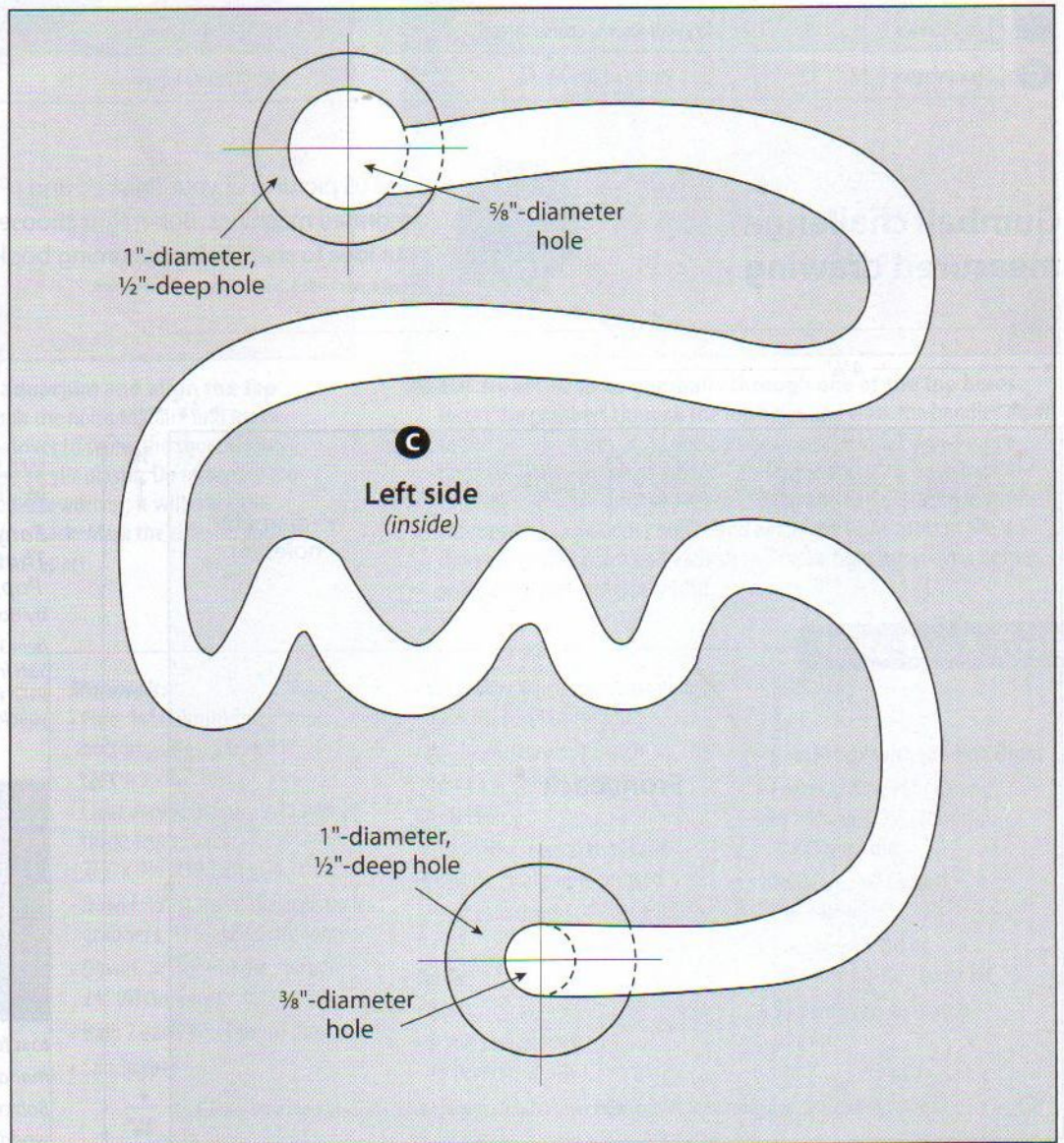


Bob Gilsdorf lives in Colorado Springs, Colo., with his wife and five sons. Bob started woodworking at a young age, and he has built wooden toys for most of his life. An engineering manager at a semiconductor company, Bob continues to invent and make wooden toys.

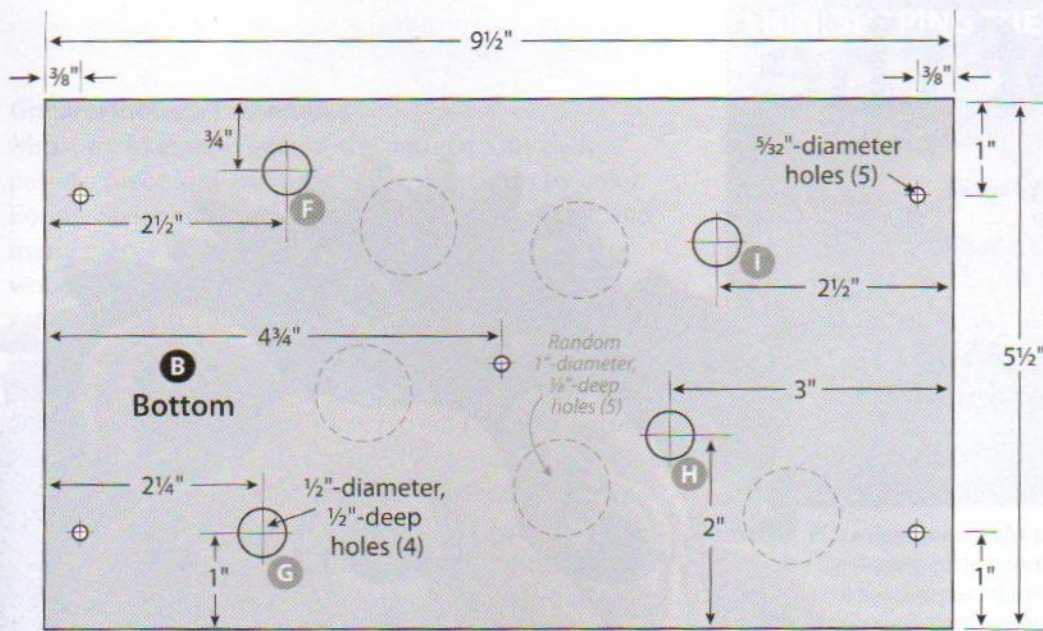
Gumball challenge measured drawing



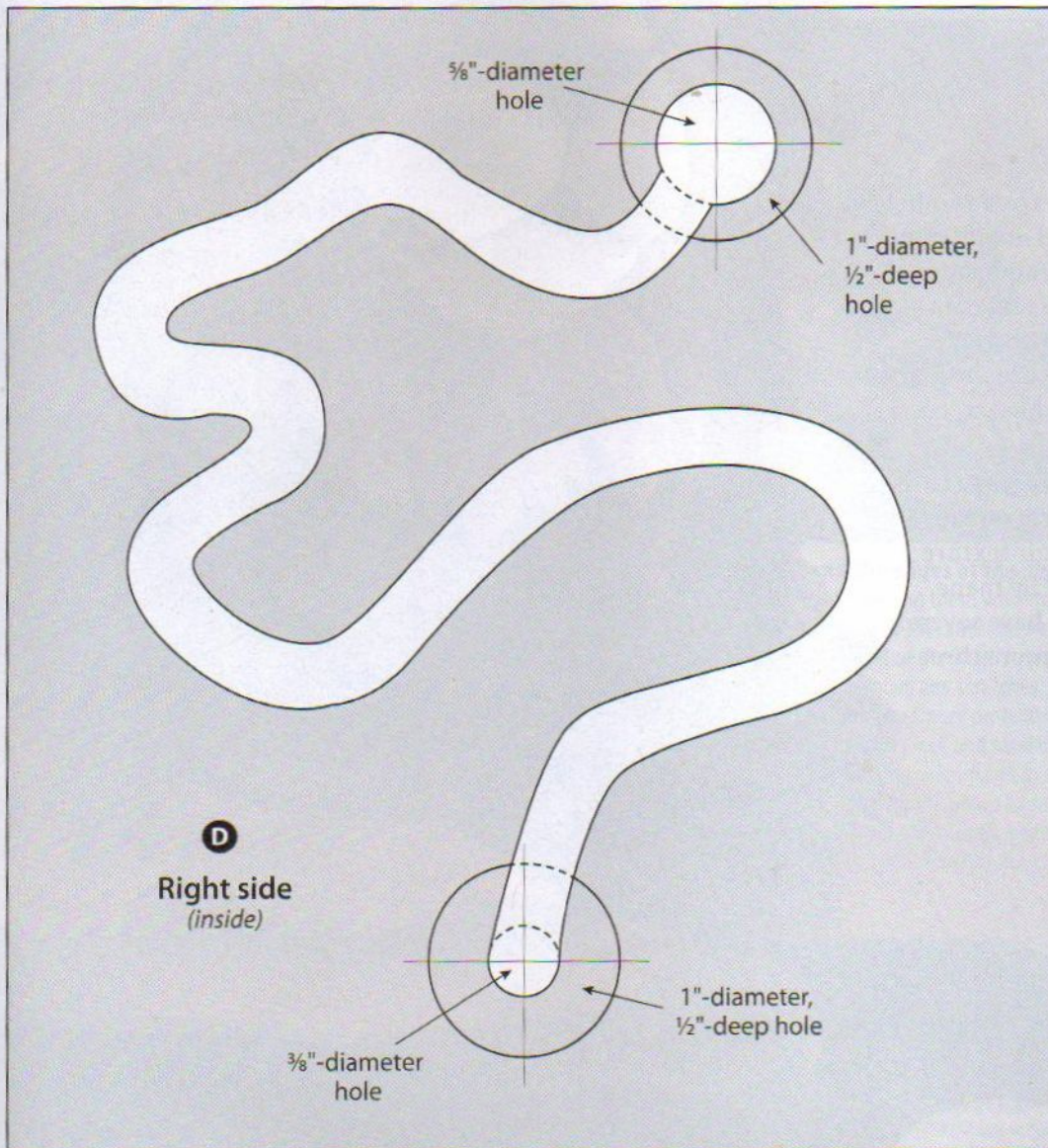
Gumball challenge pattern



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Gumball challenge measured drawing



Gumball challenge pattern

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King of the Jungle

Learn how to make a realistic mane for a magnificent lion

By Kathy Wise

The mighty lion appears as a symbol of power, courage, and nobility on family crests, coats of arms, and national flags in many countries. This intarsia lion will have a starring role on your living room wall, but to capture the glory of this animal in wood, you have to get the mane right.

The basic steps for most intarsia are the same, so I will be focusing on how to add depth and realistic hair texture to the mane for this piece. The mane, head, and front leg sections have several $\frac{1}{4}$ " (6mm)-thick risers for a more three-dimensional look.



General Intarsia Techniques

Make six to eight copies of the pattern. Cut each pattern piece and arrange them into groups by color. For an easier and faster project, cut the lion head and mane pieces from one large, medium-color piece of wood. This eliminates most of the fitting for the mane sections and turns this advanced lion pattern into an intermediate level. Spray adhesive onto the backs of the pattern pieces; attach them to the shiny side of clear shelf paper, such as Con-Tact® brand; trim the patterns; and stick them onto the wood. Wood color suggestions are listed on the pattern, and wood selections are in the Materials list. Place pieces of wood next to each other to help you decide upon the color combinations; don't feel restricted to the colors and varieties of wood I used.

Cut the pieces using a #5 reverse-tooth blade. Mark the numbers on the bottoms of the pieces with a pencil. Cut and add risers where indicated. Do not cut the ground base pieces until after you have pre-glued the lion and you can trace the edges to fit exactly.

LION: SHAPING THE MANE



1 Place risers under the pieces before you start to sand.

Using the shaping guide mark the areas to sand with a pencil. I use a red pencil to mark the pieces next to risers so that I don't accidentally make them too low.

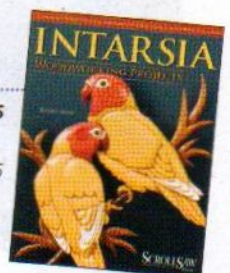


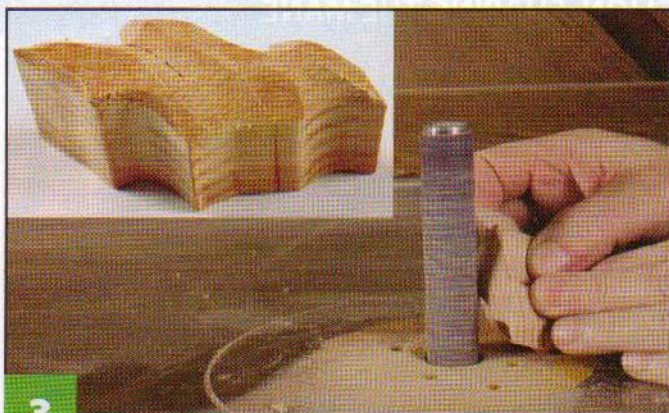
2 Sand the edges of the pieces on risers. This starts the process of blending them with the lower pieces beside them. Use a 100-grit drum sander to remove material quickly. Once you rough in all of the levels, use the 220-grit drum to soften the edges and remove any scratches. Use pliers to hold the smaller pieces and wear finger protection when holding them. Mark the level on a piece and sand down to the line. Always keep the line side up and in sight. Replace the pieces onto the work board to see how each piece looks next to the surrounding pieces. Continue sanding until the entire lion is done.

WANT MORE INTARSIA?

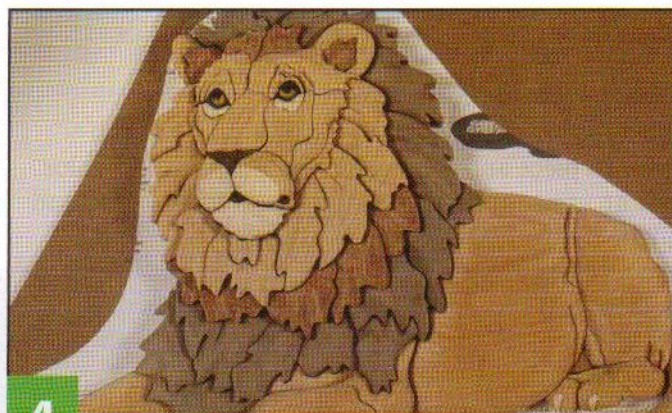
Intarsia Woodworking Projects
by Kathy Wise

Item 3393; code SSW67. Available for \$19.95 +S&H from Fox Chapel Publishing, 800-457-9112, www.FoxChapelPublishing.com, or your local retailer.



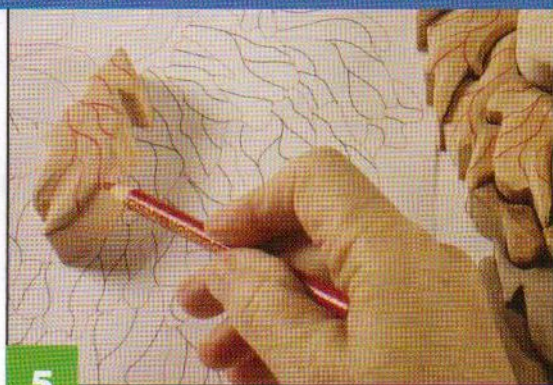


3 **Round the edges of the tight inside corners.** Use an oscillating spindle sander or sanding drum in a rotary tool. If you put a sharp angle on the edges of the pieces, it will create a shadow that will help hide any gaps, especially between the different colored pieces where the fit may be a bit off. Add concave grooves in the middle of some of the pieces for a more hairlike effect.



4 **Dry-assemble the lion on the floor.** Take a step back and see if all levels and sanding look good. Check the final fit. You may have to make some adjustments on the lion's mane where two different colors come together. You can carefully recut the line between two sections to draw them closer together or sand the points that touch with the oscillating spindle sander.

LION: ADDING HAIR TEXTURE



5 **Lay the mane pieces on the hair guide pattern.** Freehand-draw the hair lines with a red pencil. The lines don't need to be exactly the same as the pattern; as you carve along the lines you'll end up changing them. The juxtaposition of the highly textured mane and smooth body will create an interesting piece.



6 **Carve along the hair lines.** Use a long, tapered carving bit in a rotary tool. I used the tool at a high speed because I liked how the burn marks added shadows to the hair texture. Slow the tool down to avoid burn marks. Try to follow the lines, but improvise as you go, adding or changing hair lines as you see fit. Continue until you have carved all of the hair pieces.



7 **Buff the hair pieces.** Use a sanding mop. This will smooth the high parts of the hair texture but leave the rough texture in the carved grooves; this adds more texture to the mane.

LION: ASSEMBLING THE PROJECT

Dry-assemble the pieces on waxed paper placed on top of a copy of the pattern on a flat surface. Starting with the face, secure the pieces together with cyanoacrylate (CA) glue. Make sure all of the adjoining pieces are in place next to the pieces you are gluing to keep things from shifting out of place. Place dots of CA glue between each piece and quickly put them back together. You can use accelerator to speed up the process, but make sure you get the pieces in the proper positions quickly. Do not apply so much glue that it oozes out when you press the pieces together. I glued the ear sections, muzzle, and nose; right side of the face; left side of the face; front legs and claws; and body with back legs. Glue the head and leg sections to the riser. Do not use accelerator as you glue the mane sections to the pre-glued head and body. This gives you time to move the pieces into the correct positions. Leave it alone until the glue sets. If there are some small gaps, adjust the pieces to help even the spaces and let it set.



8

Place the lion on a copy of the ground pattern. Trace the new outline of the lion onto the ground pattern. There is usually a difference between the pattern and the glued-up body due to the kerf of the blade and any slight shifting when you glued the parts together. Cut and shape the ground pieces, and then buff them with a mop sander. Glue the lion to the ground with CA glue. Flat-sand the bottom of the lion on a portable drum sander, such as a Sand-Flee, to create a good gluing surface.



9

Trace the assembled project onto the backing board and cut it out. Apply dots of CA glue and wood glue to the back of the intarsia and apply accelerator to the backing board. Press the two together and trim off any overhanging backing board.

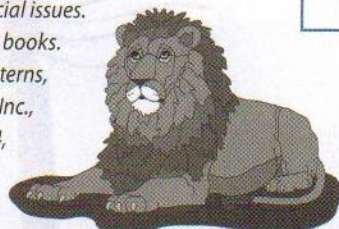


10

Apply finish to the pieces. I use clear satin spray finish, but you can use a finish of your choice. Follow the manufacturer's instructions and allow the finish to dry overnight. Attach a hanger to the back.



Kathy Wise is a nationally acclaimed intarsia artist. She has written consecutive articles for Scroll Saw Woodworking & Crafts for the past 13 years, including 52 articles for regular issues and additional patterns for a variety of special issues. Kathy has also written three books. For a free catalog of 550 patterns, contact Kathy Wise Designs Inc.,



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

Materials:

- Medium wood, such as beech, 1" (25mm) thick: body, 9" x 20" (22.9cm x 50.8cm)
- Light wood, such as maple, 1" (25mm) thick: face, 4" x 6" (10.2cm x 15.2cm)
- Yellow wood, such as yellowheart, 3/4" (19mm) thick: eyes, 2" (51mm) square
- Medium-dark wood, such as lacewood, 1" (25mm) thick: mane, 8" (20.3cm) square
- Dark wood, such as black walnut, 1" (25mm) thick: mane, 8" x 16" (20.3cm x 40.6cm)
- Black wood, such as wenge, 1/2" (13mm) thick: ground, nose, mouth, 5" x 22" (12.7cm x 55.9cm)
- Black wood, such as ebony or wood stained black, 1/2" (13mm) thick: pupils, 2" x 3" (51mm x 76mm)
- Tempered hardboard, 1/8" (3mm) thick: backing board, 15" x 22" (38.1cm x 55.9cm)
- Clear shelf paper, such as Con-Tact® brand
- Spray adhesive
- Glue: wood, cyanoacrylate (CA)
- Sanding drums: assorted grits
- Finish: clear satin polyurethane varnish
- Waxed paper
- Hanger

Tools:

- Scroll saw blades: #5 reverse-tooth
- Pliers
- Pencil: red
- Sanders: pneumatic drum, portable drum, sanding mop, oscillating spindle
- Rotary tool with sanding drums and carving bits

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

Pattern for the **KING OF THE JUNGLE** is in the pattern pullout section.

Crawly Critter Mobile

Delight bug enthusiasts with colorful scrap wood insects

By Tom St. Aubin

Being an amateur entomologist, I was thrilled when my grandson and granddaughter showed an interest in insects and bugs. They both like painting smaller projects when they visit, so I created this project with them in mind. I cut their mobile from plywood so they could paint it, but you could make one for yourself out of colorful hardwood scraps.

Making the Mobile

Photocopy the patterns and attach them to the wood. Drill blade-entry holes as needed and cut the pieces. Remove the patterns with low-odor mineral spirits and sand away any fuzzies or rough spots. Drill a $\frac{1}{16}$ " (2mm)-diameter hole in each piece for the hanging lines. Finish each piece as desired or allow a child to paint, color, or dye them.

I cut lengths of 18-pound test fishing line, and tie one end to a critter and the other end to a small button. I feed the buttons through the spider's web to easily add or rearrange the insects. I tie the spider directly to the center of the web. Insert a screw eye or tie lengths of nylon string to the web to hang the project.



Mobile spiderweb pattern



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Additional patterns for the **CRAWLY CRITTER MOBILE** are in the pullout section.

Materials & Tools

Materials:

- Baltic birch plywood, $\frac{1}{4}$ " (6mm) thick; spider web, $6\frac{1}{2}$ " x $7\frac{1}{2}$ " (16.5cm x 19.1cm); insects, assorted scraps
- Fishing line: 18-pound test
- Buttons
- Spray adhesive, such as 3M Super 77
- Sandpaper
- Acrylic paint (optional)
- Transparent tape

- Nylon string or screw eye
- Mineral spirits: low odor

Tools:

- Scroll saw blades: #2/0 reverse-tooth
- Drill press with bit: $\frac{1}{16}$ " (2mm)-dia. twist

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



A retired pharmacist, Tom St. Aubin draws his woodworking inspiration from his wife, Jo Ellen. He enjoys making one-of-a-kind projects for her, as well as many patterned projects.



Hungry Giraffe Lamp

Add animation to a bedside still life with a simple electrical motor

By John Hutchinson



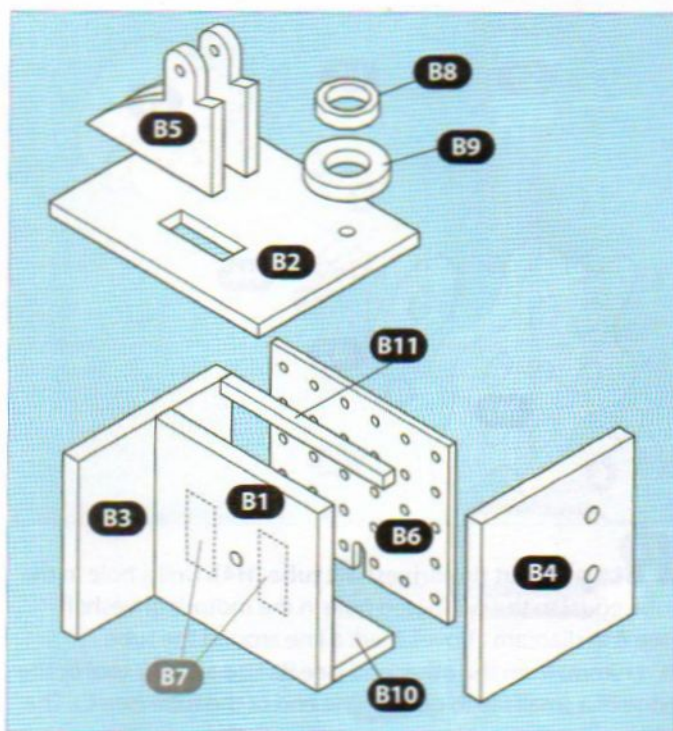
Make a lamp with a little something extra—the giraffe sways back and forth to “nibble” at the leafy shade! The lamp is perfect for a child but appreciated by adult fans of this gentle and unique creature. I’m a self-described “mechanical wizard,” but I’m a lousy painter, so my vision for a convincingly spotted giraffe stayed on the back burner until I discovered giraffe-print scrapbook paper at a local craft store. Oh, yeah—full speed ahead! The light bulb and the animation motor are switched independently. That way, when I want to give the giraffe a rest, I still have a delightful tabletop lamp.



Getting Started

Use the pattern pieces and drawings to cut the pieces from wood, referring to the Parts List as necessary. Drill the holes as marked. Note that several pieces have square holes; drill a blade-entry hole and then use the scroll saw to square off the hole. In addition, some pieces have holes drilled into their sides (i.e., into the thickness of the wood). Don't drill the pilot holes in the back (B6) or motor blockings (B7) yet. Either use a 1 1/16" (27mm)-diameter Forstner bit or drill a blade-entry hole and cut the holes in the tree bases (B8, B9), and then cut the perimeters.

MAKING THE BOX

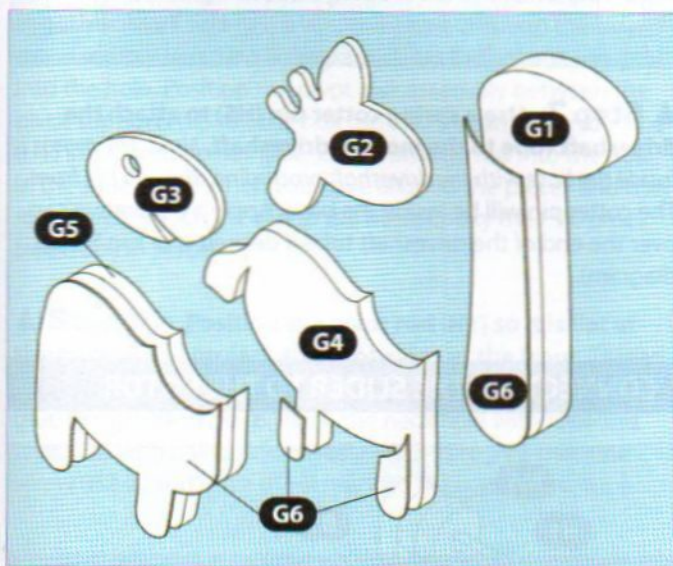


▲ Step 2: Refer to the diagram to glue and clamp the pieces. Assemble the top and base separately; do not glue the top to the base yet. Use the PVC pipe to align pieces B8 and B9. Adjust the pilot hole markings on the back (B6) as needed but do not install the piece. Referring to the photo, paint the pieces, if desired, and let dry. Cut the tree trunk (H8) from PVC, lightly sand it, and paint it brown.

INSTALLING THE MOTOR

Step 3: Align the motor (E1) on the inside of the box faceplate (B1) with the driveshaft in the hole. Position the motor blockings (B7) and mark the box; remove the motor. Glue the blockings in place, mark and drill pilot holes, and screw the motor to the blockings.

MAKING THE GIRAFFE



▲ Step 1: Cut pieces G1, G5, and just the legs of G4 from giraffe-patterned scrapbook paper. Refer to the photos to paint the pieces and let dry. Trim the paper G5 per the diagram. Use white or permanent spray glue to adhere the paper pieces to the wood. Then use wood glue to attach G3 and G2 to G1, and to attach G5 to G4. Do not glue the assembled head/neck to the assembled body.

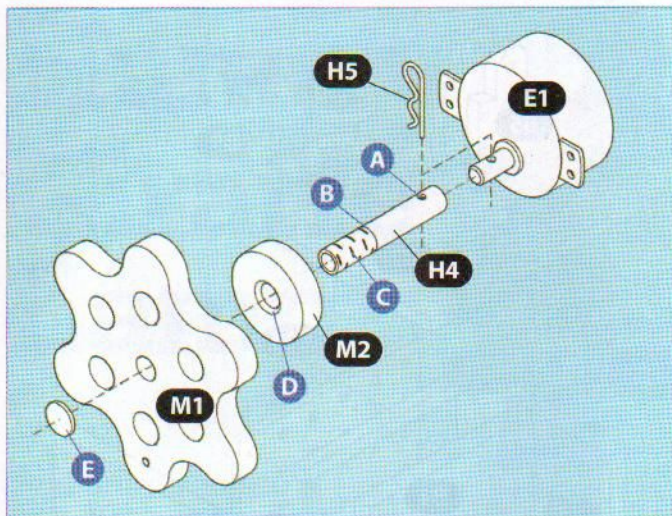
TIP

SAFETY NOTES:

- If you feel uncomfortable with electrical circuitry, enlist the assistance of a licensed electrician.
- When choosing an animation motor, make sure that it's rated continuous duty.
- Limit the wattage (heat output) of the light bulb per the recommendations of the shade manufacturer.
- Provide ventilation for the motor in the box. I used pegboard; you can also use plywood drilled with several holes.



CONNECTING THE ROTOR TO THE MOTOR



▲ Step 4 Cut the driveshaft tube (H4). Drill a hole in the tube equal to the pre-bored hole in the motor's driveshaft (see A in diagram above). Mark a line around the tube $\frac{3}{4}$ " (19mm) from the other end (see B). Use a rotary tool or the edge of a small file to distress the end of the tube (see C). The nicks will serve as micro-reservoirs for the glue.

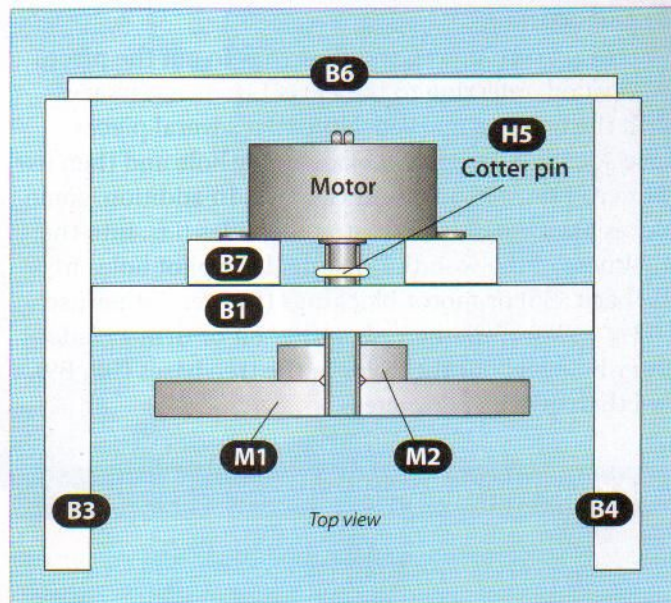
Step 5: Chamfer (bevel) the interior edge of the hole in rotor collar (M2) and rotor (M1) (see D). Chamfers serve as additional reservoirs for glue.

Step 6: Glue the pieces. Apply epoxy to the distressed portion of the driveshaft tube (H4). Slide the rotor collar (M2) over the tube until the back edge aligns with the $\frac{3}{4}$ " (19mm) setback line. Apply a liberal amount of epoxy to the face of the rotor collar, especially in the area around the chamfer. Slide the rotor over the tube until it makes contact with the collar, clamp the parts together, and allow the assembly to cure for 8 to 12 hours.

TIP

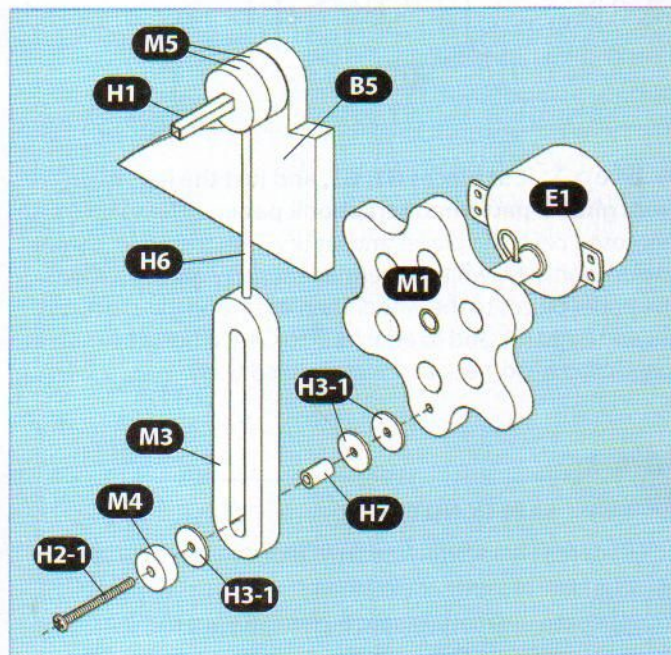
OILING THE PIVOT

If desired, drill a hole from the top to the center of each pivot support (B6). After assembling the lamp, you can use the holes to oil the pivot rod (H1). Aluminum oxide can build up over time and cause your swaying giraffe to develop an annoying squeak. The oil ports solve the problem.



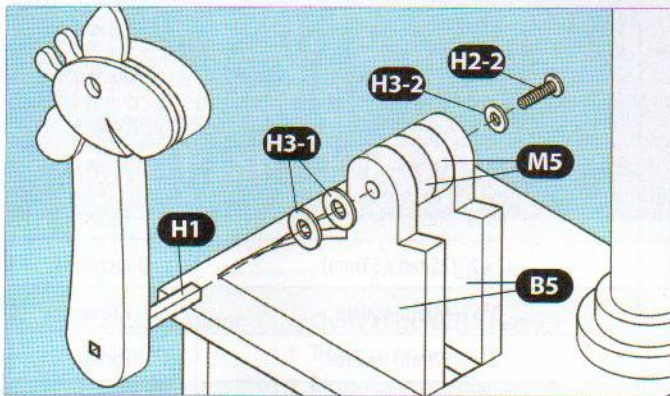
▲ Step 7: Use a spring cotter pin (H5) to attach the driveshaft tube to the motor's driveshaft. Note: The motor is inside the base with the driveshaft protruding through the front. The cotter pin will be inside the base. Apply a decorative cap over the end of the driveshaft tube if desired (see E in Step 4 diagram).

CONNECTING THE SLIDER TO THE ROTOR



▲ Step 8: Refer to the diagram to assemble the tracker disc using a #6 screw (H2-1), the slider (M3), the tracker disk (M4), three steel washers (H3-1), and a nylon spacer (H7). If desired, put a dab of wood glue on the screw threads before you tighten it into the rotor (M1).

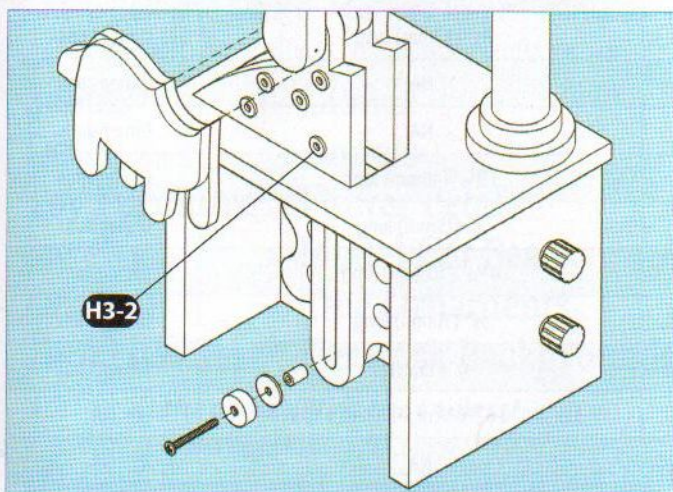
INSTALLING THE PIVOT ASSEMBLY & HEAD



▲ **Step 9:** Align the two pivot disks (M5) and glue them together. Mark and drill a $\frac{1}{8}$ " (3mm) hole through the side of the assembly (see Step 8 diagram). Glue the linkage rod (H6) into the hole. Position the pivot disk assembly between the pivot supports (B5) on the box top and thread the pivot tube (H1) into place; do not glue. Fit the linkage rod into the hole in the slider (M3). When you have aligned the pieces and they rotate well, attach the top to the base. Epoxy the PVC pipe tree trunk in place.

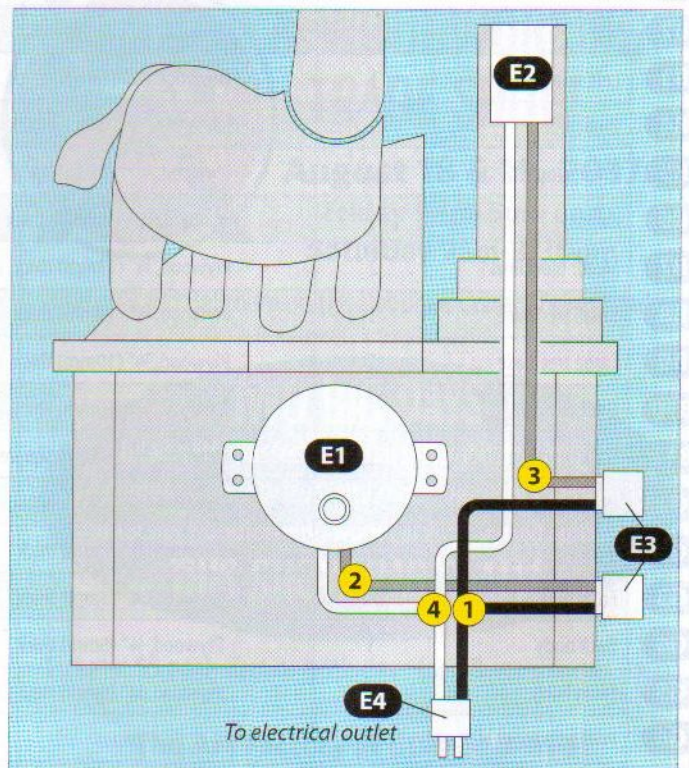
▲ **Step 10:** Position the pivot rod (H1) so it is flat at the back of the project and protrudes at the front. Thread two washers (H3-1) and the giraffe neck piece onto the front; glue the giraffe in place. Patch the neck hole with filler and touch up with paint. Add a washer (H3-2) to a #8 machine screw (H2-2) and drive the screw into the back of the tube.

INSTALLING THE BODY AND TRACKER



▲ **Step 11:** Glue washers (H3-2) to the pivot support, equal in thickness to the washers between the neck and the pivot support. The outside face of the body should be flush with the outside face of the neck. Fit the body to the bottom of the neck, leaving a $\frac{1}{16}$ " (2mm) gap, and glue it.

INSTALLING THE LAMP AND SWITCHES



▲ **Step 12:** Install the lamp fixture and switches. Fit the fixture into the top of the PVC pipe and feed the wires down into the body of the box. Feed the switch wires through the holes and then epoxy the switches in place, using washers as necessary.

▲ **Step 13:** Wire the lamp. Separate the power cord and strip the ends of each wire about $\frac{1}{2}$ " (13mm). Using wire nut 1, connect one cord wire, a bottom switch wire, and a top switch wire. Use wire nut 2 to attach the other bottom switch wire to one motor wire. Use wire nut 3 to attach the other top switch wire to a lamp wire. Use wire nut 4 to attach the remaining power cord wire, motor wire, and lamp wire.

Step 14: Hold the back in place, mark and drill pilot holes, and screw the back to the project. (See photo, page 59.) Add the lightbulb and shade, and then switch on your lamp and watch the giraffe lean forward to nibble leaves.



On a childhood family vacation that included a swing through Las Vegas, John Hutchinson was first introduced to the marvel of animated signs. A "few" years later, he's reliving that wonderment through his animated lamps. You can find a gallery of his small-scale kinetic woodworking at www.johnwhutchinson.com.

Questions or comments? Contact him via e-mail: john@johnwhutchinson.com.

Parts List

	Description	Quantity	Materials	Dimensions	Presentation
B1	Faceplate	1	Hardwood, ½" (13mm) thick	5" x 5¾" (12.7cm x 13.7cm)	Pattern
B2	Top	1	Plywood, ¾" (10mm) thick	5¼" x 6⅞" (13.3cm x 17.5cm)	Pattern
B3	Left side	1	Hardwood, ½" (13mm) thick	5" (12.7cm) square	Dimensions
B4	Right side	1	Hardwood, ½" (13mm) thick	5" (12.7cm) square	Pattern
B5	Pivot support	2	Plywood, ¾" (10mm) thick	4" x 4¾" (10.2cm x 11.1cm)	Pattern
B6	Back	1	Pegboard, ⅞" (5.5mm) thick	5" x 5⅞" (12.7cm x 14.9cm)	Pattern
B7	Motor blockings	2	Plywood, ½" (13mm) thick	1" x 2" (25mm x 51mm)	Dimensions
B8	Small tree base	1	Plywood, ¾" (10mm) thick	1¾" (44mm) square	Pattern
B9	Large tree base	1	Plywood, ¾" (10mm) thick	2¼" (57mm) square	Pattern
B10	Box base	1	Plywood, ¾" (10mm) thick	2" x 5¾" (51mm x 14.3cm)	Dimensions
B11	Back blocking	1	Hardwood, ¾" (10mm) square	5⅞" (13.5cm) long	Dimensions
G1	Head/neck	1	Plywood, ½" (13mm) thick	2⅝" x 6" (67mm x 152mm)	Pattern
G2	Back face	1	Plywood, ⅛" (3mm) thick	3½" (89mm) square	Pattern
G3	Front face	1	Plywood, ⅛" (3mm) thick	1¾" x 2¾" (44mm x 70mm)	Pattern
G4	Back body	1	Plywood, ¼" (6mm) thick	3¼" x 4¼" (83mm x 108mm)	Pattern
G5	Front body	1	Plywood, ¼" (6mm) thick	3½" (89mm) square	Pattern
G6	Printed paper	1	paper	NA	NA
M1	Rotor	1	Plywood, ¾" (10mm) thick	4¼" (10.8cm) square	Pattern
M2	Rotor collar	1	Plywood, ¾" (10mm) thick	1⅝" (41mm) square	Pattern
M3	Slider	1	Plywood, ¾" (10mm) thick	1¼" x 4¾" (32mm x 12.1cm)	Pattern
M4	Tracker disc	1	Plywood, ¼" (6mm) thick	⅞" (22mm) square	Pattern
M5	Pivot disc	2	Plywood, ¾" (10mm) thick	1¼" (32mm) square	Pattern
H1	Pivot tube*	1	Aluminum, ⅜" (5mm) square	1½" (38mm) long	Dimensions
H2-1	Machine screw 1*	1	#6-32	1¼" (32mm) long	Dimensions
H2-2	Machine screw 2*	1	#8-32	½" (13mm) long	Dimensions
H3-1	Steel washers*	As needed	⅝" (16mm) dia. o.d., #6 i.d.	NA	Dimensions
H3-2	Steel washers	As needed	⅜" (10mm) dia. o.d., #8 i.d.	NA	Dimensions
H4	Driveshaft tube*	1	Aluminum, ⅜" (10mm) round	1⅞" (46mm) long	Dimensions
H5	Spring cotter pin*	1	Steel	1" (25mm) long	Dimensions
H6	Linkage rod*	1	Aluminum, ⅛" (3mm) o.d.	4⅜" (10.4cm) long	Dimensions
H7	Spacer*	1	Nylon, #6, ¼" (6mm) o.d., ⅝" (3.6mm) i.d.	⅜" (10mm) long	Dimensions
H8	Tree trunk*	1	PVC pipe, 1⅞" (27mm) o.d., ⅜" (19mm) i.d.	6" (15.2cm)	Dimensions
H9	Lampshade (clip-on)	1	NA	3½" x 5" x 6" (8.9cm x 12.7cm x 15.2cm)	NA
E1	Animation motor*	1	16-RPM, continuous duty	NA	NA
E2	Bulb socket*	1	⅜" (19mm) o.d.	Candelabra base (E12) with short mounting bracket	NA
E3	Rotary switch*	2	NA	NA	NA
E4	Power cord*	1	NA	6' (1.83m) long	NA
E5	Bulb	1	Candelabra base	NA	NA

*These items are available in a kit from the author. See the Sources list.

(Continued on page 64)

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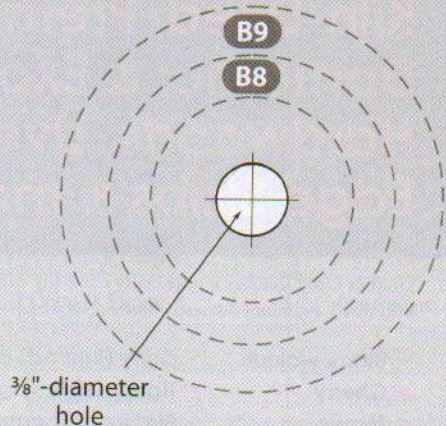
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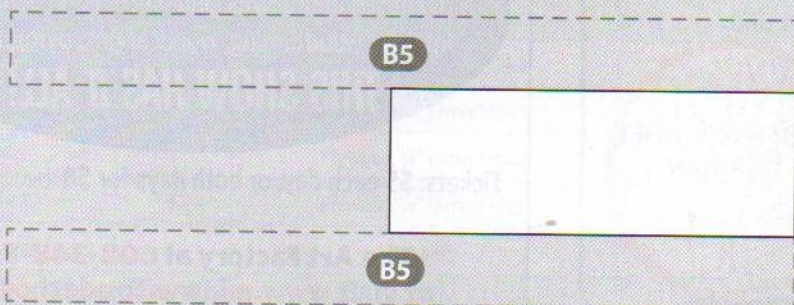
Giraffe lamp pattern

Back



B2

Top



Front

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Additional patterns for the **HUNGRY GIRAFFE LAMP** are in the pullout section.

Materials & Tools

Materials:

- Hardwood, 3/8" (10mm) square: 5 1/16" (13.5cm) long
- Hardwood, 1/2" (13mm) thick: 5" x 15 5/8" (12.7cm x 39.7cm)
- Plywood, 1/8" (mm) thick: 5 1/2" (14cm) square
- Plywood, 1/4" (6mm) thick: 3 1/2" x 9" (89mm x 22.9cm)
- Plywood, 3/8" (10mm) thick: 10" x 15" (25.4cm x 38.1cm)
- Plywood, 1/2" (13mm) thick: 4" x 6" (10.2cm x 15.2cm)
- Pegboard, 7/32" (5.5mm) thick: 5" x 5 7/8" (12.7cm x 14.9cm)
- Scrapbooking paper: giraffe print OR paint and brushes
- Aluminum tube, 3/16" (5mm) square: 1 1/2" (38mm) long
- Aluminum tube, 3/8" (10mm) round: 1 13/16" (46mm) long
- Spring cotter pin: 1" (25mm) long
- Aluminum rod, 1/8" (3mm) o.d.: 4 3/32" (10.4cm) long
- Machine screws: #6-32 x 1 1/4" (32mm) long; #8-32 x 1/2" (13mm) long
- Washers, steel: 5/8" (16mm) dia. o.d., #6 i.d.; 3/8" (10mm) dia. o.d., #8 i.d.
- Nylon spacer, 1/4" (6mm) o.d. x 9/64" (3.6mm) i.d.: 3/8" (10mm) long
- PVC pipe, 1 1/16" (27mm) o.d., 3/4" (19mm) i.d.: 6" (15.2cm) long
- Lampshade, clip-on: 3 1/2" x 5" x 6" (89mm x 12.7cm x 15.2cm)
- Motor: Generic TYC-50 synchronous motor 110V AC 15-18RPM CW/CCW torque 4W
- Socket: E12 candelabra base

Tools:

- Rotary switches: 2 each 3/1 amps at 125/250, 6" Wires
- Power cord: 6' (1.83m) long 2-conductor lamp cord
- Lightbulb: candelabra base
- Glue: white glue or permanent spray adhesive; wood glue; 2-part epoxy
- Acrylic paint: yellow, gray, black, blue, green, brown
- Sandpaper
- Wood filler
- Scroll saw with blades: #5 reverse tooth
- Table saw
- Drill with assorted bits
- Paintbrushes
- Clamps

SPECIAL SOURCES:

*Items marked with an asterisk in the Parts List are available from the author as part of a kit (www.johnwhutchinson.com/supplies.html). Other Sources: Giraffe-print paper: Reminiscence Jungle-icious scrapbook paper. Aluminum tubes: K&S Precision Metals; round, #83063, 3/8" x .049; square, #83013, 3/16" x .014. Round aluminum rod: K&S Precision Metals, #83043, 1/8". Lampshade: Lamps Plus, Brown Palms Bell Lamp Shade, style #6C003.

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COMPOUND-CUT Earrings

Transform scrap wood
into unique jewelry

By Ronald Nelson

Since I got my scroll saw, I have been making small, two-dimensional pendants and earrings from pieces of locally sourced wood. I wanted to make something using compound-cutting techniques. I found several patterns for Christmas ornaments. After some redesigning and a lot of resizing, I had plans for earrings that I cut from maple milled from a fallen branch. These earrings are light and ideal gifts for family and friends who like to wear something natural.

Making the Earrings

Cut the blank to size. Make sure the wood is square on the two sides that you will cut. Fold the pattern along the dotted line, apply spray adhesive to the back, align the fold with the corner of the blank, and press it into place. Drill blade-entry holes and cut the two frets on one side. Secure the cut pieces with clear packaging tape. Rotate the blank 90° and repeat the process. After you cut all of the frets, cut the perimeter on one side. Secure the cut pieces with clear packaging tape, rotate the blank 90°, and make the final cut. Carefully remove the earring and sand away any fuzzies. Repeat for the second earring. Apply three coats of spray lacquer and allow it to cure.

Adding the Hardware

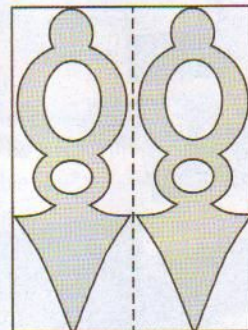
Drill a $\frac{1}{32}$ " (1mm)-diameter hole in the top of each earring. Use cyanoacrylate (CA) glue to attach a short eye pin. Attach an earring hook to the eye pin.



Ronald Nelson is a scientist from South Africa who lives in Sweden and has been woodworking for just over a year. He makes a number of wooden items, some of which are available at [etsy.com/shop/Induku](https://www.etsy.com/shop/Induku). More of his work is on display at [indukudesign.com](https://www.indukudesign.com).



Earring patterns



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Materials & Tools

Materials:

- Maple, $\frac{5}{8}$ " (16mm) square: 2 each $1\frac{11}{16}$ " (43mm) long
- Clear packaging tape
- Spray adhesive
- Earring hardware: 2 each eye pins and earring hooks
- Jump loop and chain (optional for pendant)
- Spray lacquer

- Cyanoacrylate (CA) glue
- Sandpaper: 400 grit

Tools:

- Scroll saw blades: #2 reverse-tooth
- Drill with bits: $\frac{1}{32}$ " (1mm) dia.

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

Doll Scooter

Create a combination toy and stand for American Girl® and other 18" dolls

By Paul Meisel

Although I originally designed this project as a display stand for 18" (45.7cm)-tall dolls, my granddaughter immediately commandeered it and with great enjoyment gave rides to several of her American Girl® dolls. You can cut all of the parts for this scooter from $\frac{3}{4}$ " (19mm)-thick pine except the fork, which should be cut from plywood or hardwood for additional strength.

TIPS

CUTTING TIPS

Handlebar mount: After you cut and drill the piece, round the bottom edges slightly if desired.

Head: Transfer the pattern onto $1\frac{1}{2}$ " (38mm)-thick stock, drill the hole, and cut it to its final shape. You can either face-glue two pieces of $\frac{3}{4}$ " (19mm) stock together or cut the piece from 2x4 scrap.

SPINNING WHEELS

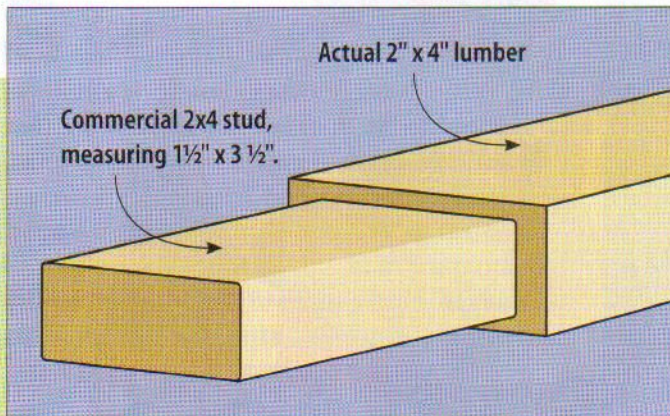
Use caution when installing the wheels and axle pegs. If you pound the axle pegs too far down, they will lock the wheels and prevent them from turning. Slip a $\frac{1}{16}$ " (2mm)-thick spacer behind the wheel and then tap the axle peg down until the wheel just touches the spacer. Remove and discard the spacer.



CUTTING & DRILLING THE PIECES

Transfer the patterns to the blanks and cut them on a scroll saw (see Cutting Tips for any special procedures). Drill the holes. *Note: Because the hole diameters are so small, we are only providing imperial measurements for the hole dimensions. For best results, use imperial drill bits.*

The $\frac{5}{16}$ " (8mm)-diameter holes in the handlebar provide a place for the doll's thumbs. They help stabilize the doll but are not intended to hold the



Nominal Dimensions

When you buy lumber the dimensions are often smaller than you might expect. For example, a 2x4 is actually closer to 1 1/2" by 3 1/2" (38mm by 89mm). The green wood was cut to 2" by 4" (51mm by 10.2cm), but it shrank after it was planed and dried. When you purchase the pine boards for this project, look for a 1x6 to get the dimensions you need.

doll securely. You will need two axle pegs for the front wheel. One axle peg will go most of the way through the fork. Cut the shank of a second axle peg to $\frac{1}{4}$ " (6mm) long for symmetry and to plug the hole on the other side of the fork.

ASSEMBLING THE SCOOTER

Step 1: Glue the handlebar and the handlebar mount together. Glue the dowel in the hole in the handlebar mount. The end of the dowel should be flush with the surface of the handlebar mount.

Step 2: Glue the head to the neck. Then glue the neck to the base.

Step 3: Slip the dowel collar onto the dowel. Then, slip the dowel through the top of the head. Glue the dowel into the $\frac{3}{8}$ " (10mm)-diameter hole in the fork. Make sure the handlebar assembly is aligned with the fork.

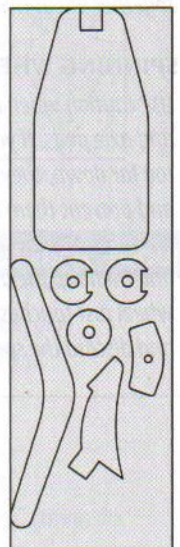
Step 4: Glue and nail the dowel collar to the dowel. Leave about a $\frac{1}{16}$ " (2mm) gap so the handlebar and fork assembly will rotate freely.

Step 5: Attach the rear wheels to the base with the axle pegs. The pegs should be glued in place.

Step 6: Attach the front wheel to the fork using one axle peg. Glue the hole plug in place.

Parts List

Part	Materials	Dimensions	Presentation
Base	Pine, $\frac{3}{4}$ " (19mm) thick	4" x 8 1/4" (10.2cm x 21cm)	Pattern
Handlebar	Pine, $\frac{3}{4}$ " (19mm) thick	2 1/4" x 9 1/4" (57mm x 23.5cm)	Pattern
Handlebar mount	Pine, $\frac{3}{4}$ " (19mm) thick	1 1/4" x 2 3/4" (32mm x 70mm)	Pattern
Neck	Pine, $\frac{3}{4}$ " (19mm) thick	2" x 5" (51mm x 12.7cm)	Pattern
Head	Pine, 1 1/2" (38mm) thick or 2 each $\frac{3}{4}$ " (19mm) thick	1 3/4" (44mm) square	Pattern
Dowel collar	Pine, $\frac{3}{4}$ " (19mm) thick	1 3/4" (44mm) square	Pattern
Fork	Hardwood or plywood, $\frac{3}{4}$ " (19mm) thick	2" x 2 5/8" (51mm x 65mm)	Pattern
Axles	3 each, $\frac{11}{32}$ " (9mm)-dia. axle peg	1 5/8" (41mm) long	Dimensions
Hole plug	1 each, $\frac{11}{32}$ " (9mm)-dia. axle peg	1/4" (6mm) long	Dimensions
Wheels	3 each, 2 3/4" (70mm)-dia. wooden wheels	NA	Dimensions



Cutting diagram
1" x 6" x 18"

Materials & Tools

Materials:

- Pine board, 3/4" (19mm) thick: 5 1/4" x 24" (13.3cm x 61cm)
- Hardwood or plywood, 3/4" (19mm) thick: 2" x 2 1/16" (51mm x 65mm)
- Axle pegs, 1 1/32" (9mm) dia.: 4 each 1 5/8" (41mm) long (#AP4)*
- Wooden wheels: 3 each 2 3/4" (70mm) dia. (#7053)*
- Birch dowel, 3/8" (10mm) dia.: 9" (22.9cm) long (#7164B)*
- Wood glue
- Sandpaper

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

- Polyurethane varnish
- Tape: clear packaging
- Finish (I use Danish oil and Deft clear wood finish)

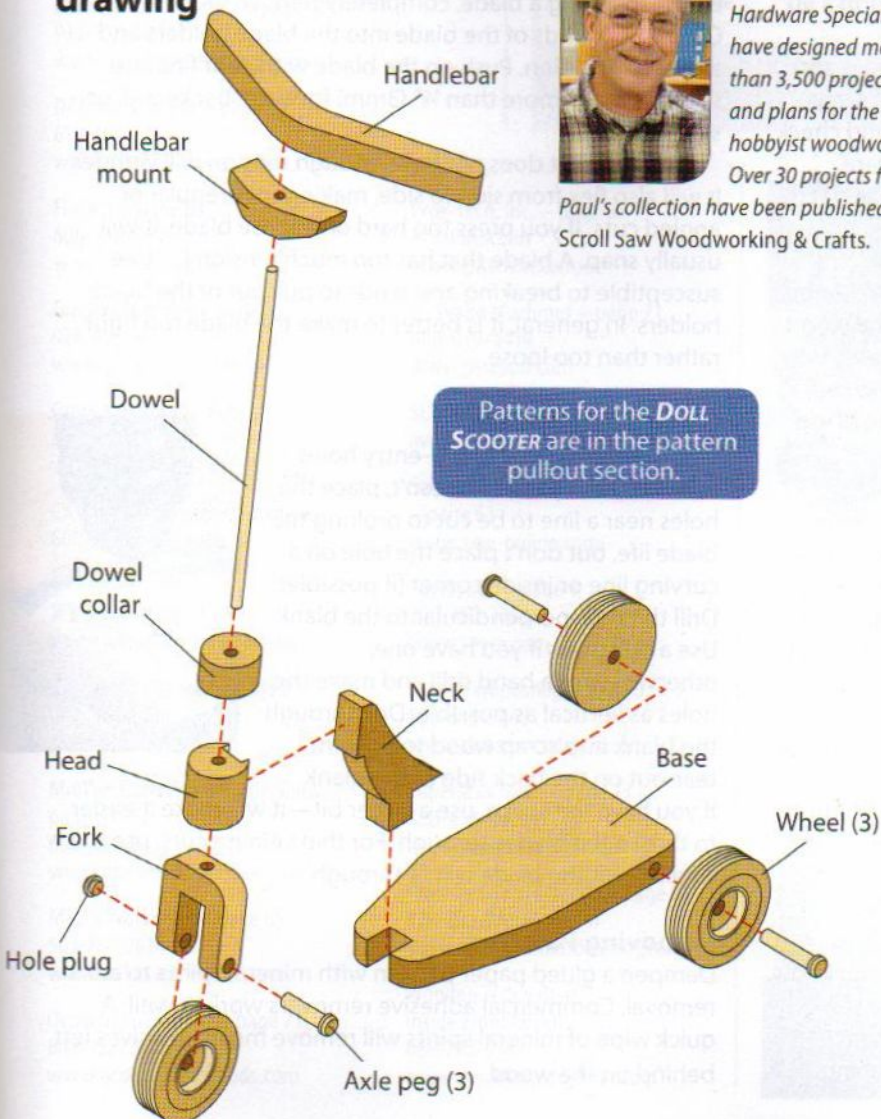
Tools:

- Drill press with bits: 5/16", 1 1/2", 2 5/64", 3/8" dia. (For best results, use imperial bits)
- Brad nailer with nails
- Paintbrushes

SPECIAL SOURCES:

The axle pegs, wood wheels, and dowel referenced with an asterisk are available from Meisel Hardware Specialties. To order parts or to request a catalog, visit www.meiselwoodhobby.com, or call 800-441-9870.

Assembly drawing



Paul Meisel and his team at Meisel Hardware Specialties have designed more than 3,500 projects and plans for the home hobbyist woodworker. Over 30 projects from Paul's collection have been published in *Scroll Saw Woodworking & Crafts*.



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DRILLNADO XL

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



Squaring Your Table

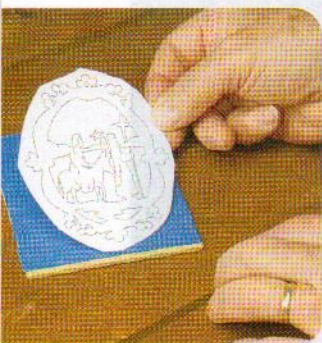
Most scroll saws have an adjustable table that allows you to make cuts at different angles. There are times when you want the saw set at an angle, but most cutting is done with the blade perpendicular to the table. If the table is even slightly off-square, the cuts will be angled. This interferes with 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 1/8" (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.



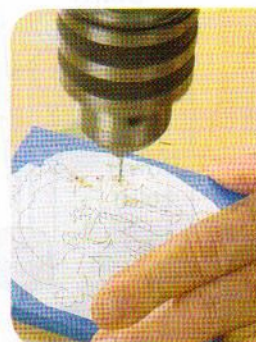
Blade Tension

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.



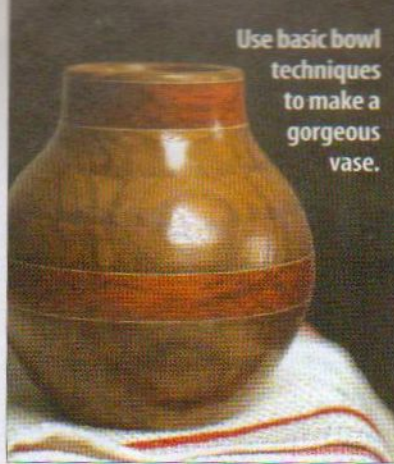
Removing Patterns

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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Young Scroller Creates Buzz

The Orange County Scroll Saw Association boasts members as old as 90, but it is their youngest member, Jadyn Coulter, who generates all the buzz at local fairs. The 11-year-old from Costa Mesa, Calif., draws crowds of onlookers to her scroll saw demonstrations. "Every scroll saw club should be so lucky to have a Jadyn Coulter," said Chuck Collins, the club president. "We are so proud of her. She is helping us introduce scrolling to a whole new generation." Jadyn started scrolling after watching an OCSSA demonstration three years ago. "They were making and giving away little toys. I wanted to do that myself someday, so I watched them and picked up tips on how to scroll saw," Jadyn recalled. Jadyn's grandfather, Dave Coulter, bought a scroll saw for her. "Pap Pap would sit in the garage and watch me for hours," she said. "We had so much fun that he bought two more saws so that we could sit side by side and learn to saw together." Later, they joined the club. "I wasn't sure how I would fit in, but all the people there were super nice and helpful. Now, I feel honored to have so many scroll saw grandparents," she said. Jadyn encourages other kids to try scrolling too. "It will be a lost art soon if the younger generation does not pick it up," she speculated. "My advice to them is, don't be afraid to try it because you just might like it. I ended up loving it!"



Jadyn Coulter's passion for scrolling is introducing the craft to a younger generation.

Little People with Big Hearts

George and Tena Baehm love making toys for needy children.



George and Tena Baehm are little people helping in a big way. Both under four feet tall and married for 53 years, the Tennessee couple makes toys for orphaned children around the world. They are both in their 80s and began taking scroll saw classes after moving to an independent living facility. "I sew, so using a scroll saw felt familiar to me, only it was cutting wood, not fabric," said Tena. "All we had to do was adjust our chairs and the fit was perfect. There is even a little ledge below the scroll saw where we can rest our feet." George and Tena began by cutting children's puzzles and now make cars, trucks, planes, busses, and helicopters that are shipped to orphanages in Third World countries. "I am so thankful I have been able to use the hands God gave me to help make children happy," said George. "In the meantime, I have fun with others in the scroll saw class. It's the greatest!" George and Tena know firsthand many of the places their toys go, as they once traveled the globe on service missions, including building youth camp cabins in Argentina and Australia, a medical clinic in Africa, a church in India, a maternity wing in Nepal, and an orphanage in El Salvador. "The Lord used our small hands in mighty ways," said Tena. "We did all the jobs under four feet that were hard for others to do."

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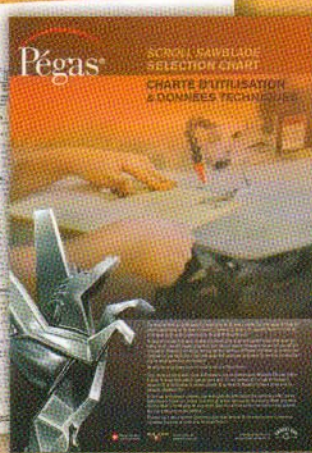
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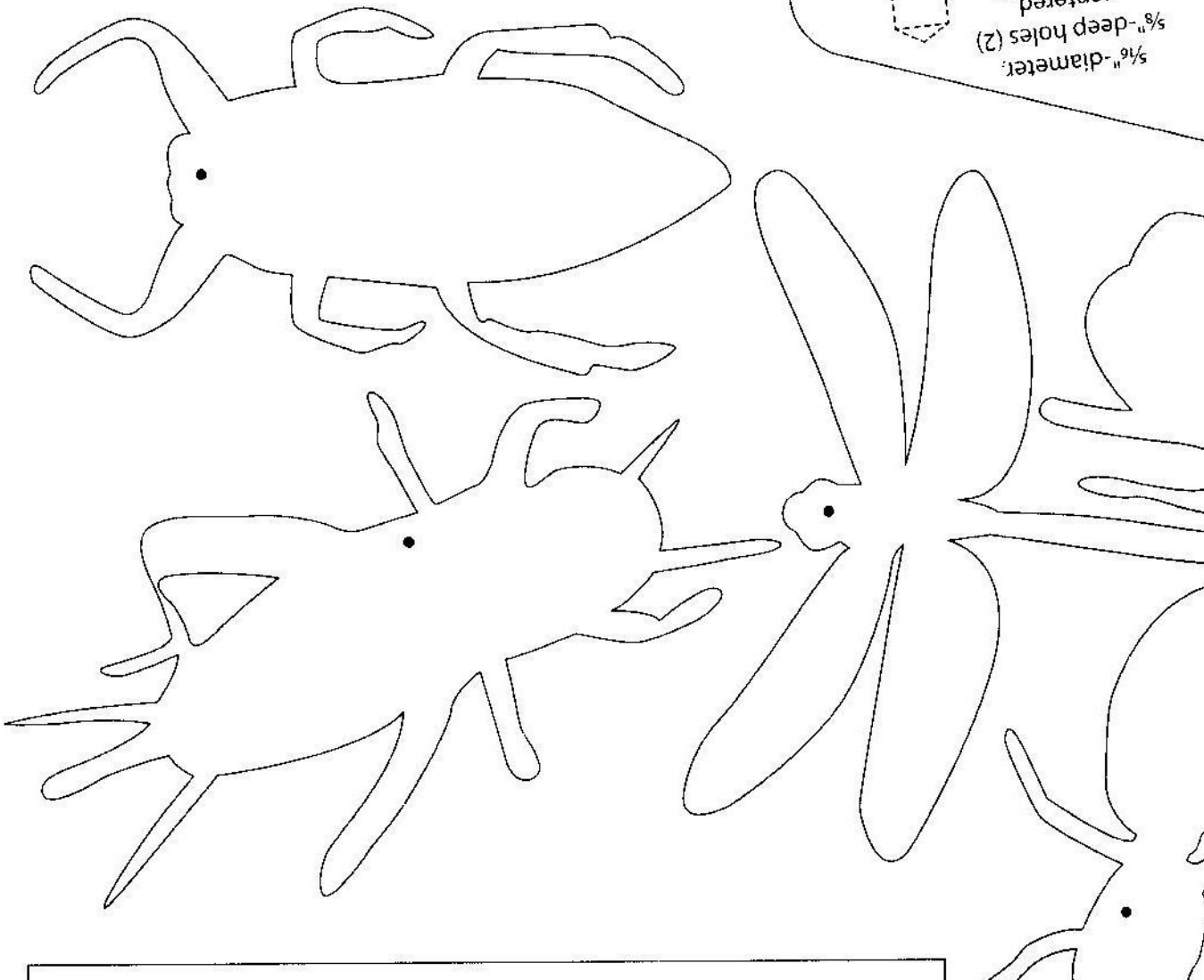
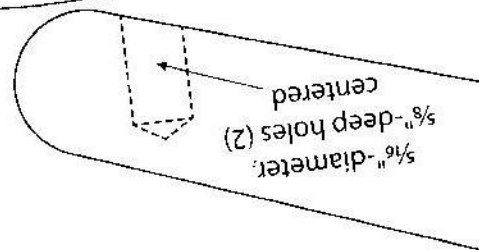
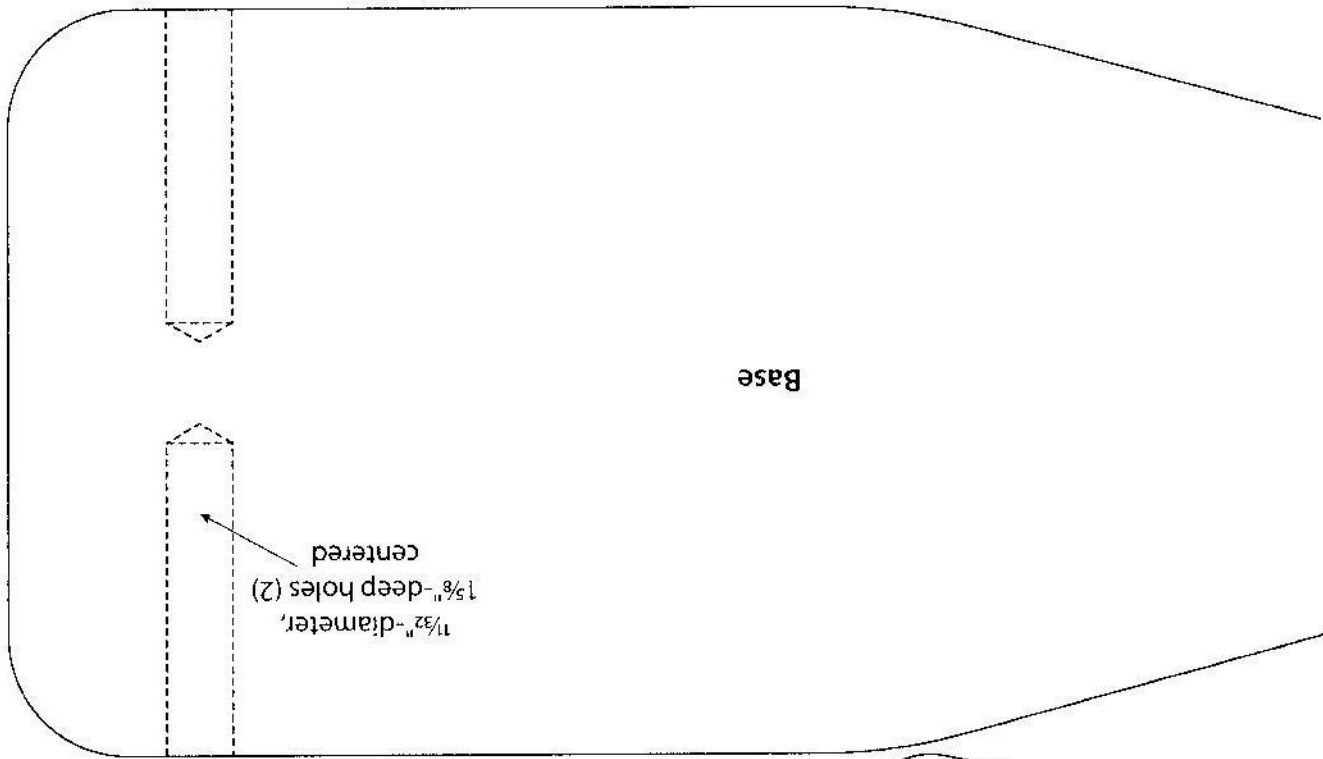


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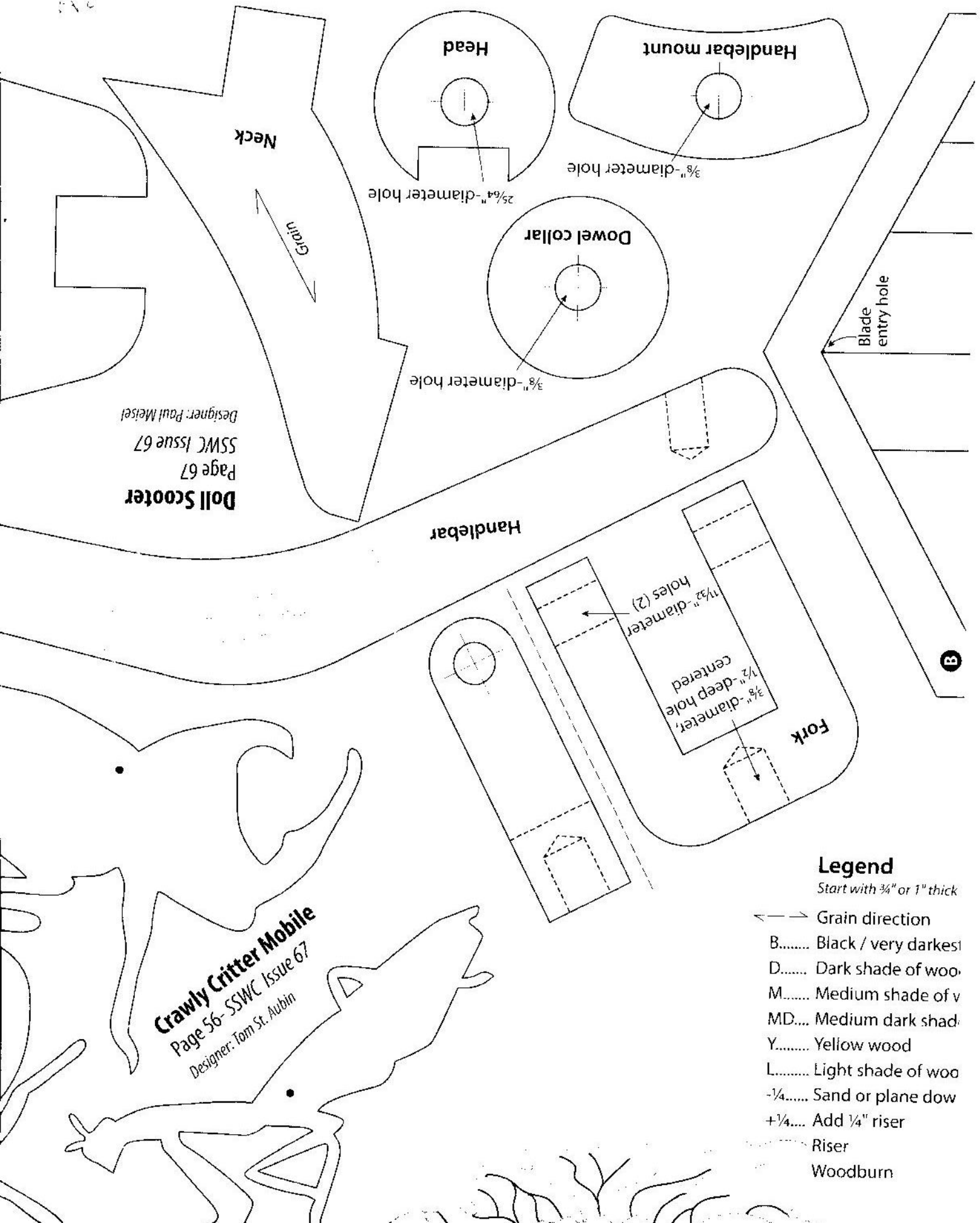
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Doll Scooter
 Page 67
 SSWC Issue 67
 Designer: Paul Meisel

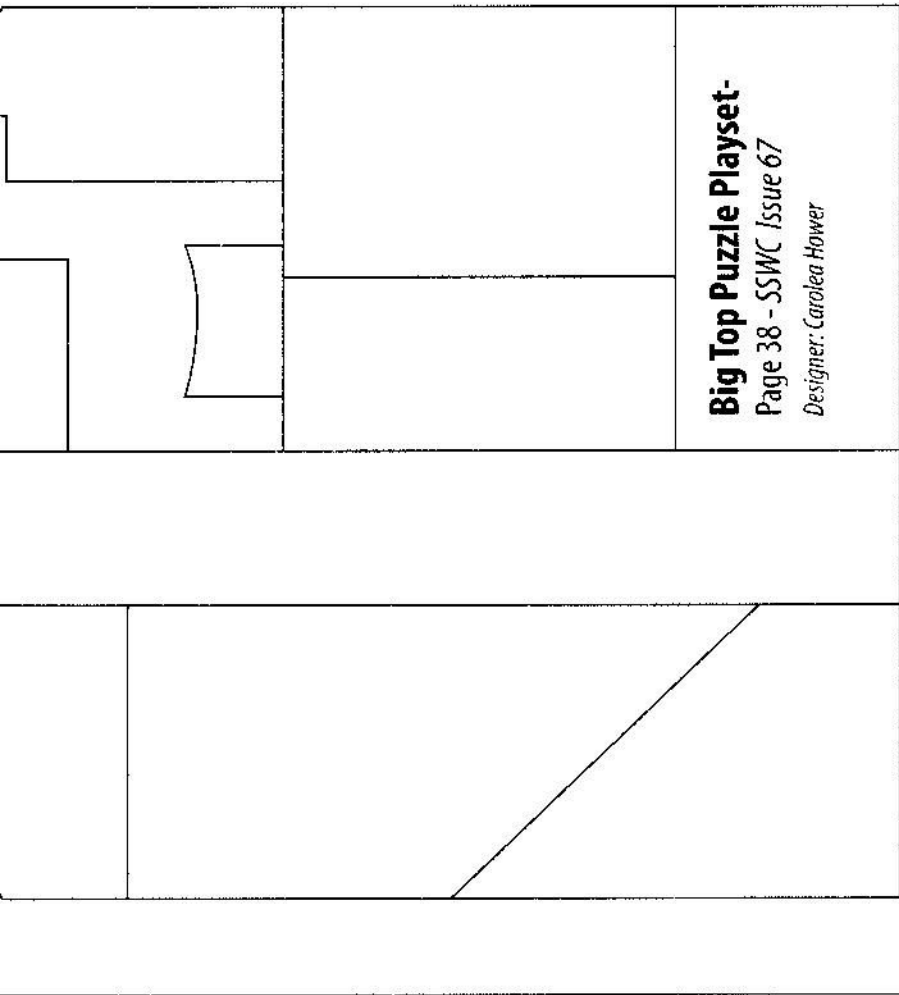
Crawly Critter Mobile
 Page 56- SSWC Issue 67
 Designer: Tom St. Aubin



Legend

Start with 3/4" or 1" thick

- ← Grain direction
- B..... Black / very darkest
- D..... Dark shade of wood
- M..... Medium shade of wood
- MD.... Medium dark shade
- Y..... Yellow wood
- L..... Light shade of wood
- 1/4.... Sand or plane down 1/4"
- +1/4.... Add 1/4" riser
- Riser
- Woodburn



Big Top Puzzle Playset-
 Page 38 - SSWC Issue 67
 Designer: Carolea Hower

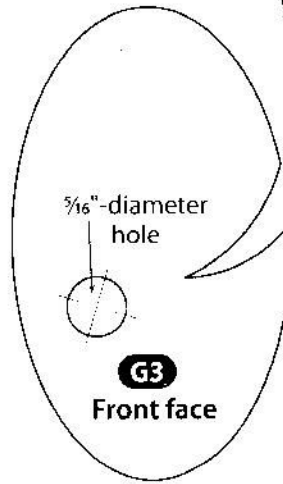
Notice about photocopying patterns

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One inch

G1
 Head/neck

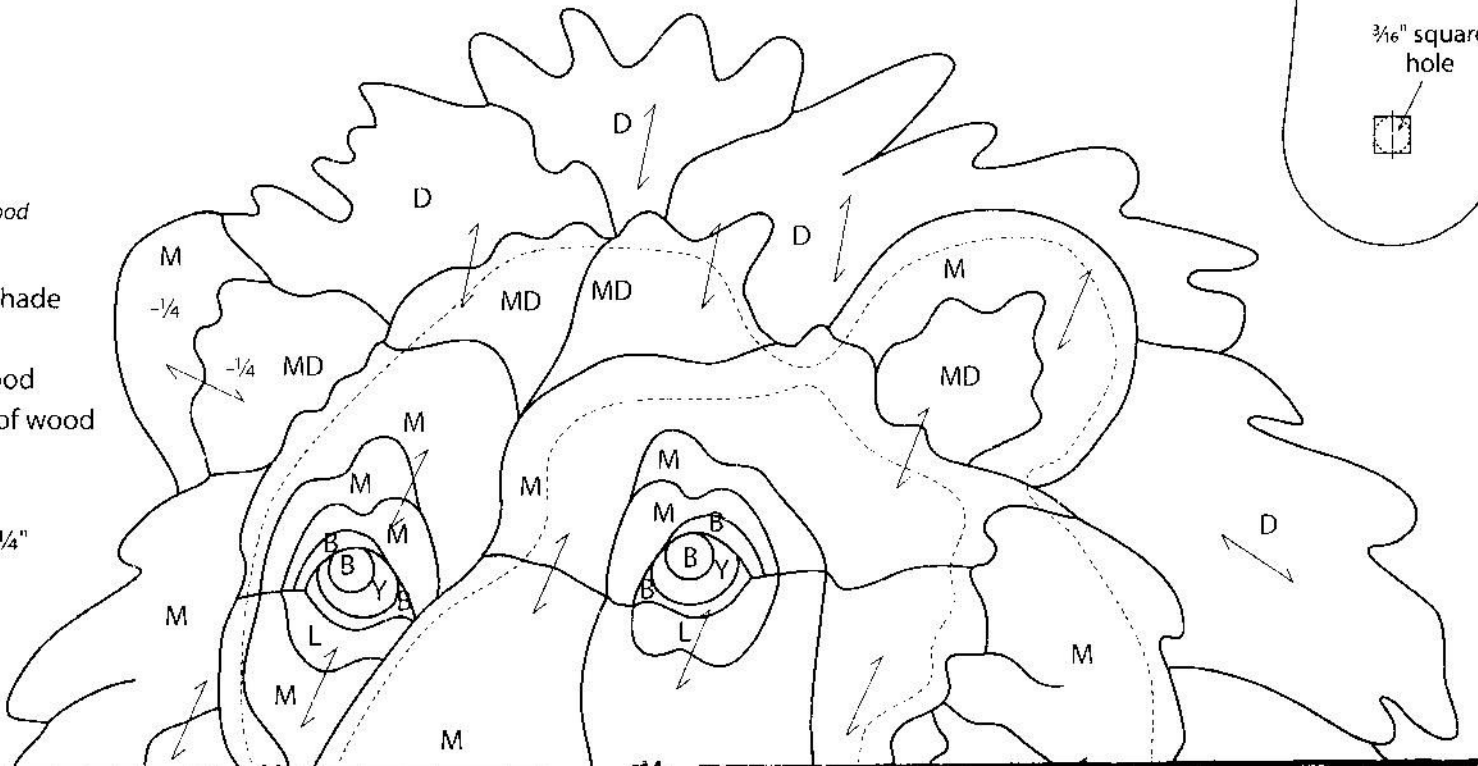


G3
 Front face

3/16" square hole



wood
 shade
 wood
 e of wood
 d
 n 1/4"



All patterns to be copied at 100% unless otherwise indicated.

All patterns on this pullout section: © 2017 Scroll Saw Woodworking & Crafts

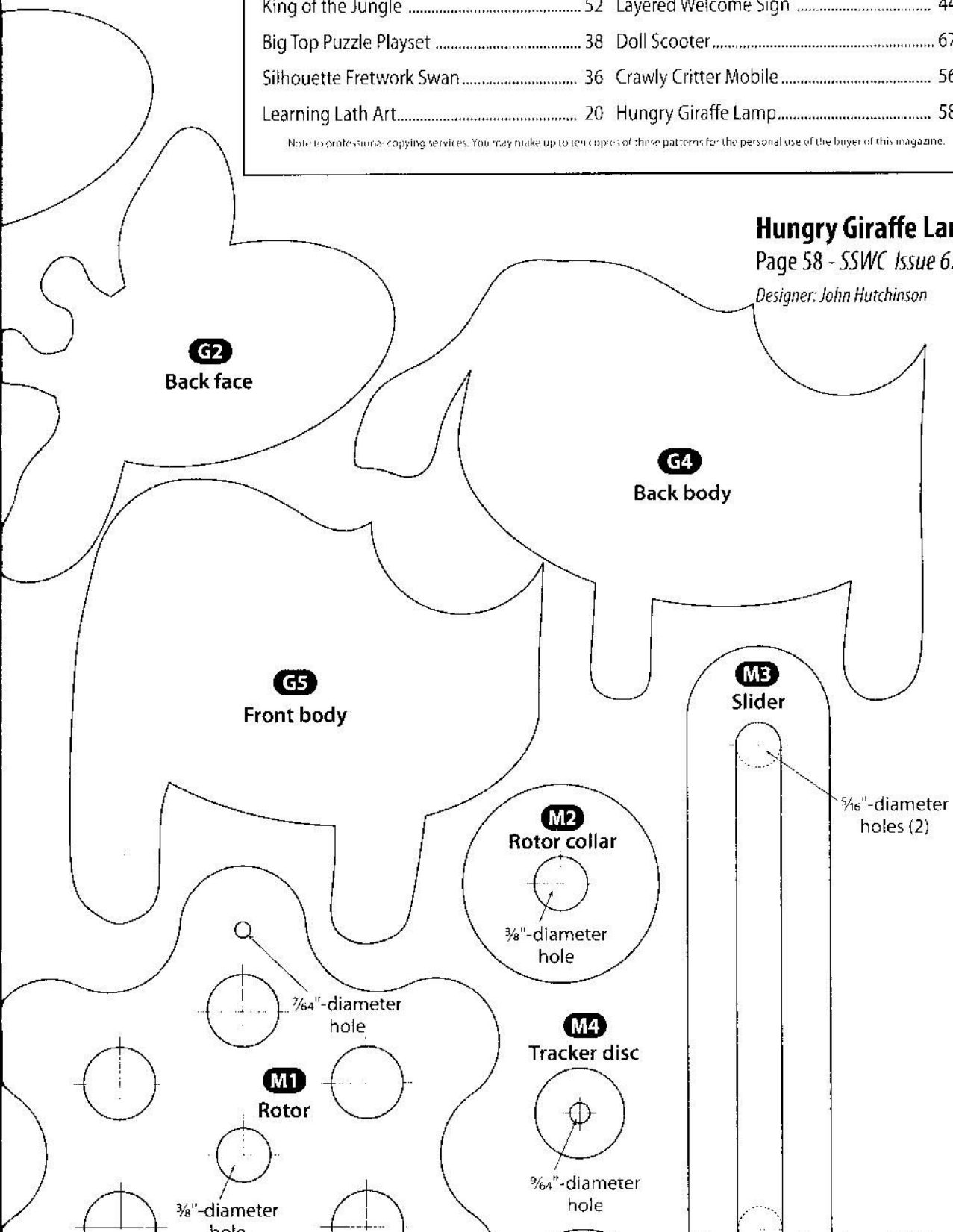
King of the Jungle	52	Layered Welcome Sign	44
Big Top Puzzle Playset	38	Doll Scooter	67
Silhouette Fretwork Swan	36	Crawly Critter Mobile	56
Learning Lath Art	20	Hungry Giraffe Lamp	58

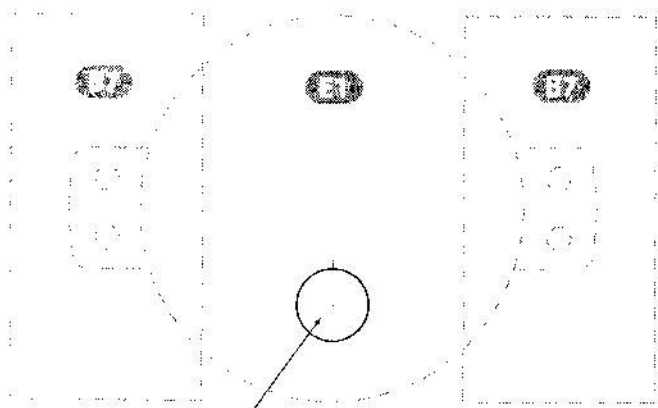
Note to professional copying services: You may make up to ten copies of these patterns for the personal use of the buyer of this magazine.

Hungry Giraffe Lamp

Page 58 - SSWC Issue 67

Designer: John Hutchinson





1 3/32"-diameter hole

B1

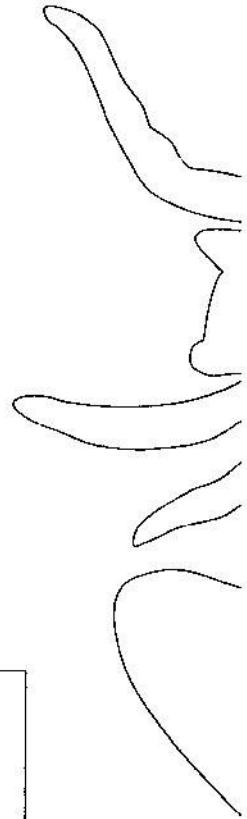
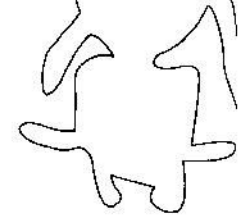
Faceplate

3/32"-diameter pilot holes (4)

B6

Back

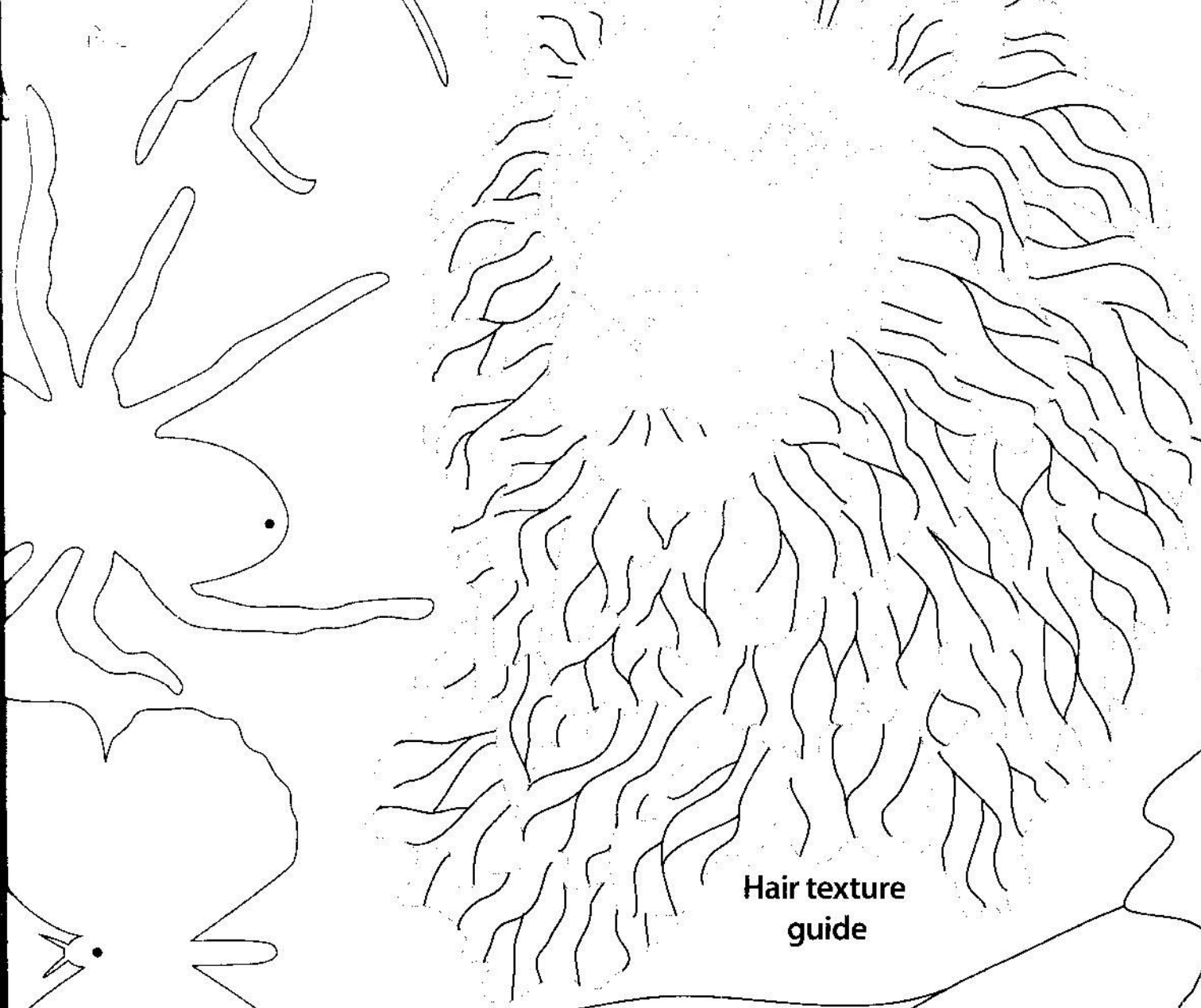
3/8"-diameter hole



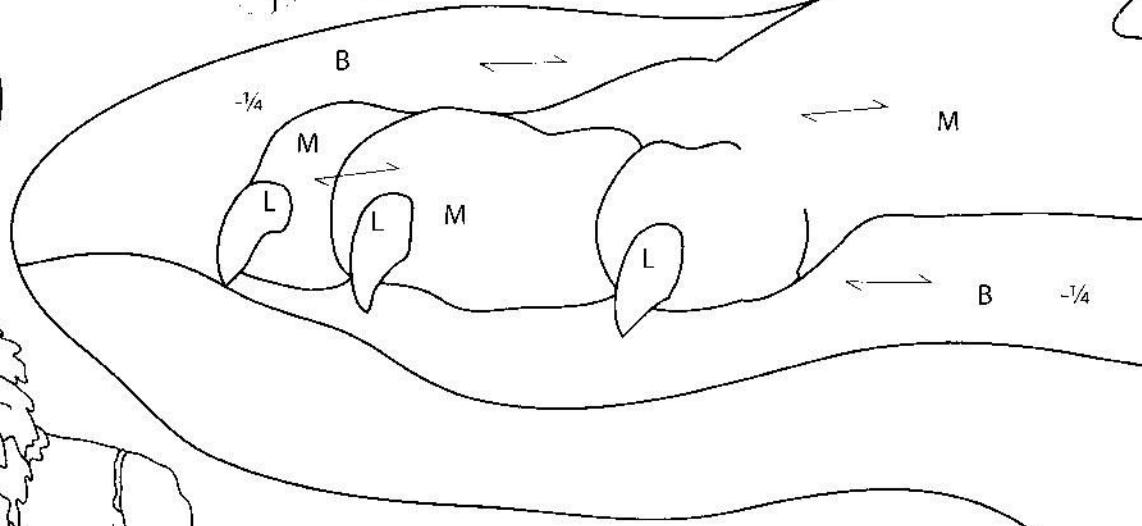
Hungry Giraff

Page 58 - SSWC I.

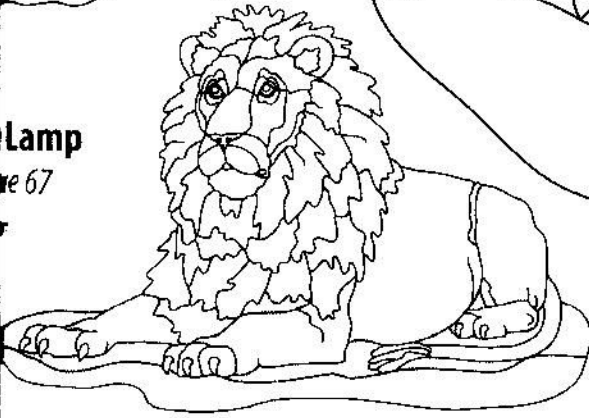
Designer: John Hutchir.



Hair texture guide



Shaping guide



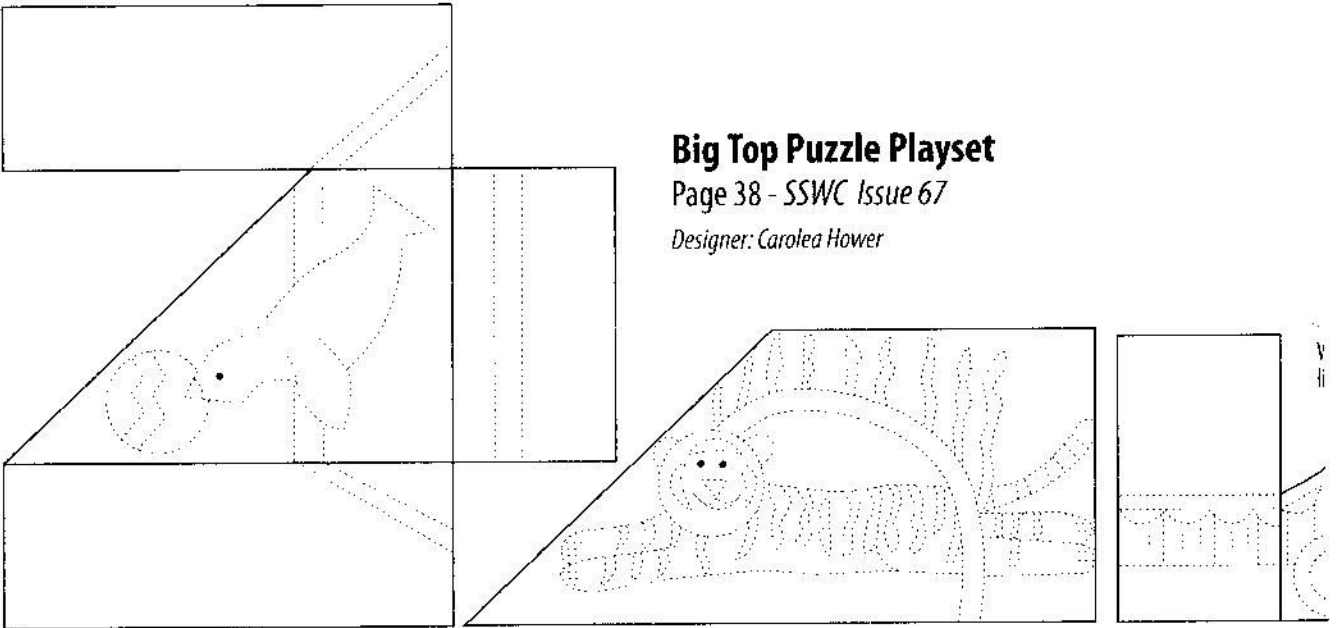
Lamp
Page 67



Big Top Puzzle Playset

Page 38 - SSWC Issue 67

Designer: Carolea Hower



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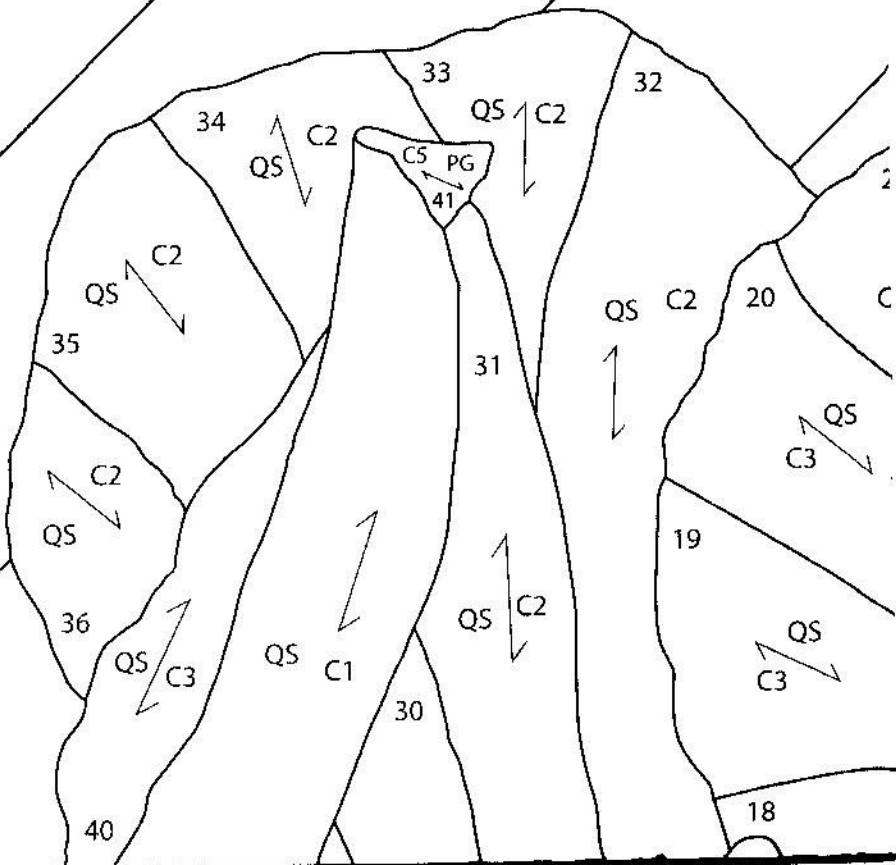
60

59

Learning Lath Art

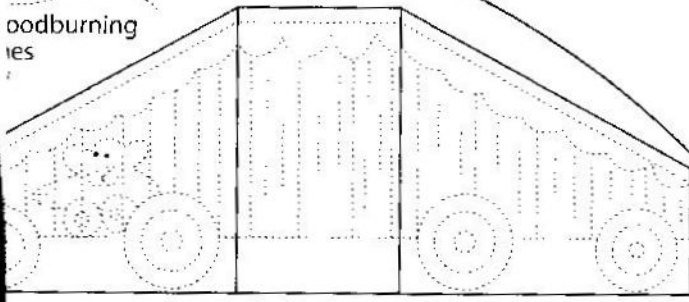
Page 20 - SSWC Issue 67

Designer: John Nielson

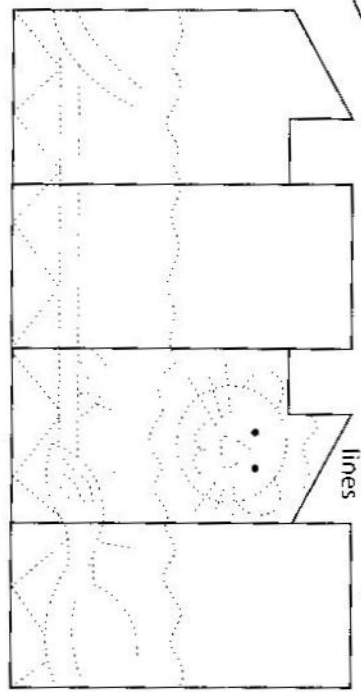
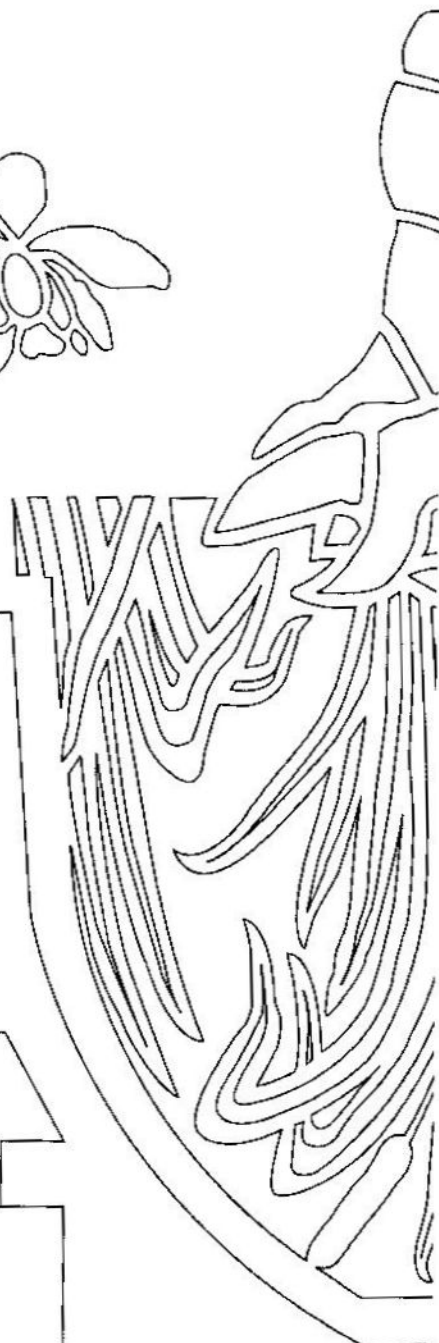
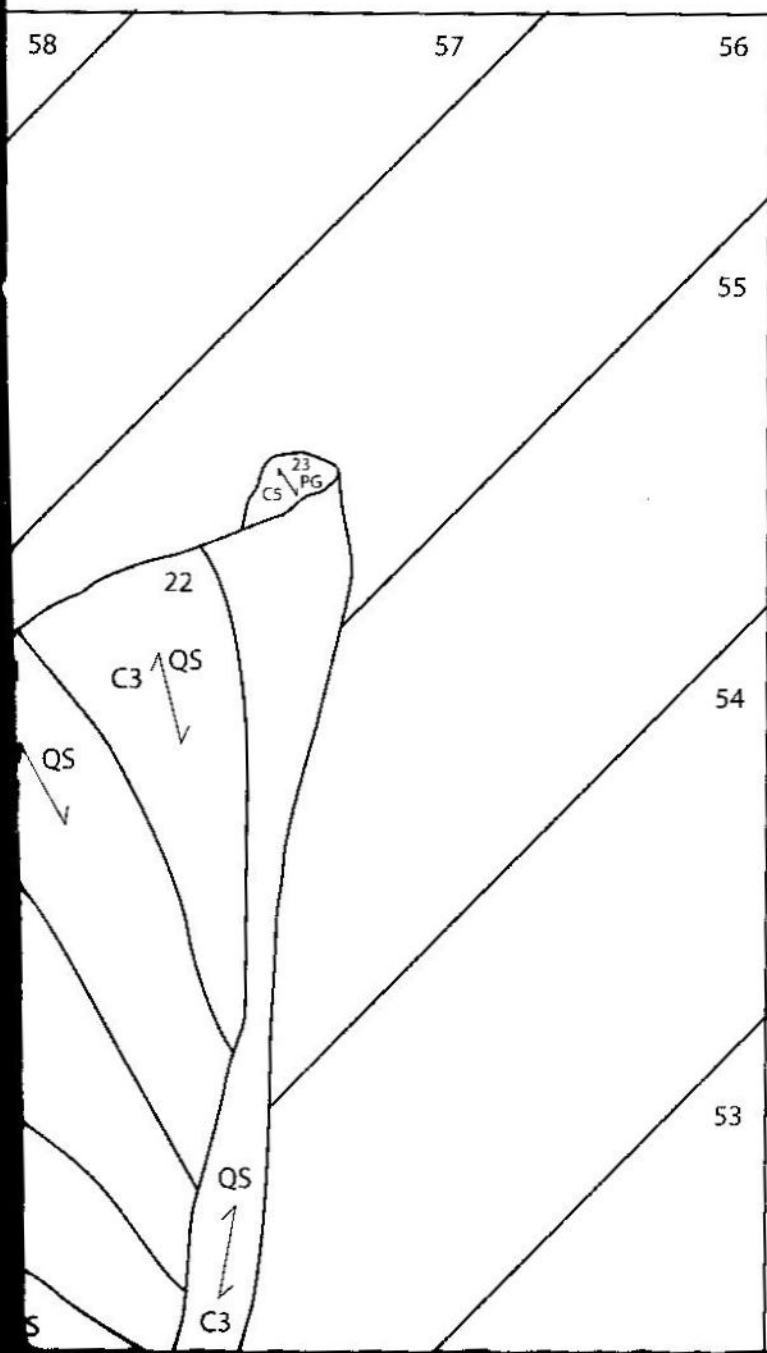
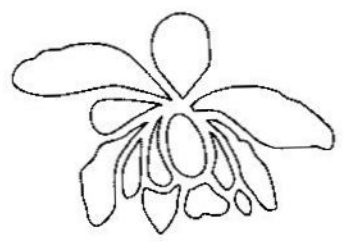


132

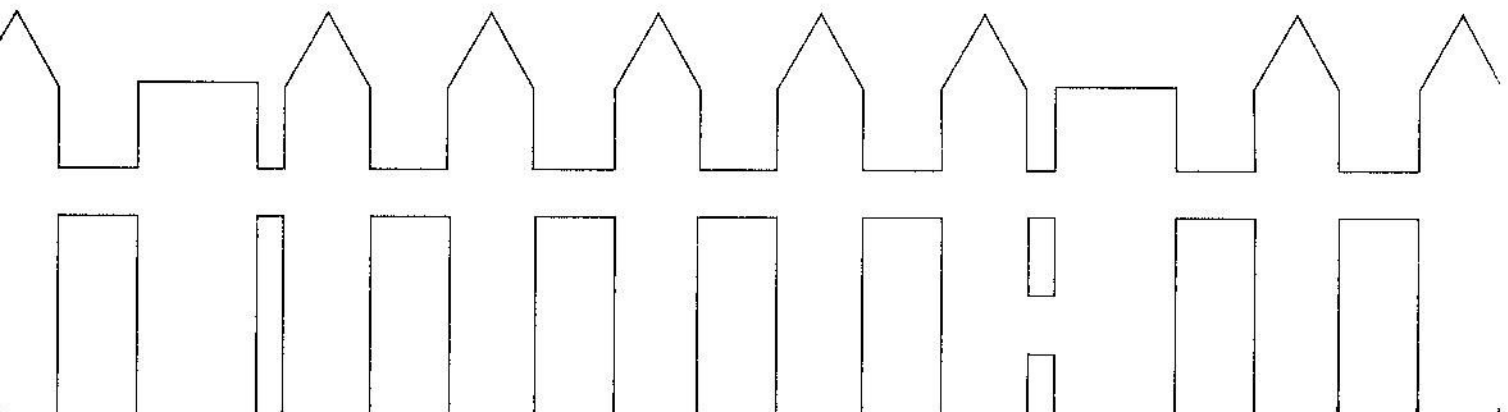
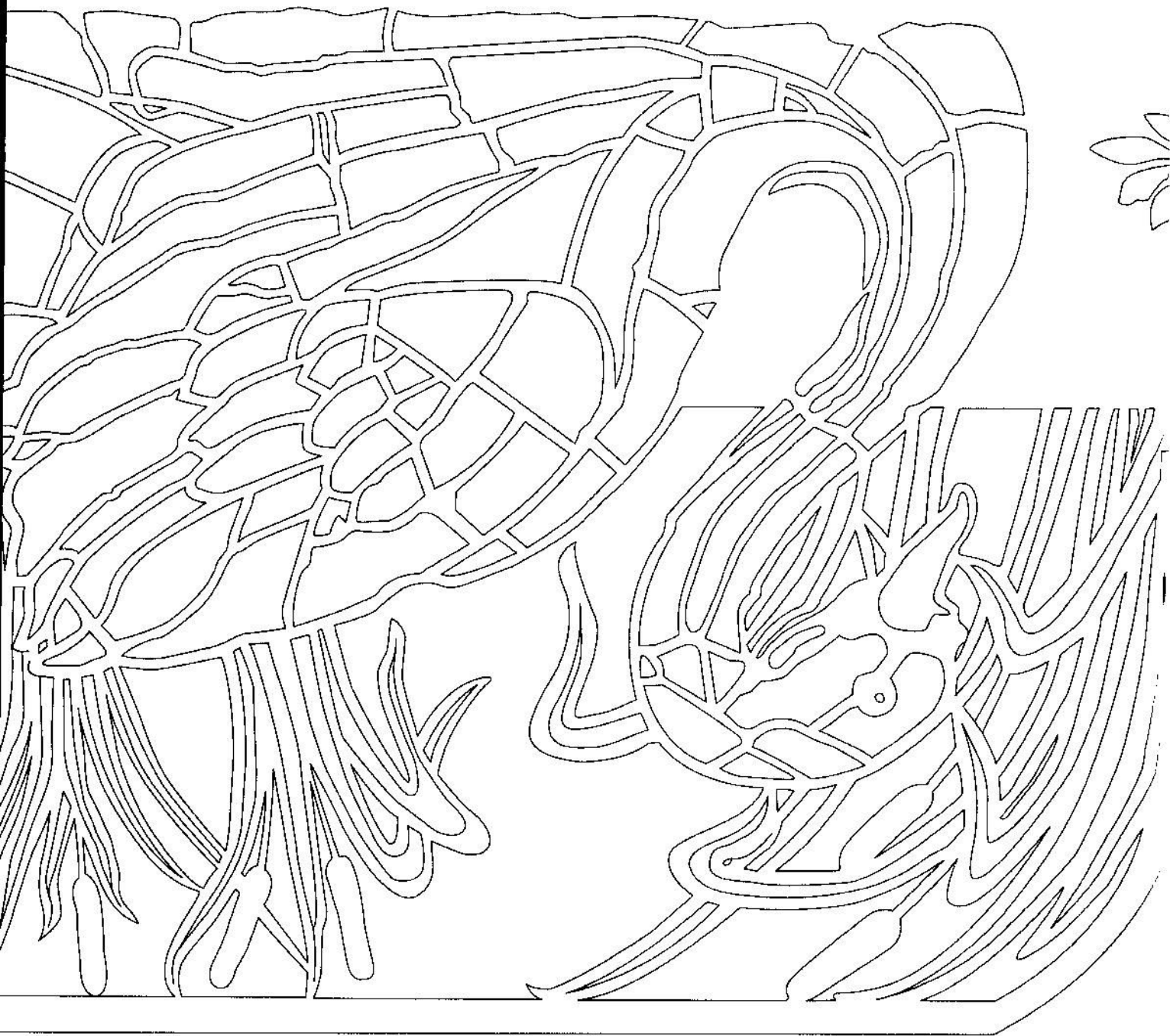
Silhouette
Fretwork Swan
Page 28 - SSWC Issue 67
Designer: Theresa Ekdom

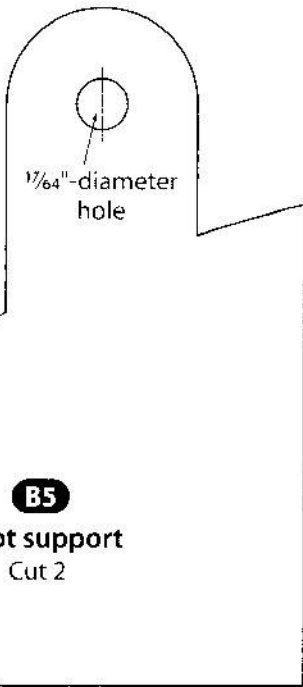
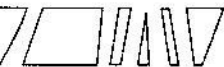
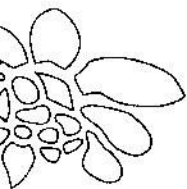


Woodburning
lines



Woodburning
lines





1 7/64" diameter hole

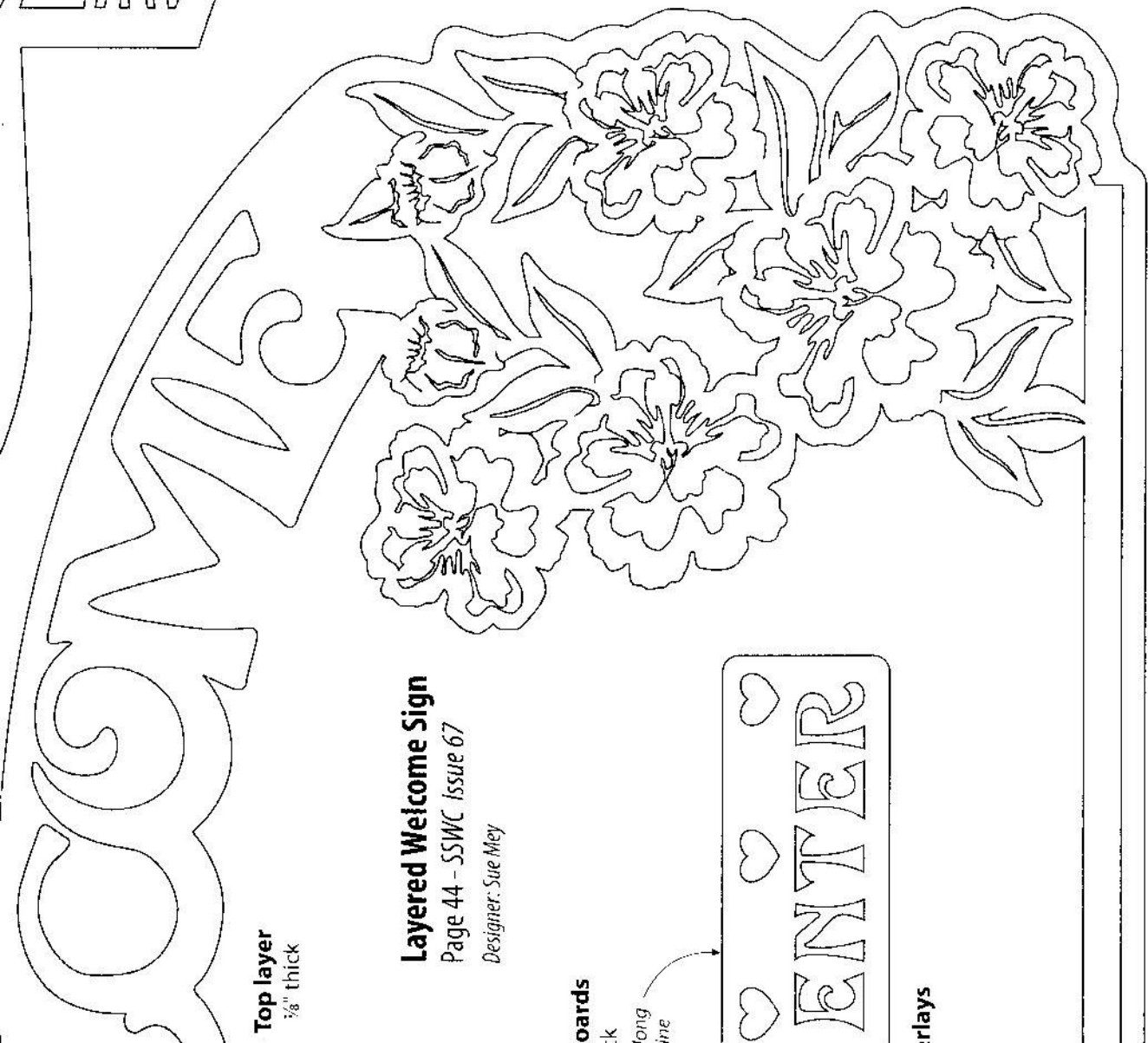
Hungry Giraffe Lamp

Page 58 - SSWC Issue 67

Designer: John Hutchinson

B5

Pivot support
Cut 2



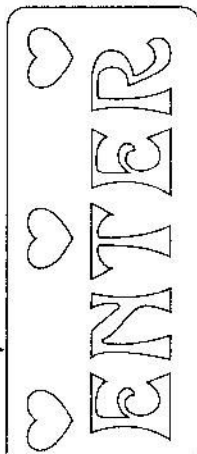
Top layer
3/8" thick

Layered Welcome Sign

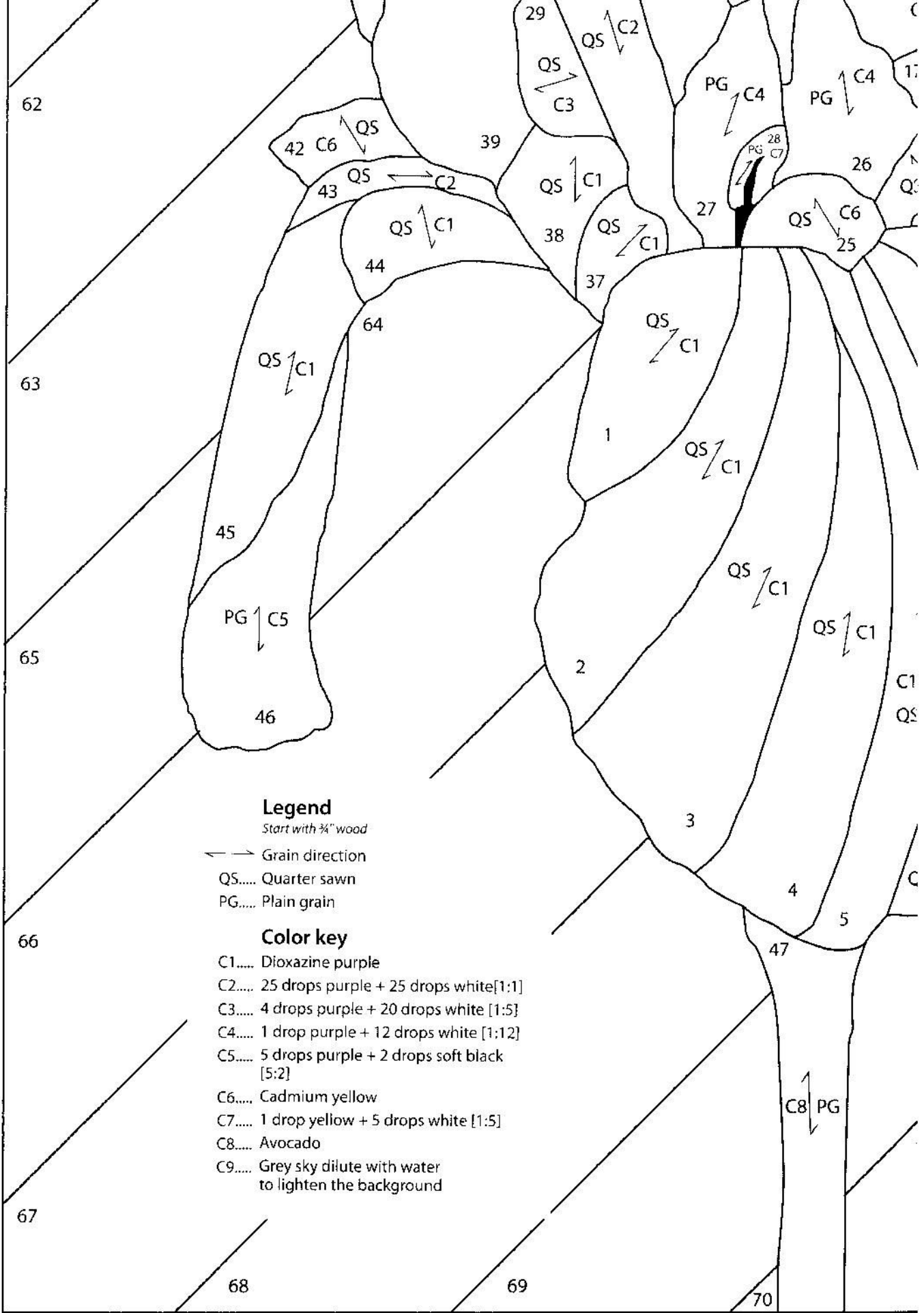
Page 44 - SSWC Issue 67

Designer: Sue Mey

boards
1/2" thick
long
fine line



layers



Legend

Start with 3/4" wood

↔ Grain direction

QS..... Quarter sawn

PG..... Plain grain

Color key

C1..... Dioxazine purple

C2..... 25 drops purple + 25 drops white [1:1]

C3..... 4 drops purple + 20 drops white [1:5]

C4..... 1 drop purple + 12 drops white [1:12]

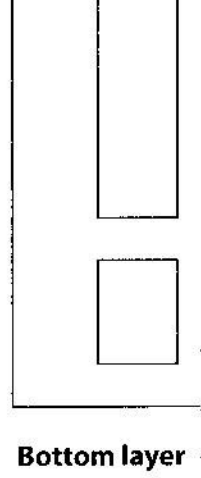
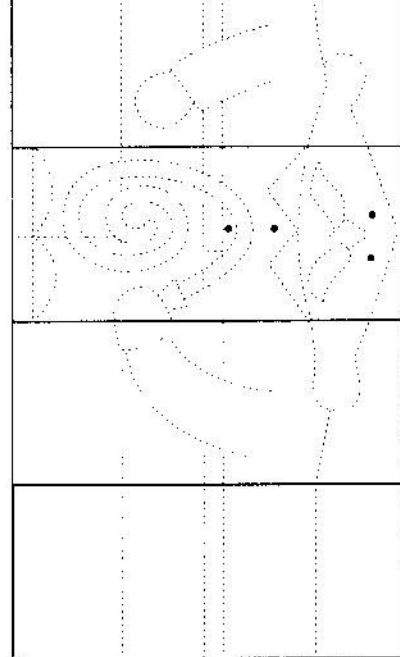
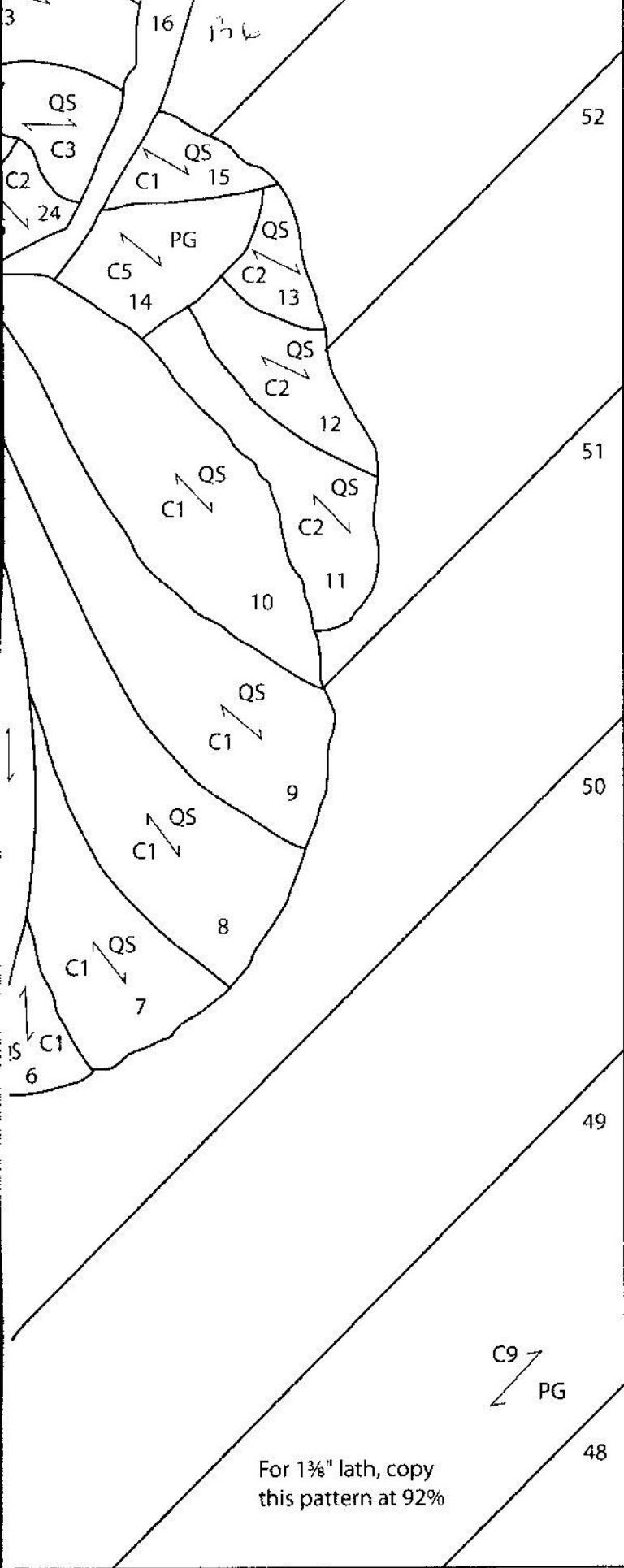
C5..... 5 drops purple + 2 drops soft black [5:2]

C6..... Cadmium yellow

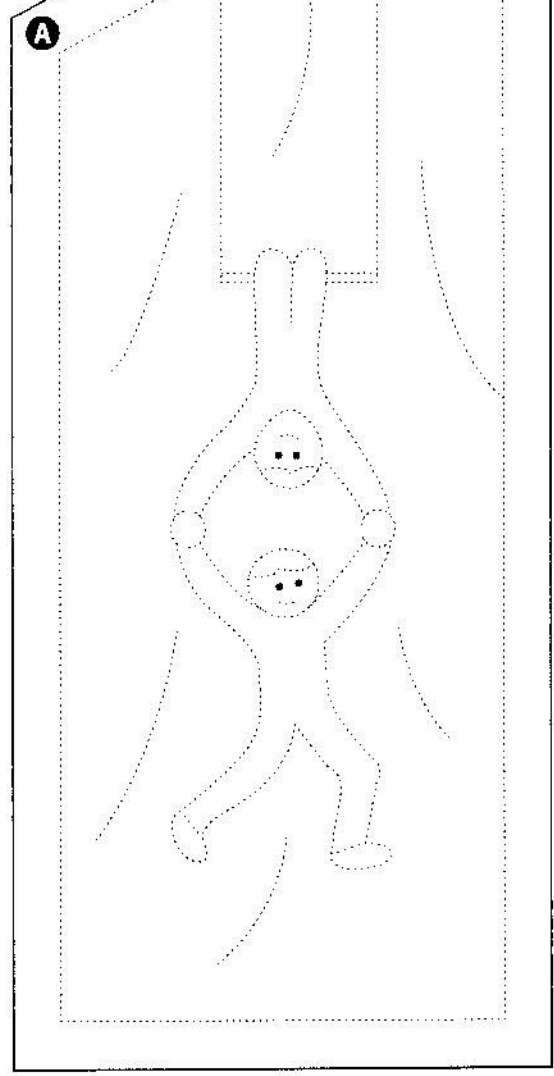
C7..... 1 drop yellow + 5 drops white [1:5]

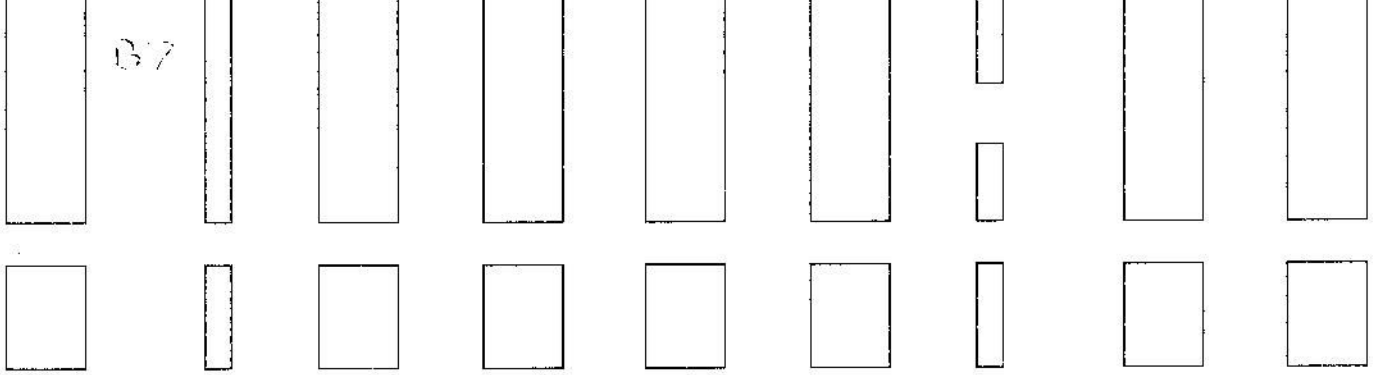
C8..... Avocado

C9..... Grey sky dilute with water to lighten the background



Woodburning lines





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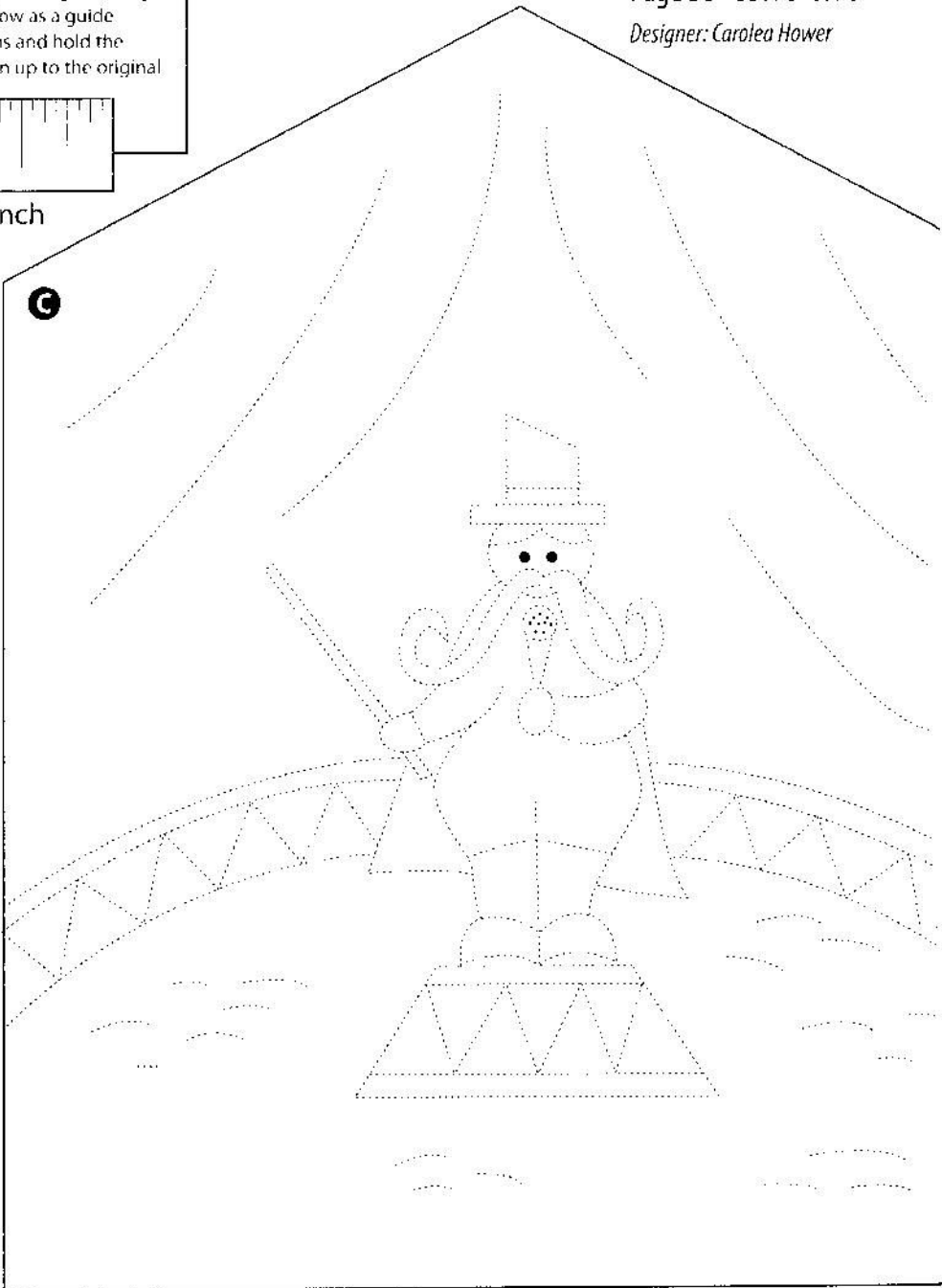
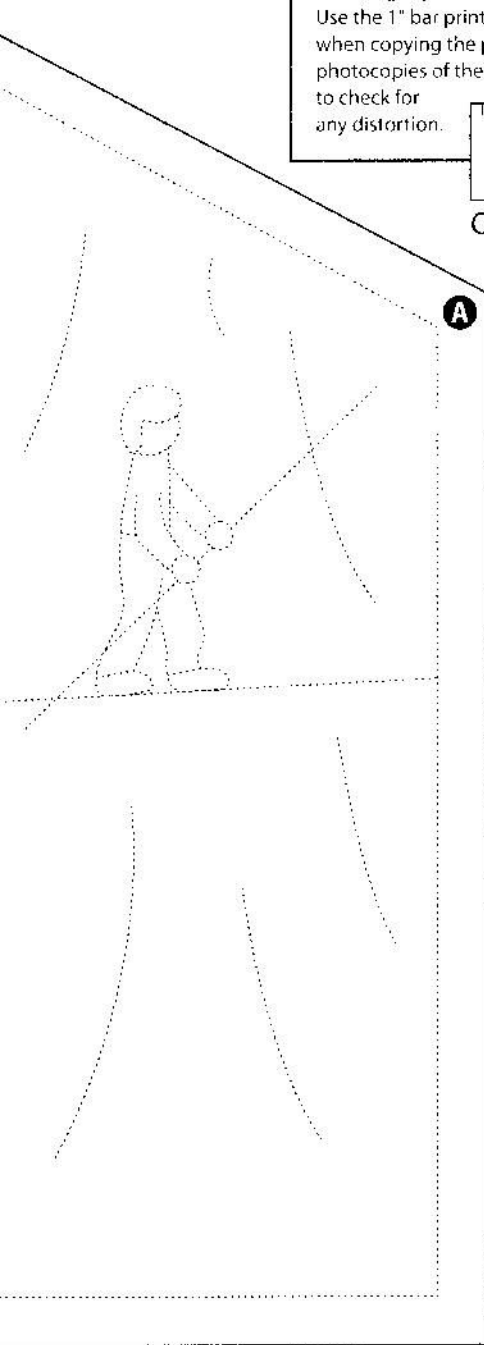


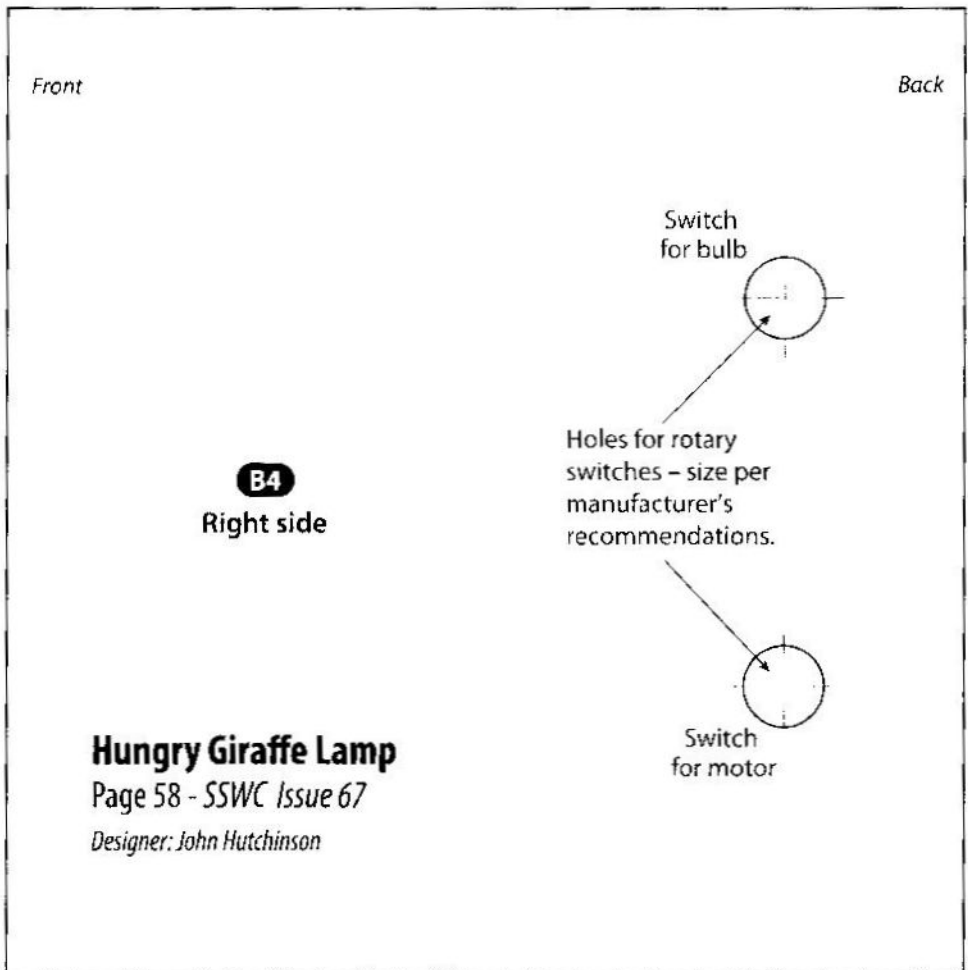
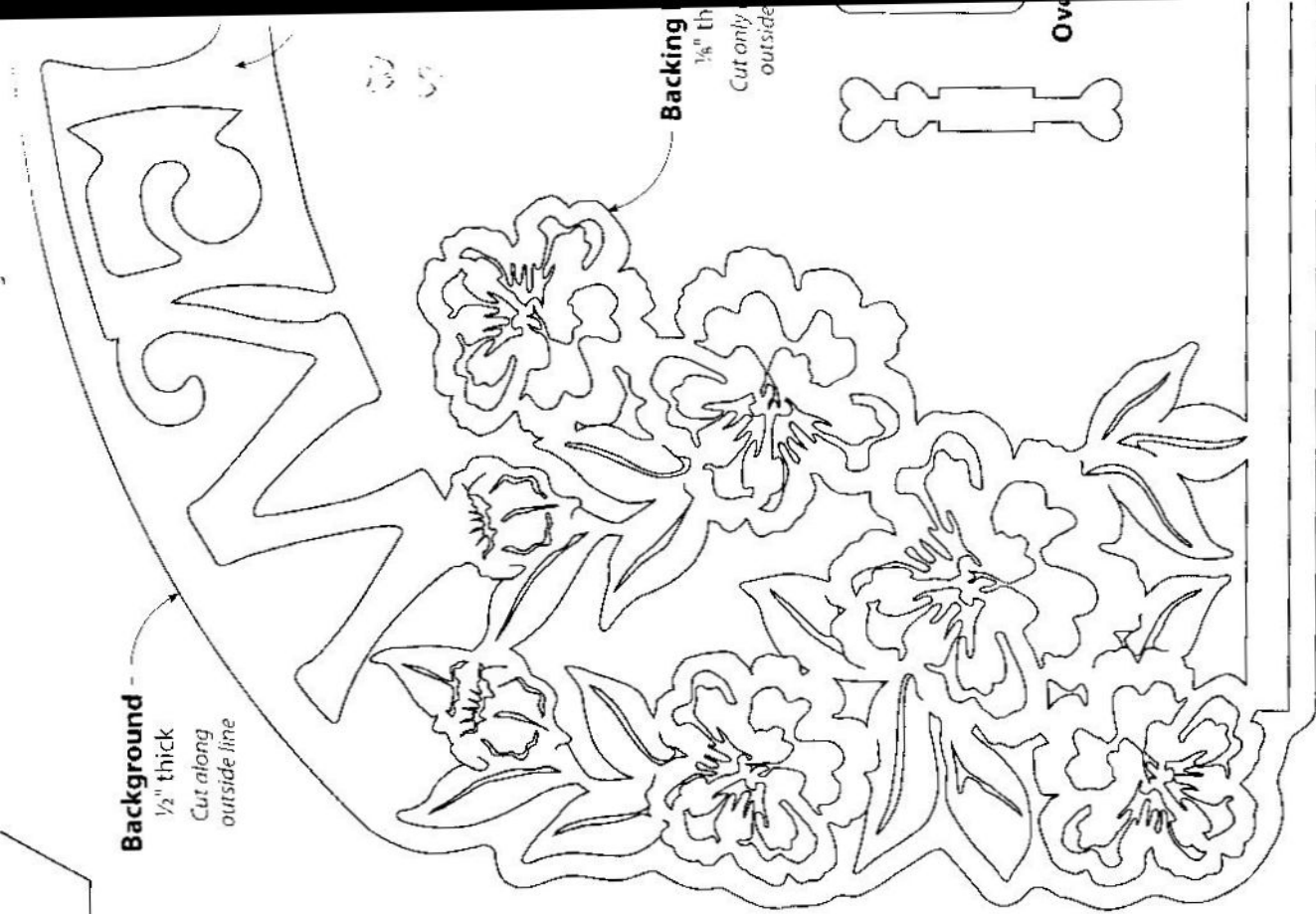
One inch

Big Top Puzzle Playset

Page 38 - SSWC Issue 67

Designer: Carolea Hower





Hungry Giraffe Lamp

Page 58 - *SSWC Issue 67*

Designer: *John Hutchinson*