

53 Ready-to-Use Woodworking Patterns

# SCROLLSAW

Woodworking & Crafts

HOLIDAY 2010  
ISSUE 41

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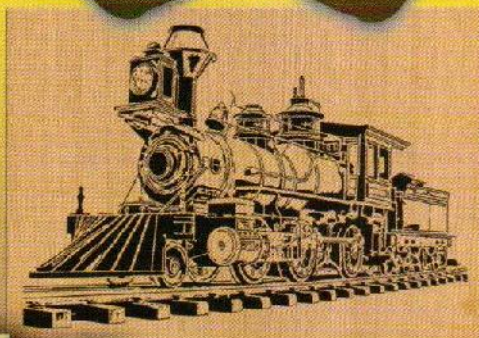
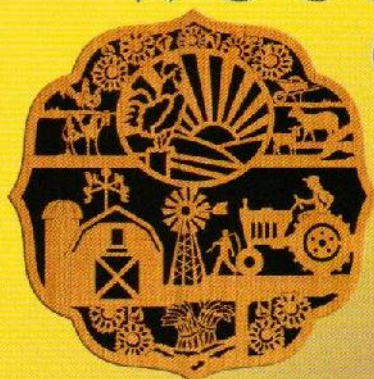
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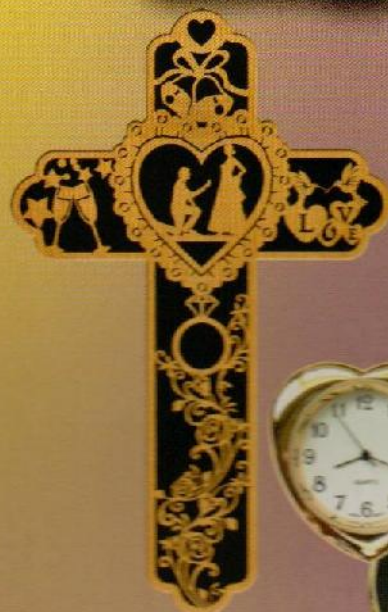
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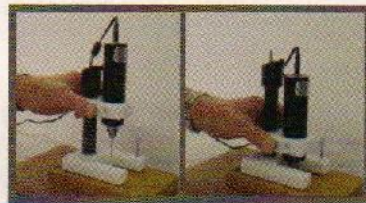
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# SCROLLSAW

Woodworking & Crafts



**22** Slotted design produces a freestanding decoration that folds flat for storage.

## FEATURES



### 17 *The Early History of the Scroll Saw*

By Kathleen Ryan

A photo-illustrated look at the origins of this popular woodworking tool



### 28 *Creating a Notre Dame Chess Set*

By Jim Kape

Compound design features scenes from the historic landmark



### 36 *Creating Wooden Jewelry*

By Cheryl Gustafson

Use contrasting hardwoods to make matching necklaces and earrings



### 40 *Making an Intarsia Reindeer*

By Kathy Wise

Overlays add dimension to this important member of Santa's crew

## DEPARTMENTS

- |                                |  |
|--------------------------------|--|
| 4 <i>Editor's Column</i>       | 16 <i>Scroll Saw Basics</i>            |
| 6 <i>Letters to the Editor</i> | 78 <i>Coming Features</i>              |
| 8 <i>Bragging Pages</i>        | 78 <i>Ad Directory and Classifieds</i> |
| 12 <i>Info Exchange</i>        | 80 <i>Sawdust</i>                      |
| 14 <i>Product Review</i>       |  |



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## METHODS



### 24 *Building a Nativity Scene Candle Holder*

By Sue Mey

Simple fretwork and easy construction techniques produce a lovely Christmas decoration



### 44 *Create a Fun Flexible Robot*

By Fred and Julie Byrne

Clever use of elastic cord allows this robot to assume a variety of poses



### 50 *Making Festive Earrings*

By David Griffin

Embellish wooden designs with beads for fun and fashionable gifts



### 60 *Making a Toy Helicopter*

By Richard Gard

Simple wooden toy makes a fun gift



### 64 *Easy Holiday Intarsia Ornaments*

By Judy Gale Roberts

Highlight these traditional Christmas designs with the beauty of natural wood



### 70 *Simply Elegant Business Card Holders*

By Roshaan Ganief

Functional and decorative designs make great gifts

## PATTERNS



### 22 *Intricate 3-D Christmas Tree*

By Gloria Cosgrove

Beautiful lace-inspired design adds an elegant touch to your holiday decorating



### 34 *Winter Wonderland Ornaments*

By Alison Tanner

Intricate snowflakes highlight holiday fretwork designs



### 48 *Scrolling an Intricate Winter Plaque*

By Sue Mey

Snowflakes and stars come together for a Christmas celebration



### 54 *Gray Wolf Portrait*

By Gary Browning

Majestic portrait captures the spirit of the wild



### 56 *Portrait of Mary and Baby Jesus*

By John A. Nelson

Classic Christmas scene makes a great holiday gift



### 58 *Spun Glass Ornaments*

By Alison Tanner

Capture the look of delicate glass in durable wooden ornaments



### 74 *Star of David*

By Zohar Laor

Simple design is a beautiful symbol of faith



### 76 *Whimsical Pets Wall Rack*

By John A. Nelson

Delightful silhouettes make a great beginner project

## ON THE WEB [WWW.SCROLLSAWER.COM](http://WWW.SCROLLSAWER.COM)

### Online Edition

*The Early History of the Scroll Saw*, pg. 17

Share this informative article with online friends interested in antiques or history.

### Exclusive Bonus Patterns

*Making Festive Earrings*, pg. 50

FREE patterns for bonus earring designs.

### Convenient Pattern Download

*Simply Elegant Business Card Holders*, pg. 70

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## Let Me Count the Ways

Last issue, we invited you to join our 10th anniversary celebration by sharing the top ten reasons you love scrolling and *Scroll Saw Woodworking & Crafts* magazine.

The response was awesome. At times, I laughed out loud, such as when I read, "My saw never gets mad at me," or "The magazine's pattern section comes in a big center fold-out which, like other centerfolds, can really warm you up on a cold night." I wholeheartedly agree with most of the reasons, although the centerfold one is a little scary.

- 10. The Fox Hunt:** Several readers stated they love searching for that stinkin' fox. Some get the kids involved and make it a family affair.
  - 9. It's Safe:** One reader said, "I don't fear cutting my hand off, like with the table saw." I agree—the table saw scares me a little too.
  - 8. Anyone Can Do It:** It's an affordable hobby and anyone can learn to scroll. Some folks use scrolling as therapy to overcome cancer or heart attacks. Others love how scrolling is not limited by their disabilities.
  - 7. The Smell and Sound:** "I love the smell of sawdust in the morning." The smell I expected, but I was surprised at the number of folks who love the sound of their saw. One scroller said it's like a meditation hum.
  - 6. Alone Time:** Responses ranged from "It gets me out of my wife's hair" to "I love the solitude of doing a project." One scroller reported learning how to make twenty-minute meals so there is more time for scrolling. Hey, I could use some twenty-minute meal recipes!
  - 5. It's Relaxing:** Folks love being "in the shop with tunes and sawdust." Scrolling relieves the stress of everything from being mayor to being married for 32 years. You forget all of your worries. "It's mental therapy."
  - 4. The Community:** Readers love being part of the scroll saw community. One reader said it's like a big family, including everyone from the editors and authors to the subscribers and *SSW&C* message board members. "Everyone is willing to share their techniques."
  - 3. The Sense of Accomplishment:** "I can hardly wait to complete a project so I can show my wife and friends." Readers take pride in making something with their own hands and love the challenge of a new pattern. One reader said he loves "making that last cut."
  - 2. The Joy of Giving:** This came up again and again. Scrollers love making beautiful things and giving them away. "I love to see the joy on my kids' faces when they get a new toy from the workshop."
- And the number 1 reason you love scrolling.....**
- 1. It's Fun:** "Every project is an adventure." One reader simply states "Scrolling rocks!" This one's my favorite and sums it up pretty well—"I'm a scroll sawing fool."

### You could be our next winner!

Log onto [www.scrollsawer.com](http://www.scrollsawer.com) to find out who won the Fox Chapel scroll saw library worth more than \$1,000 and enter the latest contest! Tell us about your favorite article from the magazine or send us a photo showing off one of the projects you completed from patterns published in *Scroll Saw Woodworking & Crafts*.

*Shannon Flowers*

Shannon Flowers

[Shannon@FoxChapelPublishing.com](mailto:Shannon@FoxChapelPublishing.com)

# SCROLLSAW

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#### Our Mission:

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

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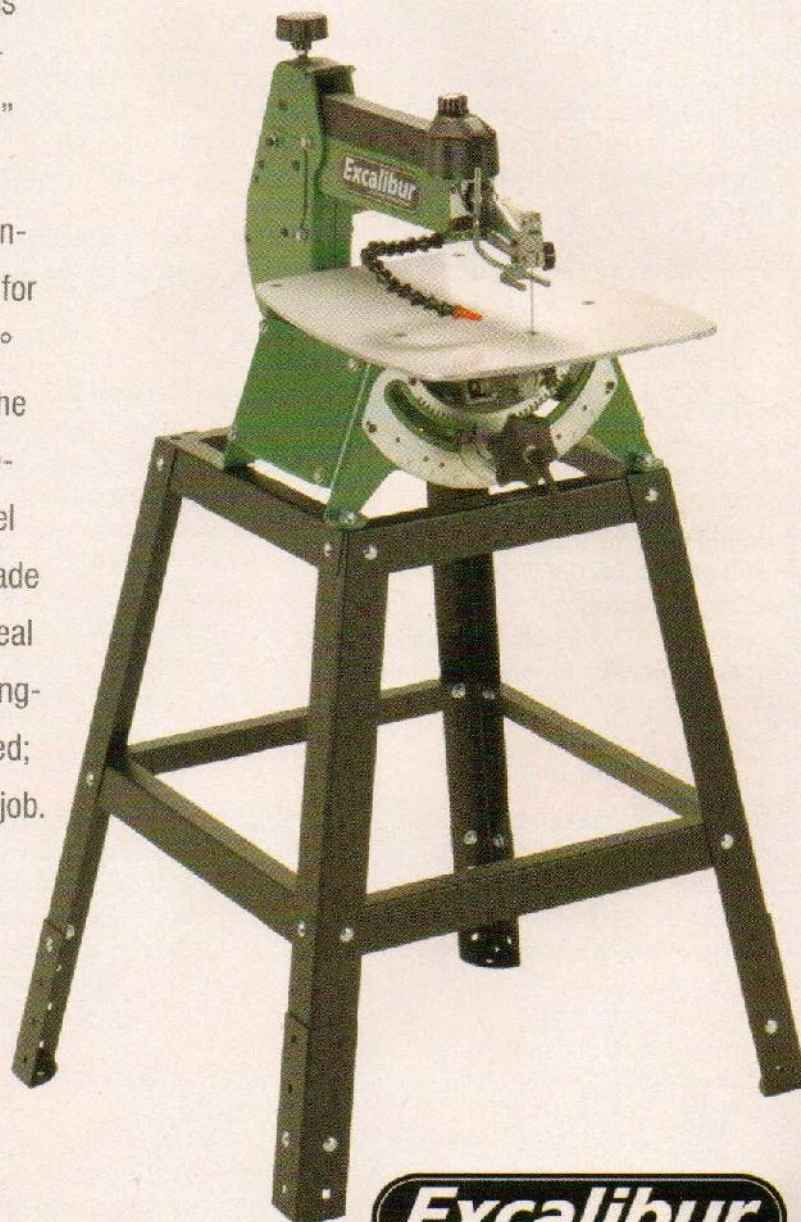
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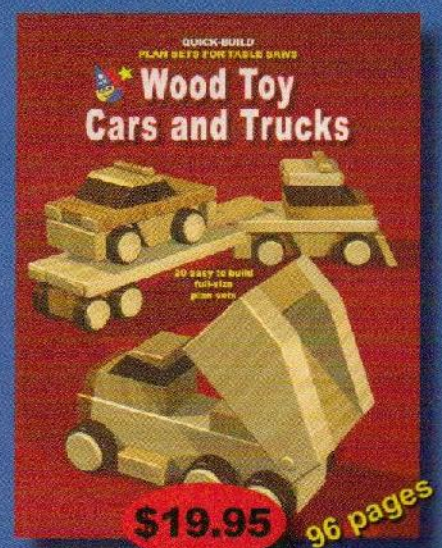
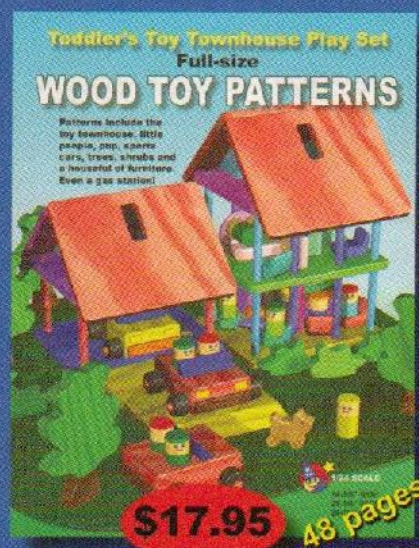
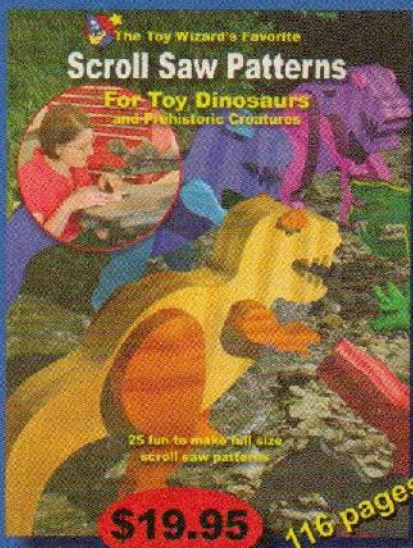
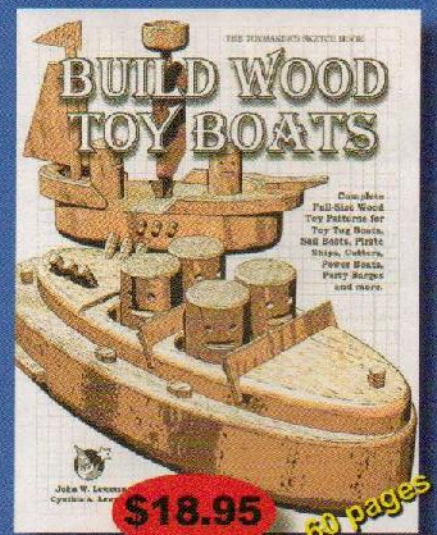
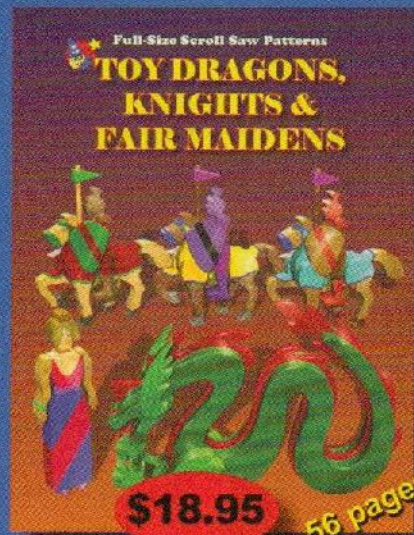
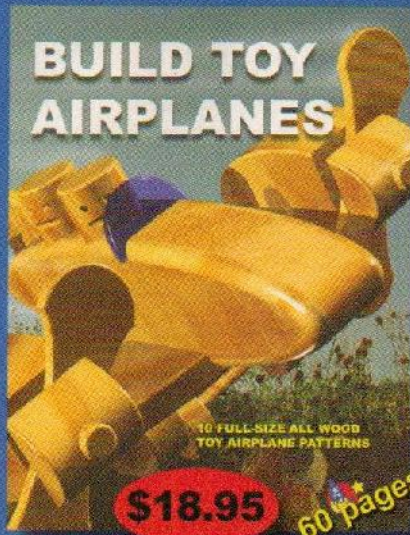
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### A Fitting Display for Scrolled Projects ▶

**Bevan Duff**, of Napier, New Zealand, created all of these scroll-sawn projects. The buffet cabinet, a Wildwood Designs project, was cut from recycled oak bed ends. Bevan uses the cabinet to display his other scrolled work, including the Coronation Coach, from Wildwood Designs, and twelve old-time wagons from Scroller LTD.



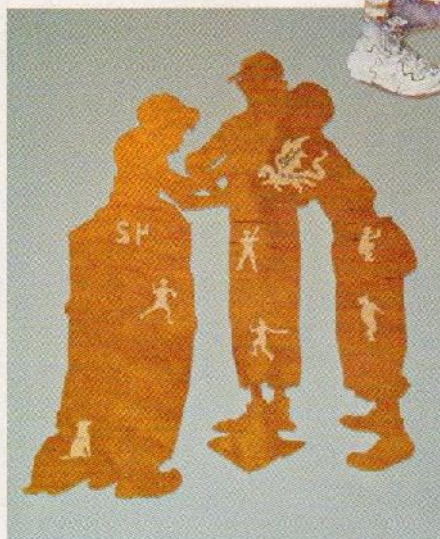
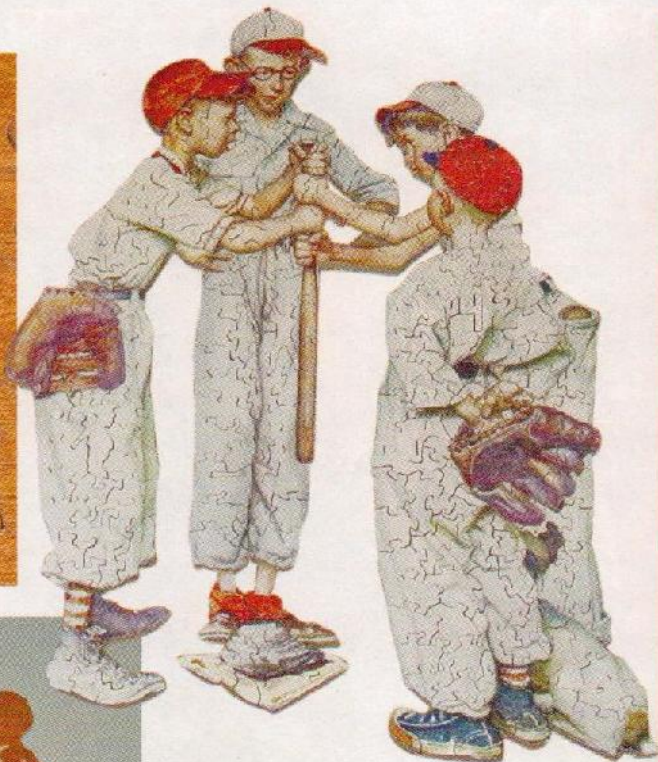
### ◀ Wolf Plaque

**Mr. Jean Mainville**, of Alouette, Que., Canada, created this design based on a pattern by Michael Hornung. The pattern is based on Mike's wolf/shepherd mixed-breed dog. Jean cut the plaque from a 1/4"-thick piece of Baltic birch plywood.

### Intricate Fretwork Basket ▶

**Joe Mathis**, of Bradenton, Fla., cut this fretwork basket from red oak. Pedro Lopez recreated the vintage French design using modern software. The basket was featured in *Scroll Saw Woodworking & Crafts* Spring 2010 (Issue 38). Joe finished the basket with Watco natural Danish oil.





**Nostalgic Puzzle ▲**

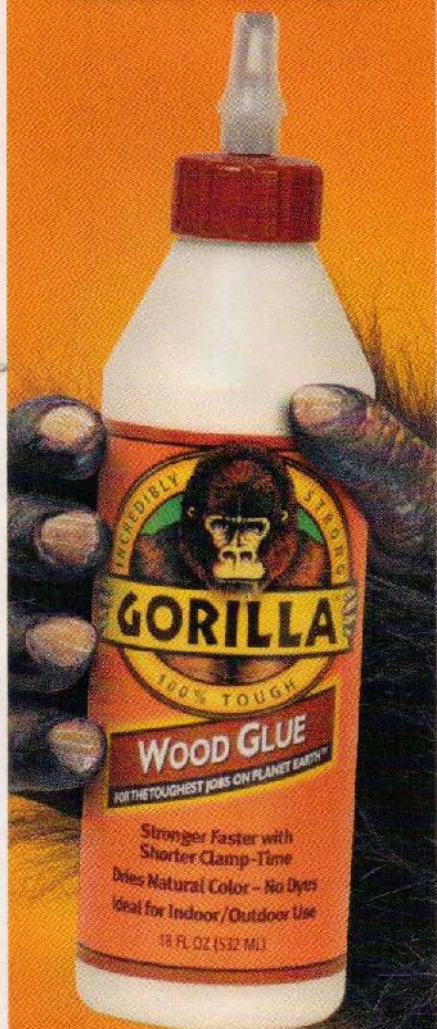
**Shawn Ferguson**, of Youngstown, N.Y., created this jigsaw puzzle from ash and maple. Shawn stack cut the contrasting woods and cut the puzzle pieces freehand. He then interchanged the shaped pieces. Shawn said the ash represents baseball's nostalgic past and the light maple represents the present.

**▼ Bear Door Topper**

**Douglas Fraser**, of Eagle River, Ala., cut this bear door topper based on a design by Deborah Nicholson. Douglas used a variety of hardwoods and added fur texture using a rotary-power carver.



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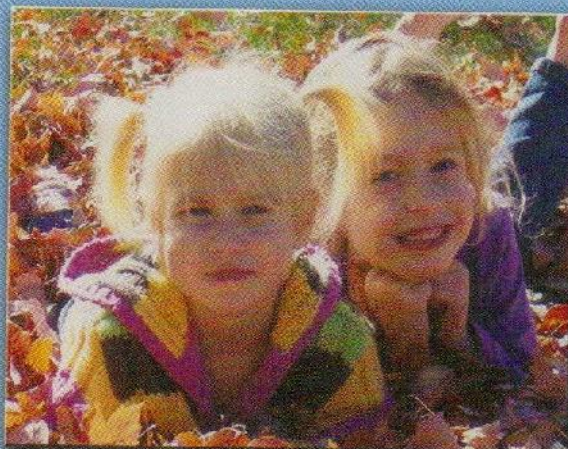
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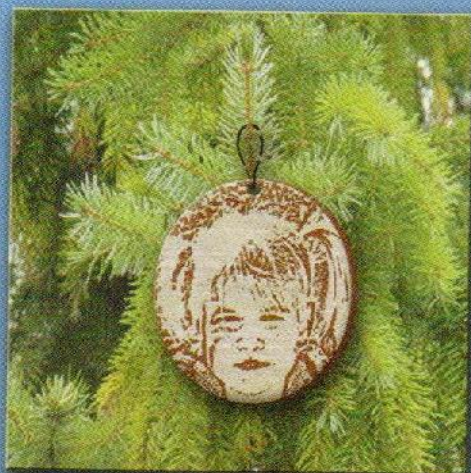
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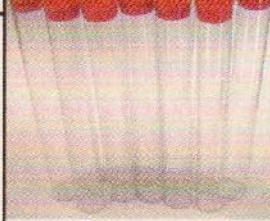
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# Inexpensive Self-Adhesive Paper



Instead of paying for expensive self-adhesive paper or 8½" by 11" labels, I make my own from a roll of clear or white shelf liner paper.

I found a 17" by 24' roll of shelf liner at a national retailer for about \$5. I cut the roll into fifty-two 8½" by 11" sheets. This reduces my cost to about \$0.10 per sheet. If you cut carefully, you can run the sheets through an ordinary copier or printer like any other sheet of paper. Peel the shelf liner paper off of the backing paper and stick it onto your blank. Unlike commercially available labels, the shelf liner is easy to remove after you've cut the pattern.

**Frank Kaufer Jr.**  
*Memphis, Ind.*



Print your patterns directly onto inexpensive self-adhesive shelf liner paper.

## Easier Feeding from the Bottom

To make it easier to feed a scroll saw blade through the blade-entry holes from the bottom of the blank, circle the hole with a red pen or chalk to give yourself a bulls-eye.

My trifocal glasses made it difficult to feed the blade through blade-entry holes. I ended up having three holes to choose from. To make it easier to thread the blade, I had a pair of single-focus glasses made at the prescription strength of the bifocal area on my regular trifocal glasses.

**Lowell Kirkley**  
*Temple, Tex.*

## Table Protection

Apply a coat of paste finishing wax to your scroll saw table. In addition to protecting the table from rust, the wax makes it easier to move and turn your projects. I find I can follow the line better with a waxed table. Buff the wax into the table with a clean rag or 0000 steel wool. Wipe off the excess with a paper towel or clean rag.

**Roger Sprague**  
*Falconer, N.Y.*



**TOP TIP** in our spring issue wins two cases of Deft aerosol finishing products. Send your tips or techniques to Bob Duncan, 1970 Broad Street, East Petersburg, PA 17520, or [Duncan@FoxChapelPublishing.com](mailto:Duncan@FoxChapelPublishing.com)

# Living Crafts

Craft your whole life

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To receive a free gift of this Fall 2010 issue with a subscription purchase visit [www.LivingCrafts.com](http://www.LivingCrafts.com) and click on Subscribe, then type F10Saw in the Offer Code.

Sweater made with handspun yarn along with the crocheted tableware featured in the Fall 2010 issue.

By Bob Duncan

# M Power's Combination 3-D Square

M Power's clever new tool combines a highly accurate traditional square with a saddle square and a small bevel square. Calibrated in both metric and Imperial, this is the only square you need to make frames and boxes or to create your own designs. Every woodworker needs a square, and if you have only one, this is the square to own.

Several features combine to make the Combination 3-D one of the most useful tools in your shop. The downward running saddle square allows you to transfer marks from the side of the blank to the top of the blank and vice versa. It also makes it easy to use the pencil holder that clamps onto the main square blade to draw lines perfectly parallel to the edge of the blank. To use the pencil holder properly, you hold the square at approximately a 5° angle. The long edges of the saddle square allow you to keep the square in contact with the side of the blank at all times.

While the square is calibrated at the factory to be accurate within  $\frac{1}{100}$ ", a square can easily get out of alignment if it's dropped. M Power attaches the square blade to the handle with a pair of hex set screws. These set screws make it easy to realign the blade if the tool gets out of square. The instructions include a simple method to test and reset the square without a lot of special tools.

The included bevel square, at the end of the handle opposite the main square blade, is calibrated with laser-etched markings at the most commonly used angles: 90°, 60°, 45°, 30°, and 15°. You can also use the locking lever to set the bevel angle at whatever angle you choose.

One of the things that initially made an impression was the overall weight of the Combination 3-D Square. The heavy-duty design is comforting to use. The tool is easy to keep against a square-edged blank and slides



The M Power Combination 3-D Square combines the three most useful squares into one compact but heavy-duty tool.

easily along the edges to draw lines. The laser-etched measurements on the flat black square blades are easy to read and highly accurate. The pencil holder is angled so the center of the pencil lead aligns with the edge of the pencil holder. This allows you to align the inside edge of the pencil holder with the measurement mark on the main square blade to easily make a mark a specific distance from the edge of the blank.

The M Power Combination 3-D Square combines the three most useful squares into one compact but heavy-duty tool. This handy tool has already found a home in my shop apron. I wholeheartedly recommend it for every woodworker!

The Combination 3-D Square is available for \$54.99 plus s&h from Eagle America, 800-872-2511, [www.eagleamerica.com](http://www.eagleamerica.com), or Infinity Cutting Tools, [www.infinitytools.com](http://www.infinitytools.com), 877-872-2487.

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**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 pattern, wait a few seconds, and 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 your 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.

**Removing Patterns**

Dampen the 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.

**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 your 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 the holes may interfere with



delicate fretwork. Drill through your 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 your blades through. For thin veining cuts, use the smallest bit your blade will fit through.

**Blade Tension**

Before inserting a blade, the tension should be completely removed. 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" 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.

**Squaring Your Table**

Most scroll saws have an adjustable table that allow you to make cuts at different angles. There are times when you want your 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, your cuts will be angled. This interferes with puzzle pieces, intarsia, segmentation, and many other scrolling projects.

The most common method for squaring your table is the small square method. 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"-thick and check the angle of the cut using a square. Adjust the table until you get a perfectly square cut.

To provide more projects per issue, we have consolidated basic scrolling information here. Because our articles will no longer cover these basics, we will publish this page in each issue to assist novice scrollers.



You can also use the kerf-test method. Take a 1 3/4"-thick piece of scrap and cut about 1/16" into it. Stop the saw, 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.

**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. Scrollers

can use either masking tape, painter's tape, or clear packaging tape.

Another method uses hot-melt glue. Glue the blanks together with a dot of hot-melt glue on each side.

You can also join pieces for stack cutting by driving brads or small nails into as many waste areas as you can. Be sure to cut off any overhanging nails as close to the surface as you can; then sand them flush to avoid scratching or catching on the table.



# The Early History of the Scroll Saw

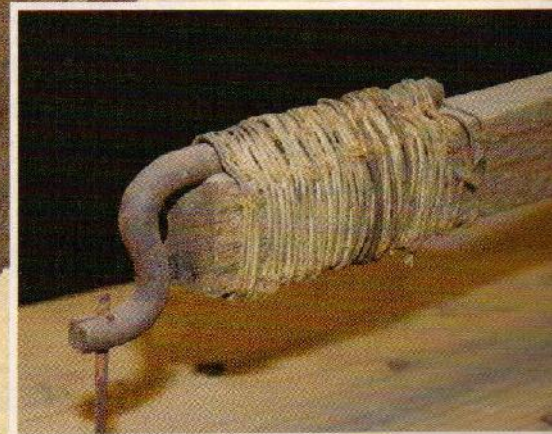
**A photo-illustrated look at the origins of this popular woodworking tool**

*By Kathleen Ryan*

This shopmade saw was built in the mid- to late-1800s. The top blade clamp is attached to the arm with string.

A lack of accurate record keeping shrouds the origins of the scroll saw in a veil of mystery. However, recently discovered records suggest the first patent for a saw using a reciprocating steel blade was awarded in 1829 in Great Britain.

Part of the reason researchers have such a difficult time nailing down the early history of the scroll saw is due to confusing and interchangeable terms. In the past, the term fretwork was used to describe all intricate and detailed cuts made in wood. While this form of woodworking can be traced back to some of the world's earliest civilizations, until the 1500s, these types of projects were most likely cut with knives.



## Early Documentation of the Scroll Saw

In the 1500s, a German craftsman developed a way to make fine narrow saw blades. A French workman named Boule developed a frame to hold these blades in order to cut intricate designs. The frame, called a Buhl saw, looks similar to today's fret and coping saws. The Buhl saw made the cutting of intricate designs popular throughout Europe.

While there is some evidence to suggest the concept of using thin blades in a reciprocating machine was in practice before the 1800s, the first recorded patent for this type of machine was issued to Mr. M'Duff in 1829.

According to *The Register of Arts and Journal of Patent Inventions*, on Dec. 2, 1829, Mr. M'Duff was awarded the Dr. Fellowes' Annual Prize for the best machine invented by a working member of the London (England) Mechanics' Institution.

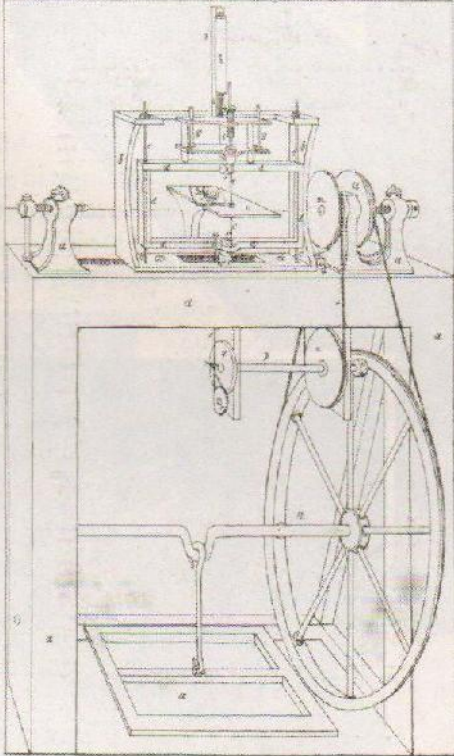
According to the publication, "The machine for which the prize on this occasion is awarded, is professedly for the object of cutting out Buhl-work, with more facility and accuracy than by the means heretofore in use."

The publication said Mr. M'Duff used his machine to cut the American continent out of a map of the world "with surprising rapidity and accuracy."

Named the No. 6 Amateur Saw, this Barnes saw was built in 1872. An old price list and descriptive catalogue says the saw will cut up to 1"-thick pine and originally sold for \$12.



Pl. 16.



◀ Mr. M'Duff's machine, patented in 1829, converted the rotary action of a lathe into a reciprocating motion by use of wheels and pulleys.

Rick Hutcheson's scroll saw collection occupies the entire top floor of his spacious workshop.

View additional photos of Rick's collection at [www.scrollsaws.com/SawCollection/SawsCollection.html](http://www.scrollsaws.com/SawCollection/SawsCollection.html).

Photos of Rick's collection by Jim Barringer from Taylor, Michigan.



The publication further states, "(Mr. M'Duff's tool) consists of a very fine and delicate straight saw blade, fixed vertically in a suitable frame, which receives a reciprocating rectilinear motion from the rotary action of the lathe. This conversion of the line of motion is effected by a contrivance particularly deserving of notice from its extreme simplicity and cheapness."

### The Evolution of the Scroll Saw

By 1857, there are at least three patents for improvements to the scroll saw and another patent references it as an American invention that was displayed at the 1851 Exhibition at the Crystal Palace in London. One document mentions the inventor attached a rod to the wheel of a band saw to drive another blade to be used as a scroll saw. By the 1860s, the first mechanical powered scroll saws began to appear in the United States using a foot-powered treadle, a hand crank, or a pedal mechanism.

During the Victoria Era (1850-1910), scroll saws were used to cut the delicate ornamental gingerbread patterns at the gabled ends along roof eaves and porches. Scroll saws were also used to create clocks, wall plaques, picture frames, and ornate furniture to adorn the inside of the home. By the 1920s, the term scroll saw was in common use throughout America and manufacturers, such as Barnes, New Rogers, Star, Lester, and Hobbies, began mass-producing them.

### RESOURCES

Harold Barker's *A Pictorial History of the American Jig or Scroll Saw* (spiral bound, privately printed, 1988, 137 pages).

*The Register of Arts and Journal of Patent Inventions*, Volume Fourth, new series, edited by L. Hebert, Civil Engineer, Published by B. Steill, 14 Paternoster Row, London, England, 1880, p. 254.

Rick Hutcheson's Website: [www.scrollsaws.com](http://www.scrollsaws.com)

Special thanks to Joe Seymour's Website: [www.icollectpuzzles.com](http://www.icollectpuzzles.com)

### The Largest Known Scroll Saw Collection

Lifelong woodworker Rick Hutcheson wants to document the 180-year evolution of the scroll saw from the first patent in 1829 to today's modern saws. Rick has one of the largest known collections of scroll saws from around the world, consisting of more than 200 saws.

Rick began his collection in 1995 with an old 1876 Barnes No. 7 treadle scroll saw he bought from a friend.

"It has a big boat paddle you step on to operate it," Rick said. "I paid \$400 for it and actually sawed on it a few times for the novelty of it. Then I just thought to myself, 'Hey, I'd like to start a collection.' So I did."

Today, that first antique scroll saw proudly sits alongside the others in what has grown to become Rick's scroll saw museum, situated in a large room over his workshop in Grimes, Iowa.

Since his first purchase, Rick launched a relentless hunt for older, more unusual scroll saws of all types; treadle, pedal, hand-crank, pneumatic, water-powered, electric, homemade, manufactured, children's saws, floor models, tabletops, and anything else that might fill the remaining gaps in his considerable collection.

In 2000, Rick began buying scroll saws over the Internet and through eBay.

"When I'd post the photos of my new saws on the web, people would contact me to see if I'd be interested in an old saw they had," Rick explained. From there, Rick's

collection grew to fill his display floor and the shelves lining the walls.

"Now I'm having to stack them on top of each other!" Rick said with a laugh "I've always liked mechanical things. To me it's just so neat to see how they were built, how they functioned, how many different types and styles there were, and how they all operated. It's like the forensics of scroll saws."

To preserve its antique value, each saw is kept in its original condition, smudges, dents, dings, missing parts, chips, broken saw blades, ratty cords, and all.

Despite the knowledge and resources Rick has accumulated during his search for saws, he still has very little information on some saws.

"With some of these saws, I have no idea who made it or what year it was made," Rick said. "But then I'll have someone go on my website museum and e-mail me that their grandfather had a saw exactly like that and he bought it new in 1932. If someone gives me that information, I gladly add it to my online museum."

Rick never sells any of his saws, but he loves showing them off to anyone interested.

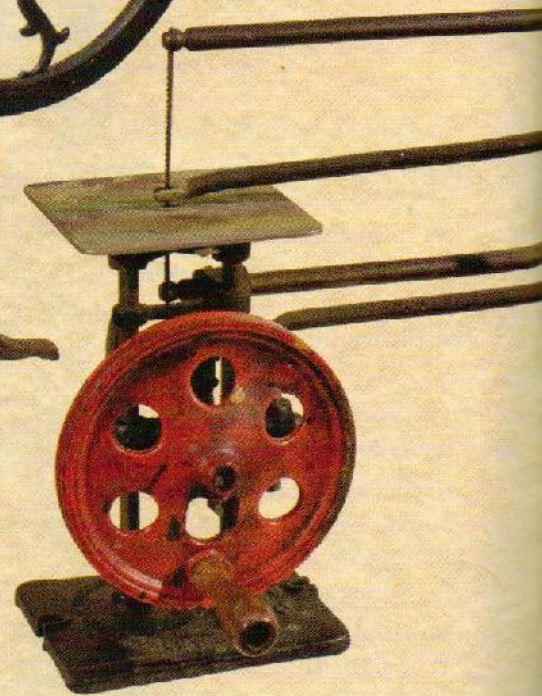
"I've had people from all across the country come here to see the saws," Rick said. "Usually, they've been to my web page and want to see them in person or they'll be passing through Iowa on vacation and decide to stop by. I'm only three miles off of the interstate. Come see me."

These days, Rick is a little more particular about what he buys because he's running out of room.

"It's really got to be something different—something with a totally different type of drive system or a different blade-clamp setup," Rick said, hopeful something unique will pop up. "I think there are still some surprises out there."



This scroll saw, made by Dirigo out of Canada around 1870, was purchased for \$2,000 from a man in Oregon. That is the most Rick has ever paid for a saw. There are reportedly only four of these Dirigo saws to be found.

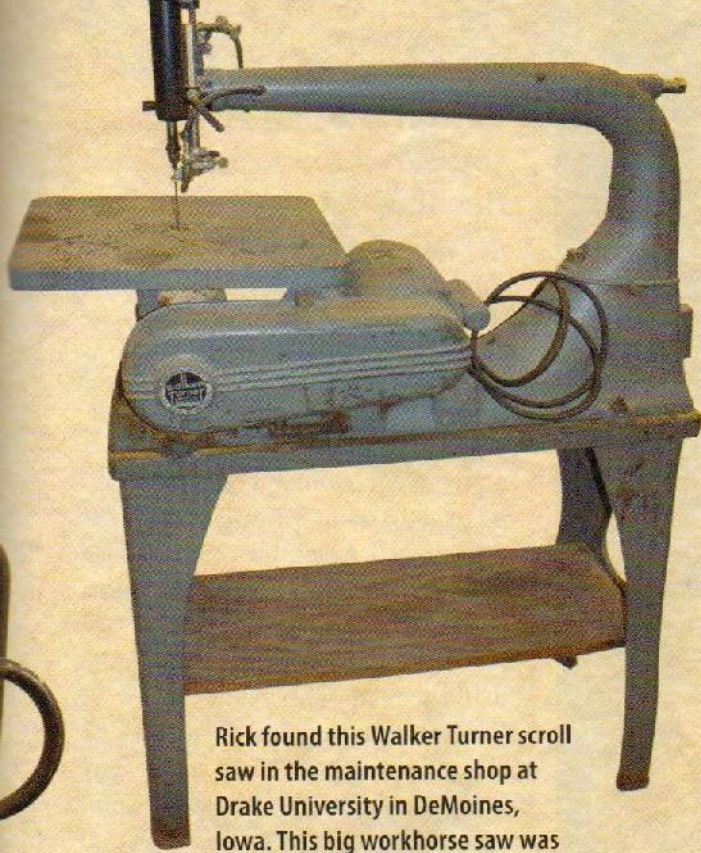


This Delta American Boy saw was built in 1923. To earn the Boy Scouts of America woodworking merit badge, Scouts must use a hand tool rather than a power tool. The hand crank allowed the boys to use this saw on their merit badge project.

One of the first Excalibur saws made in Canada, this saw uses a parallel-arm design. Only about 200 of these saws were made in the late 1960s or early 1970s before the company switched over to the parallel-link design still used today.



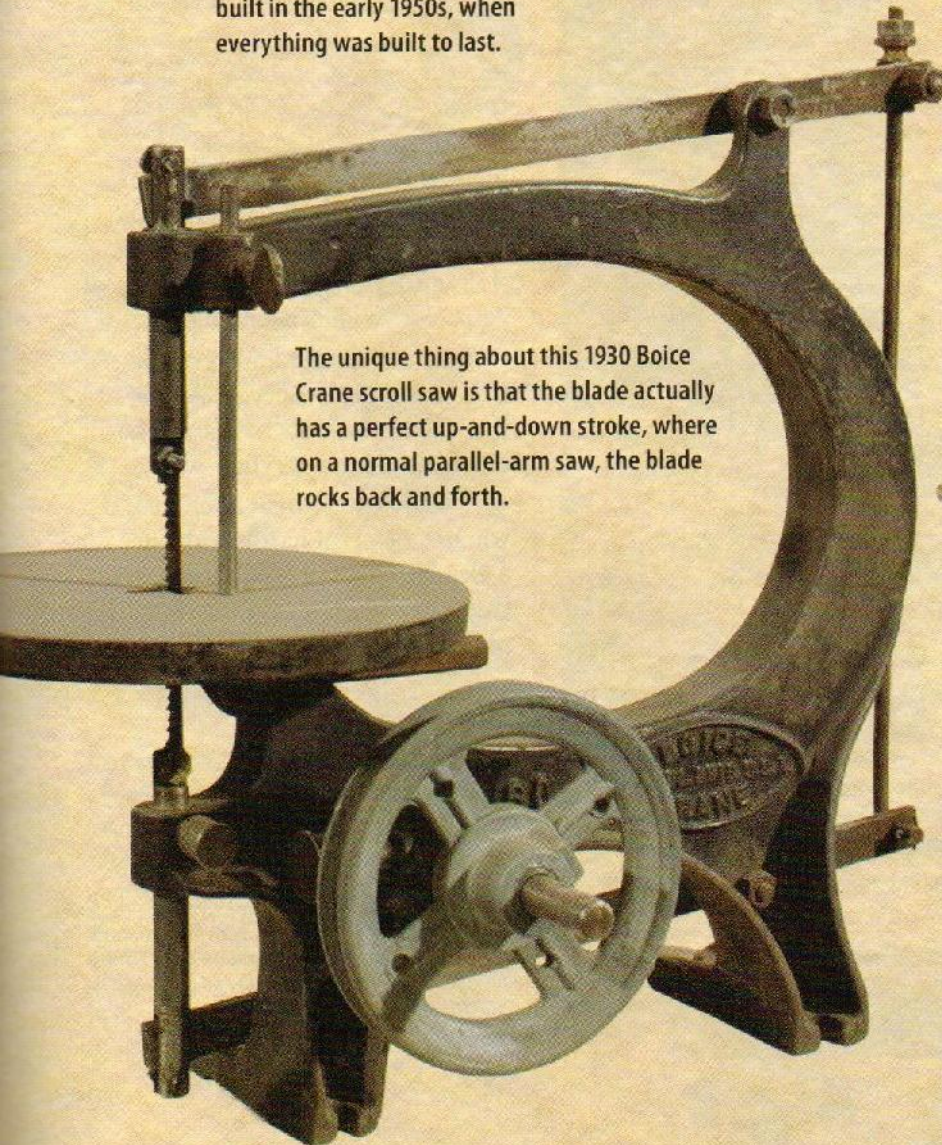
This lightweight, safe, and easy-to-run hobby saw was made for children in the 1970s. At the time, the thought was if you could get children interested in scroll sawing, they would buy more expensive saws when they were older.



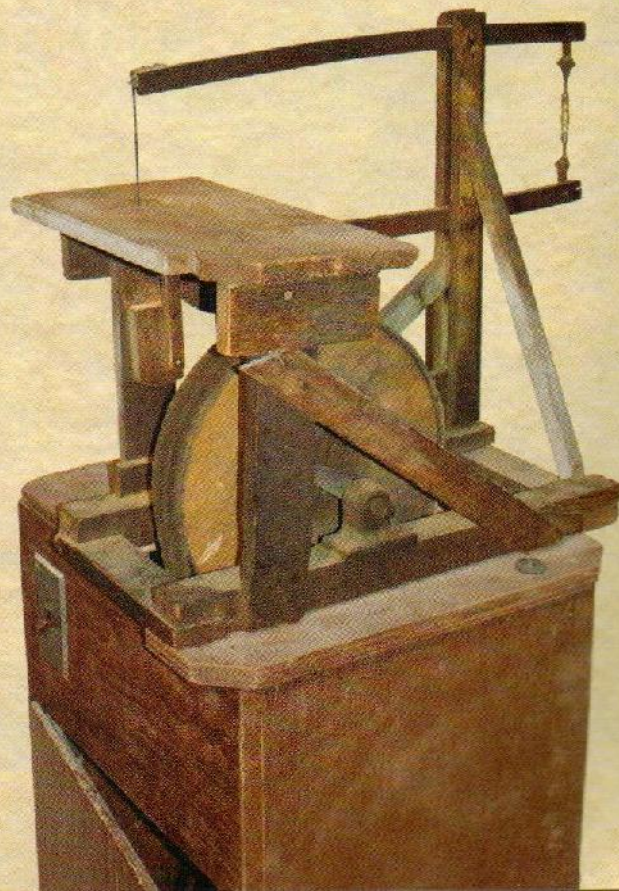
Rick found this Walker Turner scroll saw in the maintenance shop at Drake University in DeMoines, Iowa. This big workhorse saw was built in the early 1950s, when everything was built to last.



The wooden pulleys on this shopmade saw resemble the belt-driven saws from the 1930s. The plywood cabinet was probably added later. The electric motor was added later, but Rick thinks the saw was originally water-powered.



The unique thing about this 1930 Boice Crane scroll saw is that the blade actually has a perfect up-and-down stroke, where on a normal parallel-arm saw, the blade rocks back and forth.



# Intricate 3-D Christmas Tree

**Beautiful lace-inspired design adds an elegant touch to your holiday decorating**

By Gloria Cosgrove  
Cut by Dale Helgerson

This intricate slotted design makes an impressive holiday decoration. The tree makes a lovely stand-alone decoration and can also be used to display miniature ornaments. Assemble the tree for display and separate the panels for convenient off-season storage.

Stack two blanks together and drill the blade-entry holes. Cut the fretwork first and then cut around the perimeter of the design. Separate the stack and use carbon paper to transfer the slot pattern to the blank without the pattern. Cut the top assembly slot on one blank and the bottom assembly slot on the second blank. Sand the slots slightly so the two blanks slide together tightly. To cut the tree from  $\frac{1}{4}$ "-thick wood, increase the pattern size to 200%. Be sure the slot width matches the thickness of your blanks before cutting.

For a different look, cut the trees from green acrylic. Adjust the size of the slots to match the thickness of the acrylic.

Apply your finish of choice. If you use colorful hardwoods, use a clear finish. For a more durable tree, stain or paint Baltic birch plywood after the project is cut.

## Materials:

- 2 each  $\frac{1}{8}$ " x  $8\frac{1}{4}$ " x  $10\frac{3}{4}$ " (3mm x 210mm x 275mm) Baltic birch plywood or wood of choice (per tree)
- Temporary-bond spray adhesive
- Carbon paper
- Assorted grits of sandpaper
- Finish of choice

## Materials & Tools

### Tools:

- #1 reverse-tooth blades or blades of choice
- Drill with assorted small bits

Pattern for the **INTRICATE 3-D CHRISTMAS TREE** is in the pattern pullout section.



Art has always been a part of Gloria Cosgrove's life. Gloria started sketching as a child and worked with pastels, watercolors, oil paints, and created quilts before discovering scherenschnitte (papercutting). With her daughter, Alison, she maintains a mail-order business selling original artwork and papercutting patterns. For more of her work, visit [www.papercuttingsbyalison.com](http://www.papercuttingsbyalison.com).

# Gifts for Scrollers

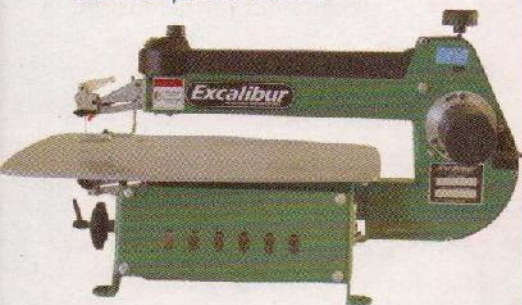
## GIFTS OVER \$300



DELTA Machinery's new 20-inch Variable-Speed Scroll Saw (model 40-690) is the perfect gift for the serious woodworking artisan and hobbyist. Gift recipients will find greater accuracy and ease of use due to design elements, such as electronic variable speed and upfront controls. For more information, visit [www.deltaportercable.com](http://www.deltaportercable.com).



Good things do come in smaller packages! The new Excalibur EX-16 is now available, with all of the features that the bigger EX-21 and EX-30 are famous for, in a full 16" throat capacity saw. Special limited-time introductory price of \$499.99 (USD) from participating General International retailers. For the nearest General International dealer, visit [www.general.ca](http://www.general.ca).



Seyco invites you to consider the Excalibur EX-21 scroll saw for that extra special scroller in your life. Chosen as the Editor's Choice in the Scroll Saw Woodworking & Crafts 2010 Buyers Guide and the choice of serious scrollers worldwide for over 25 years. Check out Seyco's super saver specials at [www.seyco.com](http://www.seyco.com) or call 800-462-3353.



The Bare Bones kit includes a 360,000rpm oil-free Shofu Lab Air-Z handpiece, pressure regulator with moisture trap and 5-micron filter, variable-speed air foot pedal, one-year warranty, and lifetime technical support. As an added bonus, the kit has five free sheets of appliqué film, seven bits, free DVD, and free shipping! For more information visit Graphic Transfer, [www.graphictransfer.net/products.asp](http://www.graphictransfer.net/products.asp) or call 866-453-2652.

## GIFTS UNDER \$200

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The Guinevere Sanding & Polishing System will create a velvety finish on wood with inflatable sanders supported by a flexible shaft and portable motor. Two inflatable sanders adapt to the shape of your work—dome for concave or angled surfaces and drum for convex or flat surfaces. Kit includes sanders, sanding sleeves and hand pump. Flexible shaft adapts for work positions. For a free catalog or to find your local Woodcraft Store, visit [woodcraft.com](http://woodcraft.com) or call 800-225-1153.



The holidays aren't just a time for gift giving but also a time for gift repairing. Gorilla products are a practical, must-have staple for emergency fixes around the house. "I have used it successfully to repair toys, ornaments, and bathroom fixtures. This is a very Gorilla Holiday season!" says customer, Jim McElroy. For more information, please visit [www.gorillatough.com](http://www.gorillatough.com).

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Get organized with PS Wood Machines' 24-hole plexiglass scroll saw blade rack and 10 tubes with lids. Rack measures approximately 5 1/2" x 4" x 3" and tubes are 6" long. Visit [www.pswood.com](http://www.pswood.com) or call 800-939-4414.



# Building a Nativity Scene Candle Holder

Simple fretwork and easy construction techniques produce a lovely Christmas decoration

By Sue Mey

Scenes depicting the birth of Jesus are displayed in various forms of art and are especially popular around Christmas. Nativity scenes are traditionally set in a barn or stable and include Mary, Joseph, baby Jesus, angels, shepherds, and the Three Wise Men.

Place two or three candles in votive holders on the base behind the fretwork to illuminate the design. A piece of semi-transparent acrylic adds color to the scene. Battery-operated candles are available in various shapes and sizes and may be used as a safe alternative to wax candles.



## NATIVITY: CUTTING THE CANDLE HOLDER



1

**Prepare the blanks.** Trace the rough shape of the candle holder fretwork onto the blank. Cut along the lines. The smaller blank is easier to maneuver as you cut the fretwork. Cut the base to the dimensions listed in the materials list.



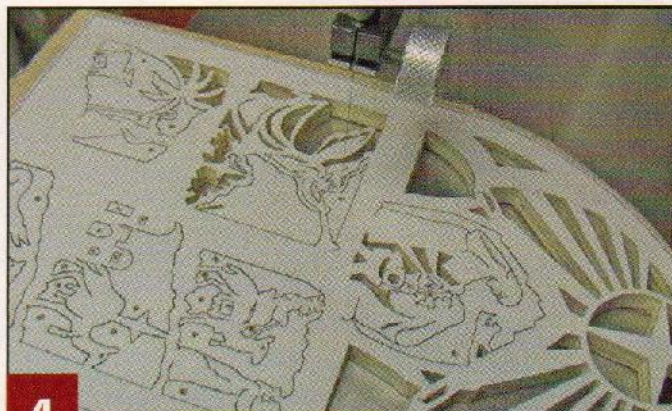
2

**Attach the patterns.** Cover the candle holder fretwork blank with masking tape. Attach the pattern to the blank with spray adhesive or a glue stick. Stack cut the blanks to create two projects.



3

**Drill the blade-entry holes.** For the large open areas, use a  $\frac{1}{16}$ " (2mm)-diameter bit. For the smaller areas, use a  $\frac{1}{32}$ " (1mm)-diameter bit.



4

**Cut the frets.** For the large areas, use #3 or #5 reverse-tooth blades. Switch to a #2/0 blade for the smaller areas.



5

**Cut around the perimeter of the blanks.** Cut or sand up to the perimeter lines. I find it easier to sand the smooth curves of this design rather than cutting them.

## NATIVITY: FINISHING AND ASSEMBLY



6

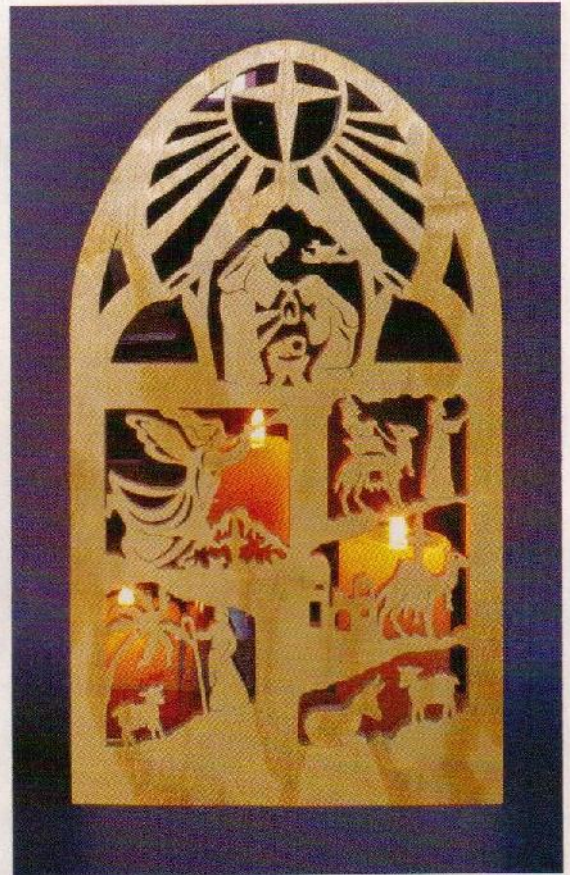
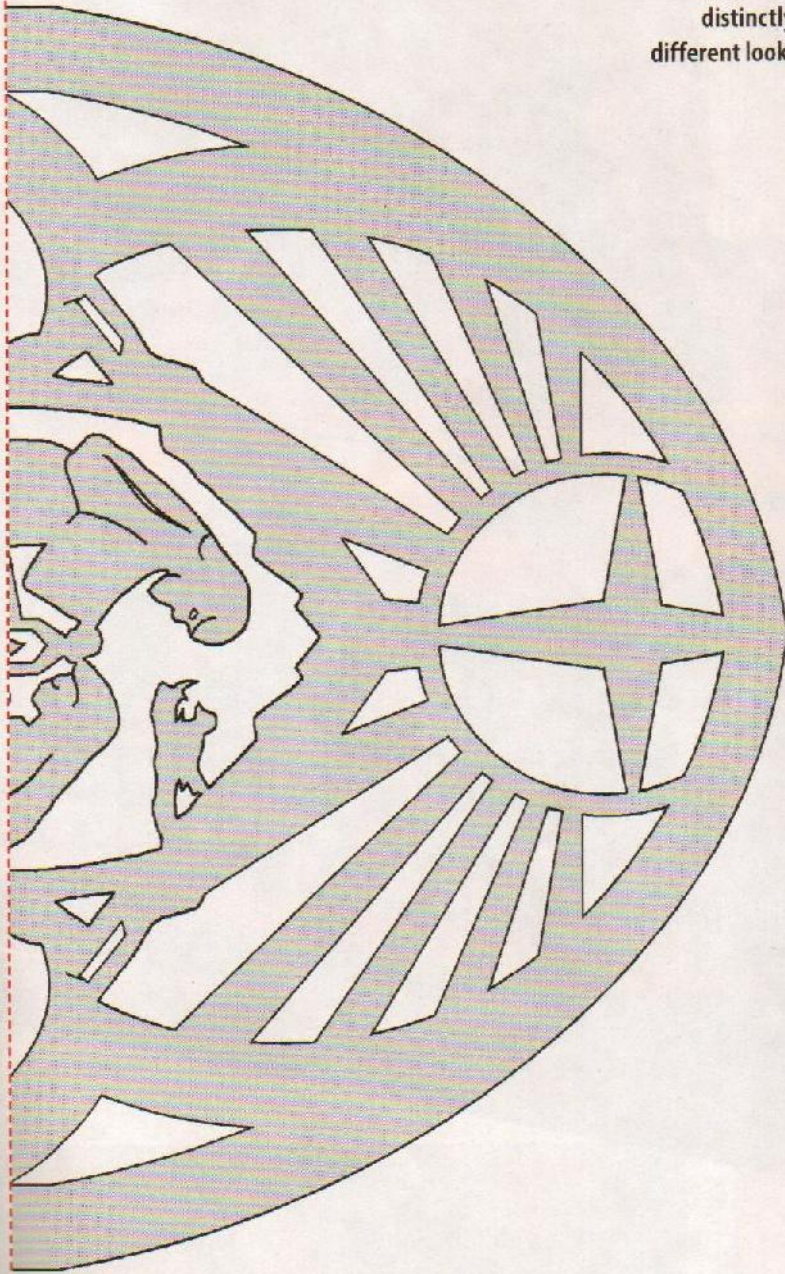
**Assemble the pieces.** Remove the tape and patterns. Carefully hand sand the pieces and remove the sanding dust. Glue and clamp the upright to the base using wood glue. Apply a clear spray varnish or your finish of choice. Use epoxy or cyanoacrylate (CA) glue to attach the optional acrylic to the back of the fretwork.

# Nativity candle holder pattern



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Use transparent acrylic or omit the backing board for a distinctly different look.



## Materials & Tools

### Materials:

- $\frac{3}{8}$ " to  $\frac{1}{2}$ " x  $6\frac{3}{4}$ " x  $11\frac{1}{4}$ " (10mm to 12mm x 170mm x 285mm) hardwood or plywood (fretwork)
- $6\frac{3}{4}$ " x  $10\frac{1}{2}$ " (170mm x 270mm) semi-transparent acrylic (optional backing)
- $\frac{3}{4}$ " x 3" x  $6\frac{1}{2}$ " (20mm x 76mm x 89mm) hardwood or plywood (base)
- Masking tape
- Temporary-bond spray adhesive or glue stick
- Wood glue
- Sandpaper, assorted grits
- Clear spray varnish

### Tools:

- #2/0 and #3 or #5 reverse blades or blades of choice
- Drill press with  $\frac{1}{32}$ " (1mm)- and  $\frac{1}{16}$ " (2mm)-diameter bits
- Disc sander (optional)
- Assorted clamps



Sue Mey lives in Pretoria, South Africa. To see more of her work including a variety of patterns and pattern-making tutorials available for purchase, visit [www.scrollsawartist.com](http://www.scrollsawartist.com). Her first pattern book, *Lighted Scroll Saw Projects*, is available from [www.schifferbooks.com](http://www.schifferbooks.com) and other outlets.

# Creating a Notre Dame Chess Set



**Compound design features scenes from the historic landmark**

*By Jim Kape*

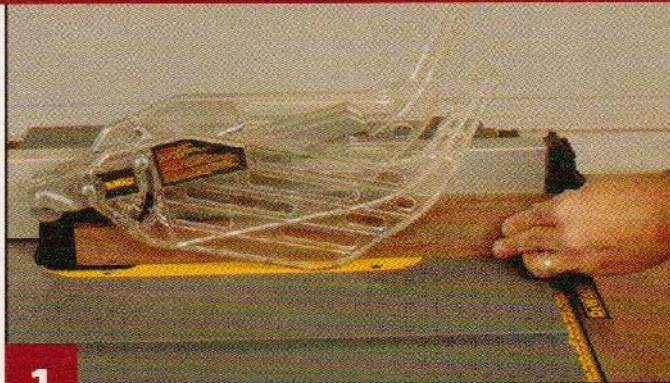
The game of chess came into Europe at the end of the first millennium, where it matured into the game we know today. When I began designing chess sets, I looked for inspiration in the cities of Europe. I focused on the great churches and cathedrals of the region. This chess set is based on the Notre Dame de Paris or Notre Dame Cathedral.

Construction of the Notre Dame Cathedral began in 1163 and the cathedral you see today was completed in 1345. The western facade of the cathedral, with the two towers and the rose window, was built for

God, but it is also a cathedral for men. The apse of the cathedral features great flying buttresses, which are needed to hold the weight of the walls, but are nevertheless beautiful and iconic. Lost in the beauty of this cathedral is the great spire in the middle.

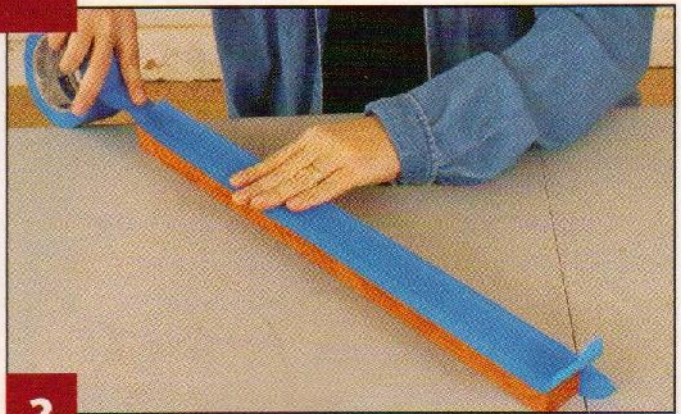
This chess set seeks to capture the majesty and grace of the cathedral and the region. To cut the pieces, I recommended using the compound cutting jig described in the sidebar. The jig makes the pieces easier to hold and provides more weight to limit chatter and bounce.

## CHESS SET: CUTTING THE PIECES



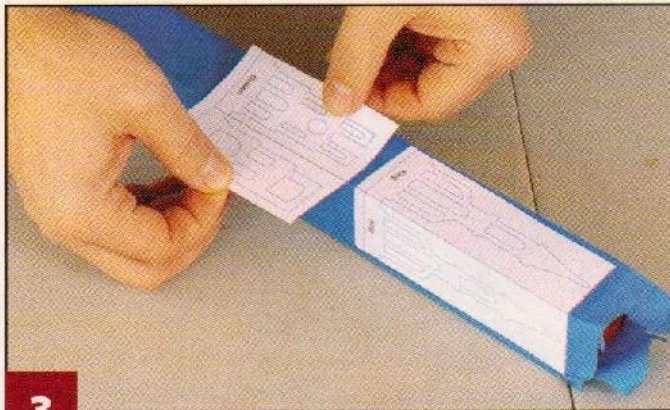
1

**Prepare the blanks.** Cut the stock to  $1\frac{1}{2}$ " (38mm) thick by  $1\frac{1}{2}$ " (38mm) wide. The edges of the blank must be square. I use a table saw, but you can cut the pieces to rough size and sand them square. Overall, you need 55" (1,400mm) of stock. It is easier to add the tape and patterns to several long blanks.



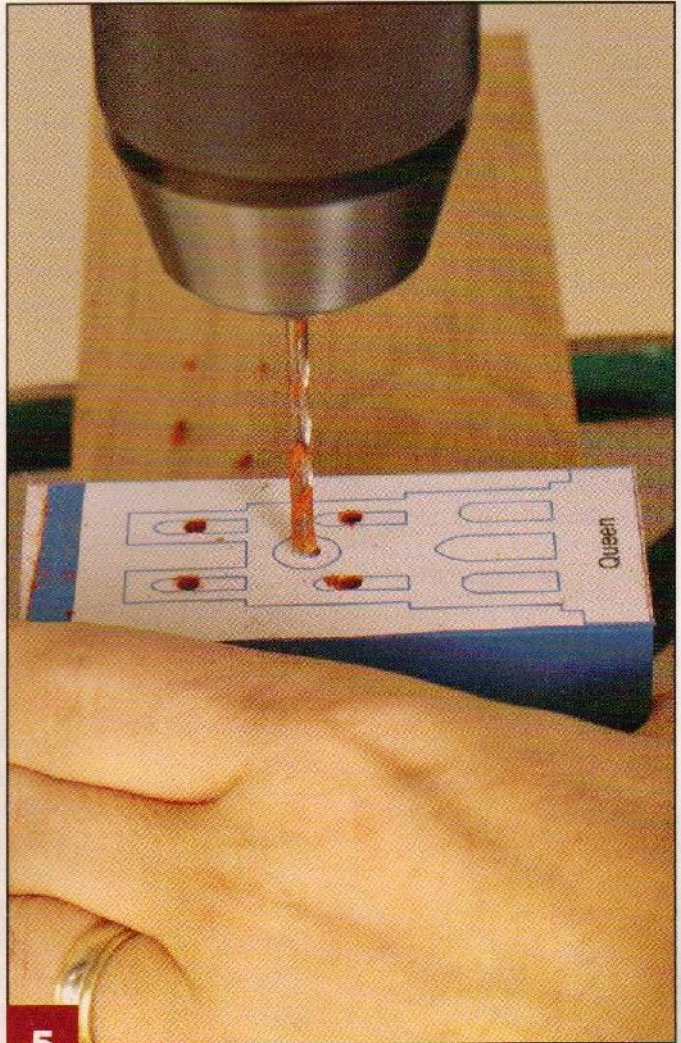
2

**Cover the blank with blue painter's tape.** All tape has a lubricant to prevent the tape from sticking to itself on the roll. Blue painter's tape doesn't leave residue and helps lubricate the blade, reducing the chance of the wood burning as you cut. Cover all four sides of the blank.



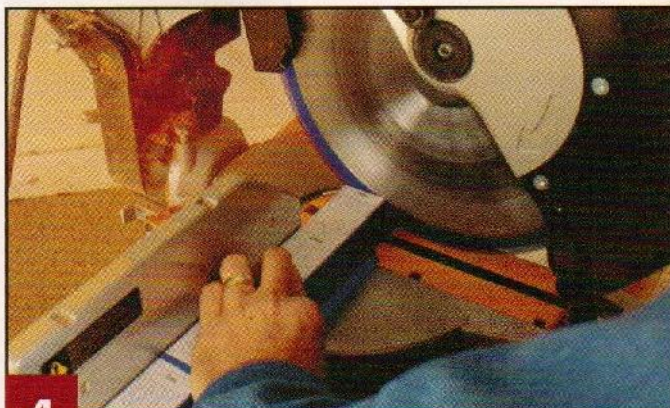
3

**Attach the patterns to the blank.** Fold the patterns along the dotted line and apply spray adhesive to the back of the pattern. Align the fold with the corner of the blank and smooth the patterns over two sides of the blank. Make sure the fold line is straight on the corner.



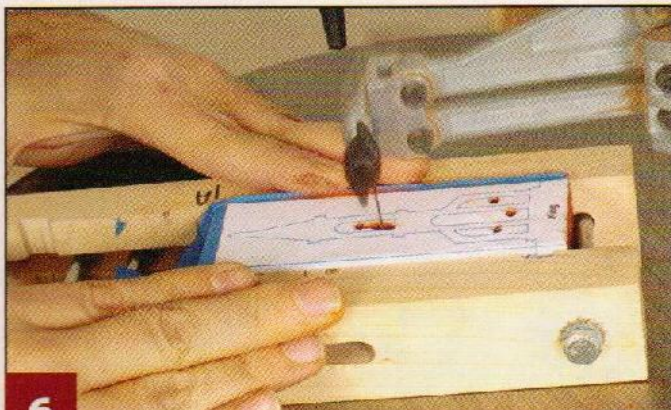
5

**Drill blade-entry holes.** Drill the holes for the frets with a  $\frac{1}{8}$ " (3mm)-diameter brad-point bit. If you plan to weight the bottom of the pieces, drill a  $\frac{3}{8}$ " (10mm)-deep hole in the center of the bottom with a  $\frac{7}{8}$ " (22mm)-diameter Forstner bit.



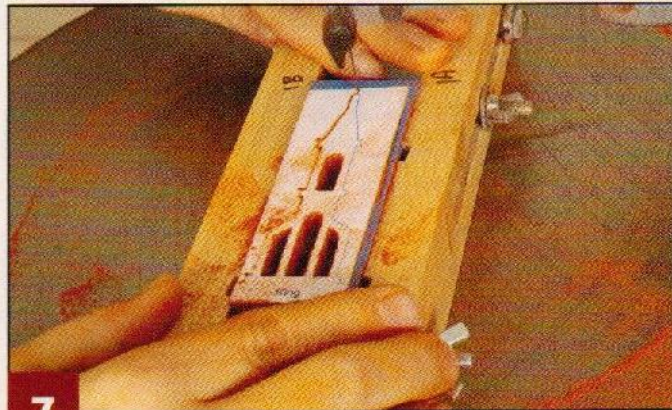
4

**Cut the individual blanks.** Cut the blanks apart using a miter saw or table saw to ensure a perfectly square cut on the base. Alternatively, cut the pieces apart with a scroll saw and sand them square.



6

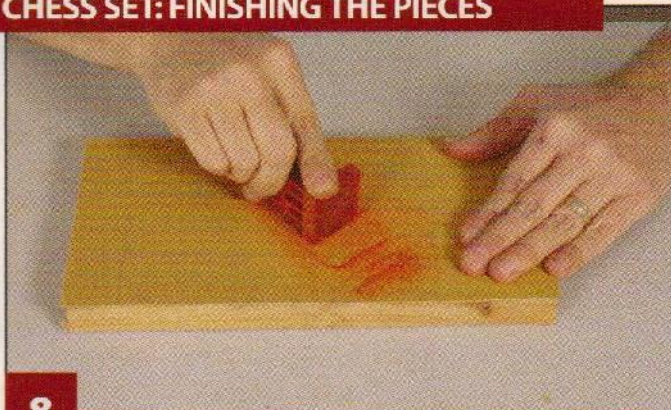
**Cut the frets.** Clamp the piece in the holding jig and cut the frets. To create sharp corners, cut into the corners from both directions instead of trying to turn the corners. Cut all of the frets on one side of the blank. Remove the piece from the jig, rotate it 90°, and cut the other frets.



7

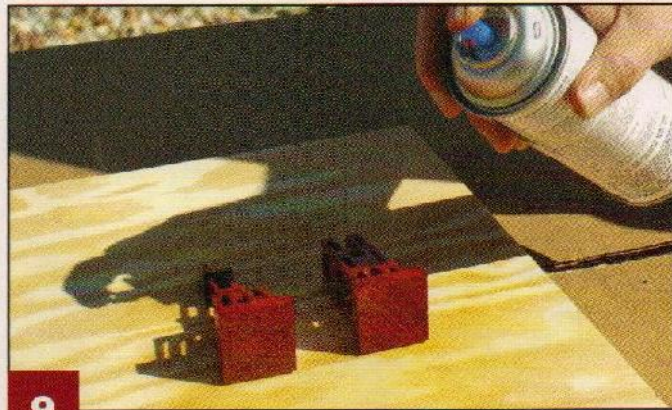
**Cut the profile of the pieces.** Thread your blade through one of the slots in the jig. Cut around the perimeter of the pattern. Carefully remove the piece from the jig, wrap clear packaging tape around the blank to hold the waste in place, and cut the second profile.

## CHESS SET: FINISHING THE PIECES



8

**Sand the pieces.** Carefully remove the piece from the waste wood. Attach a piece of sandpaper to a flat surface and sand the bases flat. Then use epoxy to attach pennies or lead weights to the base of the pieces. Fill any remaining hole with wood putty and sand the putty flat. Clean up any rough frets with an emery board or strip of sandpaper.



9

**Apply the finish.** I use three or more coats of spray polyurethane. I prefer the glossy look of polyurethane to the satin finish of Danish oil. After the finish dries, apply self-adhesive felt to the bottom of the pieces. You can also attach regular felt to the bottom using spray adhesive.



## Materials & Tools

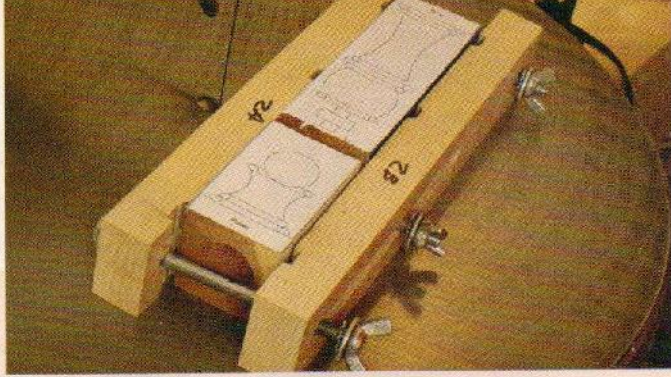
### Materials:

- 1½" x 1½" x 55" (40mm x 40mm x 1,400mm) wood of choice (per side)
- 2 each 1" x 1¾" x 8¼" (25mm x 35mm x 210mm) wood of choice (jig)
- 3 each ¼"-diameter by 3½"-long (6mm by 90mm) bolts (jig)
- 3 each ¼" (6mm)-diameter wing nuts (jig)
- 6 each ¼" (6mm)-diameter flat washers (jig)
- 3 each ¼" (6mm)-diameter star washers (jig)
- 2" (50mm)-wide blue painter's tape
- Spray adhesive
- 1 square foot of regular or self-stick felt
- Oil finish, polyurethane, or finish of choice
- Weights, such as pennies, lead shot, or washers (optional)

- 30-minute epoxy (optional)
- Wood putty (optional)
- 200-grit sandpaper
- Emery board

### Tools:

- #5 or #7 blades or blades of choice
- Table saw (optional)
- Miter saw (optional)
- Drill press with ⅛" (3mm)-diameter brad-point bit and ⅞" (22mm)-diameter Forstner bit
- Scissors
- Putty knife

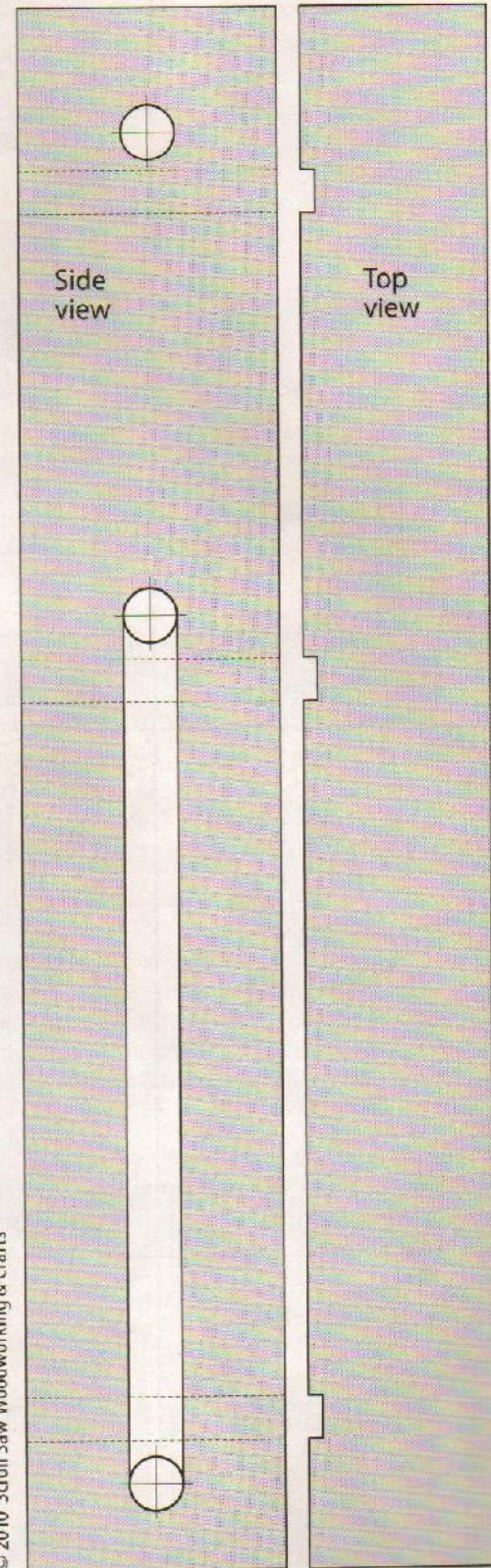


## Compound-cutting Jig

Compound-cut chess pieces are small and can break when you lose your grip on the small pieces. I use scrap wood to make a simple jig. Attach the pattern to two pieces of 1"-thick stock. Cut the jig pieces to shape, drill the 1/4" (6mm)-diameter holes, and cut the long slot. Then rotate the piece 90° and cut the blade-entry slots. Use the blade-entry slots when cutting the perimeter of the pieces.

Place washers over the bolts and thread the bolts through the holes. Add a star washer, washer, and wing nut to the end of each bolt. Place the jig flat on the table and insert the compound blank into the jig. Hold the jig and blank tightly down as you tighten the wing nuts. When the nuts are tight, check to see if the pieces wobble. If there is no wobble, the blank is correctly positioned in the jig.

## Compound-cutting jig pattern



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## TIPS PREVENTING SCORCH MARKS

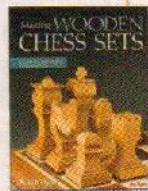
*Thicker wood heats up more quickly than thin wood. If you are not careful, you can scorch your blanks. All wood can scorch, but cherry, maple, mesquite, alder, African mahogany, and sapelle scorch easily. There are several techniques you can employ to minimize scorching.*

- Cut past the outside corners into the waste and loop around to start the other side of the corner.
- Feed the wood slowly into the blade.
- Avoid applying sideways pressure on the blade.
- Use an aggressive blade, such as a #5 or #7.
- Cover the blank with blue painter's tape.
- Adjust the speed of the saw so you can control the cut without pushing too hard into the blade.
- Use your thumbs to feed and your fingers to lightly guide the piece.

## Further Reading

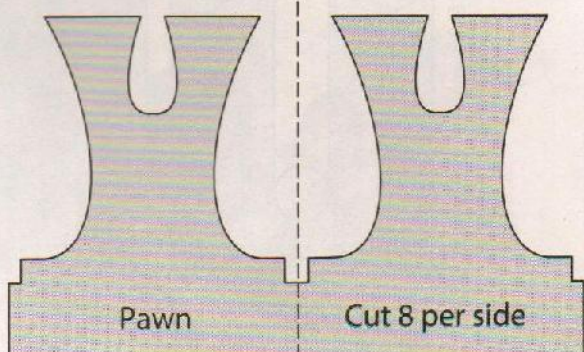
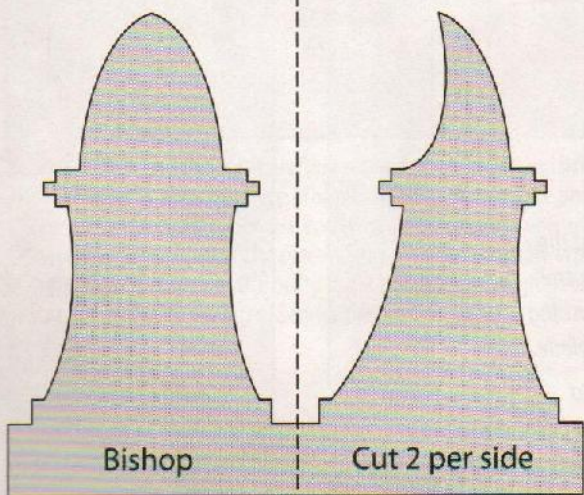
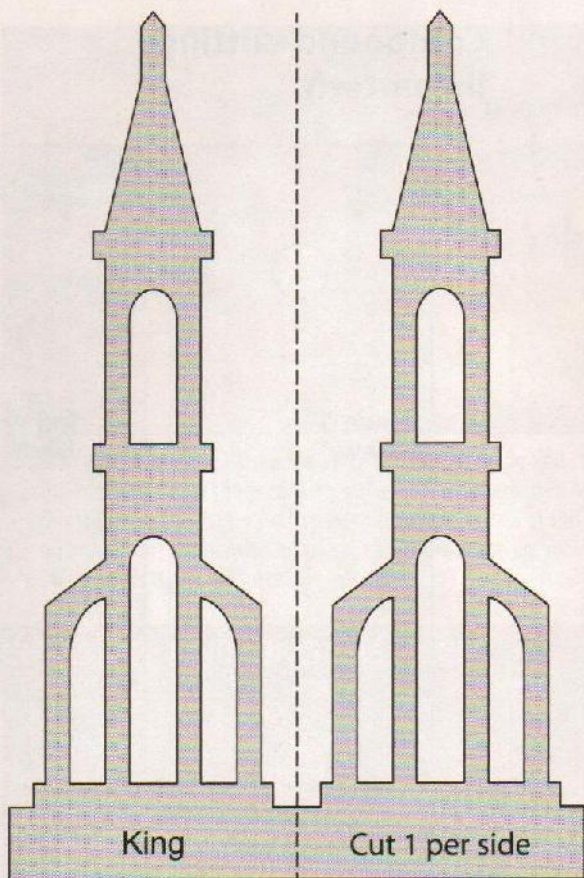
### **Making Wooden Chess Sets** by Jim Kape

*Includes all the know-how and patterns you need to create 13 one-of-a-kind chess sets along with a handsome board to display them and a sturdy storage box for your pieces.*

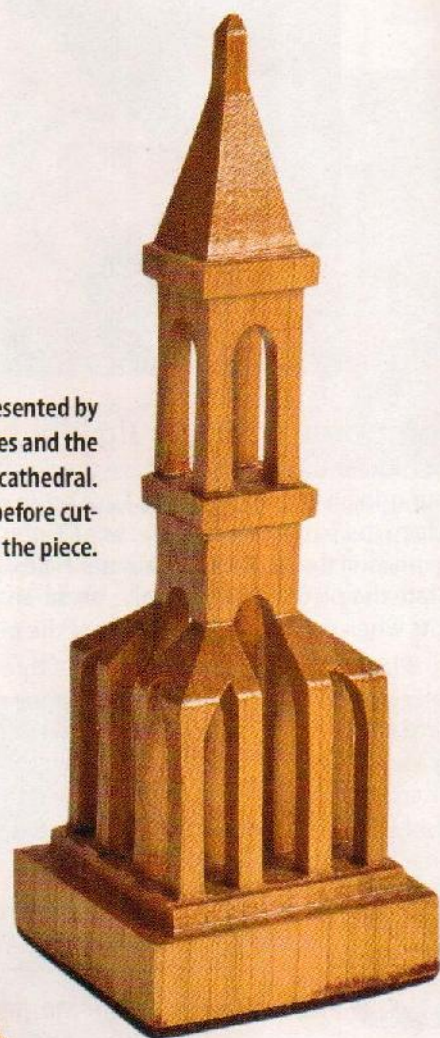


Available for \$19.95 + \$4.75 s&h (parcel post) from Fox Chapel Publishing, 1970 Broad St., East Petersburg, PA 17520, [www.FoxChapelPublishing.com](http://www.FoxChapelPublishing.com), 800-457-9112.

## Notre Dame chess piece patterns



**THE KING** is represented by the flying buttresses and the grand spire of the cathedral. Make the inside cuts before cutting the perimeter of the piece.



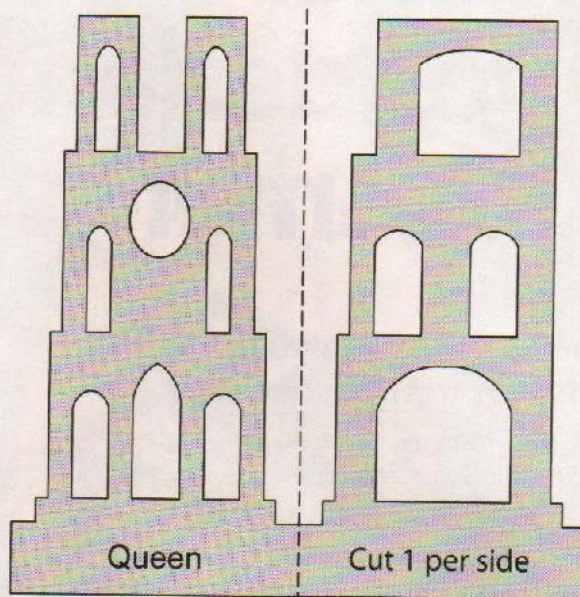
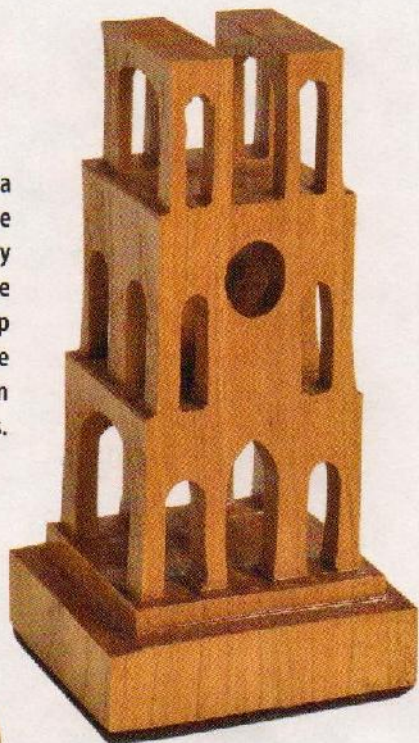
**THE BISHOP** takes some cues from the standard Staunton set with the semi-conical head and tapered body. The square collar is an important element. Be sure to cut sharp outside corners.



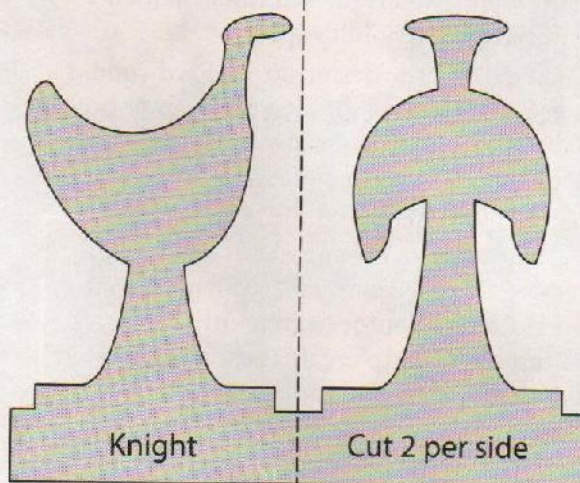
**THE PAWN** also takes cues from the standard Staunton chess set design, but turns them backward. Cut around the entire design on the first compound face. On the second face, cut the curve coming down from the flat top, but don't cut across the flat top. Cutting the top on the second face can cause tooth marks which will be difficult to sand out of the end grain.



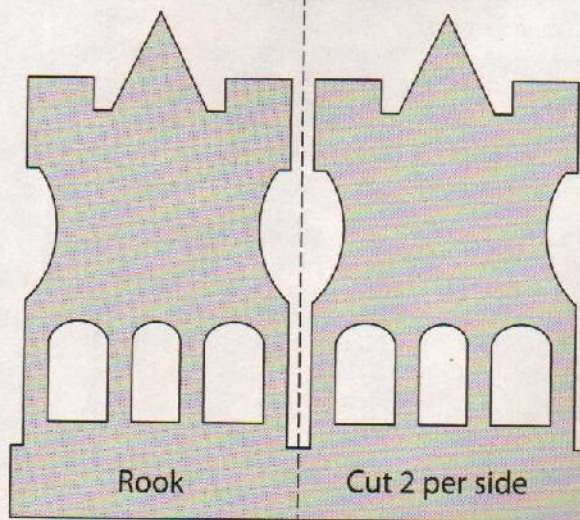
**THE QUEEN** is a close replica of the west facade of the cathedral. Drill the blade-entry holes with a drill press and use a brad-point drill bit to keep the bit from wandering. Be careful when drilling holes in the narrow windows.



**THE KNIGHT** is represented by a saddle. During the middle ages, the church was directly involved with the crusades and it was common for knights to ride under the protection of the church. Be careful when removing the piece from the waste.



**THE ROOK** is a castle rampart with arched windows or doorways at ground level. Be sure to make the inside cuts first.



*Jim Kape lives in Chandler, Ariz. Jim's compound chess sets have won numerous awards, including people's choice in Scroll Saw Woodworking & Crafts' Best Project Design Contest. Contact Jim on the SSW&C message board at [www.scrollsawer.com/forum](http://www.scrollsawer.com/forum).*

# Winter Wonderland Ornaments

## Intricate snowflakes highlight holiday fretwork designs

By Alison Tanner

Cut by Rolf Beuttenmuller

These ornament designs are the result of superimposing snowflakes over iconic winter shapes, such as reindeer and polar bears. The compilation results in fun ornaments brimming with holiday spirit.

If cutting the designs from hardwood, I suggest a white wood, such as aspen or holly. Baltic birch plywood is also a good choice. You can use a white stain or washes of acrylic paint to lighten the plywood.

The designs look great cut from white acrylic. Sue Mey, a *Scroll Saw Woodworking & Crafts* contributor from South Africa, has an easy way to create the look of frosted glass. Before cutting the ornament, sand both sides of a piece of clear acrylic with 320-grit sandpaper. Sand the blank from top to bottom, then left to right. Wipe the blank with a damp rag to remove the sanding dust before applying the pattern.

More **WINTER WONDERLAND ORNAMENT** patterns are in the pullout section.

### Materials:

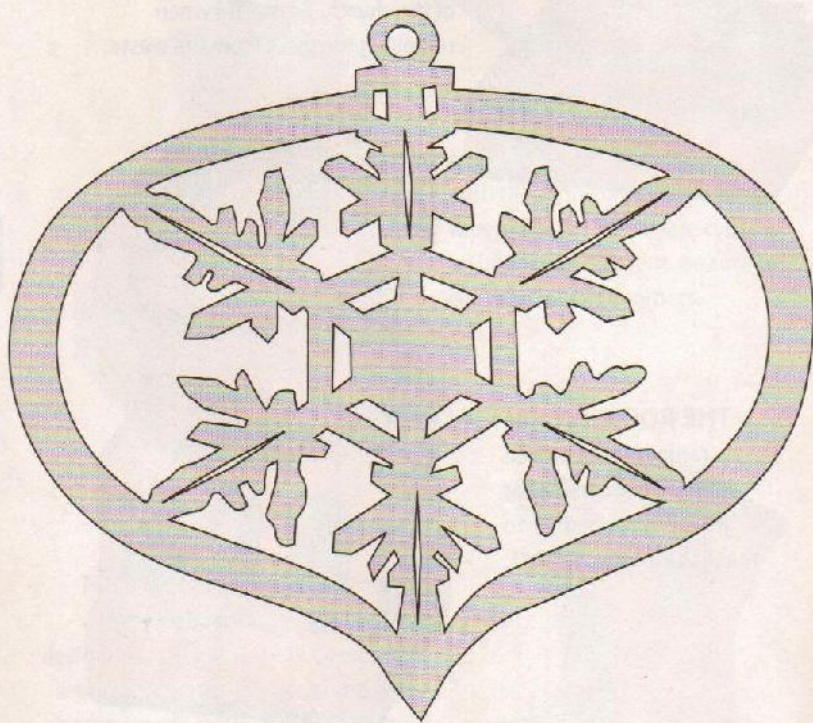
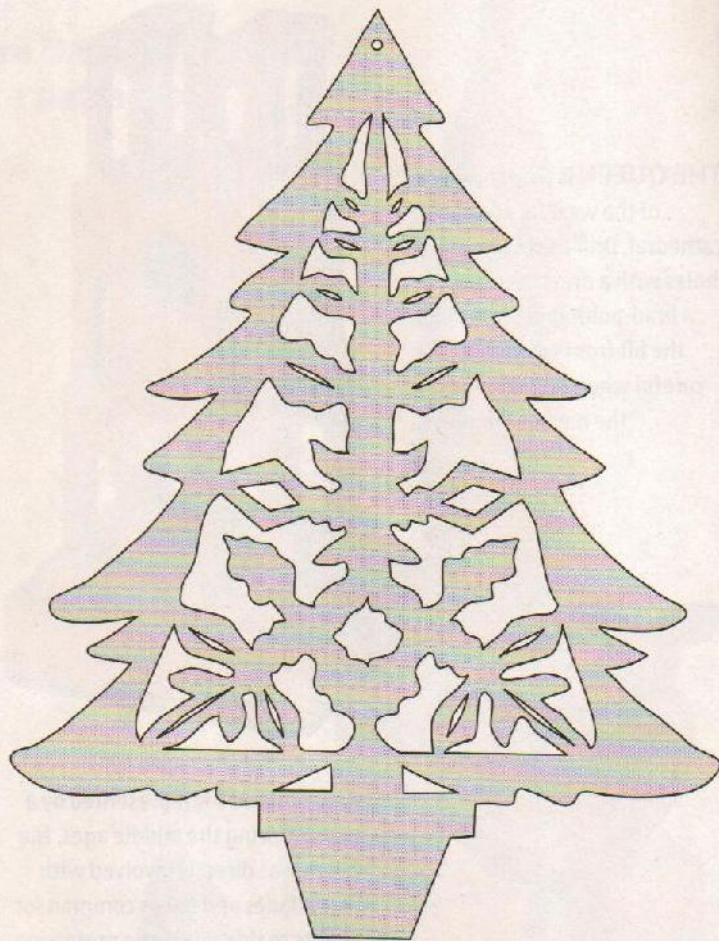
- 1/8" - to 1/4" - (3mm to 6mm) thick Baltic birch plywood, hardwood, colored acrylic, or wood of choice (sized to accommodate pattern of choice)
- Assorted grits of sandpaper up to 320 grit

### Materials & Tools

- White stain, white acrylic paint, or finish of choice

### Tools:

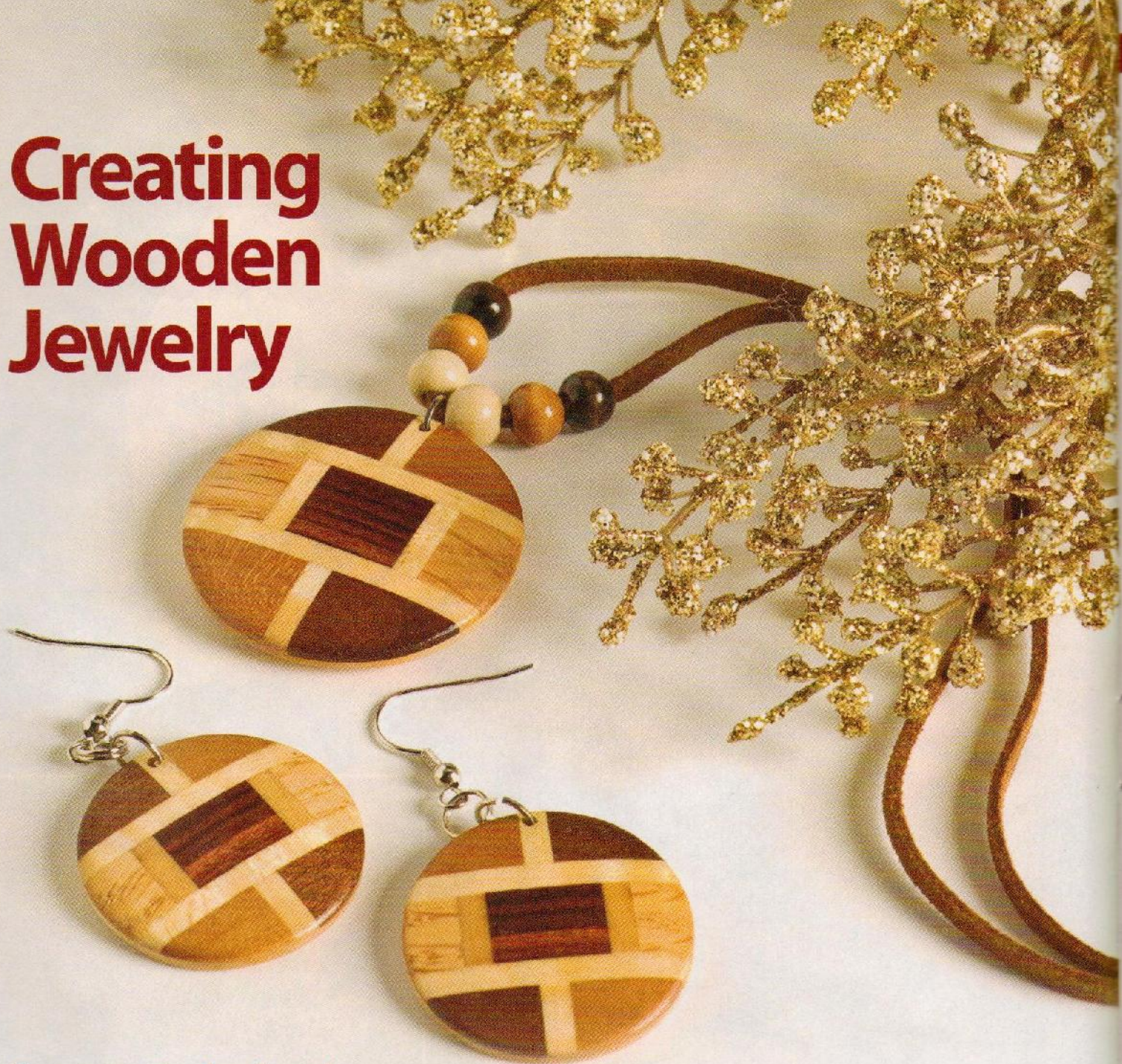
- #3 reverse-tooth blades or blades of choice
- Drill with assorted small bits



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



# Creating Wooden Jewelry



## Use contrasting hardwoods to make matching necklaces and earrings

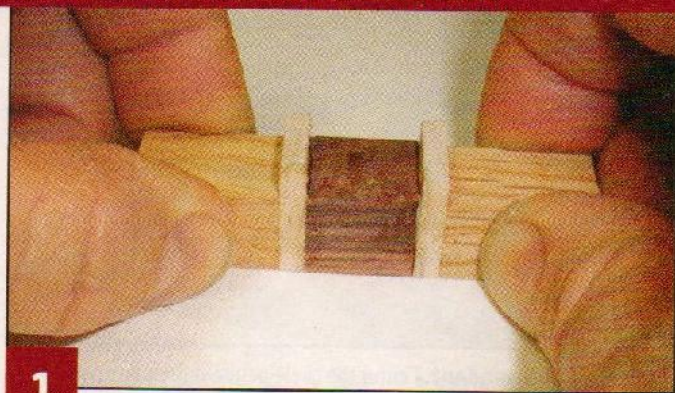
By Cheryl Gustafson

These elegant jewelry pieces are top sellers at art and craft shows. My jewelry-making process produces multiple pieces from each glue-up. The handmade jewelry is perfect for holiday gift giving.

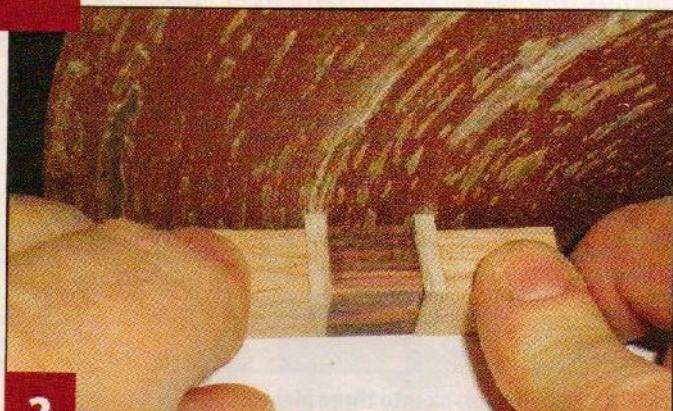
By following the instructions, you will make three necklaces and two pair of earrings. I use kingwood, red oak, cherry, walnut, and curly maple. You need only a small piece of kingwood, so a pen blank from

your local hardwood store gives you enough wood for several necklaces. Alternate hardwoods can be used to create unique and distinctive pieces.

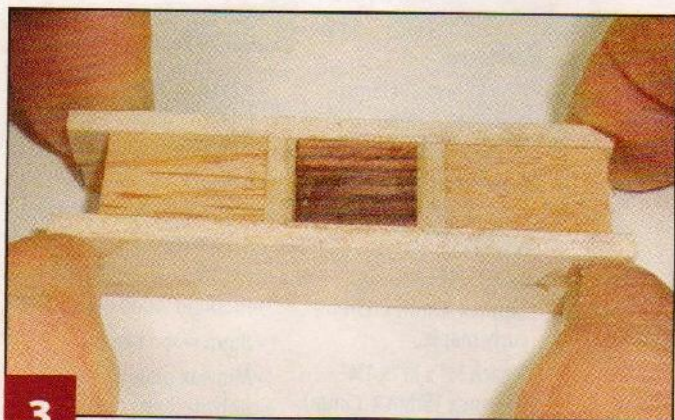
To get started, cut the pieces to the sizes listed in the materials list. Orient the grain along the length of the smaller pieces. Orient the grain across the 2" width of the maple backing boards.



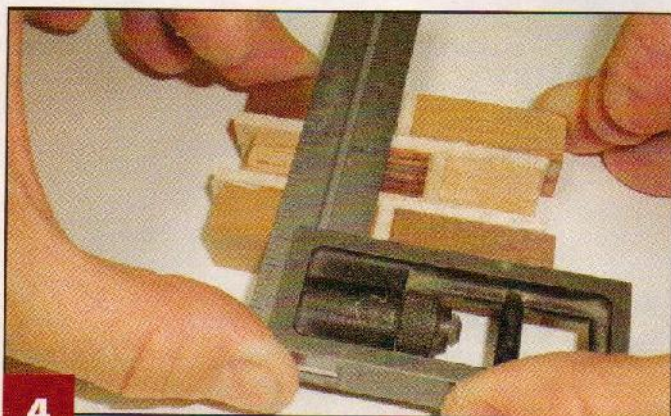
**1** **Glue up the center strip.** Glue a  $\frac{3}{8}$ " (16mm)-long strip of maple to the end grain on both sides of the kingwood. Then glue a piece of red oak on either side of the assembly. Turn the assembly on edge and press it against a flat surface as you squeeze the pieces together. Hold the blank in position for a minute until the glue grabs. The maple sticks out on the top.



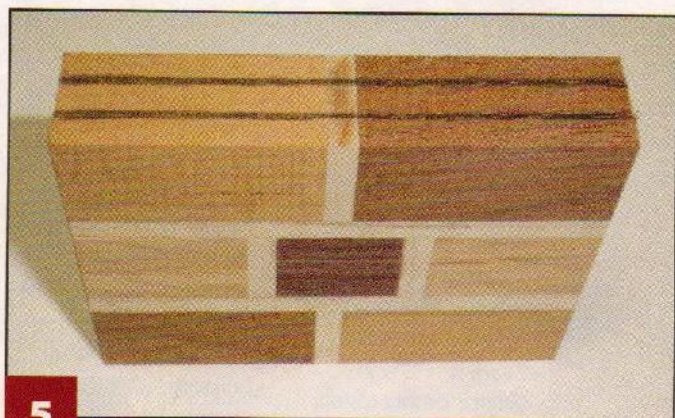
**2** **Sand the pieces flush.** Let the glue dry for ten minutes. Then sand the curly maple flush with the kingwood and red oak using a disc sander or your sander of choice.



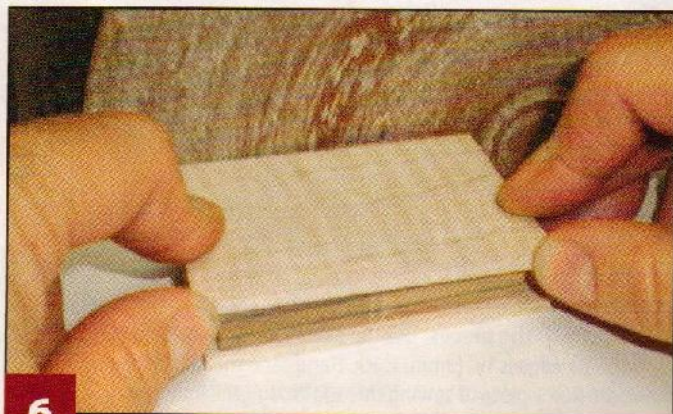
**3** **Glue up the remaining strips.** Glue and clamp  $2\frac{1}{2}$ " (65mm)-long strips of curly maple to the top and bottom of the center strip. Assemble the two outer strips, consisting of one piece of walnut and one piece of cherry with a  $\frac{3}{8}$ " (16mm)-long piece of maple between the two woods. Glue and clamp the outer strips and allow the glue to dry for ten minutes.



**4** **Assemble the blank.** Glue and clamp the outer strips on either side of the center strip assembly. Use a machinist's square to make sure the strips of maple are centered on the piece of kingwood and line up with each other. Position the cherry on the left side on one strip and on the right side on the opposite strip.

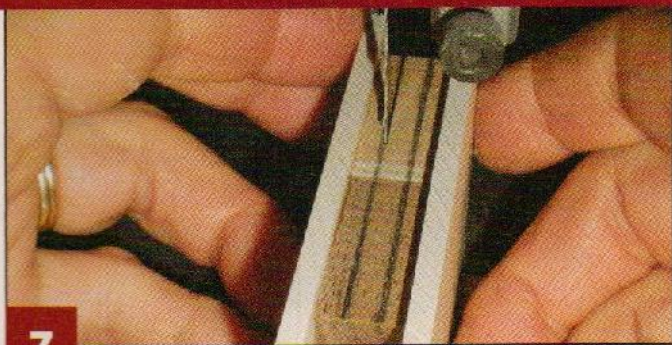


**5** **Mark the three sections.** Cut the blank into a rectangle. Sand the top and bottom faces flat on a belt sander. Draw lines to divide the blank into three sections of equal thickness.



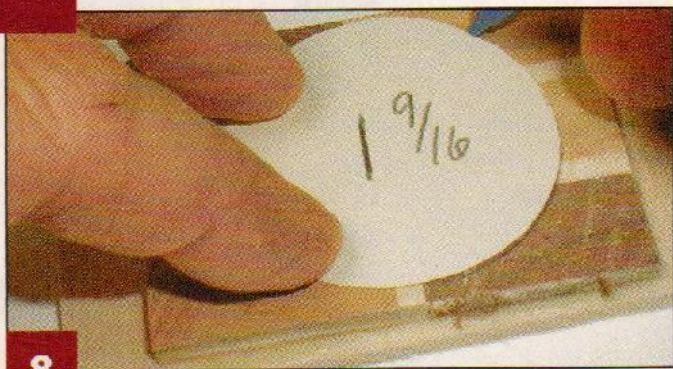
**6** **Attach the backing pieces.** Glue and clamp the maple backing boards to the front and back of the assembly. Make sure the maple grain runs perpendicular to the grain of the smaller pieces. Let the glue dry and then sand the side opposite the drawn lines until the maple pieces are flush with the rest of the blank.

## JEWELRY: CUTTING THE PENDANT



7

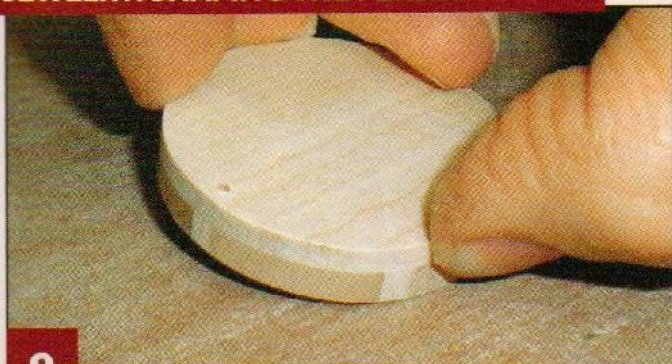
**Resaw the blank into three pieces.** Place the flat edge on the band saw table and carefully cut along one line. Sand the cut face of the middle blank flat. Glue and clamp another maple backing board to the sanded face and let it dry. Sand the bottom flush and cut along the remaining line. Sand the design side of each piece smooth.



8

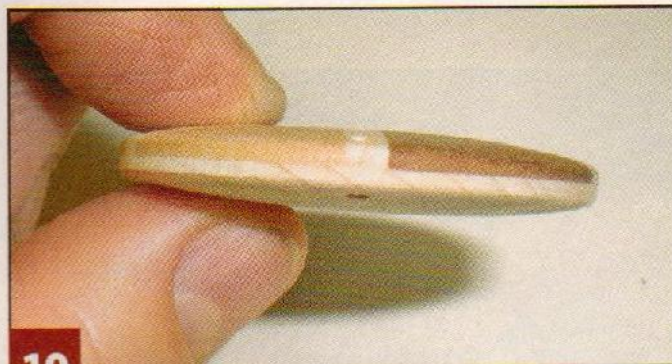
**Cut the pendant.** Center the circle pendant template on the kingwood piece and trace around the pattern. Cut along the template line. Carefully sand the pendant perfectly round while looking at the plain maple side. The designs on the opposite side make it difficult to sand a perfect circle. Drill a  $\frac{1}{32}$ " (1mm)-diameter hole in the top middle piece of maple.

## JEWELRY: SHAPING THE PENDANT



9

**Shape the pendant.** Grasp the pendant by the edge and hold it face down against the belt sander. Rotate your wrist in a clockwise circular motion as you press down toward the outside edge. As the edge gets thinner, rotate in smaller circles with lighter pressure on the middle of the piece to create a smooth dome on the front. The piece will be thinner on the edges and thicker in the center.



10

**Finish the pieces.** Use the same technique to sand the back until the edge is  $\frac{1}{8}$ " (3mm) thick. Hand sand the edges for a smooth finish. Run a piece of sewing thread through the hole and tie it. Dip the pendant into Minwax gloss polyurethane. Wipe off the excess with a paper towel and hang the pendant to dry. Sand the project with 320-grit sandpaper and wipe it with a soft cloth. Spray it with clear gloss Krylon finish. Install a jump ring and run a cord through the ring. String 8mm wooden beads on either side of the jump ring.

## Materials & Tools

### Necklace:

- $\frac{1}{2}$ " x  $\frac{1}{2}$ " x  $\frac{3}{16}$ " (15mm x 15mm x 13mm) kingwood
- 2 each  $\frac{1}{2}$ " x  $\frac{1}{2}$ " x  $\frac{3}{4}$ " (15mm x 15mm x 20mm) red oak
- 2 each  $\frac{1}{8}$ " x  $\frac{1}{2}$ " x  $2\frac{1}{2}$ " (3mm x 15mm x 65mm) curly maple
- 2 each  $\frac{1}{2}$ " x  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " (15mm x 15mm x 35mm) cherry
- 2 each  $\frac{1}{2}$ " x  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " (15mm x 15mm x 35mm) walnut
- 4 each  $\frac{1}{8}$ " x  $\frac{1}{2}$ " x  $\frac{5}{8}$ " (3mm x 15mm x 16mm) curly maple
- 3 each  $\frac{1}{8}$ " x 2" x 3" (3mm x 50mm x 75mm) curly maple (pendant back)

- 2 each  $\frac{1}{2}$ " x  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " (15mm x 15mm x 35mm) walnut
- 4 each  $\frac{1}{8}$ " x  $1\frac{3}{4}$ " x  $1\frac{3}{4}$ " (3mm x 45mm x 45mm) curly maple (earring backs)
- Probond wood glue
- 8mm wood beads
- Minwax gloss polyurethane
- 7mm jump rings
- Paper towels
- 6mm double rings
- Thread
- Fishhook earring findings
- Krylon gloss clear spray
- $\frac{1}{8}$ " (3mm)-thick faux leather cord
- 320-grit sandpaper

### Earrings:

- $\frac{3}{8}$ " x  $\frac{1}{2}$ " x  $\frac{1}{2}$ " (10mm x 15mm x 15mm) kingwood
- 2 each  $\frac{3}{8}$ " x  $\frac{1}{2}$ " x  $\frac{3}{4}$ " (10mm x 15mm x 20mm) red oak
- 2 each  $\frac{1}{8}$ " x  $\frac{1}{2}$ " x  $2\frac{1}{2}$ " (3mm x 15mm x 65mm) curly maple
- 2 each  $\frac{1}{2}$ " x  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " (15mm x 15mm x 35mm) cherry

### Tools:

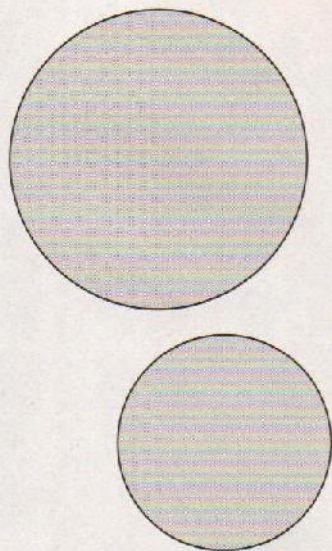
- Band saw
- #5 reverse-tooth blades or blades of choice
- Belt and disc combination sander
- Drum sander (optional)
- Drill with  $\frac{1}{32}$ " (1mm)-diameter bit
- Assorted clamps

## Earrings

The glue-up steps for the earrings are identical to the pendant. The length of the pieces is the only difference. Cut the pieces to the sizes listed in the materials list. Center the 1½"-diameter circle template over the kingwood and trace around it. Cut the circle and sand the edges to make it perfectly round. Cutting the earrings to shape before resawing ensures all four blanks are the exact same size.

Glue and clamp ⅛" by 1¾" by 1¾" pieces of maple to both faces of the blank. Resaw the blank in half, sand the faces smooth, and glue and clamp ⅛" by 1¾" by 1¾" pieces of maple to the faces. Resaw each of these blanks in half. Trim and sand the maple flush with the circle and use the same process used on the pendant to shape the front of the earrings. Sand the back flat.

The earrings should be thinner and lighter than the pendant. Drill ½" (1mm)-diameter holes in the center maple strips for the jump rings. Use a 7mm jump ring through the hole. Thread a 6mm double ring between the jump ring and the fishhook earring finding so the earrings dangle freely.



## Pendant and earring templates



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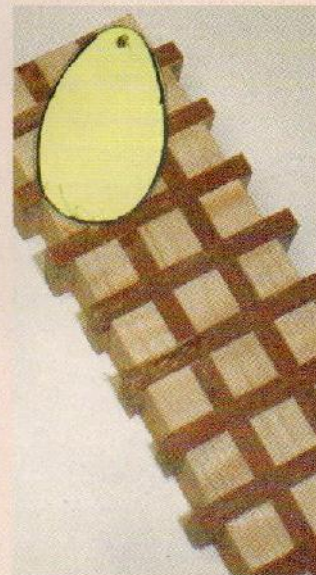
Cheryl Gustafson is a self-taught woodworker from Piqua, Ohio. Cheryl makes many different styles of jewelry, as well as mirrors, boxes, letter openers, and many more items using inlay techniques. Cheryl sells her items at woodcarving and craft shows, as well as gift shops and art galleries.



With a little creativity, you can create your own custom jewelry using simple patterns of contrasting hardwoods.

## Alternate Designs

The same basic technique can be used to create a variety of jewelry designs. Experiment with different laminations of hardwood and template shapes. To make the checkerboard teardrop jewelry, I glue up three ½" x ¼" x 6" strips of curly maple with two ½" x ⅛" x 6" strips of walnut in an alternating pattern. When dry, cut the assembled strip into ¼"-thick slices. Glue and clamp ½" x ⅛" x 1¼" pieces of walnut between the slices to create a checkerboard design. Sand the faces smooth. Position the teardrop template diagonally on the assembled blank and trace around the perimeter. Cut the shape and follow the process explained in the step-by-step directions to attach a backing board and sand the pieces to shape.

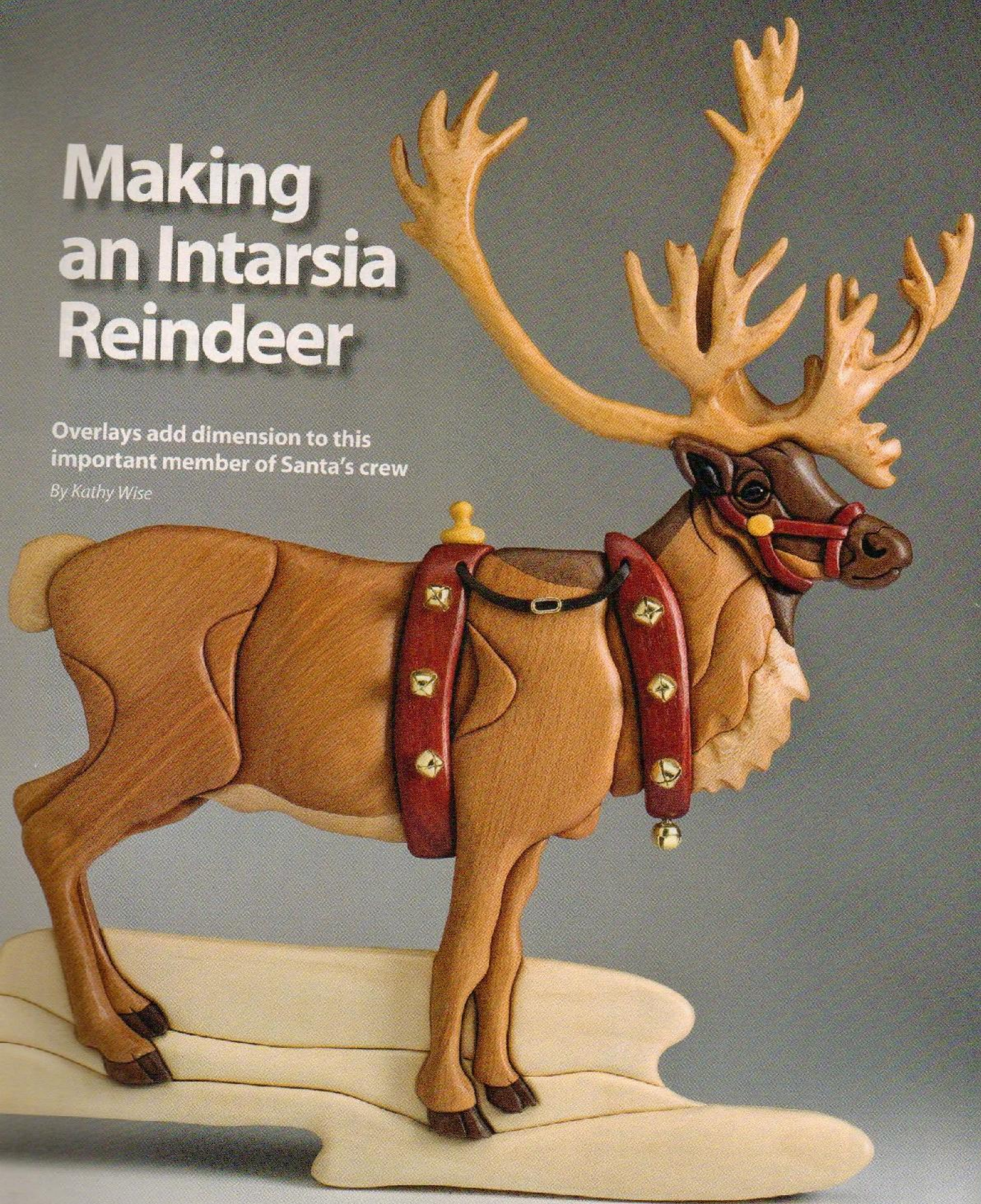


Glue up three pieces of curly maple with two pieces of walnut and cut slices off of the laminated blank. Then glue up the slices between additional strips of walnut to create a checkerboard design.

# Making an Intarsia Reindeer

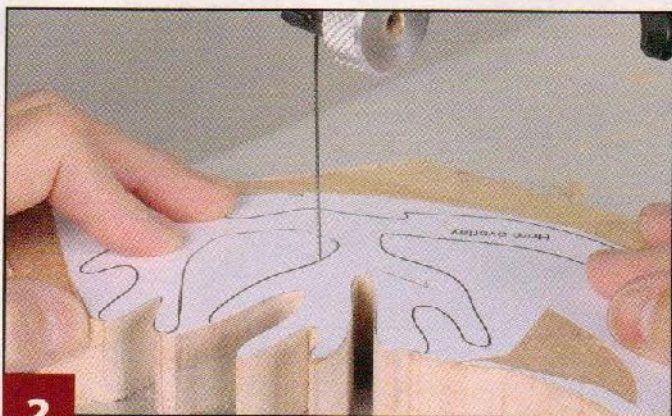
Overlays add dimension to this  
important member of Santa's crew

*By Kathy Wise*



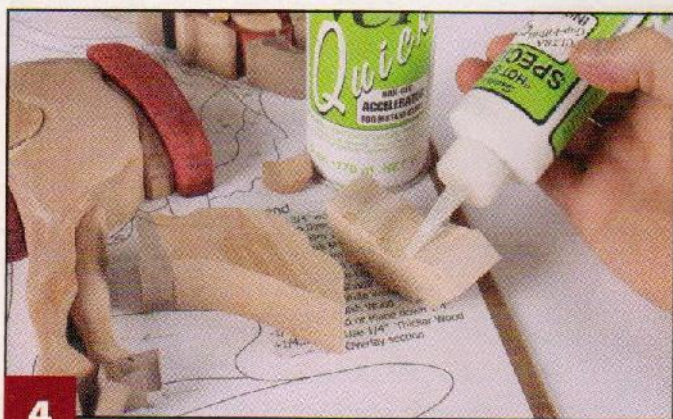
This festive reindeer project is a wonderful lesson in intarsia overlays. To give your piece a 3-D effect, add a second layer of antlers as overlays and overlay the harness strap. I often use overlays in my custom mural pieces for added effect and dimensionality. You can cut the jingle bells from wood or use real metal bells.

Make six copies of the pattern and keep a master copy for later use. Cut and group the pattern pieces by color. Apply spray adhesive to the back of the pieces and attach the pieces to the shiny side of clear contact paper. Cut each pattern piece. Attach a full-size pattern to the backing board blank to use as an assembly board.



2

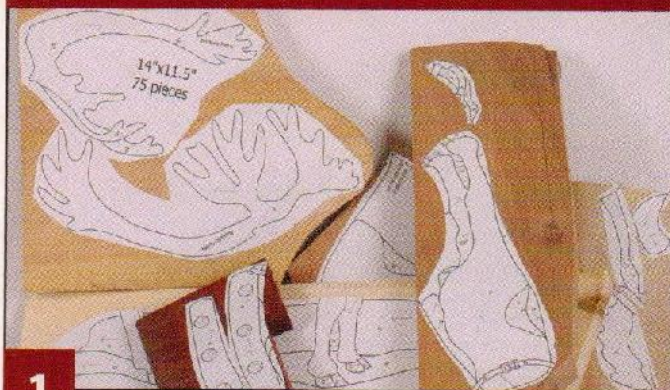
**Cut the pieces.** Use #5 reverse-tooth blades. Check a cut piece with a small square to ensure the blade is square to the table. Use a #2 or #3 blade to separate sections with the same color and grain direction. Cut the perimeter of the snow-covered ground, but do not cut the individual sections yet. Number the back of each piece as you cut it and place it onto the assembly board.



4

**Tack sections together.** Some sections have different colors, but follow the same contour. Tack pieces together with two drops of cyanoacrylate (CA) glue on the base of one piece. Spray accelerator on the other piece and push the pieces together on a flat surface. Shape them as a unit. Rap the section on a hard surface to break the glue joint or use acetone-based solvent to dissolve the glue.

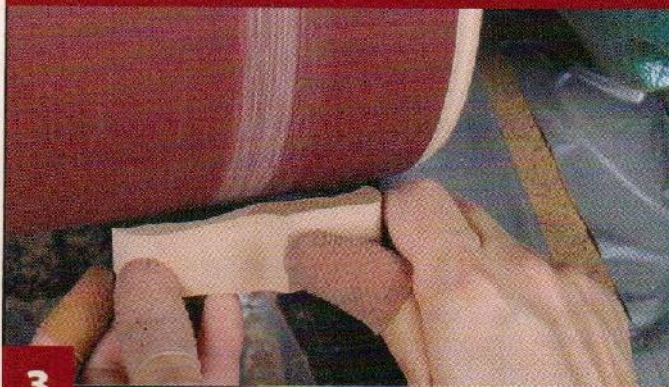
## REINDEER: CUTTING THE PIECES



1

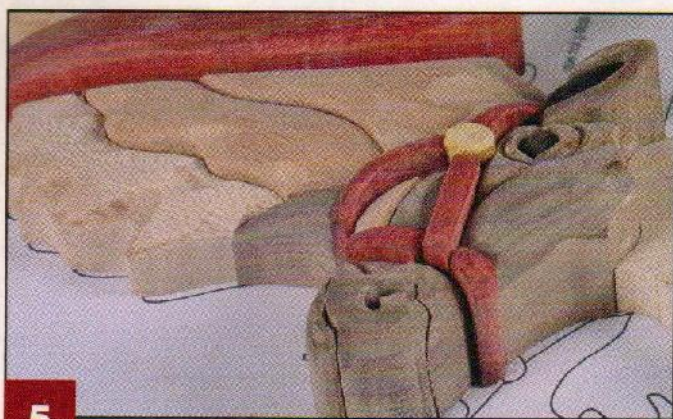
**Attach the patterns to the blanks.** Peel and stick the patterns to the wood. Pay attention to the grain direction arrows. Plane any wood that isn't flat before you attach the patterns. You need flat wood for a good cut and fit. Cut the larger pieces into smaller more manageable pieces.

## REINDEER: SHAPING THE PIECES



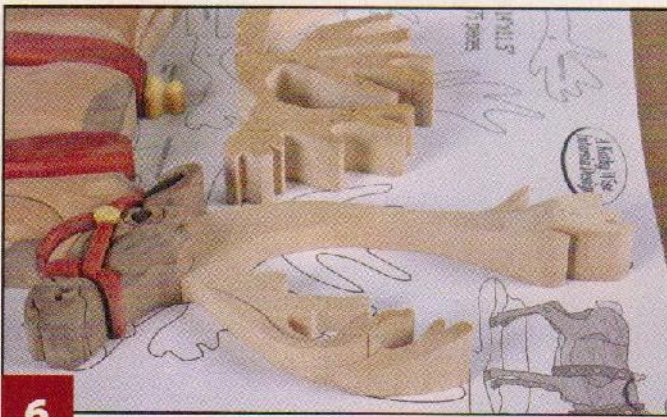
3

**Sand the lowest areas.** Check the fit, color, and grain direction of the pieces before shaping. I use a pneumatic drum sander and wear rubber finger tips to protect my fingers. Sand the tail and the legs that are farthest from the viewer down to a thickness of  $\frac{3}{8}$ " (9mm). Sand in small increments and replace the pieces on the assembly board to check your progress.

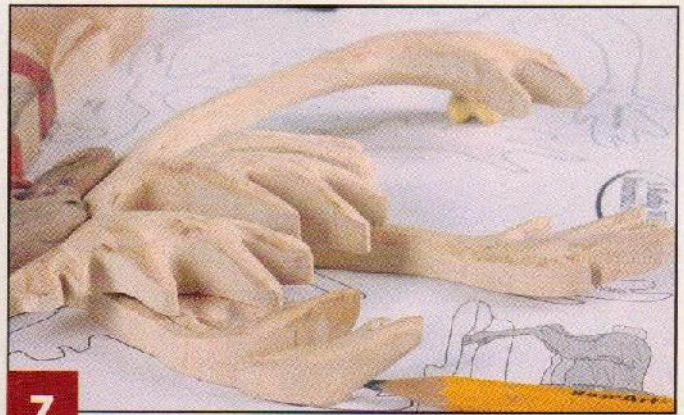


5

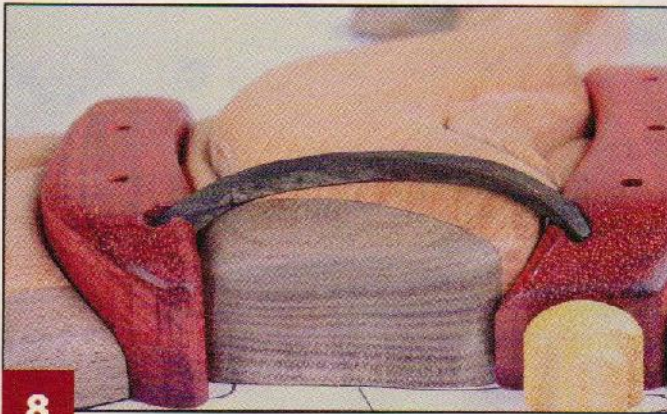
**Shape the reindeer body.** Shape the remaining body and harness pieces. Use a rotary-power carver with a  $\frac{1}{2}$ " (15mm)-diameter sanding drum and an oscillating spindle sander with  $\frac{1}{2}$ " (15mm)- and 1" (25mm)-diameter drums for the tight areas. Shim the eye piece to the correct height.



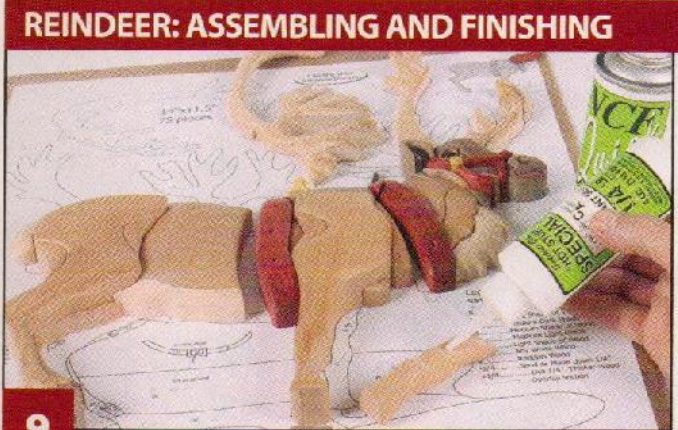
**6** **Shape the bottom antlers.** Sand the bottom antler sections down to  $\frac{3}{8}$ " (10mm) thick. Leave the lower section as flat as possible because the overlay sits on this area. Leave the antlers thick at the tip and sand wood away from the bottom of the tips to curve the antlers toward the front. Use the shaping diagram as a guide.



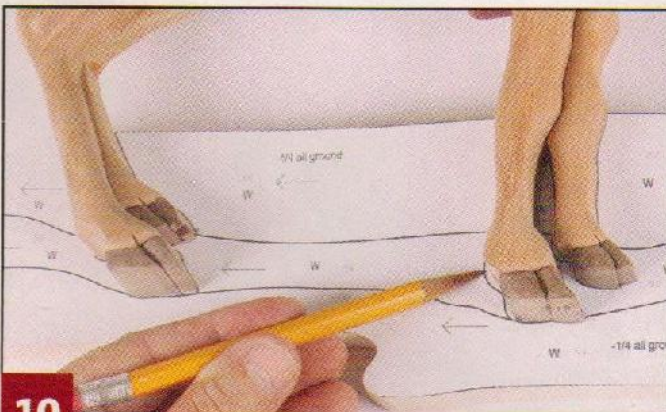
**7** **Shape the overlay antlers.** Fit the overlay piece on top of the bottom antlers. Mark where the overlay meets the head and taper the overlay down to the head. Taper the tips of the short antlers downward. Sand a curve under the left branch so it curves to the back of the piece, creating the opposite effect of the bottom antlers.



**8** **Shape the strap overlay.** Sand a curve into the bottom of the strap piece to match the shape of the shoulder. Sand the top until it matches the curve sanded into the bottom of the piece. Take your time and test the fit of the piece often. Drill the small holes to hold the jingle bells. Buff all of the pieces with a sanding mop to remove any scratches. Sand the exposed edges of all of the pieces.



**9** **Assemble the pieces into sections.** Use CA glue. This technique keeps the pieces from shifting as you glue them in place. Start at the back legs and work your way to the head. Glue together three to six pieces and let the glue dry before you add more pieces. Do not glue the antlers together yet. Use a drum sander to sand the bottom of the pieces flat if desired.



**10** **Mark and cut the base.** Place the assembled reindeer on top of the base with a shim under the body so it lays flat. Draw the lines around the feet and cut along the lines. Sand the base sections so they are lower than the feet and taper the base toward the back. Buff the pieces with a sanding mop.



**11** **Glue the antlers together.** Apply wood glue to the surface and use a few dots of CA glue to hold the pieces together while the wood glue dries. Reinforce the joint with a pin nailer, small brads, or countersunk screws. Apply a varnish to the antlers before gluing them to the backing board. Apply the varnish and wipe off any excess with a clean cloth.



12

**Attach the piece to the backing board.** Trace the outline of the reindeer, snow, and antlers onto the backing board. Cut  $\frac{1}{16}$ " (2mm) inside the line. Cut the backing board so only the bottom of the antlers are supported. Paint the edges of the backing board black. Glue the intarsia to the backing board using wood glue. Apply a few drops of CA glue and add accelerator to the backing board to hold the pieces in place until the wood glue dries.



13

**Apply the finish.** Apply gel varnish with a brush and wipe off the excess with a clean cloth. Use compressed air to blow the gel out of the cracks and wipe off the excess. Use cotton swabs to clean out the small areas. Apply two coats of varnish and let the varnish dry overnight. Apply a clear gloss finish to the eye for a lifelike look. Use epoxy to attach the overlay strap. Bend wires around the ends of the bells and epoxy the wire in place. Add your hanger of choice.

## Materials & Tools

### Materials:

- $\frac{3}{4}$ " to 1" x 9" x 20" (20mm to 25mm x 230mm x 510mm) medium-tone wood, such as beech (body)
- $\frac{3}{4}$ " x 2" x 2" (20mm x 50mm x 50mm) black-stained wood or black wood, such as ebony (eyes, nose)
- $\frac{3}{4}$ " to 1" x 6" x 6" (20mm to 25mm x 155mm x 155mm) dark wood, such as black walnut (head, hooves)
- $\frac{1}{2}$ " to  $\frac{3}{4}$ " x 5" x 16" (15mm to 20mm x 130mm x 405mm) white wood, such as poplar (snow base)
- $\frac{3}{4}$ " to 1" x 4" x 7" (20mm to 25mm x 105mm x 180mm) light wood, such as sycamore (belly, neck, tail)
- $\frac{3}{4}$ " to 1" x 5" x 6" (20mm to 25mm x 130mm x 155mm) red wood, such as bloodwood (harness, halter)
- $\frac{3}{4}$ " to 1" x 3" x 4" (20mm to 25mm x 75mm x 105mm) yellow wood, such as yellowheart (harness)
- $\frac{3}{4}$ " to 1" x 8" x 12" (20mm to 25mm x 205mm x 305mm) light highly figured wood, such as birdseye maple (antlers)

- $\frac{1}{4}$ " x 17" x 19" (6mm x 435mm x 485mm) plywood or tempered hardboard (backing board)
- Roll of clear shelf contact paper
- Spray adhesive
- Wood glue, such as Titebond
- Gel natural varnish
- Wiping rags
- Hanger
- Cyanoacrylate (CA) glue and accelerator
- 7 each metal jingle bells and wire (optional, or use wood of choice)
- Two-part epoxy glue

### Tools:

- #2 or #3 and #5 reverse-tooth blades or blades of choice
- Sanders of choice: I use a pneumatic drum sander, an oscillating spindle sander, and a sanding drum in a rotary-power carver
- Pin nailer (optional)
- Drill with  $\frac{1}{8}$ " (3mm)-diameter bit

Pattern for the *INTARSIA REINDEER* is in the pattern pullout section.

### TIPS

#### STRONGER ANTLERS

Use a hardwood, such as maple or ash, for the antlers to keep them from cracking or splintering.



Nationally acclaimed intarsia artist Kathy Wise has authored two books and more than 30 articles. Kathy's award-winning intarsia mural work has set a new standard for the art of intarsia. Get her new Christmas pattern booklet *Intarsia & Fretwork Ornaments* (\$20). For a free catalog contact Kathy Wise Designs Inc., P.O. Box 60, Yale, Mich. 48097, fax 810-387-9044, [www.kathywise.com](http://www.kathywise.com), [kathywise@bignet.net](mailto:kathywise@bignet.net).

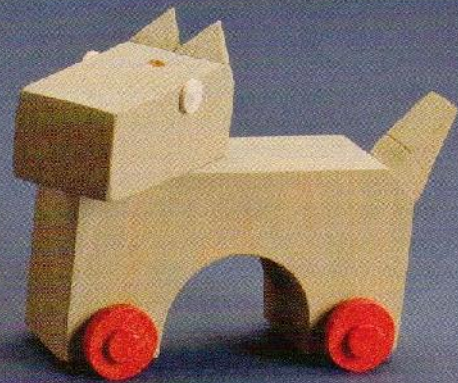


# Create a Fun Flexible Robot Toy

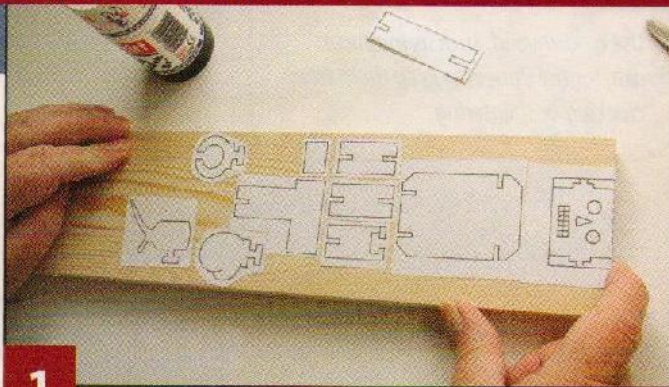
Clever use of elastic cord allows this robot to assume a variety of poses

By Fred and Julie Byrne

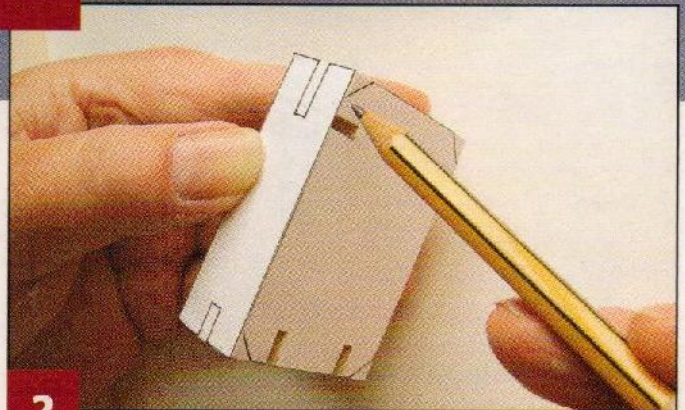
This quirky little robot is a fun gift for kids and adults alike. An elastic cord and simple grooves allow the pieces to be positioned in numerous ways. Interchangeable accessories make the toy even more fun. Just as easy to make is the flexible robot's trusty friend, Rusty the dog.



## ROBOT: CUTTING THE PIECES

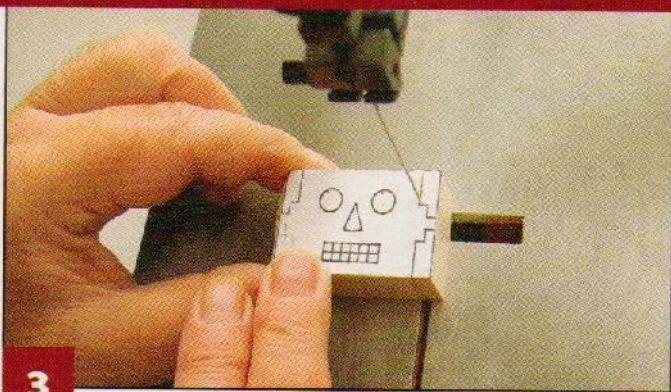


**1 Prepare the blanks.** Cut the pattern into separate pieces and attach them to the blanks using spray adhesive or a glue stick. For the compound patterns, such as the head, fold the pattern along the dotted line and align the fold with the edge of the blank as you press it in place.



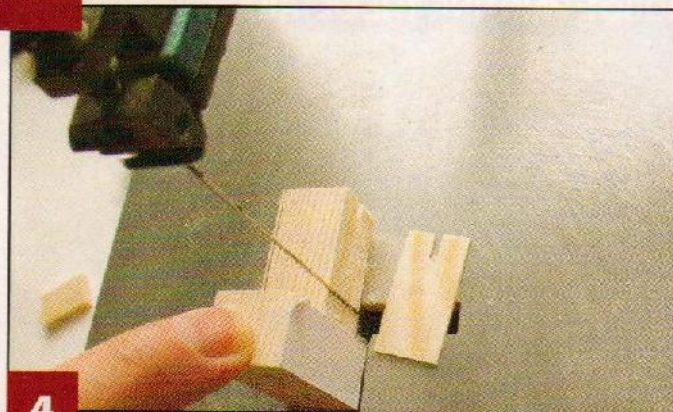
**2 Cut the grooves.** Set the robot head aside. Cut the grooves before you cut the individual pieces. Then cut the perimeter of the individual pieces, but leave the body blank rectangular. Attach the body side-view pattern onto the body blank. Cut the side grooves. Rotate the blank and cut off the sharp corners.

## ROBOT: CUTTING THE PIECES



3

**Cut the head.** Start with the front profile of the robot's head. Use masking tape to secure the waste pieces back onto the blank. Then cut the top profile of the robot's head.



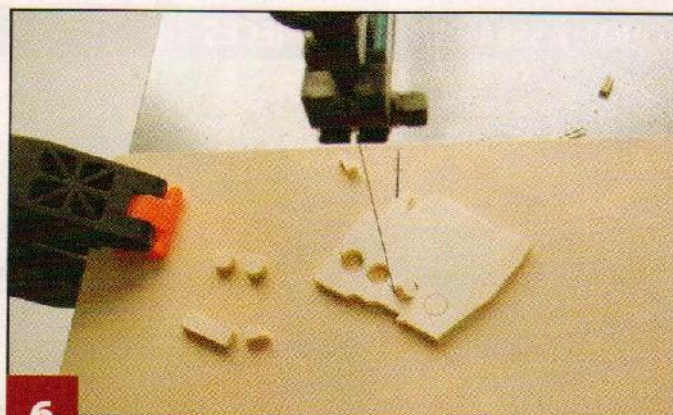
4

**Thin the pieces.** Cut or sand the boxing glove, arms, thighs, and neck pieces down to  $\frac{1}{16}$ " (17mm) thick. Cut a  $\frac{1}{32}$ " (1mm)-thick slice off of both sides of the lower legs, leaving the boots  $\frac{3}{4}$ " (20mm) thick. Cut or sand the wrench, oil can, and hand clamps down to  $\frac{3}{8}$ " (10mm) thick.



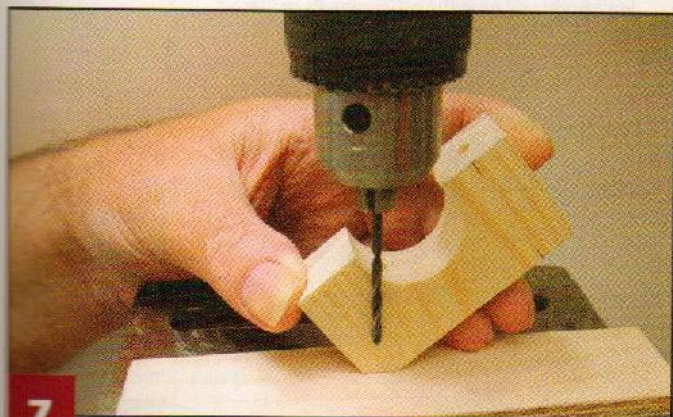
5

**Cut the dog's ears and wheels.** Cut the side profile of the ears from a piece of scrap wood to create a wedge shape. Then trace the front profile of the ears on the wedge and cut out the pyramid-shaped ears. Cut four  $\frac{1}{8}$ " (3mm)-thick slices from the  $\frac{1}{16}$ " (15mm)-diameter dowel for the wheels. Drill a  $\frac{1}{8}$ " (3mm) hole through the center of each wheel.



6

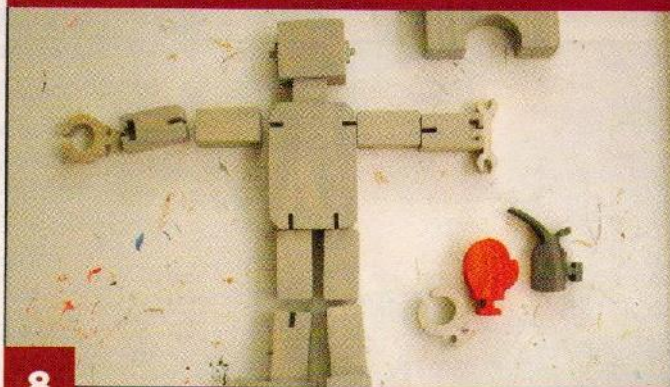
**Cut the axles and detail pieces.** Cut the  $\frac{1}{8}$ " (3mm)-diameter dowel into two  $1\frac{1}{8}$ " (30mm)-long axles. Cut four  $\frac{1}{8}$ " (3mm)-thick slices from the  $\frac{3}{8}$ " (10mm)-diameter dowel for the wheel covers. Attach the facial feature patterns to  $\frac{1}{32}$ " (1mm)-thick wood and cut the pieces with a #1 blade. Alternatively, the facial features can be painted directly on the head pieces.



7

**Drill the holes.** Refer to the patterns and mark the center of each hole with an awl to keep the bit from wandering. Rest the dog's body on the tail area when drilling the hole for the cord to attach the tail. Hold the small pieces with a clamp while drilling. Drill the  $\frac{5}{32}$ " (4mm)-diameter by  $\frac{5}{32}$ " (4mm)-deep holes to hide the knots on the cords. Clean the holes with a small round file.

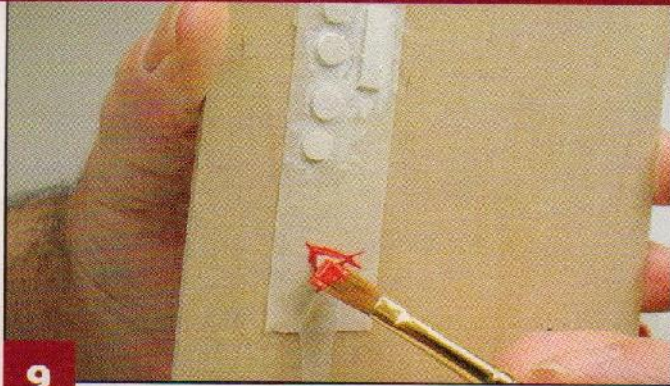
## ROBOT: PAINTING THE PIECES



8

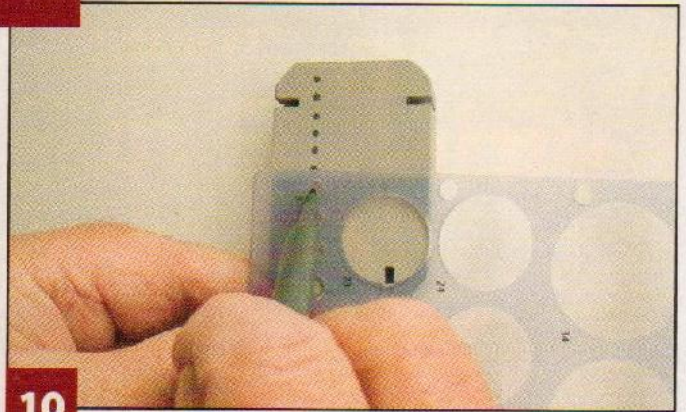
**Paint the large pieces.** Sand all of the pieces with 180- to 280-grit sandpaper and remove the dust with a tack cloth. Glue on the dog's ears with cyanoacrylate (CA) glue. The main robot parts and the dog are light gray. Paint the boxing glove red and the oil can black. Paint the other handpieces silver.

## ROBOT: PAINTING THE DETAILS



9

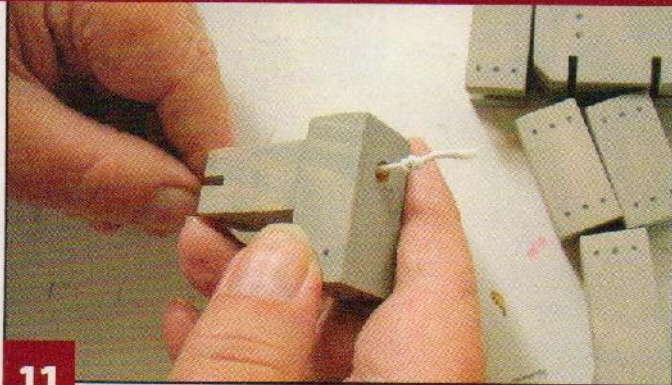
**Paint the small pieces.** Attach the small pieces to the sticky side of a piece of masking tape. Bend the ends of the tape over and stick it to a board. Paint the nose red. Paint the eyes and mouth white. Paint the pupils gray and use a fine permanent marker for the teeth. Use a hobby knife to separate the pieces from the masking tape.



10

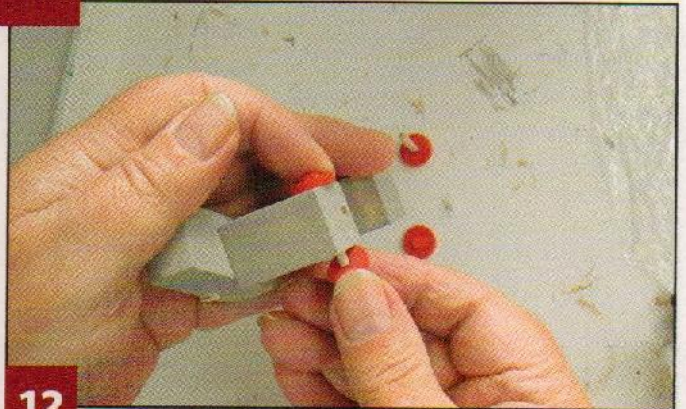
**Add the details.** Glue the wheel covers to the wheels with CA glue and paint them red. Sand all of the pieces lightly with 320-grit sandpaper and seal them with acrylic matte varnish. Use a ruler and pencil to space the imitation rivets evenly on the body parts. Draw in the small circles with a dark gray marker and a circle template. Glue the facial features in place with CA glue.

## ROBOT: ASSEMBLING THE PIECES



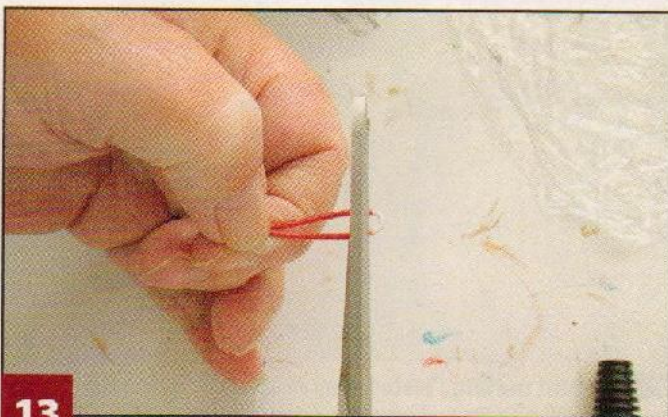
11

**Assemble the robot.** Tie a knot in one end of the elastic cord and thread it up through the boot, upper leg, one side of the body, and through the two arm pieces. Stretch the cord as tight as you can and knot the other end. A second pair of hands is helpful for this step. Assemble the other side of the robot using the same technique. Run another cord up through the center of the body and the neck, and knot it on the top of the head.



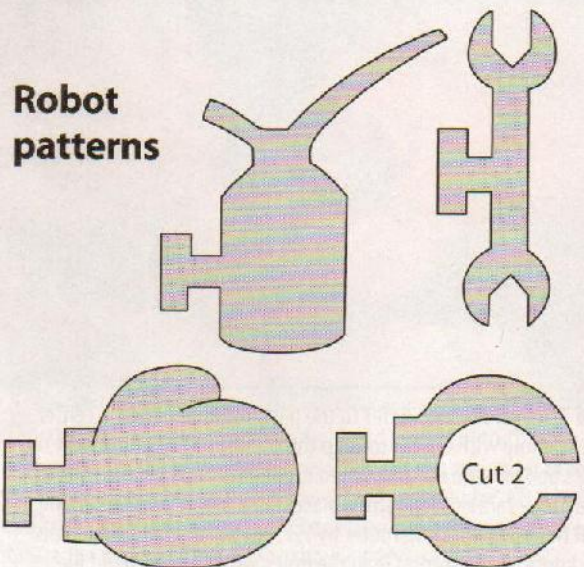
12

**Assemble the dog.** Tie a knot in the end of a small piece of elastic cord. Thread it through the tail and make sure the knot is recessed in the hole. Glue the tip of the tail over the hole with a dab of CA glue. Use the same process you did for the robot to attach the tail and head to the dog's body. Glue one wheel onto each axle and let them dry. Feed the axles through the holes in the dog's body and glue the other wheels in place.

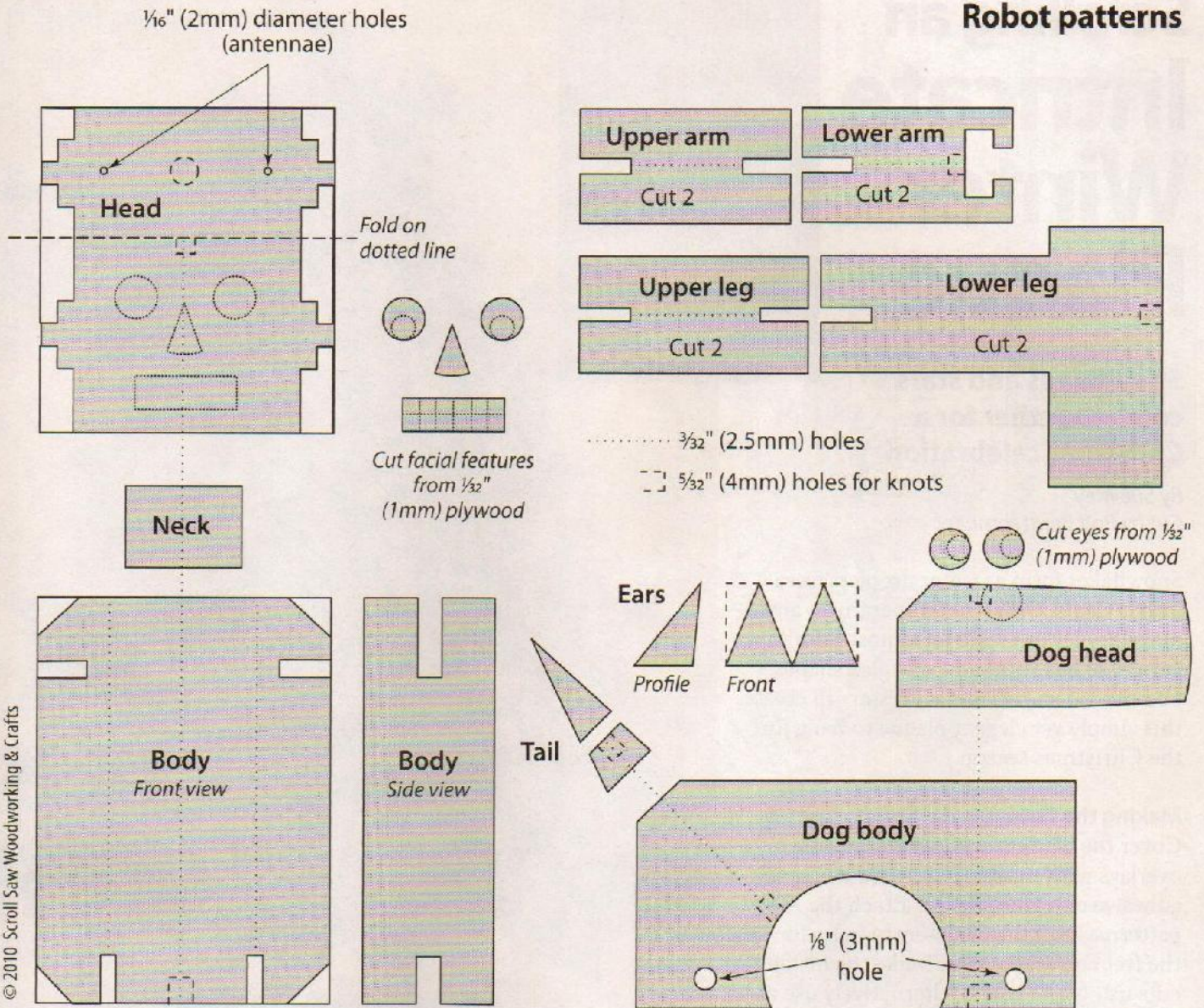


13

**Add the antennae.** Knot both ends of a small length of elastic cord. Color the cord with a red marker. Fold and cut the cord in half. Apply a dab of CA glue to the cut ends and push the ends into the holes in the robot's head.



Robot patterns



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### Materials:

- 3/4" x 4" x 12" (20mm x 100mm x 305mm) pine or wood of choice
- 1/32" x 2" x 2" (1mm x 50mm x 50mm) white craft wood or plywood (facial details)
- 2 each 1/8"-diameter by 1 1/8"-long (3mm by 30mm) dowels (axles)
- 4 each 3/8"-diameter by 1/8"-long (10mm by 3mm) dowels (wheel covers)
- 4 each 3/16"-diameter by 1/8"-long (15mm by 3mm) dowels (wheels)
- 1/16"-diameter by 36"-long (2mm by 915mm) elastic cord
- Glue stick or spray adhesive
- Super glue
- Sandpaper: 180 to 320 grits
- Tack cloth
- Paint: light gray, silver, red, black, white
- Fine-tip permanent markers: dark gray, black, red
- Masking tape

### Tools:

- #1 and #5 or #7 blades or blades of choice
- Set square

### Materials & Tools

- Carpenter's square
- Drill press
- Drill bits: 1/16" (2mm)-, 1/8" (3mm)-, 3/32" (4mm)-diameters
- Scissors
- Awl
- Pencil
- Ruler
- Circle template
- Needle file
- Clamps



Fred and Julie Byrne live on the Fens in Cambridgeshire, England. They are the authors of *Success with Scrollsaws*, which is available at [www.FoxChapelPublishing.com](http://www.FoxChapelPublishing.com). For more of their work, visit their website at [www.picturesinwood.co.uk](http://www.picturesinwood.co.uk).

# Scrolling an Intricate Winter Plaque



**Snowflakes and stars come together for a Christmas celebration**

*By Sue Mey  
Cut by Rolf Beuttenmuller*

Snowflakes form as water droplets freeze into crystals. Different temperatures and humidity levels create an almost infinite variety of beautiful and complex shapes. I combined snowflakes with stars to create this simple yet elegant plaque to hang for the Christmas season.

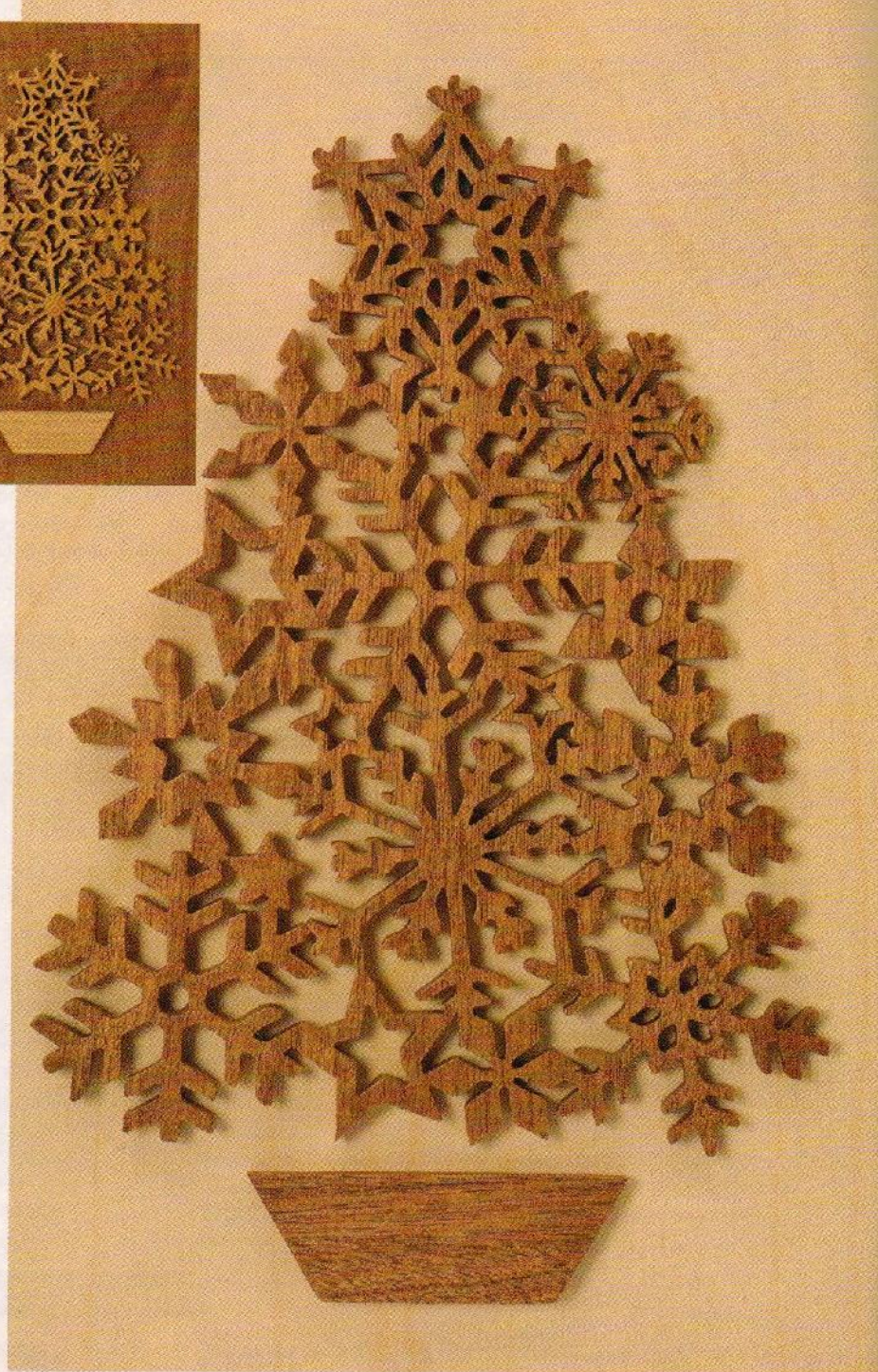
## Making the Cuts

Cover the blanks for the tree and base overlays with masking tape and use spray adhesive or a glue stick to attach the patterns. Drill the blade-entry holes for the fret cuts in the tree. Make the inside cuts using a #1 blade. Alternatively use a #3 blade if you are stack cutting two layers of wood. Cut the perimeter lines of the tree and base.

Choose wood of a contrasting color for the backing board. Use a disc sander to sand the straight edges of the backing board. The corners of the backing board may be rounded if preferred.

## Assembly and Finishing

Remove the tape and patterns. Sand all of the blanks by hand and remove the sanding dust. Position the tree on the backing board with the base approximately  $\frac{3}{4}$ " (20mm) below the tree. Secure the overlays to the backing board with wood glue and clamp the pieces until the glue is dry. Apply clear spray varnish to the project. Attach a sawtooth hanger on the back of the project.



### Materials:

- $\frac{1}{8}$ " to  $\frac{1}{4}$ " x 8" x 10" (3mm to 6mm x 205mm x 255mm) hardwood or plywood of choice (tree)
- $\frac{1}{8}$ " to  $\frac{1}{4}$ " x  $1\frac{1}{2}$ " x 4" (3mm to 6mm x 38mm x 105mm) hardwood or plywood of choice (base)
- Masking tape
- $\frac{3}{4}$ " to 1" x 9 x  $13\frac{1}{2}$ " (20mm to 25mm x 230mm x 345mm) hardwood or plywood in a contrasting color (backing board)
- Temporary-bond spray adhesive or glue stick
- Wood glue
- Sandpaper, assorted grits

### Materials & Tools

- Clear spray varnish
- Sawtooth hanger

### Tools:

- #1 or #3 and #7 or #9 reverse blades or blades of choice
- Drill press with  $\frac{1}{16}$ " (2mm)-diameter bit
- Disc sander (optional)

## Winter plaque pattern



*Sue Mey lives in Pretoria, South Africa. To see more of her work including a variety of patterns and pattern-making tutorials available for purchase, visit [www.scrollsawartist.com](http://www.scrollsawartist.com).*

*Her first pattern book, Lighted Scroll Saw Projects, is available from [www.schifferbooks.com](http://www.schifferbooks.com) and other outlets.*





# Making Festive Earrings

Embellish wooden designs with beads for fun and fashionable gifts

By David Griffin



My wife, Jenny, is always looking for unique earrings and loves to collect beads. Earrings are a great way to combine my love of woodworking with her love of beads. These designs focus on Christmas and Hanukkah designs. However, just about any silhouette can be reduced to earring size and used for a pattern.

Adjust the size of the patterns for a variety of uses. Enlarge them to create ornaments, pendants, or pins.

Because the earrings are so small, you can use exotic wood without worrying about the expense. I use mahogany because it cuts well. Wood with

large differences in hardness, such as oak, may cause problems. The softer spring wood between the harder summer wood can catch a drill bit, causing it to go off the lines or into an adjacent blank. Lightweight woods, such as yellow poplar or sassafras, work well. If you plan on painting the earrings, consider using woods that accept paint well, such as yellow poplar.

Although I haven't tried them myself, many non-wood materials should also work. As long as you can drill a small hole for the wires and use compatible glues, alternate materials, such as colored acrylic,



should work fine. Thin materials, such as metals, can't be drilled through the edge. Instead, add a loop to the top or drill a hole and use jump rings to attach the findings and beads.

### Embellishments

Beads add sparkle and color to the earrings. Beads are made from a variety of materials with prices that range from less than a penny to several hundred dollars each. The earrings don't require a lot of beads, so don't feel like you have to scrimp on beads due to cost.

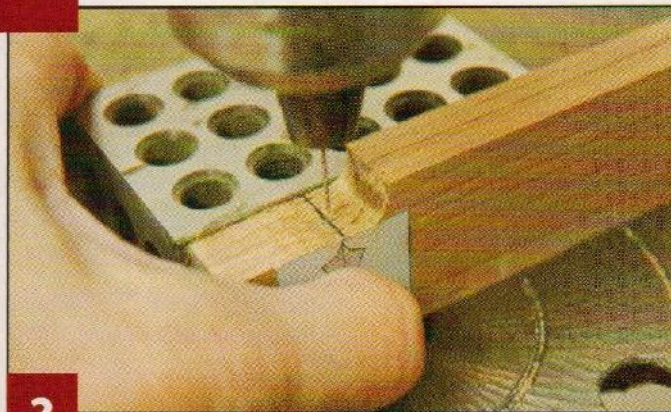
Findings are the wires, clasps, and other items that turn the beads and wood into jewelry. For these designs, we use eye pins, head pins, and ear wires. Eye pins have a loop on one end. Head pins are similar to eye pins, but they have a flattened end instead of a loop and are designed to hold beads unobtrusively. You could also use kidney wires instead of ear wires. Kidney wires have a loop that closes the earrings in the back while ear wires hang free.

## EARRINGS: CUTTING THE EARRINGS



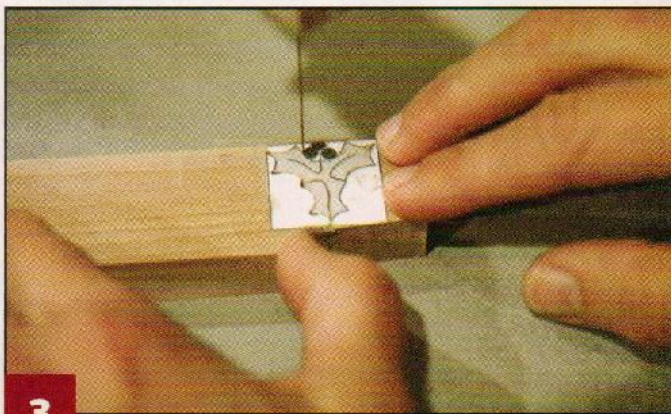
1

**Prepare the blanks.** Create a stack of an even number of blanks. I use four to six. Use your method of choice to secure the stack. Attach a pattern to the blank. Use a square to mark the edge of the blank where any wire holes will be drilled. All hole locations are notated on the patterns.



2

**Drill the wire holes.** Make a mark in the middle of each blank using a sharp pointed tool, such as the center of a brad-point bit. Drill the holes using a drill press and a machinist's 1-2-3 square. Use a #70 drill bit for 21 gauge eye pins and a #77 drill bit for 24 gauge pins. Drill straight down the center of each blank.



3

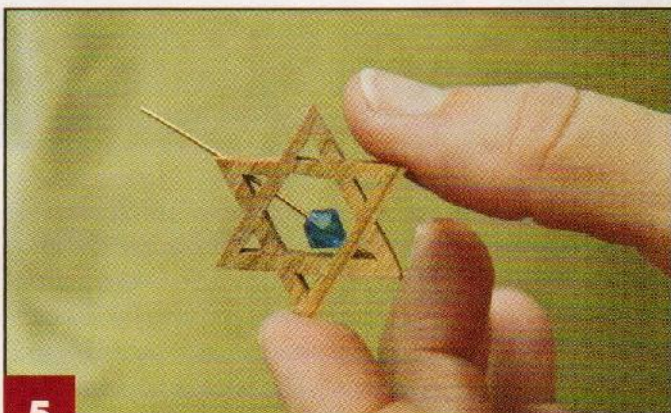
**Cut the earrings.** If you plan to paint or woodburn the details, ignore the veining cuts. Use standard compound-cutting techniques for the compound earrings. Apply your finish of choice. I use a mixture of boiled linseed oil and paint thinner, but you can use lacquer or polyurethane.

## EARRINGS: ASSEMBLING THE EARRINGS



4

**Assembling with eye pins.** Test to make sure the eye pin fits into the hole in the earring. Place your beads on the pin, place a small drop of cyanoacrylate (CA) glue in the hole, and press the eye pin into the hole.



5

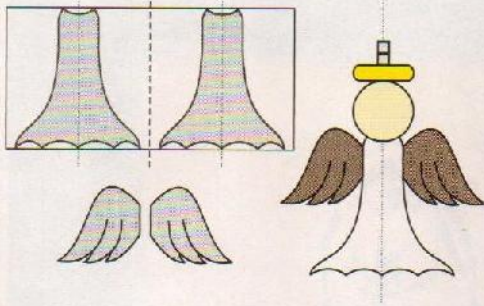
**Assembling with head pins.** Insert a head pin from the bottom and add your beads to the center inside the fretwork or on the top of the design. Cut the top of the pin about  $\frac{3}{8}$ " (10mm) above the top bead and roll the end of the pin over the tip of round-nose pliers, creating a loop.



6

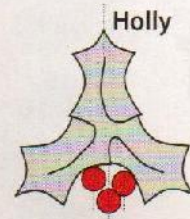
**Connect the ear wire.** Twist the loop on the eye pin (or the loop you made on the end of the head pin) slightly to the side and slip the ear wire onto the loop. Then use pliers to close the loop.

### Angel Compound cut



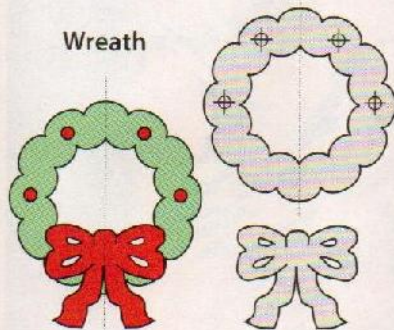
**Angel:** Drill the wire hole in the center of the top before or after cutting. Fold the pattern on the dotted line. Cut one profile and tape the waste wood in place. Rotate the block and cut the second profile. Cut the wings from  $\frac{1}{8}$ " (3mm)-thick wood and glue them to the sides of the angel. Use an 8mm pearl bead for the head and an 8mm light topaz disk for the halo.

## Festive earring patterns

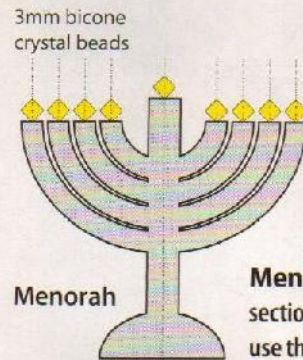


**Holly Leaf:** Use small sections of head pins to attach the holly berry beads into the bottom of the leaf.

### Wreath



**Wreath:** Cut the wreath from  $\frac{1}{8}$ " (3mm)-thick wood. Cut the bow from  $\frac{1}{32}$ " (1mm)-thick Baltic or Finnish birch plywood. The seed beads can be glued directly on the wreath or inserted into tiny holes drilled in the wreath. Use an eye pin to hold the tiny beads as you press them in place with pliers. Use a head pin to attach beads in the center of the wreath if desired. Glue the bow to the bottom face of the wreath.



**Menorah:** Cut small sections of head pins and use them to attach the flames to the ends of the candles. Use an eye pin from the top or a head pin from the bottom for the center candle so you can attach the finding.

## Materials & Tools

### Materials:

#### Flat earrings

- $\frac{1}{8}$ " x 2" x 2" (3mm x 50mm x 50mm) wood of choice (per set)
- $\frac{1}{32}$ " x 2" x 2" (1mm x 50mm x 50mm) Baltic or Finnish Birch plywood (wreath)
- 21- or 24-gauge eye pins and headpins
- Assorted beads including size 11 seed beads
- Cyanoacrylate (CA) glue (to attach findings and beads)

#### Angel

- 2 each  $\frac{3}{4}$ " x  $\frac{3}{4}$ " x  $1\frac{1}{2}$ " (20mm x 20mm x 40mm) maple, sassafras, or light wood of choice (body)
- 4 each  $\frac{1}{8}$ " x 1" x 1" (3mm x 25mm x 25mm) contrasting wood of choice (wings)

- 8mm pearl or spherical bead of choice (head)
- 8mm Czech Rondelle, topaz or color of choice (halo)
- 2 each size 11 seed beads (spacers)

#### Tools:

- #3 or #5 Pegas Modified Geometry blades or blades of choice
- #70, #77, #46 drill bits
- Drill press
- Sanding block (fine grit)
- Flat-nose jeweler's pliers (to hold findings, beads)
- Round-nose pliers (to form loops in headpins)
- Wire cutters (to cut findings to length)

### Star of David



### Star



**Stars:** Thread a head pin from the bottom of the star. Bend the pin slightly out through the center of the star to thread the bead. Push the pin back in alignment with the hole and continue threading the pin through the top of the star. Form a loop on the end of the head pin with pliers.

Additional patterns for **FESTIVE EARRINGS** are in the pattern pullout section.



David Griffin is a recent U.S. Air Force retiree who now works full-time at his business, Tuliptree Crafts. He lives in Bogue Chitto, Miss., and Pendleton, Ind. with his wife, Jenny Lynn, and runs the website [www.scrollsawblog.com](http://www.scrollsawblog.com).



Download bonus earring designs from our website.

[www.scrollsawer.com](http://www.scrollsawer.com)

# Gray Wolf Portrait



## **Majestic portrait captures the spirit of the wild**

*By Gary Browning  
Cut by Linda Helgerson*

The gray wolf is a majestic symbol of nature's free spirit and has been around since the Ice Age. The wolf is cast as a bloodthirsty villain in folklore and children's stories. Wolves are most known for their golden eyes, many sharp teeth, and eerie howl.

It may surprise you that the wolf typically avoids humans and may even leave its kill when a human approaches. Wolf attacks on humans are uncommon and there are no documented accounts of a human being killed by a healthy wild wolf in North America. The wolf is a sociable creature and exists as part of a pack of two to thirty others.

## Gray wolf pattern



### Materials:

- 1/8" to 1/4" x 8" x 10" (3mm to 6mm x 205mm x 255mm) Baltic birch plywood or wood of choice (portrait)
- 1/8" x 8" x 10" (3mm x 205mm x 255mm) Baltic birch plywood or backing material of choice

### Materials & Tools

- Fine-grit sandpaper (to remove fuzzies)
- Frame of choice

### Tools:

- #3 spiral reverse-tooth blades or blades of choice
- Drill and assorted bits



Gary Browning is a popular designer and author of Scroll Saw Portraits, available from Fox Chapel Publishing, [www.FoxChapelPublishing.com](http://www.FoxChapelPublishing.com). For more of Gary's work, visit his website at [www.angelfire.com/ind2/creativewood/browning.htm](http://www.angelfire.com/ind2/creativewood/browning.htm).

# Portrait of Mary and Baby Jesus

**Classic Christmas scene makes a great holiday gift**

By John A. Nelson  
Cut by Howard Lampa

One of the most iconic symbols of Christmas is Mary holding the infant Jesus. This portrait makes a great gift and is a beautiful symbol of faith suitable for year-round display.

The pattern is unique in that you choose which sections are the waste. If you remove the white pattern sections as the waste, cut the project from dark wood or stain the finished cutting and mount it on a light-colored backing board. If you remove the gray sections as the waste, cut the project from light-colored wood and mount it on a dark backing board.

Either way you cut the portrait, you will have floaters or sections of the fretwork that are not connected by bridges of wood. Try to cut the waste areas out in one piece. Place the cut pieces on a copy of the pattern to keep them organized. Dry assemble the project and the waste areas on the backing board.

Carefully remove the fretwork sections, apply drops of cyanoacrylate (CA) glue to the back, and replace them on the backing board. Be careful not to get glue on the waste sections. When all of the pieces are in place and the glue is dry, remove the waste sections. Seal the wood with a few light coats of clear finish and insert the project in your frame of choice.

## Materials:

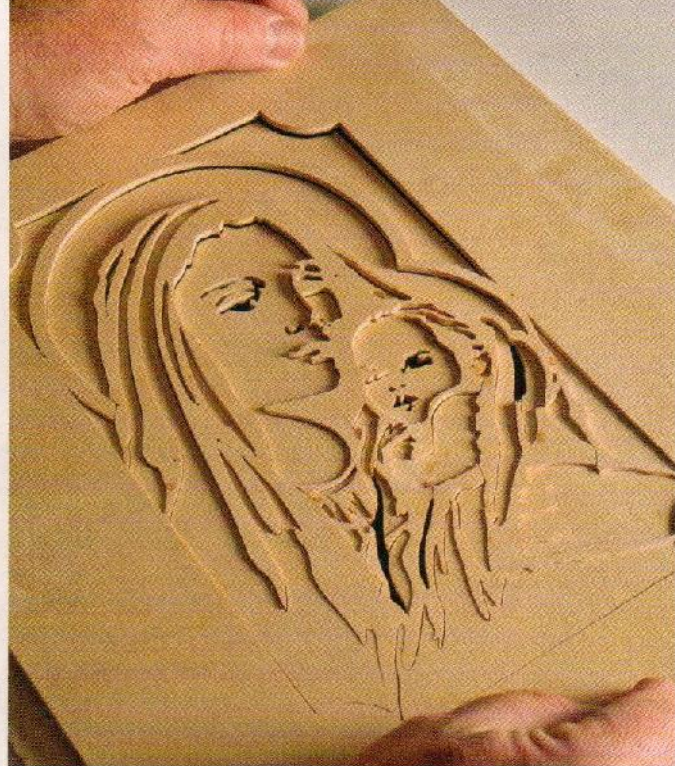
- 1/8" to 1/4" x 8" x 10" (3mm to 6mm x 205mm x 255mm) Baltic birch plywood or wood of choice (fretwork)
- 1/8" x 8" x 10" (3mm x 205mm x 255mm) Baltic birch plywood (backing board)
- Cyanoacrylate (CA) glue
- Frame of choice

## Materials & Tools

- Assorted grits of sandpaper
- Stain or black paint
- Clear finish of choice

## Tools:

- #3 reverse-tooth blades, #3 spiral reverse blades, or blades of choice
- Drill with assorted small bits



Use the waste wood from the blank to position all of the floating elements during glue-up.



If you keep the gray pattern sections as the fretwork, the baby's facial features and Mary's eye will be floaters.

Pattern for **MARY AND BABY JESUS** is in the pattern pullout section.



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



# Spun Glass Ornaments



## Capture the look of delicate glass in durable wooden ornaments

By Alison Tanner  
Cut by Dale Helgerson

I love the swirling effect of colorful handblown glass. Delicate spun-glass ornaments add an elegant touch to any Christmas tree, but their fragile nature makes them impractical in homes with small children or curious pets. I incorporated the trademark twirling lines of handblown glass in these designs to add a delicate flair to your tree without the risk of broken glass.

Stack cut the designs to quickly build your inventory. Use a clear finish or dress up the ornaments with colorful stains, dyes, or washes of acrylic paint. You can stack the ornaments with colored acrylic when you cut around the perimeter and glue the two pieces together to produce vibrant suncatchers. Experiment with inlay techniques to add a contrasting color of wood to the frets for a completely different look.

### Materials & Tools

#### Materials:

- $\frac{1}{8}$ "- to  $\frac{1}{4}$ "- (3mm to 6mm) thick Baltic birch plywood, hardwood, colored acrylic, or wood of choice (sized to accommodate pattern of choice)
- Assorted grits of sandpaper
- Stain, dye, paint, or clear finish of choice

#### Tools:

- #3 reverse-tooth blades or blades of choice
- Drill with assorted small bits

**Spun glass  
ornament  
patterns**



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Additional patterns for the  
**SPUN GLASS ORNAMENTS** are in  
the pattern pullout section.



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

# Making a Toy Helicopter

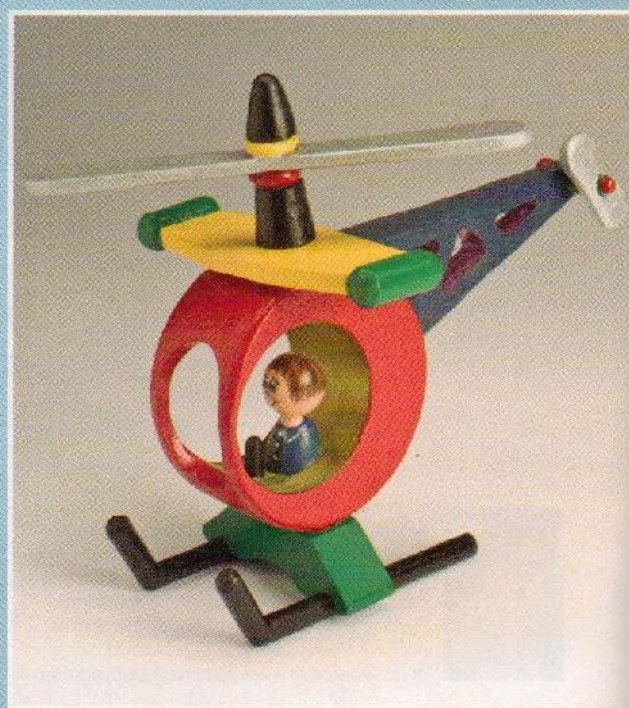
**Simple wooden toy  
makes a fun gift**

*By Richard Gard*



This wooden helicopter makes a great Christmas gift. If you are painting the finished project, choose an inexpensive soft wood, such as pine or basswood. For a natural wood finish, choose hardwoods.

Because I make a lot of these helicopters and use them to support worthy charities, I use a few tools to speed production. However, the majority of the work can be completed with just a drill press and a scroll saw.



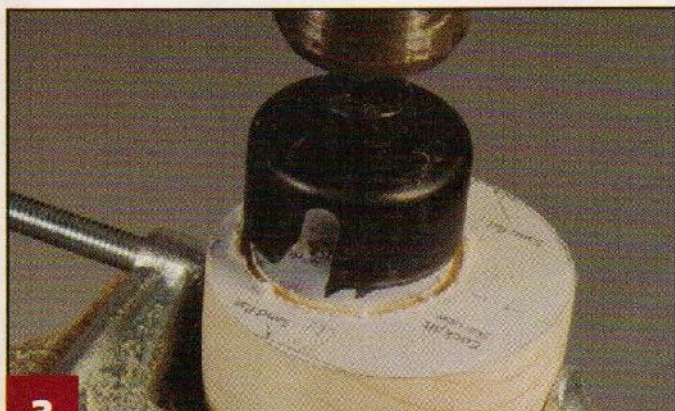
## HELICOPTER: PREPARING THE MAIN PIECES



**1** **Drill the required holes.** Attach the patterns to the blanks. Using the patterns as a guide, drill all of the required holes in the cockpit, wing, rotors, landing gear, and tail section. Drill the holes in the top, bottom, and front of the cockpit while the blank is still square.



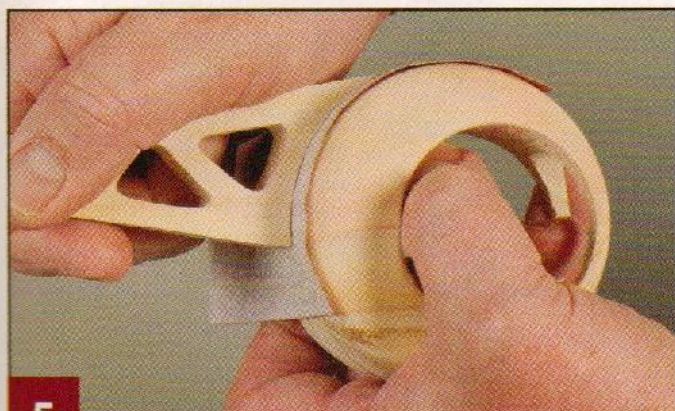
**2** **Cut the outside of the cockpit.** Cut around the perimeter of the cockpit. Then sand it smooth. I thread a  $\frac{1}{4}$ "-diameter by  $2\frac{1}{2}$ "-long (6mm by 65mm) carriage bolt through the center hole and lock it in place with a nut and washer. Chuck the bolt in the drill press and sand the cockpit perfectly round.



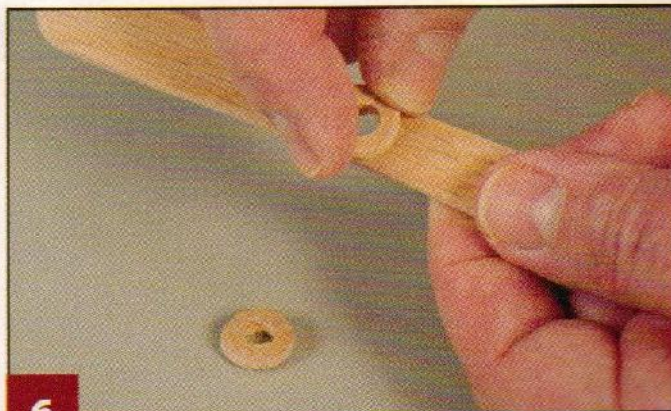
**3** **Cut the inside of the cockpit.** Use a scroll saw or a 2" (50mm)-diameter hole saw. If you use a hole saw, cut in from both sides to prevent tear-out. Sand flat spots in the top and bottom of the cockpit for the wing and the landing gear. Then carve or sand the two holes for the windshield into an oval.



**4** **Cut the remaining parts.** Cut the landing gear, rotors, and wing. Drill blade-entry holes and cut the side profile of the tail section first. Then tape the waste section back in place and cut the top view of the tail section. Alternatively, sand the taper on the top-view of the tail section with a belt sander. Cut all of the dowels to length as listed in the materials list.

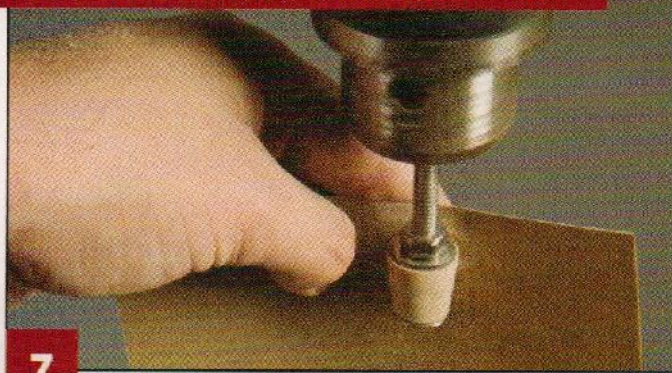


**5** **Adjust the fit of the tail section.** Attach 180-grit self-adhesive sandpaper to the side of the cockpit and rotate the curved edge of the tail section against the sandpaper until the tail section fits tightly against the cockpit.



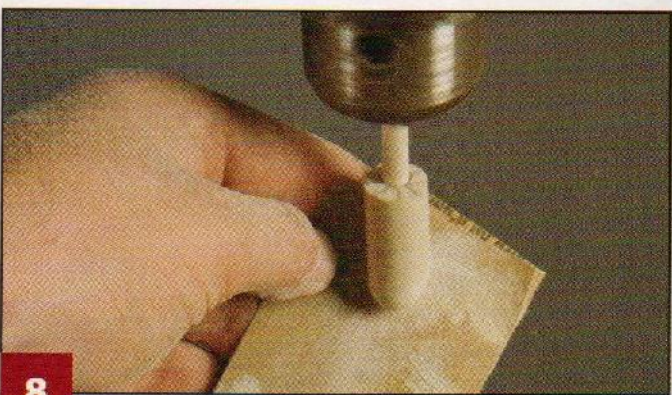
**6** **Create the top rotor mounts.** Drill a  $\frac{9}{32}$ " (7mm)-diameter hole through the center of both rotor mount pieces. Round the edges of the dowel pieces to create a donut shape and glue them to the top and bottom of the top rotor, aligning the holes. Round the edges of the top rotor.

## HELICOPTER: PREPARING THE DOWELS



7

**Make the top rotor pivot and housing.** Drill a  $\frac{1}{4}$ "-diameter by  $\frac{3}{8}$ "-deep (6mm by 10mm) hole in the center of the rotor pivot. Glue the rotor axle into the rotor pivot. Chuck the rotor axle in the drill press and sand the pivot into a cone shape. Drill a  $\frac{1}{4}$ " (6mm)-diameter hole through the center of the rotor housing and insert a  $\frac{1}{4}$ " (6mm)-diameter carriage bolt into the hole. Chuck the bolt in the drill press and sand the housing into a tapered cylinder.



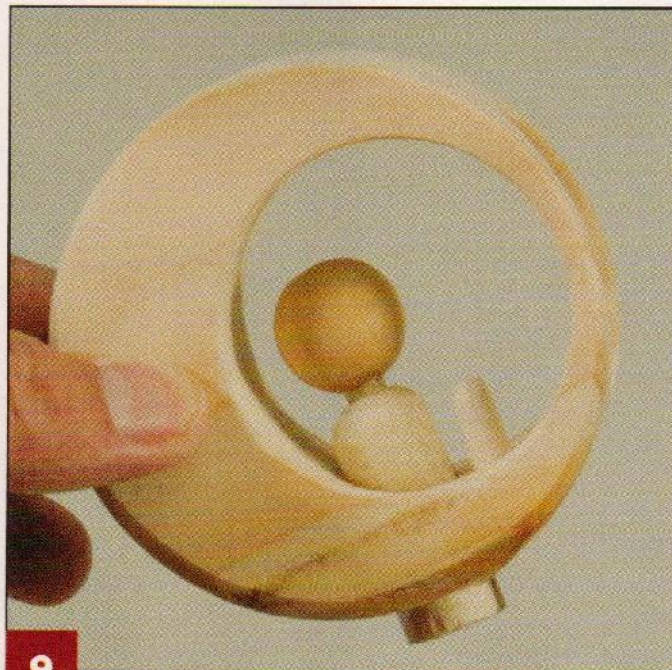
8

**Create the pilot.** Drill a  $\frac{1}{4}$ "-diameter by  $\frac{1}{2}$ "-deep (6mm by 15mm) hole in both ends of the pilot. Glue the neck into one of the holes. When dry, chuck the neck into the drill press and round the end of the pilot. Remove the piece from the drill press and cut the neck off flush with the pilot. Glue the neck into the rounded end of the pilot and trim it so  $\frac{3}{16}$ " (8mm) protrudes.

## TIPS

### DRILLING HOLES IN DOWELS

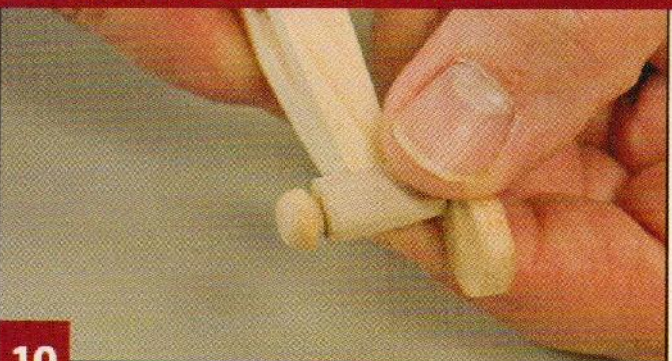
To drill holes in dowels, drill a hole the same diameter as the dowel in a piece of scrap wood. Clamp the scrap wood to the drill press table and insert the dowel. Drill the hole in the dowel slowly so the bit doesn't wander. For longer pieces, drill from both ends to avoid tear-out. Use the same technique to drill holes in balls, such as the pilot's head.



9

**Finish the cockpit.** Glue the pilot into the cockpit with  $\frac{1}{4}$ " (6mm) sticking out the bottom. Drill a  $\frac{1}{4}$ "-diameter by  $\frac{1}{4}$ "-deep (6mm by 6mm) hole in the head. Glue the head onto the neck. Chuck the control stick in the drill press and taper  $\frac{3}{4}$ " (20mm) of the end. Thread the tapered end of the control stick through the bottom of cockpit and glue it in place. Sand the bottom flush with the outside of the cockpit.

## HELICOPTER: ASSEMBLING THE TOY



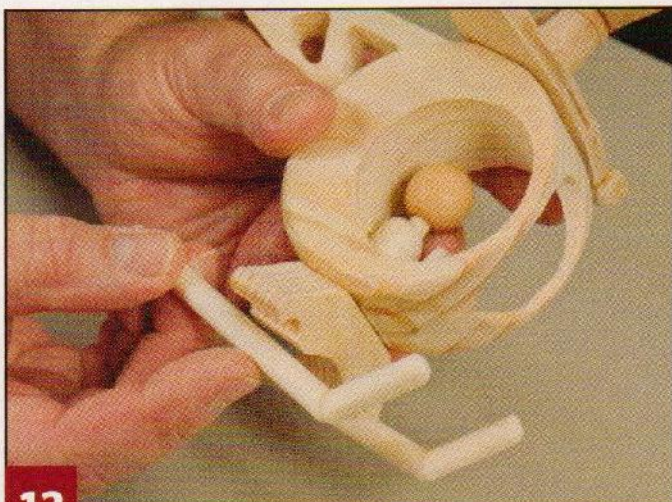
10

**Attach the tail rotor.** Drill a  $\frac{1}{4}$ " (6mm)-diameter hole lengthwise through the center of the tail rotor dowel. Glue the dowel onto the tail section with  $\frac{1}{16}$ " (2mm) sticking out on either side of the tail. Thread a  $\frac{7}{32}$ " (5.5mm)-diameter axle peg through the tail rotor dowel and glue the tail rotor onto the axle peg.



11

**Add the top wing.** Flatten one side of each of the wing trim pieces and glue the trim pieces to the edges of the wing. Glue the wing to the cockpit, aligning the holes. Thread the dowel glued in the rotor pivot through the top rotor and then through the rotor housing. Add a dot of glue to the hole in the top of the wing and insert the dowel through the wing into the hole in the top of the cockpit. Be careful not to get glue on the top rotor.



**12** **Attach the landing gear.** Glue the landing gear onto the bottom of the pilot. Round the ends of the two skids. Cut 1" (25mm) off of the end of each dowel at a 60° angle. Rotate the 1" (25mm) dowels so the front of the skids stick up at a 60° angle and glue the cut-off ends back onto the skids. Allow the glue to dry and round the bottom joint with sandpaper. Glue the skids onto the bottom of the landing gear.



**13** **Finish the helicopter.** Leave the piece unfinished or apply a coat of beeswax for a natural finish. Alternatively, paint the toy with nontoxic acrylic paints in your colors of choice.

### Materials & Tools

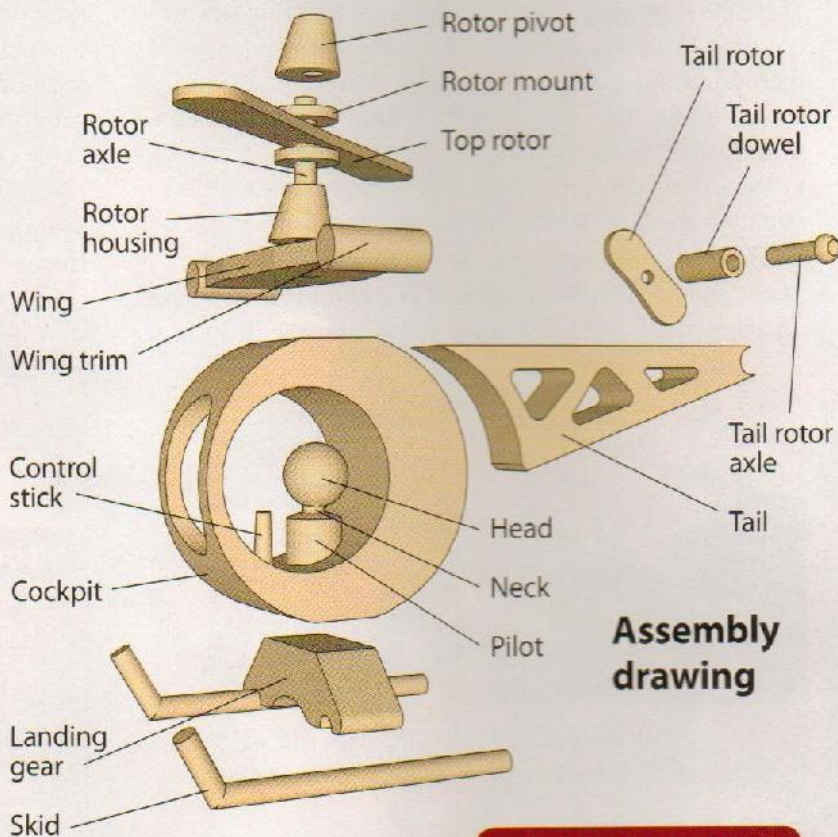
#### Materials:

- 1½" x 3¾" x 3¾" (40mm x 85mm x 85mm) pine, oak, or wood of choice (cockpit)
- ¾" x 2" x 9" (20mm x 50mm x 230mm) pine, oak, or wood of choice (tail, landing gear)
- ¼" x 1½" x 3½" (6mm x 50mm x 90mm) pine, oak, or wood of choice (wing)
- ⅞" x ¾" x 8" (6mm x 20mm x 205mm) pine, oak, or wood of choice (rotors)
- 2 each ¾"-diameter by ⅛"-long (10mm by 3mm) dowels (rotor mounts)
- ⅝"-diameter by ⅝"-long (16mm by 16mm) dowel (rotor pivot)
- ¼"-diameter by 2¼"-long (6mm by 60mm) dowel (rotor axle)
- ¾"-diameter by ¾"-long (20mm by 20mm) dowel (rotor housing)
- ⅝"-diameter by 1½"-long (16mm by 40mm) dowel (Pilot)

- ¼"-diameter by 1¼"-long (6mm by 35mm) dowel (neck)
- ¾" (20mm)-diameter ball (head)
- ¼"-diameter by 1¼"-long dowel (control stick)
- ⅜"-diameter by ⅝"-long dowel (tail rotor dowel)
- 2 each ½"-diameter by 1⅞"-long (13mm x 30mm) dowels (wing trim)
- 2 each ⅜"-diameter by 4⅝"-long (8mm x 120mm) dowels (skids)
- ⅜"-diameter by ⅝"-long axle peg (tail rotor axle)
- Self-adhesive 180-grit sandpaper

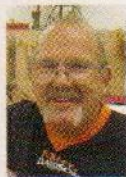
#### Tools:

- Drill press
- Assorted drill bits
- #5 reverse tooth blades or blades of choice
- 2" (50mm)-diameter hole saw
- Drum sander
- Belt sander



### Assembly drawing

Patterns for the **TOY HELICOPTER** are in the pattern pullout section.



Richard Gard contributed this article prior to his untimely death on July 18, 2010. Richard specialized in building custom music boxes and wooden toys, many of which were donated as fund-raisers for American Cancer Society, Heart Fund, Shriners Children's Hospital, and local benevolent needs. For more of Richard's work visit [www.thetoymaker.net](http://www.thetoymaker.net).

# Easy Holiday Intarsia Ornaments



**Highlight these traditional Christmas designs with the beauty of natural wood**

*By Judy Gale Roberts*

Full-size intarsia projects can be intimidating for budding intarsia artists. These ornaments are a great introduction to the art. They allow you to practice your cutting and shaping skills without investing a lot of time or expensive wood. The ornaments make great gifts or craft show items. Experienced intarsia artists can complete the whole set in a single weekend.

Intarsia requires accurate cutting. Your skill set, blade selection, and the species and thickness of wood all affect the optimum speed. Experiment with each

type of wood to determine what saw speed produces the most accurate cuts. Keep the blade in the center of the pattern line for the best results.

To start, make at least four copies of the pattern. Keep one master copy for reference. Cut the pieces of the pattern where the color or grain direction changes. Leave  $\frac{1}{4}$ " of extra paper around the pattern to make sure the patterns stick to the wood.

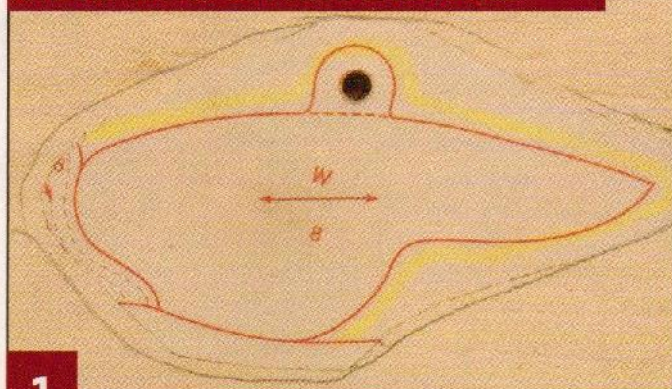


The Flex Drum sander is soft on the end, which allows you to carve rough detail using the sander.

## Drum sanders

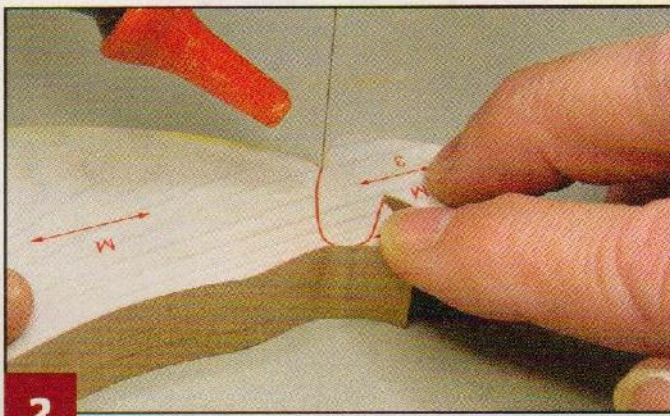
I use a soft Flex Drum sander and two pneumatic drum sanders to shape the intarsia pieces. All three soft sanders make it easy to create smooth contours. The Flex Drum sander is soft on the end, which allows you to carve rough detail using the sander. I keep a 100-grit band on my large pneumatic drum sander to remove wood quickly. I use a 150-grit band on a smaller drum to remove the scratches from the coarse sanding band. Then I switch to a 220-grit band to finish smoothing the pieces.

## ORNAMENTS: CUTTING THE PIECES



**1 Prepare the blanks.** Attach the patterns to the wood with repositionable spray adhesive or a restickable glue stick. Drill a  $\frac{3}{16}$ " (5mm)-diameter ribbon hole in the angel's wing before you cut the piece. Use a small square to make sure the blade is square to the saw table. If your cuts are not square, your pieces will not fit tightly together.





2

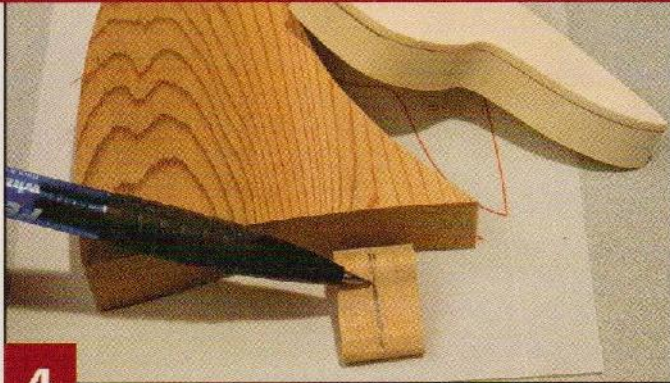
**Begin cutting the pieces.** Start with the easiest parts. Use a #5 reverse-tooth blade to make the exterior cuts. Switch to a #2/0 reverse-tooth blade to cut the dress into the three sections. The smaller blade ensures the pieces will fit together tightly. The reverse teeth on the bottom of the blade cut on the up stroke and reduce tear-out on the bottom of the pieces.



3

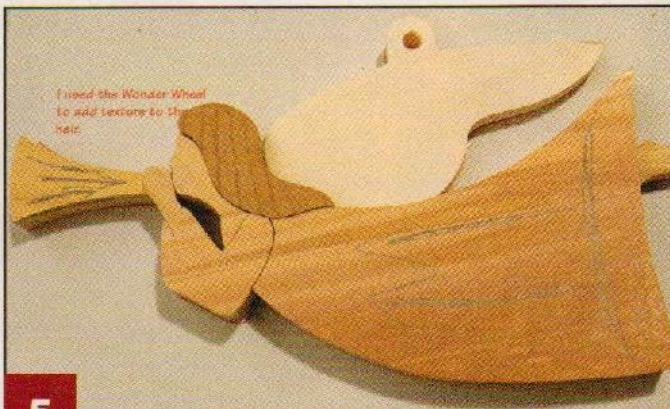
**Finish cutting the pieces.** Plan your cuts so any small pieces will be freed by the last cut instead of trying to hold small pieces as you cut. Number the back of the cut pieces and sand off any tear-out. Before removing the patterns, dry assemble the pieces and check the fit. If the pieces don't fit tightly, recut along the pattern lines where you've strayed from the line.

## ORNAMENTS: SHAPING THE PIECES



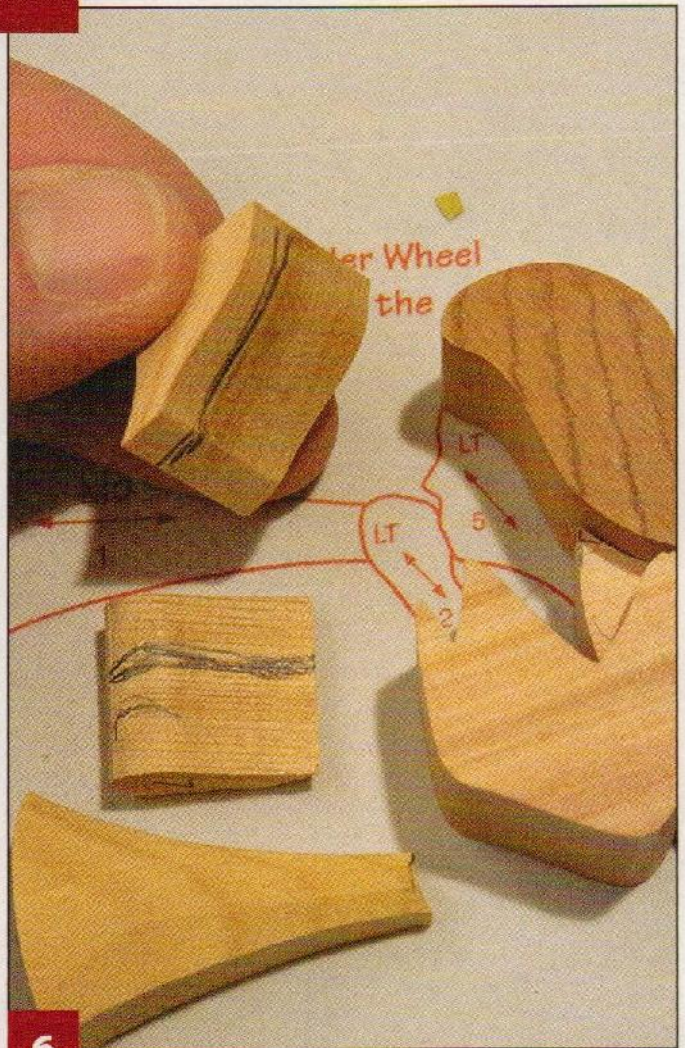
4

**Begin shaping the pieces.** Remove all of the patterns. Start shaping with the parts that are farthest from the viewer, such as the foot and wing. Mark the  $\frac{3}{8}$ " (10mm) thickness of the foot and sand it down flat. Mark the wing at  $\frac{3}{8}$ " (10mm) thick where it joins the dress and sand an even taper from the top edge of the wing down to this line.



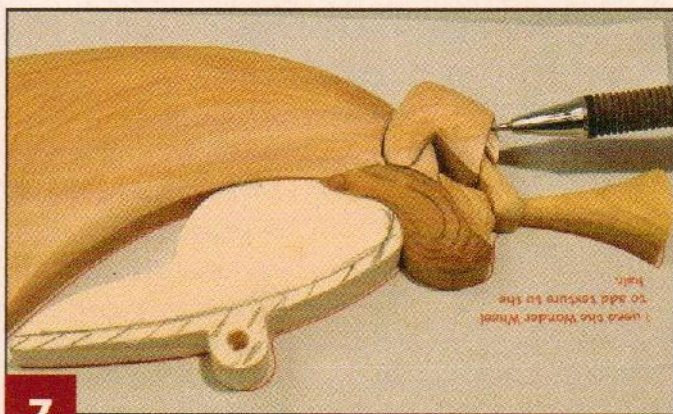
5

**Sand the dress and horn.** Mark the thickness of the wing on the dress. Do not sand below this line. Taper the dress from the hem to the sleeve. The sleeve is thicker than the dress around it. Taper the dress down to about  $\frac{1}{2}$ " (15mm) at the sleeve. Taper the horn down to about  $\frac{3}{8}$ " (10mm) thick at the hand. The hand is in front of the horn, but lower than the sleeve.



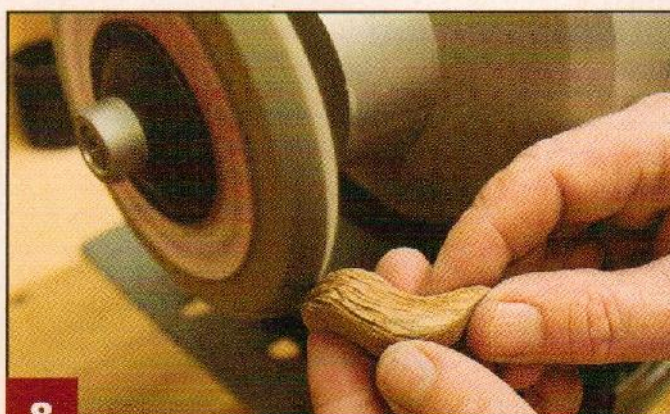
6

**Sand the hand, face, and neckline of the dress.** Sand the neckline down to  $\frac{1}{2}$ " (15mm) to match the main part of the dress. Mark a line  $\frac{1}{2}$ " (15mm) from the bottom of the face and hand. Sand these pieces flat down to the  $\frac{1}{2}$ " (15mm) line. Mark the thickness of all of the adjoining pieces on the sleeve. Mark the thickness of the face onto the hair.



7

**Sand the sleeve and hair.** Round the sleeve. Sand an angle onto the underside of the sleeve so the wrist is in front. Round the edges of the sleeve. Round the top of the hair and taper the hair down to the wing and dress. Round the top of the wing. Round the dress toward the edges. Soften the edges of the foot, face, and hand. Round the long edges of the horn.



8

**Add the hair texture.** Draw in some texture lines on the hair. Then carve in the texture. I use a Wonder Wheel mounted in a bench grinder. Dress the wheel to a V-point using coarse-grit sandpaper stapled to a flat piece of wood. The wheel carves and burnishes the wood in one step. You can also add the hair texture with a carving bit in a rotary-power carver or with a small V-tool.

## ORNAMENTS: FINISHING THE ORNAMENT



9

**Apply the finish.** Use a 220-grit sanding drum to remove any scratches. Then hand sand the pieces with the grain, using 180-grit and then 220-grit sandpaper. Apply polyurethane wiping gel with a foam brush. Put some gel on the inside of the can lid and place the can lid over the open can to keep the majority of the gel from drying. Apply a heavy coat of the finish to the pieces.



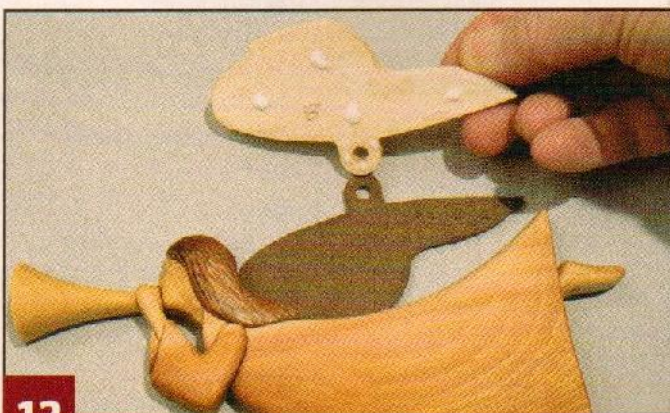
10

**Wipe off the excess finish.** Allow the finish to set for less than a minute and wipe off the excess with a paper towel. Buff the pieces completely dry with a clean paper towel. Allow the finish to dry for six to eight hours. Then apply two more lighter coats using the same technique. Allow each coat to dry for six to eight hours before applying the next coat.



11

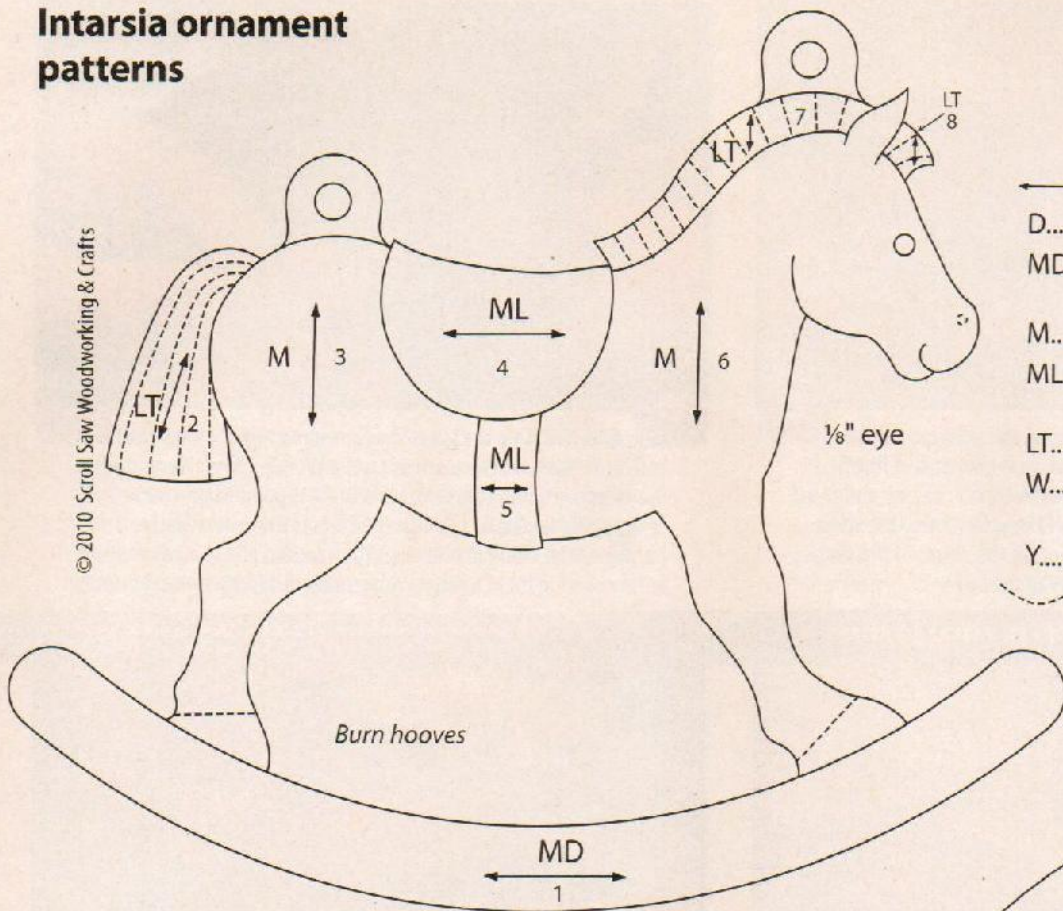
**Cut the backing board.** Spray a light coat of adhesive onto a piece of white paper to keep the parts from shifting as you trace around them onto the paper. Attach this traced pattern to  $\frac{1}{8}$ " (3mm)-thick tempered hardboard. Cut  $\frac{1}{16}$ " (2mm) inside the lines to make the backing board.



12

**Glue the pieces to the backing board.** Dry assemble the pieces on the backing board. Lift a few outside pieces, such as the wing, the foot, and the horn, and add a few drops of tacky glue to the bottom. Let these sections set up. These parts will ensure the other pieces do not shift out of place. Then attach the other pieces. Add ribbon or twisted paper cord to hang the ornament.

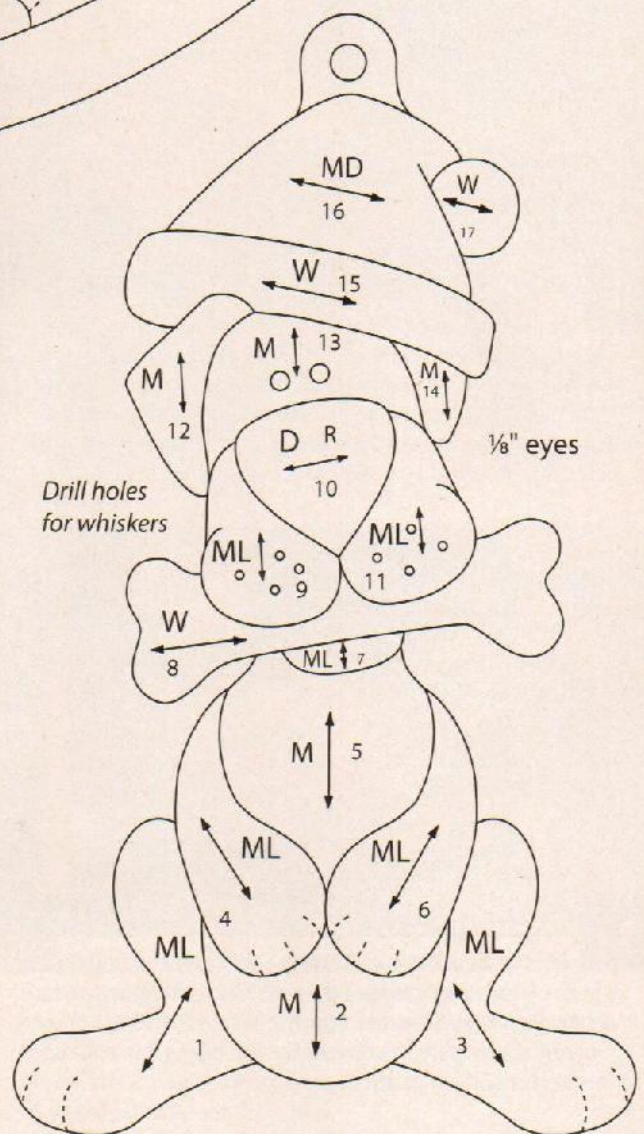
# Intarsia ornament patterns



## LEGEND

- Grain direction
- D..... Dark shade of wood
- MD..... Medium-dark shade of wood
- M..... Medium shade of wood
- ML..... Medium-light shade of wood
- LT..... Light shade of wood
- W..... White pine, aspen, or any white wood
- Y..... Yellow wood
- - - - - Texturing guidelines

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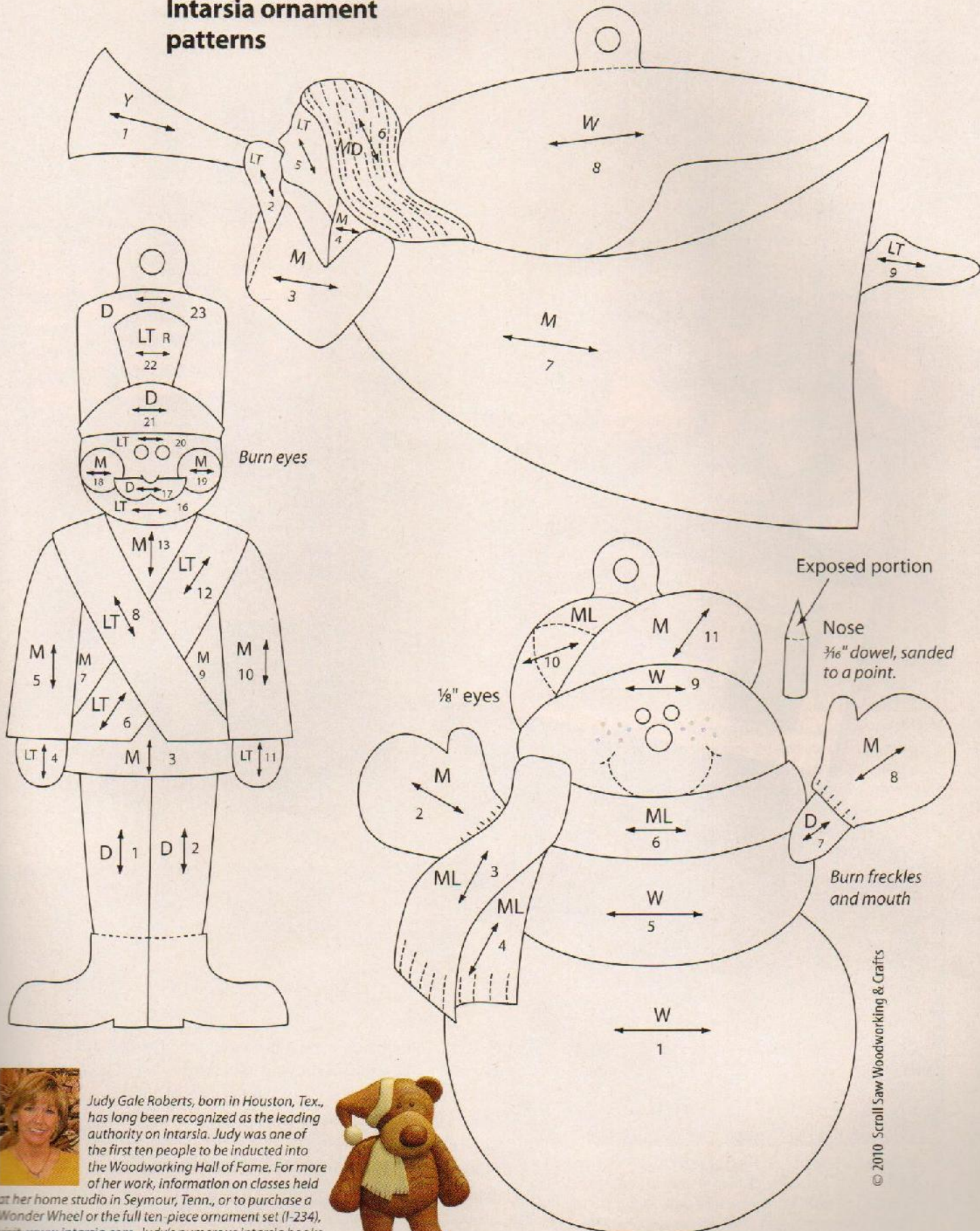
### Materials:

- Wood for angel (Refer to the legend for suggested woods for the other ornaments):
- 3/4" x 1" x 1 1/2" (20mm x 25mm x 40mm) medium-dark wood, such as Western red cedar or mahogany
  - 3/4" x 4" x 7" (20mm x 105mm x 180mm) medium wood, such as Western red cedar, aromatic cedar, cherry, or red oak
  - 3/4" x 1" x 2" (20mm x 25mm x 50mm) light wood, such as Western red cedar, basswood, or maple
  - 1/2" x 3" x 4 1/2" (15mm x 75mm x 115mm) white wood, such as aspen, holly, or poplar
  - 3/4" x 2" x 2" (20mm x 50mm x 50mm) yellow wood, such as yellowheart or osage orange
  - 1/8" x 4" x 7 1/2" (3mm x 105mm x 190mm) plywood or tempered hardboard

### Materials & Tools

- General materials:**
- Glue of choice
  - Repositionable spray adhesive or re-stickable glue stick
  - Polyurethane wiping gel or finish of choice
  - Paper towels
  - 1" (25mm)-wide disposable foam brush
  - Ribbon to hang ornament
- Tools:**
- #5 and #2/0 reverse-tooth blades or blades of choice
  - Sander of choice
  - Drill with 3/16" (5mm)-diameter bit
  - Wonder Wheel (optional)
  - Carving or hobby knife (optional)
  - Rotary-power carver or small V-tool (optional)

# Intarsia ornament patterns



Judy Gale Roberts, born in Houston, Tex., has long been recognized as the leading authority on Intarsia. Judy was one of the first ten people to be inducted into the Woodworking Hall of Fame. For more of her work, information on classes held at her home studio in Seymour, Tenn., or to purchase a Wonder Wheel or the full ten-piece ornament set (I-234), visit [www.intarsia.com](http://www.intarsia.com). Judy's numerous intarsia books are available at [www.FoxChapelPublishing.com](http://www.FoxChapelPublishing.com).



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# Simply Elegant Business Card Holders



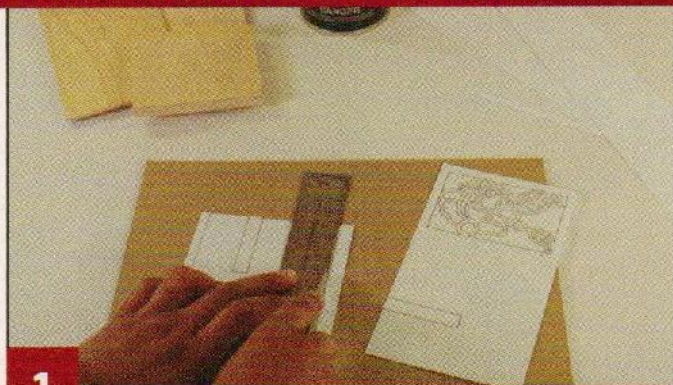
## Functional and decorative designs make great gifts

By Roshaan Ganief  
Step-by-step photography by Elsa Chu

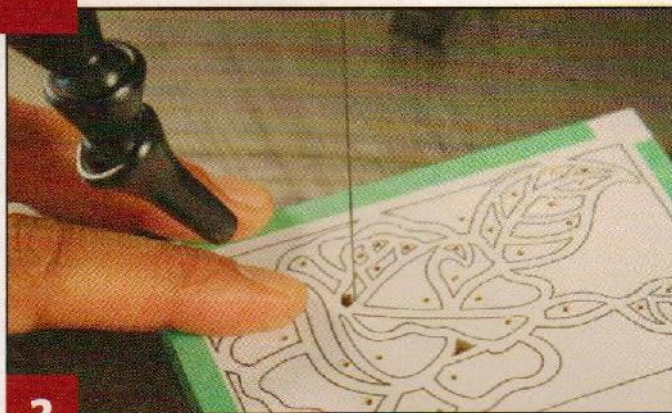
These attractive business card holders make thoughtful gifts for the professionals on your Christmas list. The travel-friendly collapsible design is perfect for displaying your business cards at craft shows.

The business card holders easily accommodate 70 2" by 3" (50mm by 75mm) business cards. To make the holder collapsible, I use a half-lap joint. This joint is a deep notch that stops halfway in each mating piece. This simple yet functional joint is easy to make using only your scroll saw.

## CARD HOLDER: CUTTING THE PIECES



**1 Prepare the stock.** Cut the pieces according to the materials list. Cut the paper pattern on the outline with a utility knife and ruler. Attach the paper patterns to the appropriate blanks with temporary-bond spray adhesive. For a smoother cut, apply a few strips of clear packaging tape over the paper patterns.

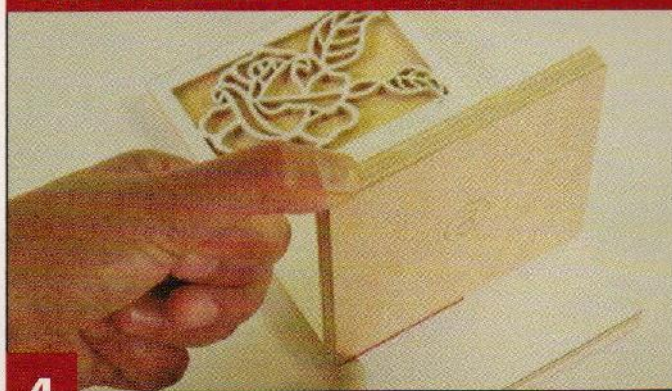


**2 Cut the fretwork.** Attach a sacrificial backing board to the fretwork stock using painter's tape. This backing board keeps the back of the fretwork from tearing out as you cut. Drill the blade-entry holes and use a #2/0 or #1 reverse-tooth blade to cut all of the interior frets. Do not cut the half-lap lines.

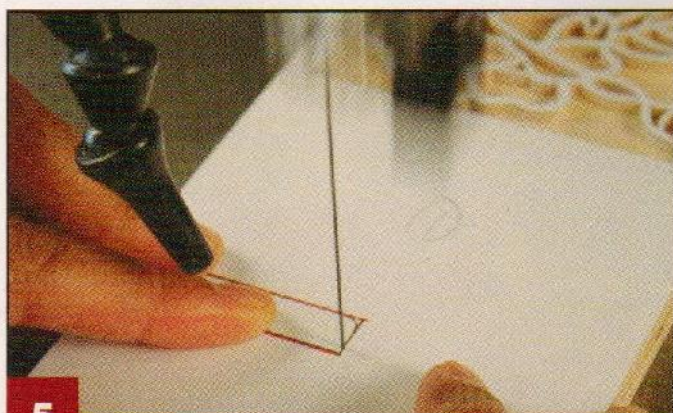


**3 Stack the fretwork with the contrasting backing board.** Separate the fretwork from the sacrificial backing board and discard the sacrificial backing board. Use a few strips of double-sided tape to attach the fretwork to the contrasting backing board. Use the tape sparingly to make separation easier.

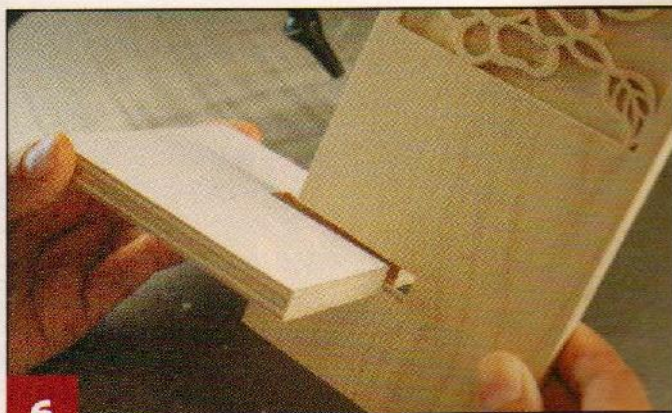
## CARD HOLDER: CUTTING THE HALF-LAP JOINTS



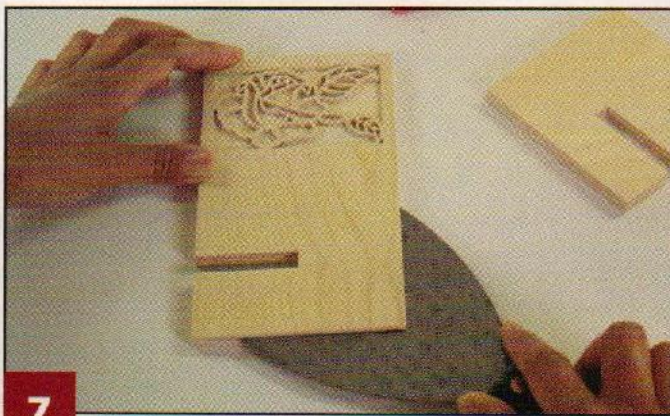
**4 Mark the exact thickness of the half-lap joint.** Before cutting the half-lap, sand both the top assembly and the short piece smooth. Use a red felt-tip pen to mark the exact thickness of the short piece on the fretwork pattern. Wood selection, cutting, and sanding may alter the actual thickness of the pieces.



**5 Cut the half-lap in the fretwork and backing board.** Use a #5 reverse-tooth blade to cut the half-lap on the top assembly. Stay inside the line, as the goal is to leave the entire thickness of the line visible. Test fit the two parts, making minor adjustments as necessary.

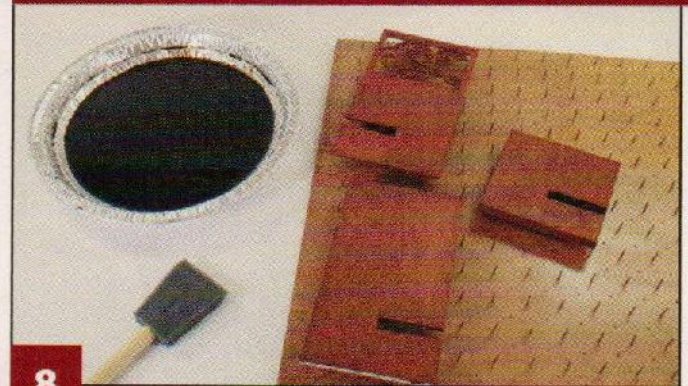


**6 Cut the half-lap in the short piece.** Sand the top assembly smooth and use the assembly to mark the thickness of the half-lap on the short crosspiece. Use a #5 reverse-tooth blade to cut the half-lap. Test fit the parts and make any necessary adjustments.



7

**Separate the stack.** After you are satisfied with the fit, promptly separate the stack. It is important to mark each mating piece, especially when making several business card holders at one time. Use a wide putty knife to carefully separate the top fretwork from the backer.



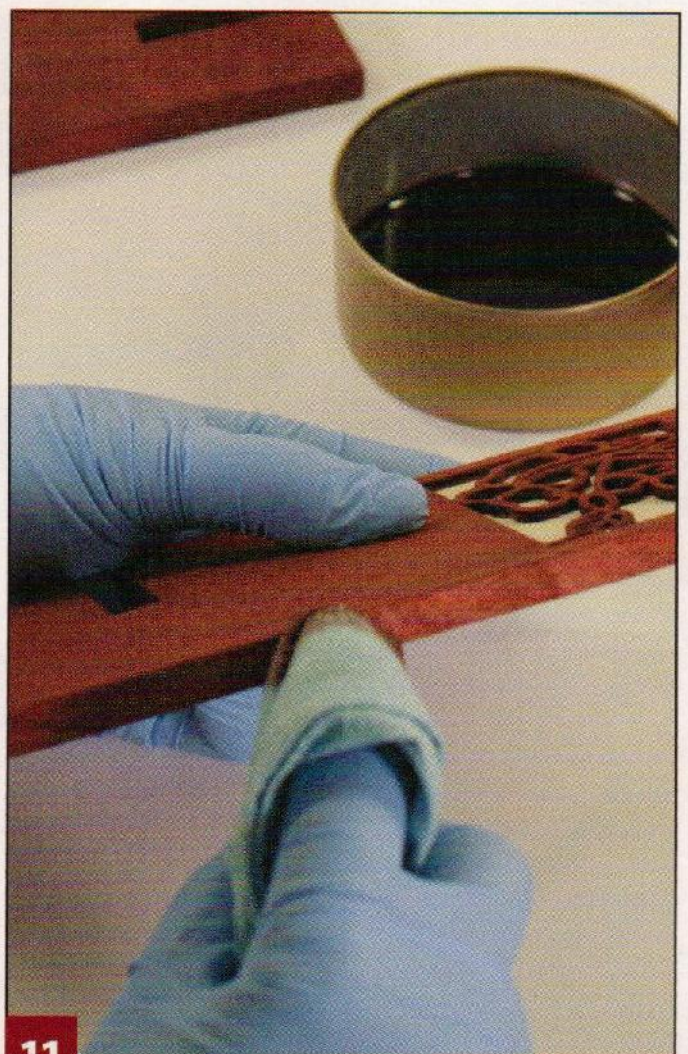
8

**Stain the parts.** Sand all of the parts to a smooth finish and focus on removing any burrs. Apply a stain to the fretwork and short crosspiece by dipping them in a tray filled with the desired stain. Only apply the stain on the back side of the fretwork backing board in order to create contrast on the front.



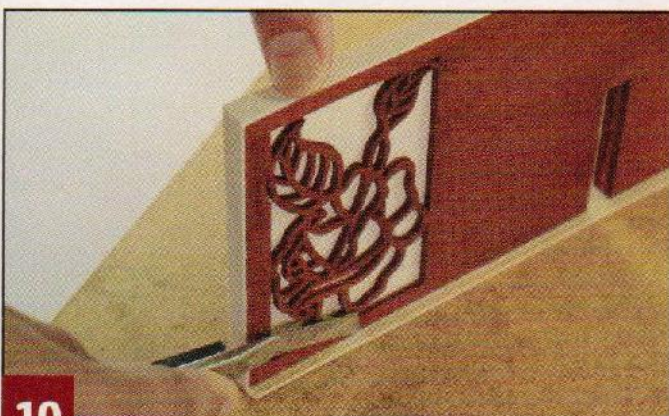
9

**Assemble the fretwork and backing board.** After the stain is dry, use a glue roller to roll an even layer of white glue on the back of the fretwork. Position and clamp the fretwork to the backing board, making sure to align the slots properly.



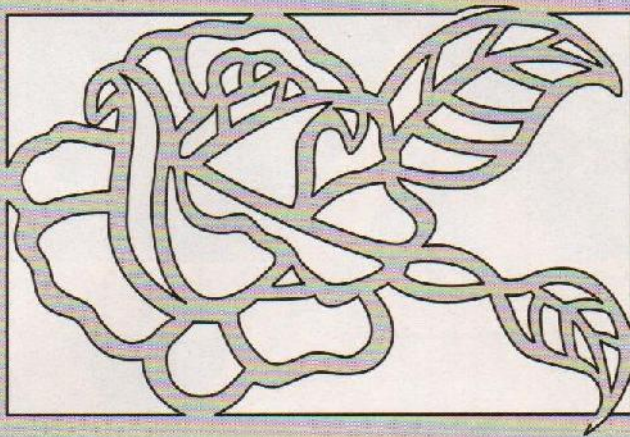
11

**Apply the finish.** Carefully stain the veneer or any unfinished edges. Apply a protective finish of choice. The great thing about this business card holder is that it is meant to be collapsible, so there's no need to glue the pieces together.



10

**Apply veneer tape to the exposed plywood edges.** After all of the edges have been sanded square, apply veneer tape to any exposed plywood edges. This step is not necessary, but it certainly finishes everything off nicely. Trim the excess veneer flush with a utility knife.



## Business card holder pattern

### Materials:

- 1/8" x 3 3/4" x 6 3/8" (3mm x 95mm x 168mm) Baltic birch plywood (fretwork)
- 1/4" x 3 3/4" x 6 3/8" (6mm x 95mm x 168mm) Baltic birch plywood (fretwork backer)
- 3/8" x 3 3/4" x 3 1/2" (10mm x 95mm x 89mm) Baltic birch plywood (short crosspiece)
- White glue
- Temporary-bond spray adhesive
- Clear packaging tape
- Double-sided tape
- Painter's masking tape
- Veneer tape, birch (optional)
- Sandpaper (various grits)
- Stain/dye of choice

### Materials & Tools

- Finish of choice
- Scrap plywood (sacrificial backer)

### Tools:

- #2/0 or #1 and #5 reverse-tooth blades or blades of choice
- Drill press with 1/16" (2mm)-diameter bits
- Shallow container (for stain)
- Utility knife
- Ruler
- Putty knife
- Veneer J-roller
- Iron (to apply the veneer tape)
- Mini quick clamps

Additional pattern for the **BUSINESS CARD HOLDER** is in the pullout section.

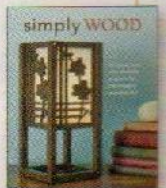
### Further Reading

#### **Simply Wood: 40 Stylish and Easy-to-Make Projects for the Modern Woodworker**

By Roshaan Ganief

*Author, artist, and fresh face in the woodworking community, Roshaan Ganief shares patterns and instructions for forty attractive projects that can be cut on a scroll saw. The projects, which combine a simple, natural beauty with a modern flair, range from chic lighting accessories and wall art to stylish pendants, coasters, candle holders, and more.*

Available for \$19.95 + \$4.75 s&h (parcel post) from Fox Chapel Publishing, 1970 Broad St., East Petersburg, PA 17520, [www.FoxChapelPublishing.com](http://www.FoxChapelPublishing.com), 800-457-9112.



## Crosspiece



Roshaan Ganief grew up in Cape Town, South Africa, and moved to Canada with her family when she was 17. Roshaan discovered woodworking eight years ago and scroll sawing a few years later. Scroll sawing allows her to combine her passion for woodworking with her love of art. For more of her work, visit Roshaan's website at [www.mokajadewoodstudio.com](http://www.mokajadewoodstudio.com).

# Star of David



## Simple design is a beautiful symbol of faith

By Zohar Laor

This project combines the Star of David design with the Hebrew words for Shema Israel in the center. Shema Israel means “Hear, [O] Israel,” which are the first two words of a section of the Torah (the Hebrew Bible), which is a centerpiece of the morning and evening Jewish prayer services.

This project is easy to cut, requires little sanding, and can be made out of a variety of woods. Attach the pattern to the blank using spray adhesive. Cut roughly around the perimeter of

the pattern to make it easier to drill the blade-entry holes. After drilling the holes, start cutting the design with the letters in the center. Then cut the straight lines and the triangles. Cut the perimeter last. Create sharp corners for both the inside and outside corners of the triangles. Instead of turning at the corners, cut in from both sides of the angle.

Display the cut project on its own or attach black, blue, or red felt to the back.

## Materials & Tools

### Materials:

- ¼" to 1" x 7" x 8" (6mm to 25mm x 180mm x 205mm) Baltic birch plywood or wood of choice
- Temporary-bond spray adhesive
- Assorted grits of sandpaper
- Finish of choice
- 7" x 8" (180mm x 205mm) black, blue, or red felt (optional for backing)

### Tools:

- FD-SR #3 blades or blades of choice
- Drill with 3-jaw micro chuck
- #43 drill bit

Pattern for the **STAR OF DAVID** is in the pattern pullout section.



Zohar Laor lives in New Jersey. Zohar is a husband and father of two mischievous children, but gets to rest forty hours a week as a software engineer.

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be published in a  
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Charles Bowman  
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Award, will have two winners: one chosen by the editors and one chosen by the online community. All entries are eligible for the Best in Contest Awards. Entries will be posted on our website, [www.scrollsawer.com](http://www.scrollsawer.com), for voting.

Depending on the number of entries, it may not be possible to have all entries available for online voting. SSW&C staff reserves the right to determine the category for entries.

**Deadline is March 31, 2011.**

Artists retain all copyrights, but consent to having a pattern of their project published in SSW&C. Entries will be acknowledged, but photos and materials will not be returned. Please do not submit original artwork.

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#### CONTEST RULES:

- Patterns must be your original design. Designs cannot be altered versions of existing patterns by another designer or based on copyrighted images.
- Projects must feature a significant amount of scrolling. (Projects may include other common woodworking tools in the creation, for example: router, table saw.)
- Projects must be able to be made from commonly available wood.
- Projects cannot have been previously entered in a SSW&C sponsored contest.

#### TO ENTER:

Submit the following information:

- Category of entry
- Clear photographs of your work. Digital images or traditional prints only. Prints from a home printer cannot be used.
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# Whimsical Pets Wall Rack



**Delightful silhouettes make a great beginner project**

By John A. Nelson  
Cut by David Penman

This attractive and functional wall hanger is easy to cut and assemble. You can cut the project from hardwood with an interesting grain pattern and finish it naturally or create a sturdier version from plywood and finish with acrylic paints.

If you choose to use solid wood, pay attention to the grain direction lines on the pattern. Soft wood, such as pine, is not recommended as the hangers will be fragile no matter how you orient the grain. I use plywood and paint it black to give it a silhouette look.

After you cut the silhouettes, drill  $\frac{1}{8}$ "-diameter pilot holes for the screws. Then drill additional  $\frac{3}{8}$ "-diameter countersinking holes  $\frac{1}{4}$ " deep on top of the pilot holes. If you cut the piece out of  $\frac{3}{4}$ "-thick hardwood, you can drill the holes  $\frac{1}{2}$ "-deep and add a matching hardwood plug to cover the screws. Use wall anchors if mounting the project on a hollow wall.

Cut the hangers out of  $\frac{1}{2}$ "-thick material. After cutting and sanding them, glue them in place using wood glue. Clamp them overnight until the glue dries. If you make accurate cuts, the glue joint should be as strong as the wood itself. You can adjust the fit of the pieces when sanding. Another alternative is to use screws or dowels to reinforce the joints.

## Materials:

- $\frac{1}{2}$ " to  $\frac{3}{4}$ " x 10" x 15" (15mm to 20mm x 255mm x 380mm) plywood or hardwood of choice (silhouettes)
- 5 each  $\frac{1}{2}$ " x 3" x 4" (15mm x 75mm x 100mm) plywood or hardwood (hangers)
- Finish of choice (I use black acrylic paint)
- 3 each #8 hollow wall anchors (with screws)

## Materials & Tools

- 3 each  $\frac{3}{8}$ "-diameter matching hardwood plugs (optional)
- Wood glue of choice
- Assorted grits of sandpaper

## Tools:

- #5 reverse-tooth blades or blades of choice
- Assorted small clamps
- Drill with  $\frac{1}{8}$ "-diameter and  $\frac{3}{8}$ "-diameter drill bits

Patterns for the **WHIMSICAL PETS WALL RACK** are on the pattern pullout section.



John A. Nelson of Dublin, N.H., is an accomplished designer and author. For more of his patterns, visit [www.foxchapelpublishing.com](http://www.foxchapelpublishing.com).

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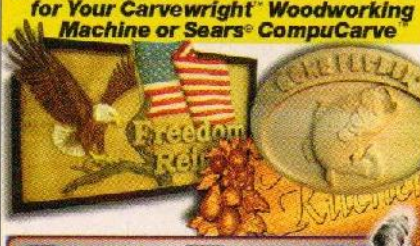
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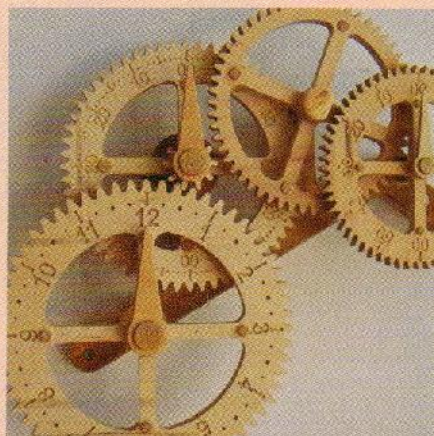
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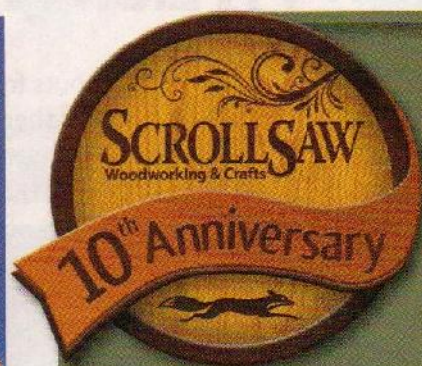


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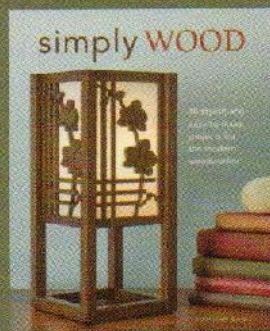
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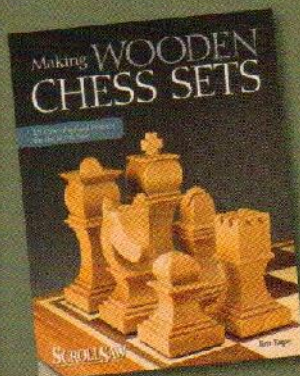
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## Pockets Full of Diplomacy

Each year, the Colorado Springs Scrollers make about 3,000 wooden toys to give out during the Christmas season to children in area hospitals and Ronald McDonald Houses. Recently, this group of fifteen woodworkers decided to supply toys for the deployed troops to hand out to kids in Iraq and Afghanistan.

"We thought it might be a nice way to make friends if the soldiers had toys to keep in their pockets and give out to the kids," said Harv Schaefer, a longtime club member.

The first step to get things rolling was getting the project approved by the donations committee at Fort Carson.

"They're pretty strict about what they can accept," Harv said. "We submitted a

bunch of toys and they were approved by the committee."

The simple wooden toys are cut with a scroll saw into various vehicle shapes. Once word of the effort got out, donations of money and materials started pouring in to the club. The Pikes Peak Whittlers supplied 12,000 wooden wheels and hundreds of ¼"-diameter axle dowels.

Four hundred of the little wooden cars and trucks have already been shipped overseas. Another 1,000 are scheduled to leave with more troops headed for Iraq.

For information on the project or to find out how to make a contribution, call club treasurer Harv Schaefer at 719-392-3740 or club president Larry West at 719-599-4448.



Photos by Matt Schaefer



The Colorado Springs Scrollers have crafted hundreds of toys for soldiers to hand out in Iraq and Afghanistan.



Detroit Lions linebacker Zack Follett uses his artistic talents to create wooden memorabilia to support charities.

Detroit Lions linebacker Zack Follett is known as one of the hardest hitters in the National Football League. Off field, he enjoys a hobby that deals more in precision and delicacy—woodworking.

"It satisfies the artistic side of my mind," Zack said. "I see things in my head and then I create them in wood."

After the devastating earthquake in Haiti, Zack decided to make an auction piece to help raise money for the relief effort. Zack offered up his two Super Bowl tickets along with a wooden cutout of the Super Bowl XLIV logo. Made from plywood, artificial turf, an authentic NFL football, and Zack's used game gloves, the piece measures 2' by 3' and sold for \$3,425.

Each year while Zack was growing up, his father, Bob Follett, made Christmas

## A Lion With a Big Heart

cutouts for the yard. Young Zack helped paint them.

"It wasn't until I was a senior in high school that I finally asked him to show me how to make them," Zack said. "Dad taught me how to use a jigsaw and a Dremel, and showed me his technique for projecting images onto plywood. If it wasn't for my dad, I never would have explored my artistic abilities through wood."

Zack's other charity cutouts include life-size figures of his teammates.

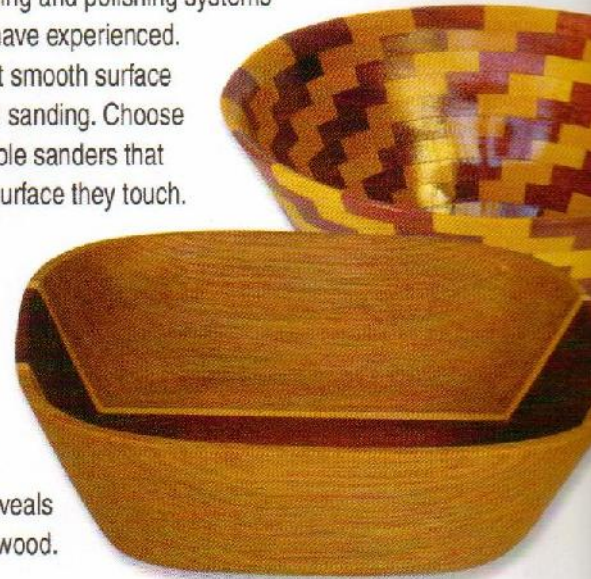
"I get the players to autograph the cutout and then I collect some materials used in games, like jerseys and helmet screws. I put all that memorabilia on there," Zack explained. Zack then donates the pieces to charity auctions. Zack's other causes include the Cat Haven, a rescue reserve for big cats in California, and purchasing sporting equipment for children in Kenya.

To buy one of Zack's pieces or help support his causes, e-mail Zack directly at [contact@zakarianfollett.com](mailto:contact@zakarianfollett.com) or visit his website at [www.zakarianfollett.com](http://www.zakarianfollett.com).

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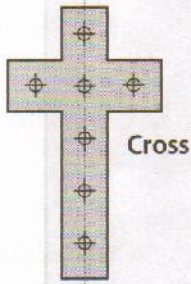


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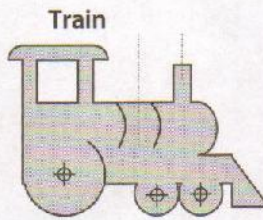
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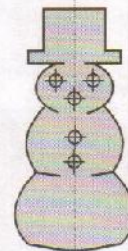
Cross



Ribbon



Train



Snowman



Candycane

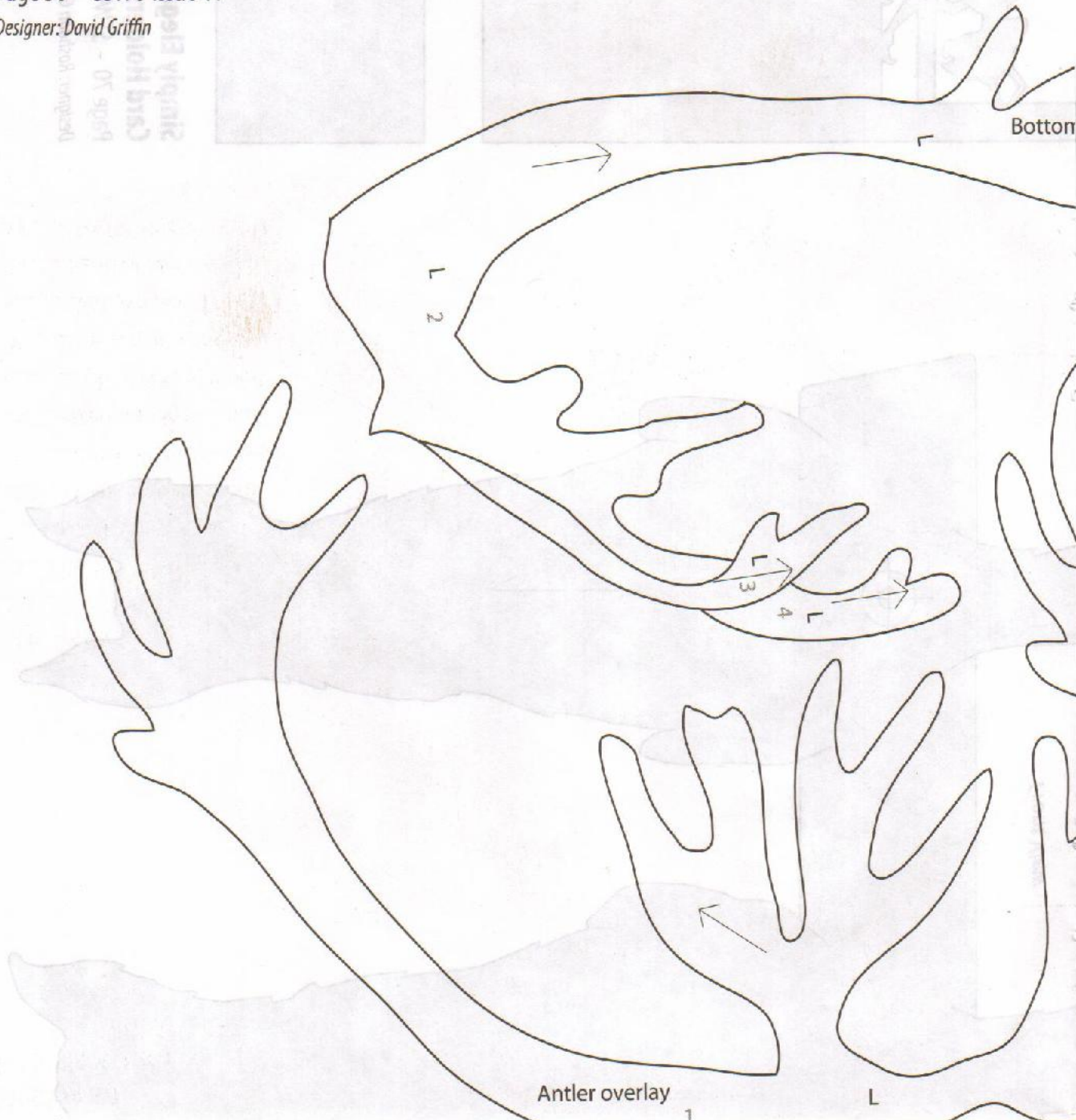


Drill holes for size 11 seed beads

## Making Festive Earrings

Page 50 - SSWC Issue 41

Designer: David Griffin

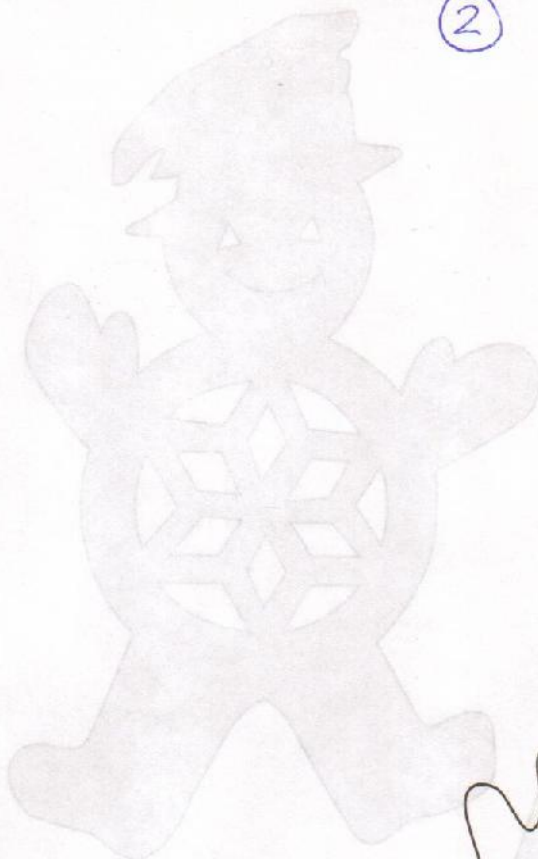
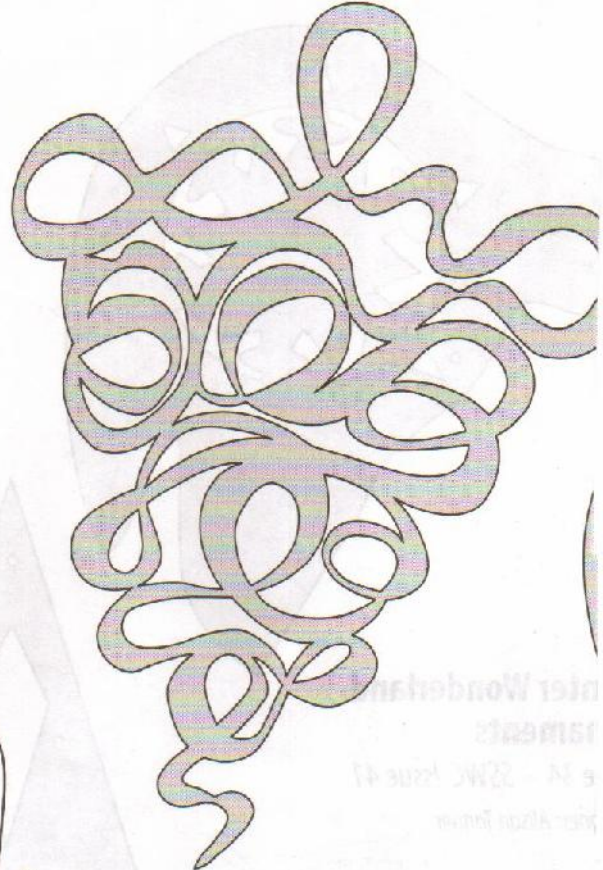


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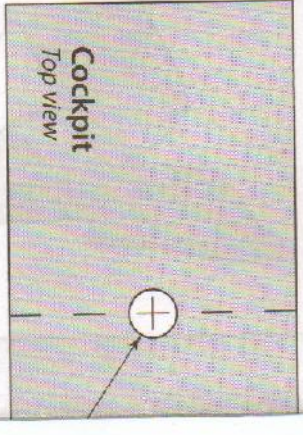
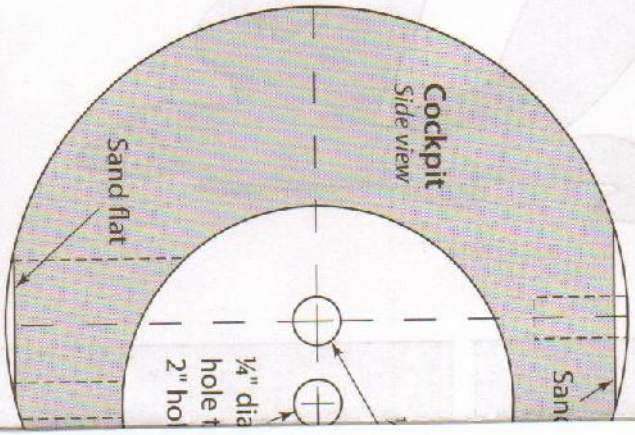
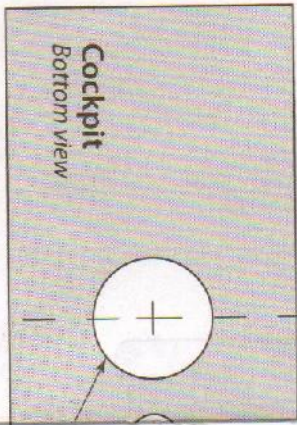
21

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Antler overlay



4

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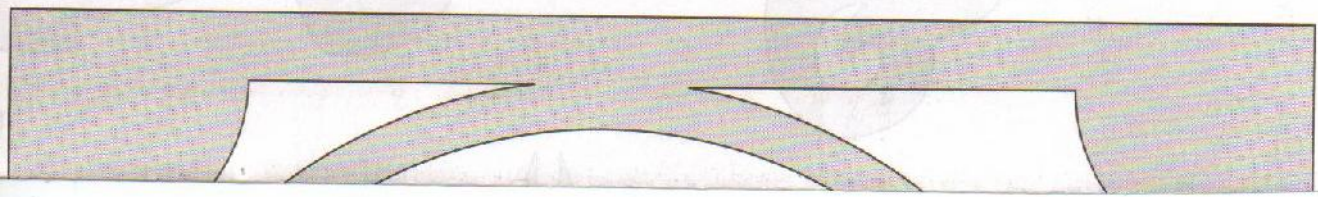
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Winter Wonderland Ornaments .....	34	Making a Toy Helicopter .....	60
Making an Intarsia Reindeer .....	40	Simply Elegant Business Card Holders .....	70
Making Festive Earrings .....	50	Star of David .....	74
Portrait of Mary and Baby Jesus .....	56	Whimsical Pets Wall Rack .....	76

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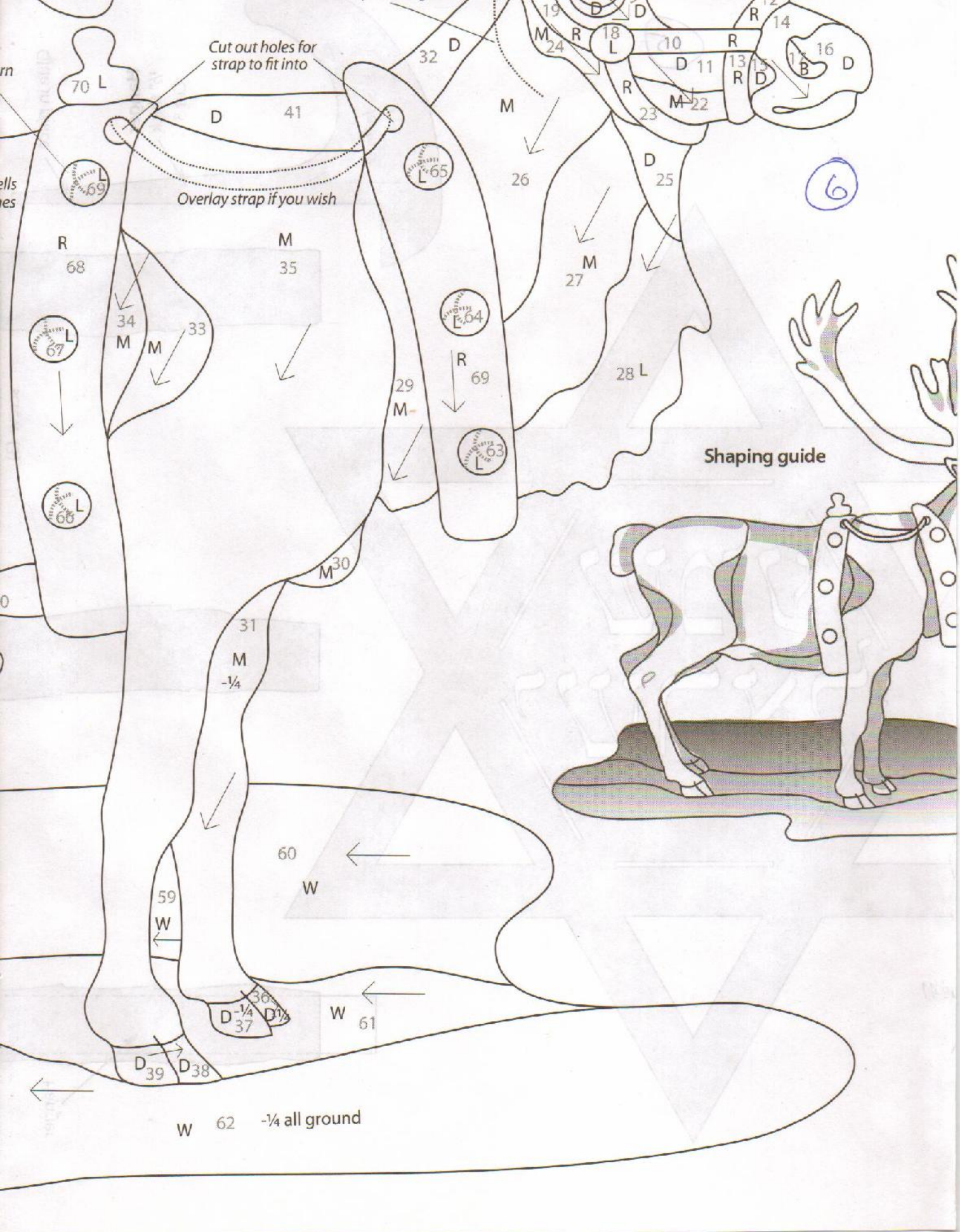


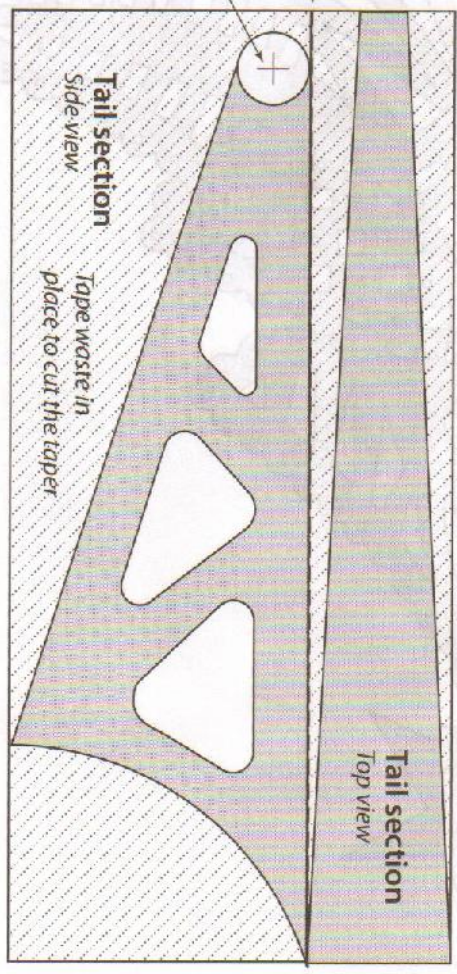
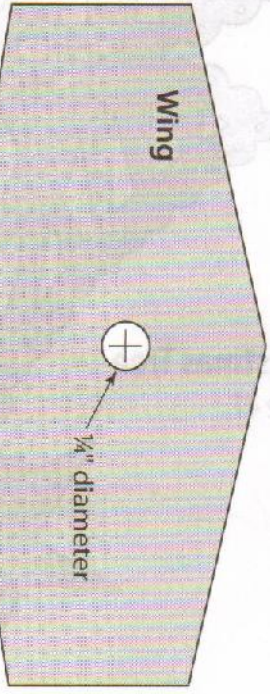
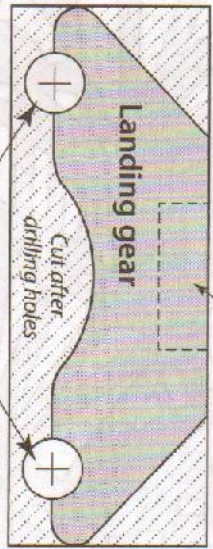
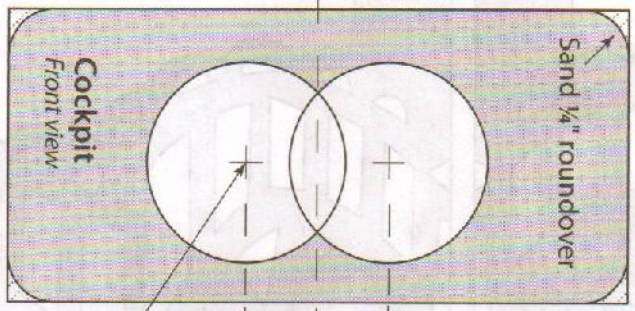
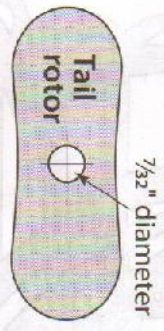
Spun Glass Ornaments  
Page 58 - SSWC Issue 41  
Designer: Alison Tanner

Portrait of Mary  
and Baby Jesus  
Page 56 - SSWC Issue 41  
Designer: John A. Nelson







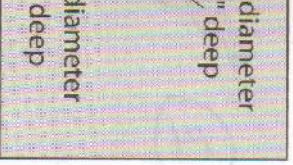


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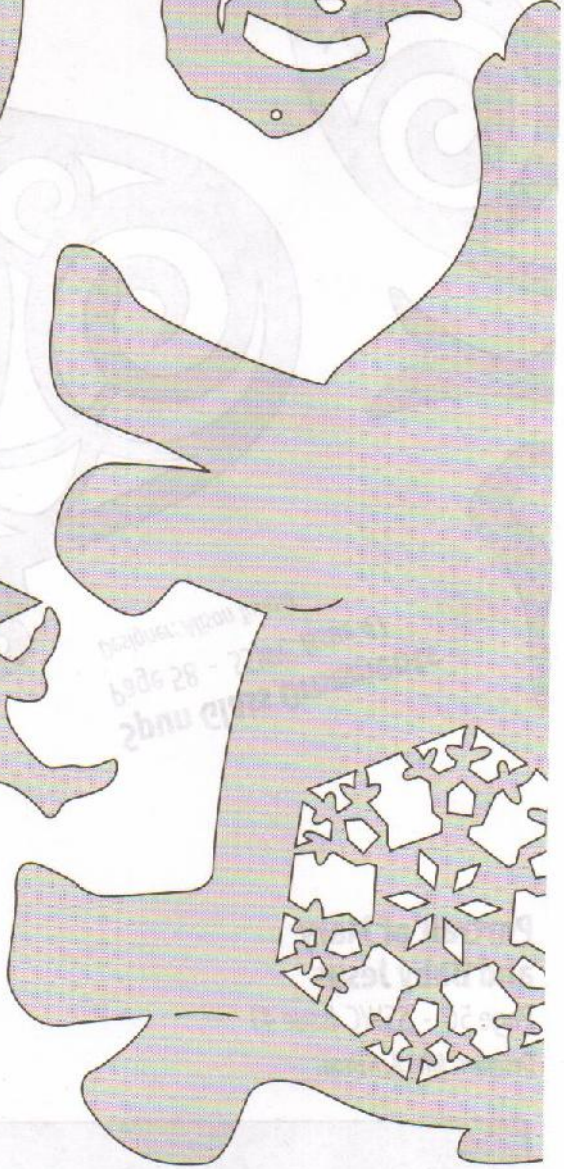
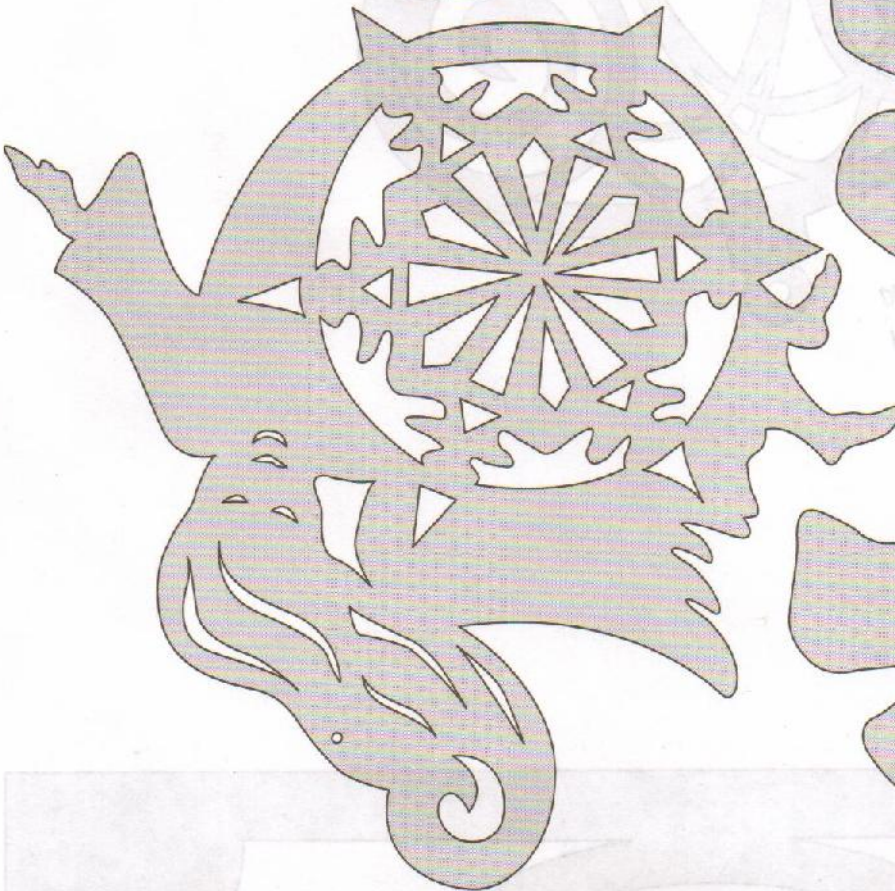
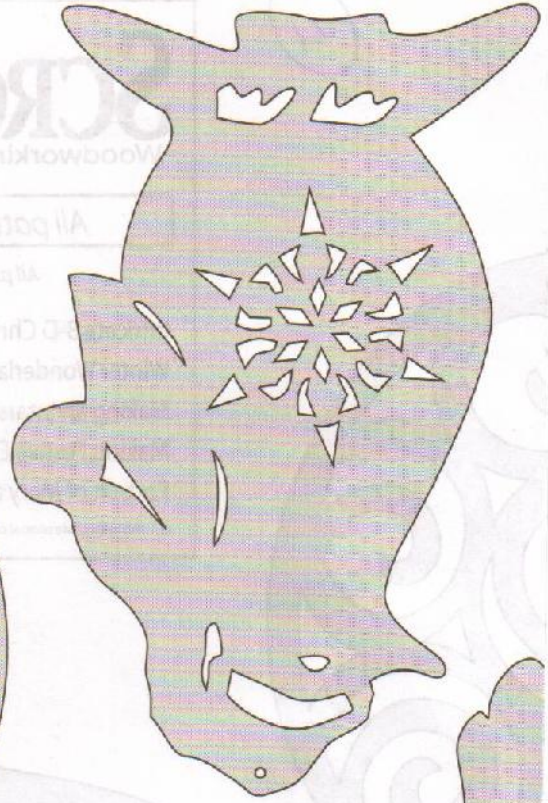
# Making a Toy Helicopter

Page 60 - SSWC Issue 41

Designer: Richard Gard





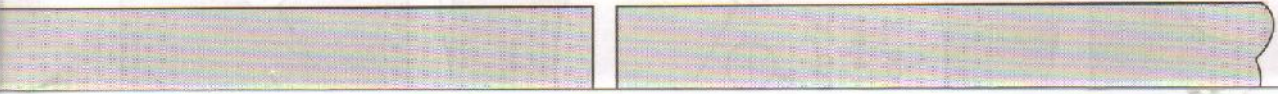


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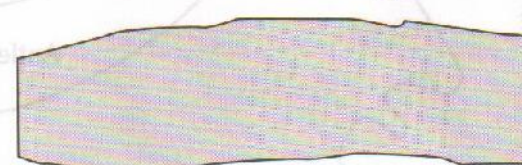
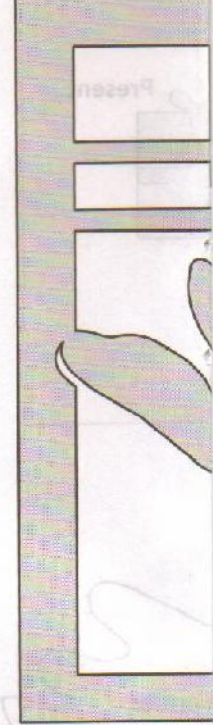
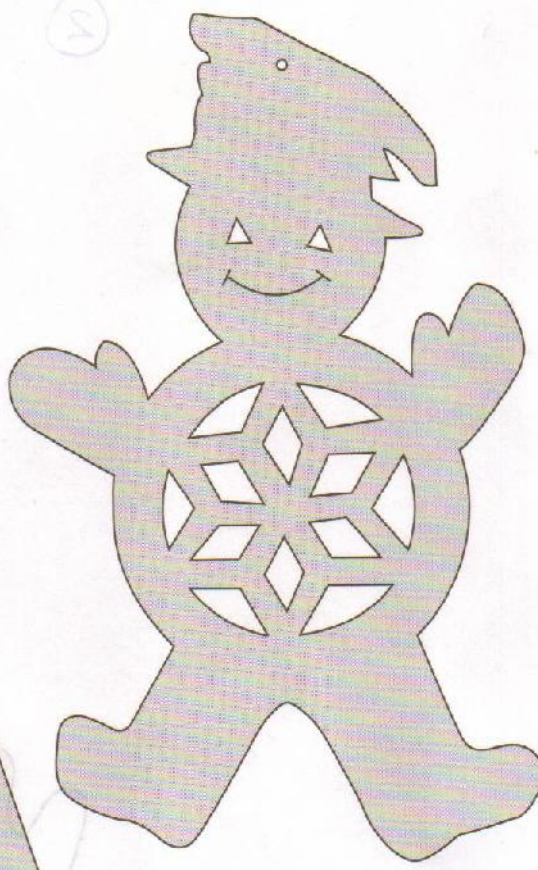
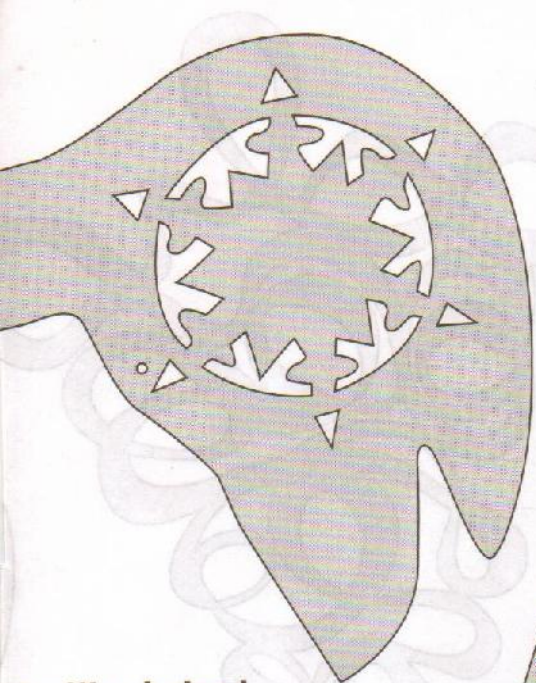
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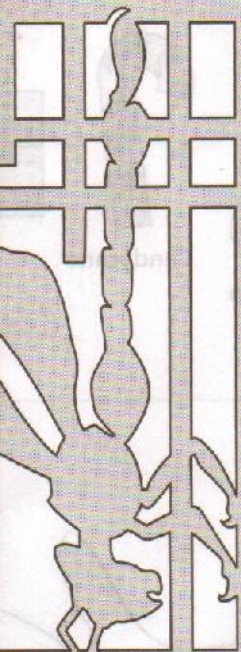
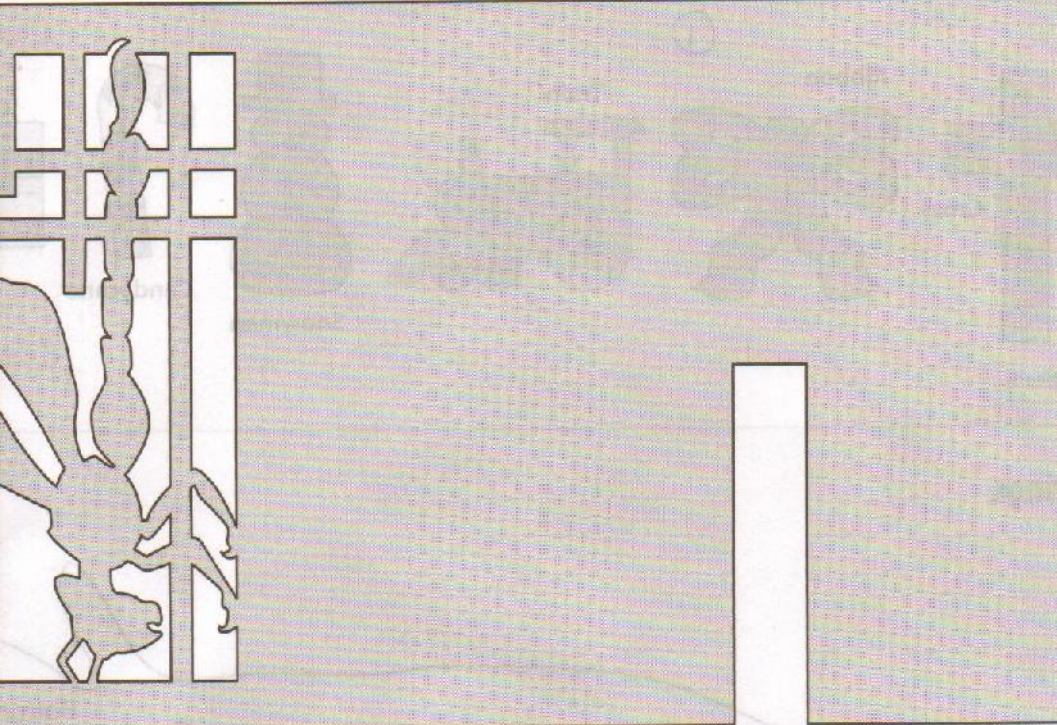
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Winter Wonderland  
Ornaments  
Page 34 - SSWC Issue 41  
Designer: Alison Tanner



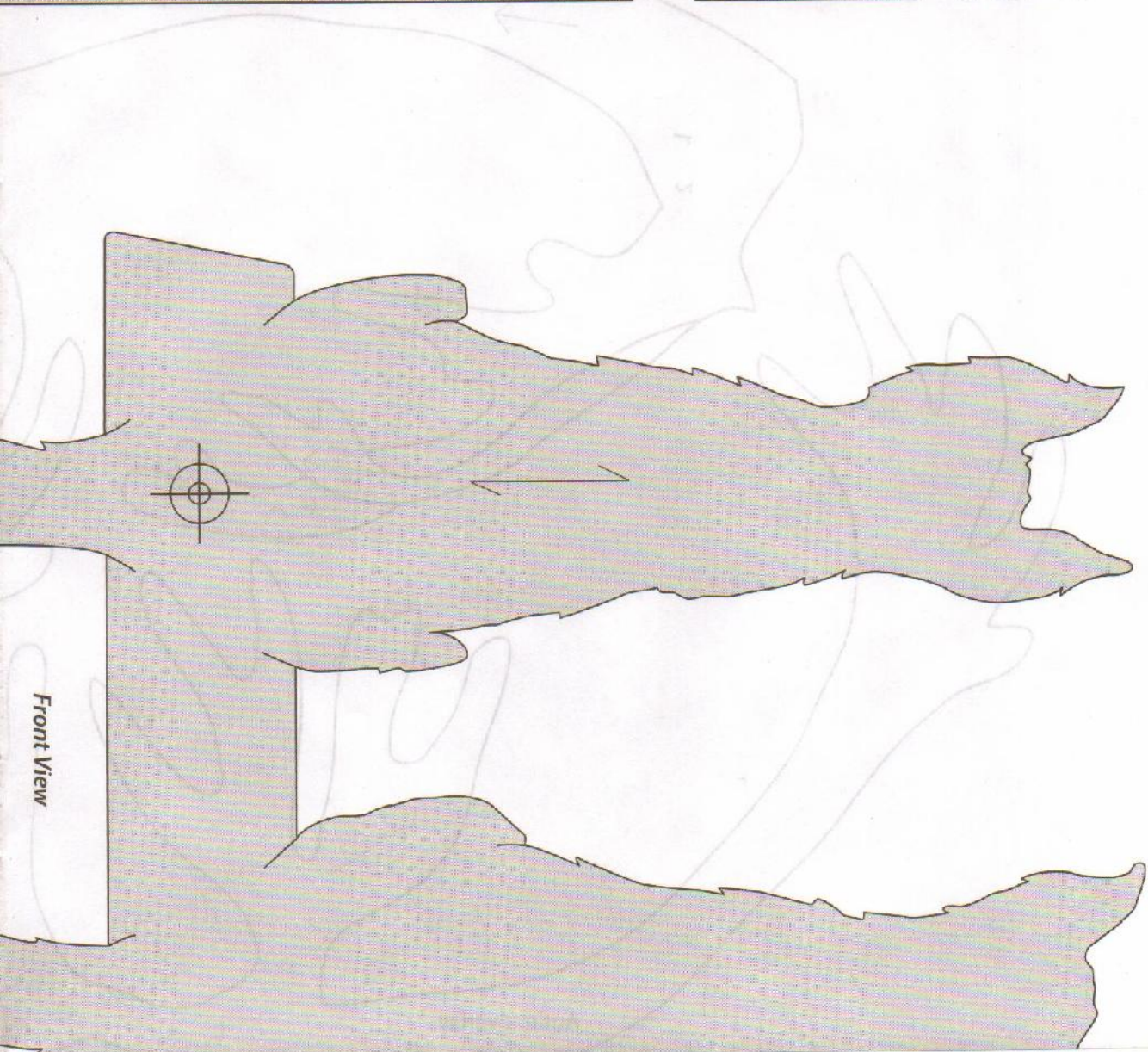
**Whimsical Pets Wall Rack**  
Page 76 - SSWC Issue 41  
Designer: John A. Nelson



**Simply Elegant Business  
Card Holders**

Page 70 - SSWC Issue 41

Designer: Roshaan Ganief

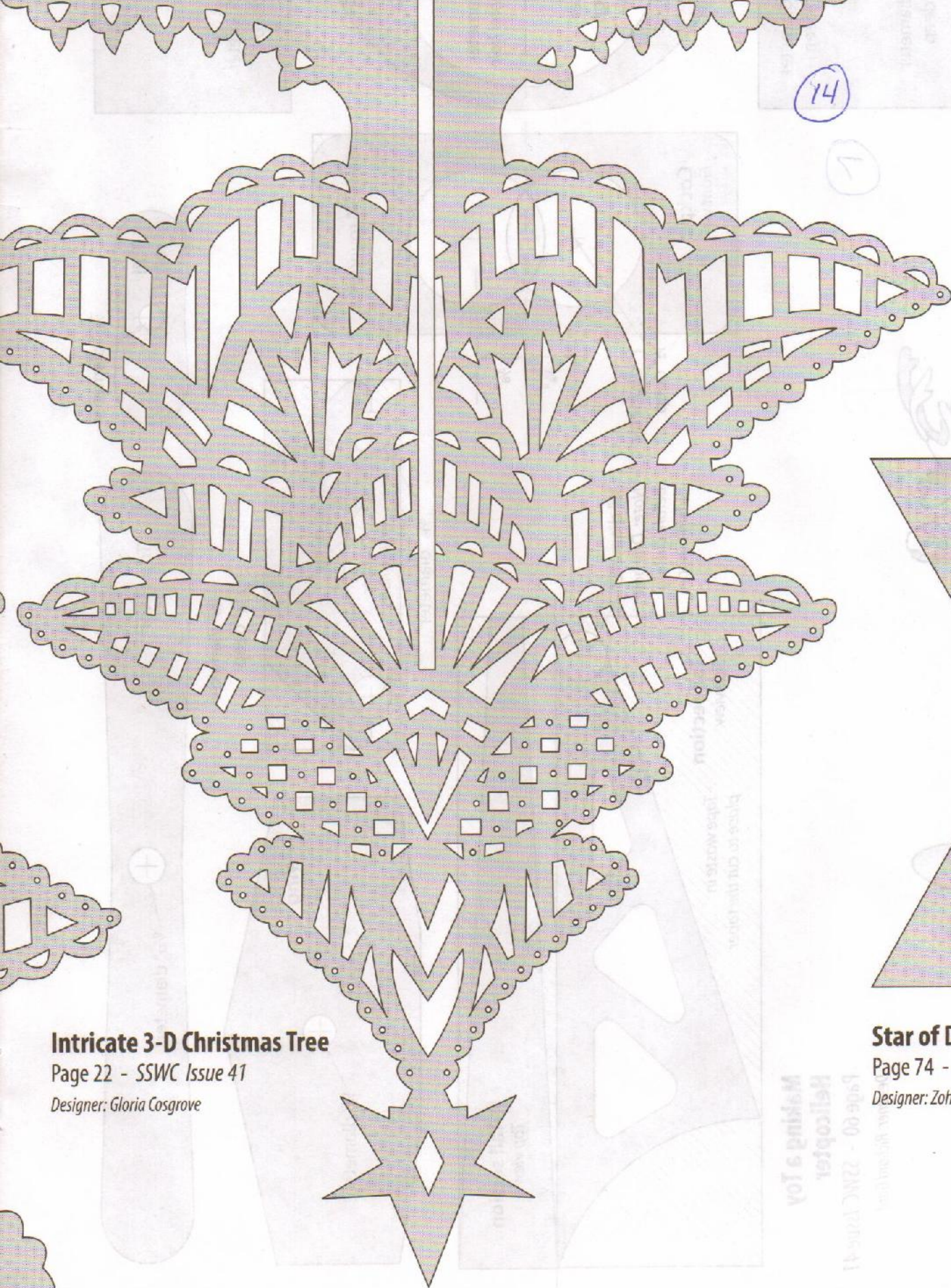


Front View

13

8





14

7

**Intricate 3-D Christmas Tree**

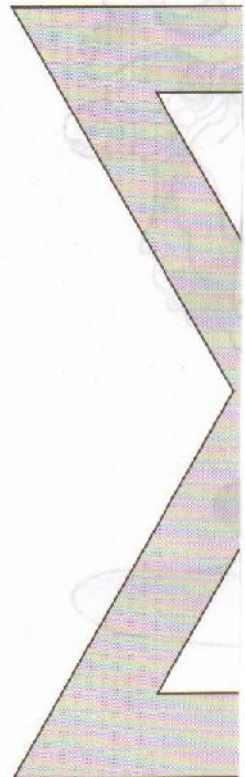
Page 22 - SSWC Issue 41

Designer: Gloria Cosgrove

**Star of David**

Page 74 - SSWC Iss

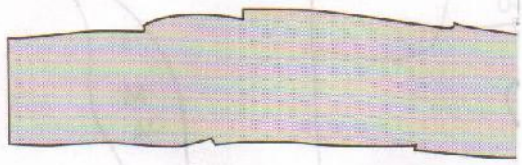
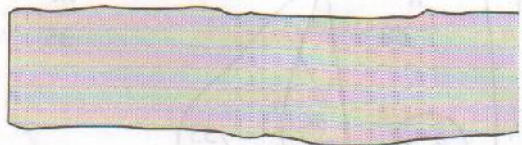
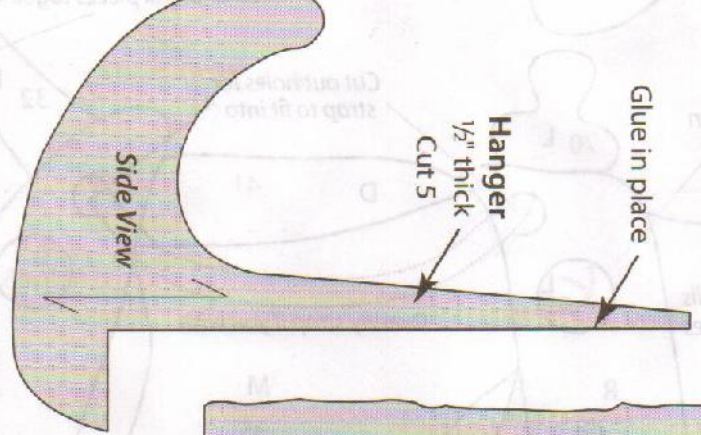
Designer: Zohar Laor



Making a Toy

Page 60 - 22MC 1706-41

15



Hanger

screw (3)

e41

