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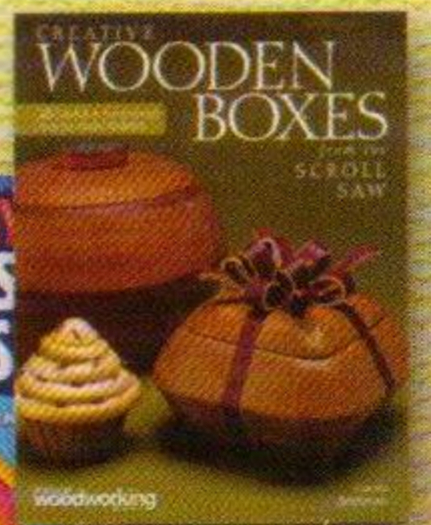
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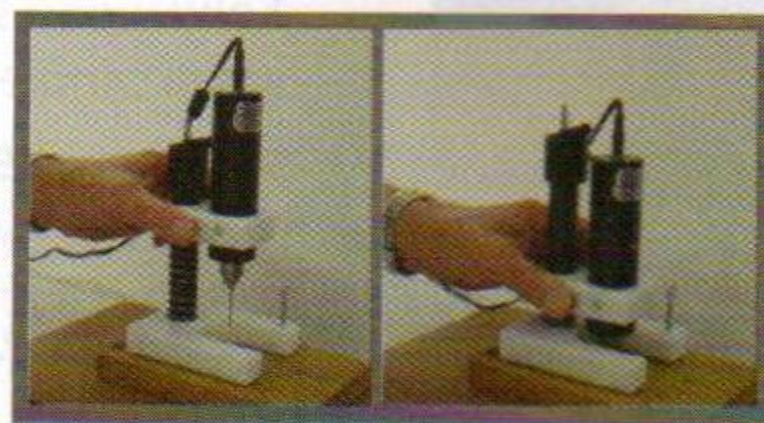
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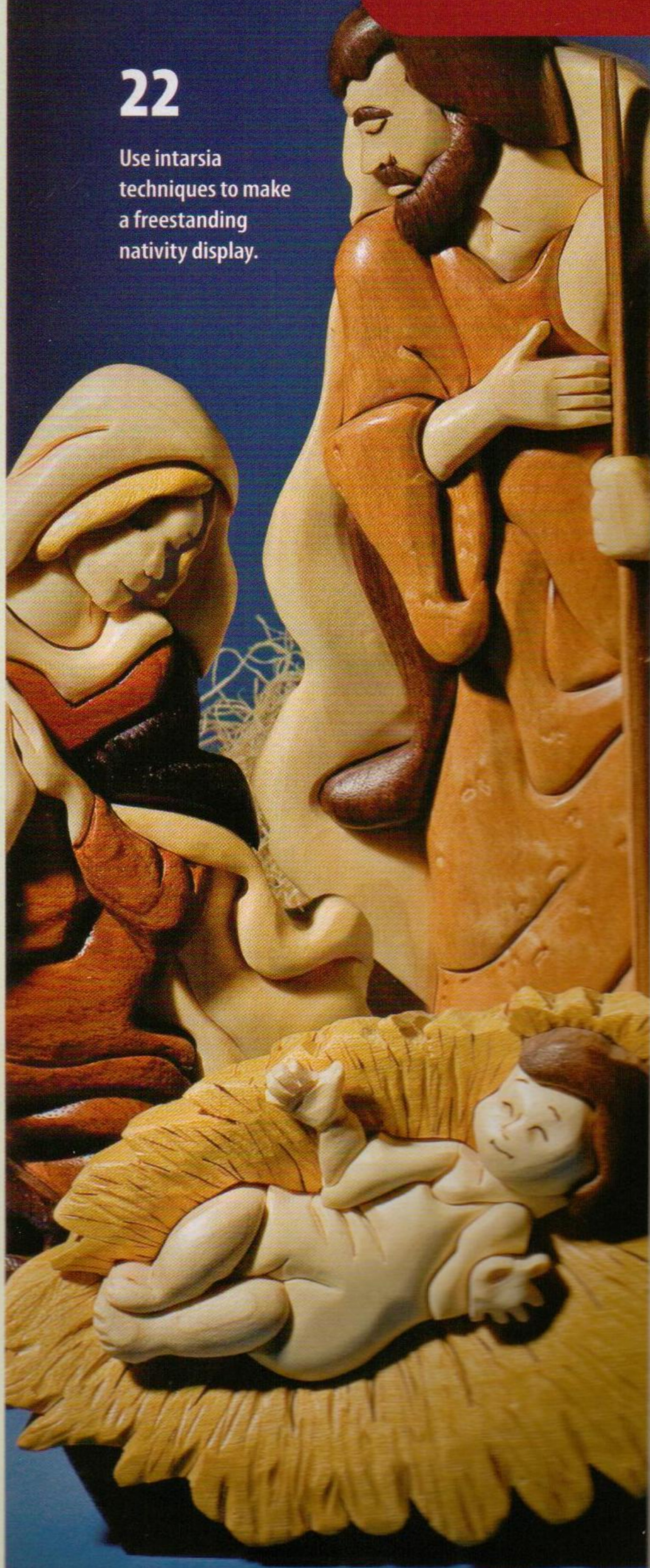


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PATTERNS



29 12 Days of Christmas Tree

By Gloria Cosgrove
 Fretwork tree symbolizes the classic Christmas carol



41 Classic Fretwork Ornaments

By Lora S. Irish
 Traditional designs are perfect for every tree



44 Compound-Cut Candleholders

By Sue Mey
 Solid wood stands support small candles



66 Wooden Bulb Ornaments

By Sue Mey
 Compound-cut designs resemble classic glass bulb ornaments



72 Intarsia Teddy Bear

By Garnet Hall
 Use up your small scraps of wood by making a cute Christmas decoration



74 Crystal Lace Ornaments

By Alison Tanner
 Intricate fretwork designs will have you dreaming of a white Christmas

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18 A Visit to Tim's Toys

By Kathleen Ryan
Woodworker makes simple toys in his tiny shop



22 Heirloom Intarsia Nativity

By Kathy Wise
Create the look of a carved display with these two-sided designs



26 Santa and Stockings Ornament Set

By Ruth Chopp
Personalize the dangling stockings with names or designs



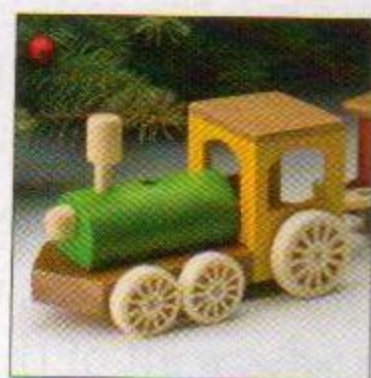
32 Castle and Crossbow Play Set

By Paul Meisel
Fun toy makes it easy to defend your own castle



36 True Love's Gifts Ornament Set

By Judy Gale Roberts
Practice the art of intarsia with lessons from a master designer



46 Constructing a Sturdy Wooden Train

By Adrian Iredale
Durable toy is designed to withstand years of play



54 Squished Santa Puzzle Box

By Carolea Hower
A puzzle and play set in one handy barn-shaped box



61 Making a Maze-Lid Box

By Carole Rothman
Adding a game to the lid makes this box fun as well as functional



69 Tiger Coin Bank

By Paul Meisel
Children will enjoy saving money with this fun gift

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Bonus Enlarged Patterns

- Crystal Lace Ornaments, p. 74
Print larger versions of the intricate patterns for easier cutting.

Convenient Pattern Download

- Compound-Cut Candleholders, p. 44
Simply print the online pattern and get right to work cutting these functional designs.

Web Exclusive Bonus Ornament Patterns

- Victorian Fretwork Ornaments by Kirk Ratajesak
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12 Kinds of Christmas Fun

There's something about the "12 Days of Christmas" that I find delightful. I like singing the song—the verses always get muddled in the middle, and no one can really hit the high notes for "five GOL-den rings." The Muppets' version of the song is my favorite, but some of the parodies are cute, too. There are some great 12 Days picture books; among mine are a pop-up version and one where all of the gifts end up stuffed into the pear tree. And I always get a kick out of the annual calculation of the market value of the gifts—in 2011, the price to buy all 364 items topped \$100,000 for the first time. That's a lot of calling birds and milking maids.

I also like 12 Days-themed holiday decorations. We have two in this issue, each as different from the other as a French hen is from a swimming swan. Our 12 Days of Christmas fretwork tree was designed by Gloria Cosgrove and cut by Dale Helgerson (page 29). Dale chose to add slots to the design and stack-cut two trees to create a 3-D tabletop decoration. Of course you could also cut just one and use it as a wall-hanging. Judy Gale Roberts interpreted the famous days as a gorgeous set of intarsia ornaments made from natural hardwoods. Judy shares her method and tips for making the first ornament on page 36.

Speaking of ornaments, among my first scrolling projects last year were fretwork ornaments for my friends. I hope to reprise the gift with some of the designs from this issue. At first glance, I thought most of them were too difficult for me, and then I looked more closely and realized they're well within my abilities. Sue Mey's complex-looking compound-cut wooden bulbs (page 66) require just a few cuts to make, and Alison Tanner's fretwork snowflakes (page 74) look lacy but require surprisingly few intricate interior cuts. Ruth Chopp's Santas (page 26) are mostly simple perimeter cuts, plus some fun painting. If—when!—I get my ornaments cut, I'll share pictures in our forum, and I hope you'll do the same.

Sharing is definitely part of the fun of scrolling. If you'd like to share the gift of *Scroll Saw Woodworking & Crafts* this Christmas, I encourage you to buy a subscription for your family or friends. Our single-issue price has gone up slightly to compensate for an increase in our postage and printing costs, but the subscription price has stayed the same. A subscription is a great value—you save nearly 40% over the cover price and enjoy the convenience of home delivery. It works out to just 34 cents per project for this issue, which is a bargain by any standard.

I hope you enjoy the projects we chose to celebrate the holidays this year. From heirloom-quality decorations to fun toys, we have a little of everything. Please e-mail photos, share with us on Facebook or our forums, or drop me a note with your thoughts—I'm always eager to hear from you.

Mindy Kinsey

kinsey@FoxChapelPublishing.com

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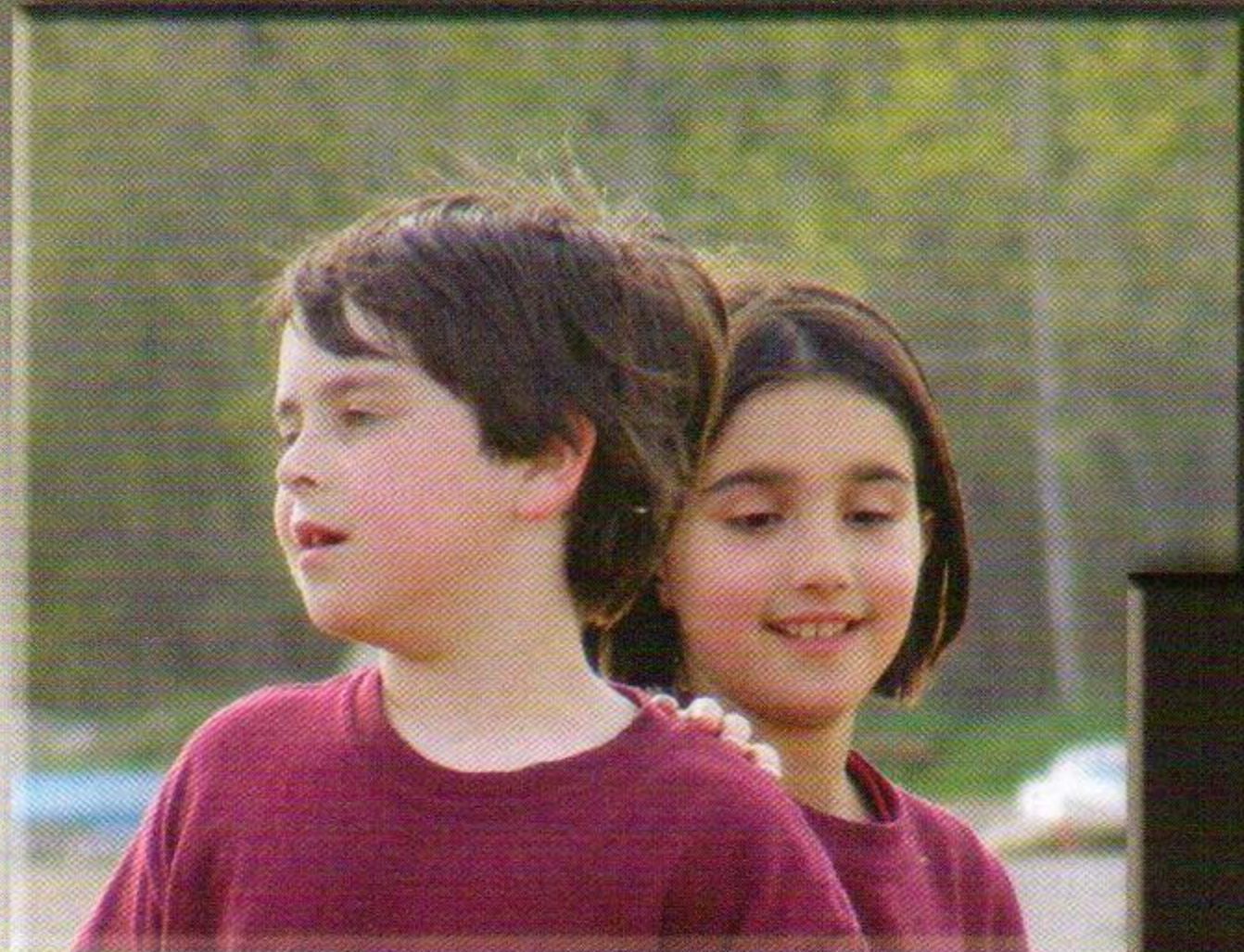
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13th Anniversary Thoughts

As I ran into different *Scroll Saw Woodworking & Crafts* subscribers over the summer, several of them started off with, "Oh, so you're still alive?" While scrollers are famous for enjoying a good joke, I took it as a sign that I've been a bit too quiet lately in the pages of the magazine.

My involvement in the magazine is more behind the scenes nowadays. Mindy Kinsey, Bob Duncan, and Shannon Flowers do an excellent job running the magazine. Sometimes I get a bit jealous—they get to do all the fun stuff, like discovering new contributors and interesting new projects that we'd never hear about otherwise. And, in addition to our regular issues, they have been busy turning out some amazing special issues. The latest is *Gizmos & Gadgets*; see page 13 for information on the cool projects in the issue.

It's hard to believe, but this year marks the 13th year of *Scroll Saw Woodworking & Crafts* and the 21st anniversary of Fox Chapel Publishing, the magazine's parent company. Back when we started SSWC, scrolling was in its heyday. The new high-quality, lower-priced saws were finding eager buyers among crafters, woodworkers, and first-time users. Although things have settled down a bit since then, our job is still the same—finding great talent to introduce to our readers and encouraging scrollers to aim high in their craft.

Over the years we have witnessed amazing growth in the field of scrolling. Our little magazine has somehow managed to find subscribers in 53 countries. Our Web forum, where scrollers go to share info and chat about their latest projects, has more than 1,200 active members and is the largest scrolling forum on the Internet. We're also seeing scrollers use computers and the Internet to design or download patterns and shop for supplies. Sites like Etsy.com are allowing many scrollers to make some money from their craft—a nice bonus in these tighter economic times. And recently, SSWC was chosen by Lowe's, the hardware and home improvement chain, to be featured in the checkout pockets of more than 1,000 of their stores.

One thing I miss is the chance to get together in a big way like we used to at our Open Houses. The last one, held in 2006, drew more than 1,000 people to our office and warehouse in Lancaster County, Pa. It was a bit overwhelming space-wise, but now that we have expanded, we're looking at holding another Open House in 2013. I'd be happy to hear from those who were at our last event—what should we keep or change from last time? Please drop me a note or send an e-mail (alan@foxchapelpublishing.com) with your thoughts.

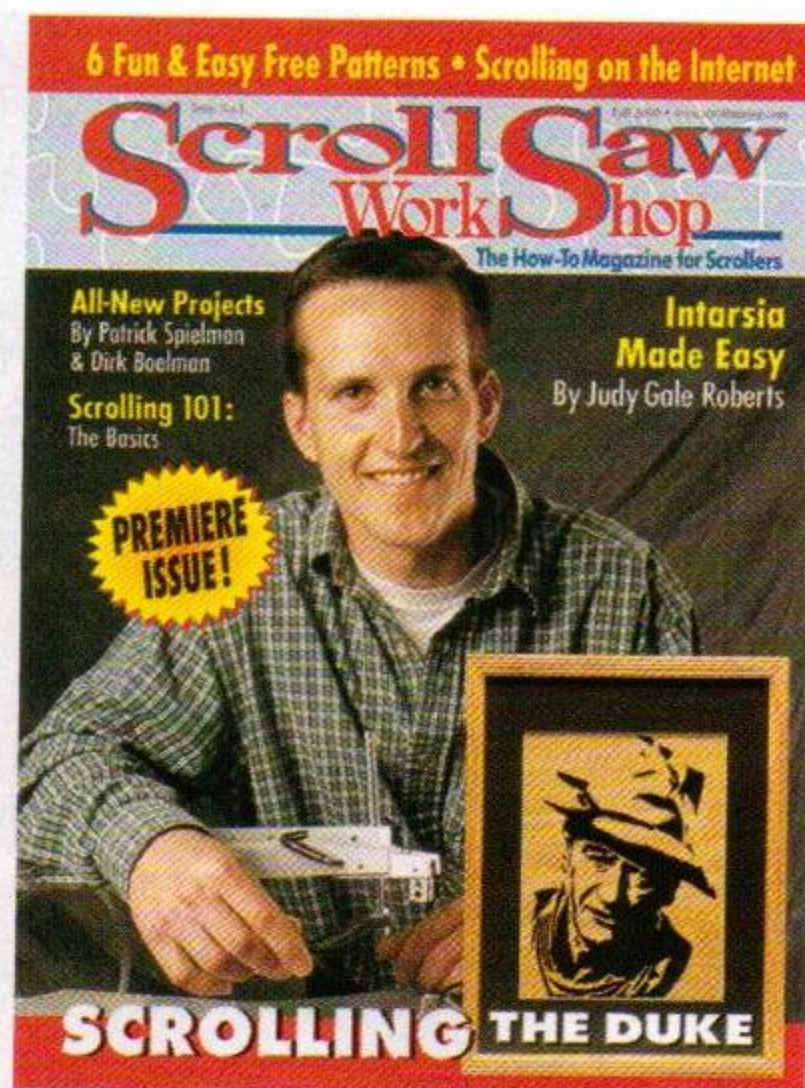
It has been a great 13 years. My thanks to all of our faithful readers, our many talented contributors, and, of course, Shannon, Mindy, and Bob for creating fascinating issues. Together, the readers, contributors, and our team have created a wonderful community of creative scrollers.

Here's to many more years of fun and creativity!

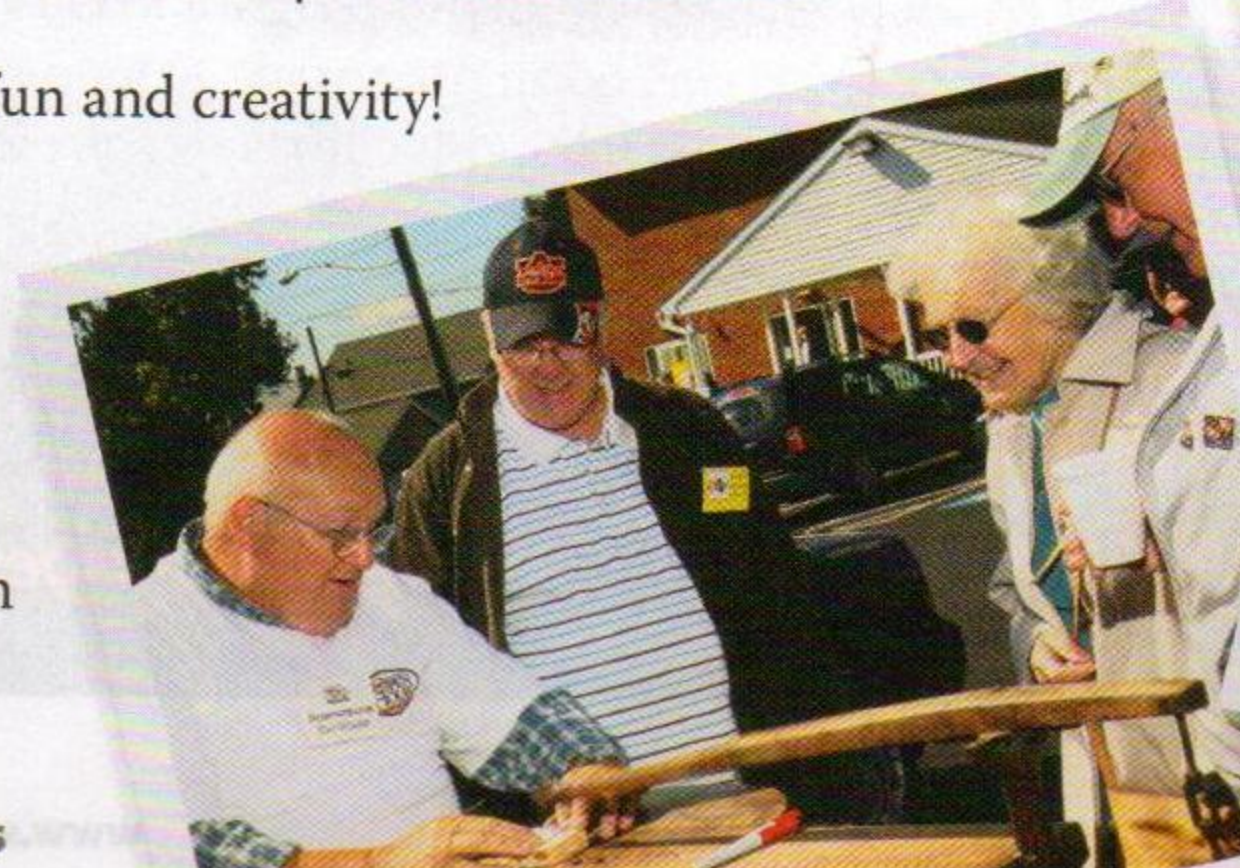
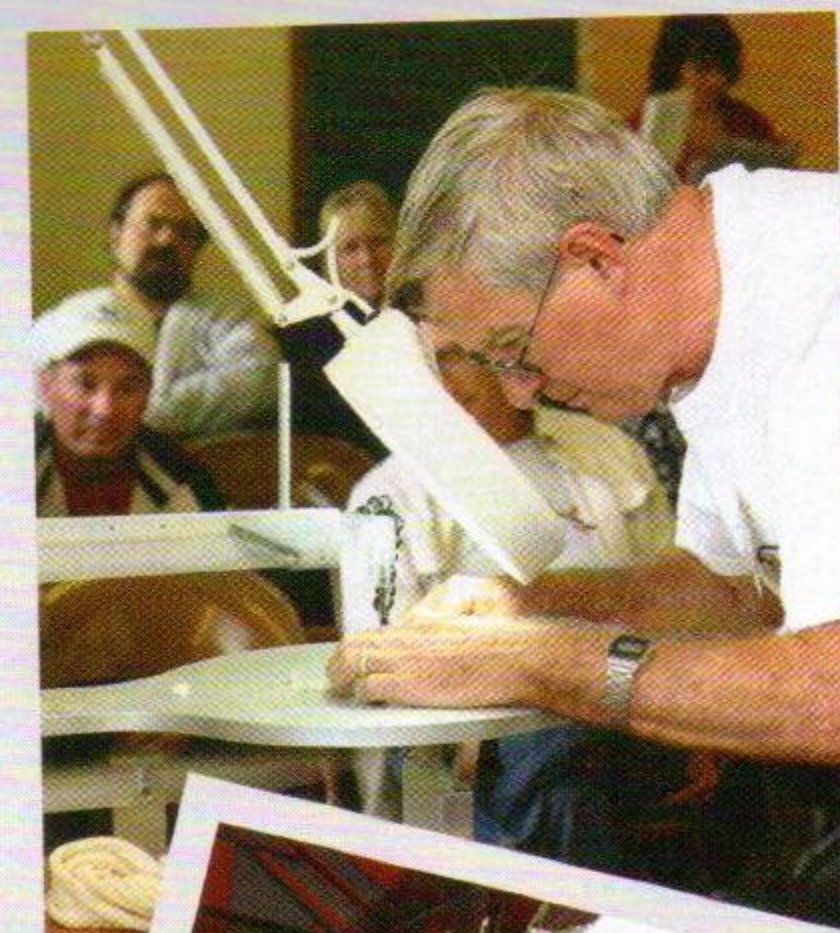
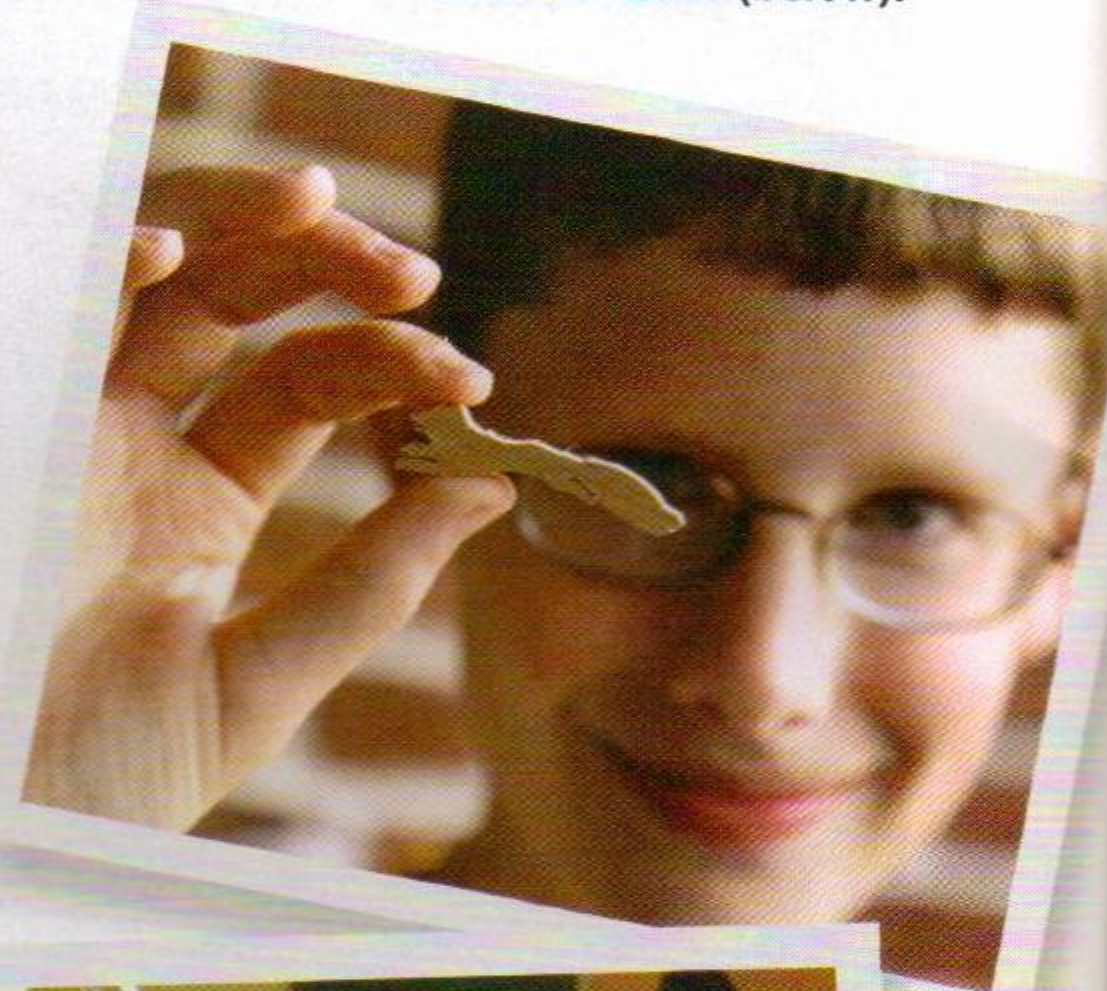
Alan

Alan Giagnocavo
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Our first cover (above) from Fall 2000, and images of our last Open House in 2006 (below).



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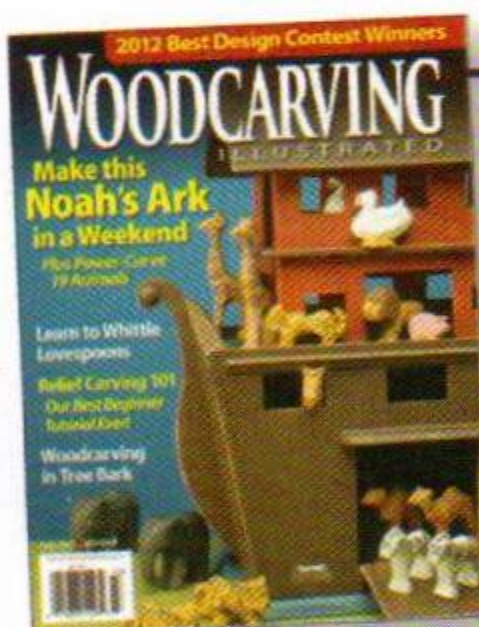


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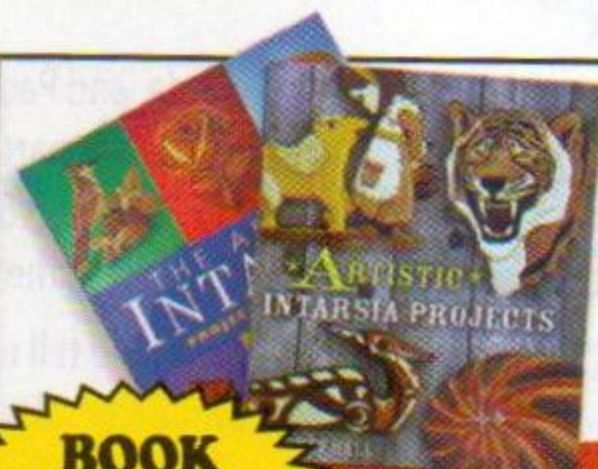
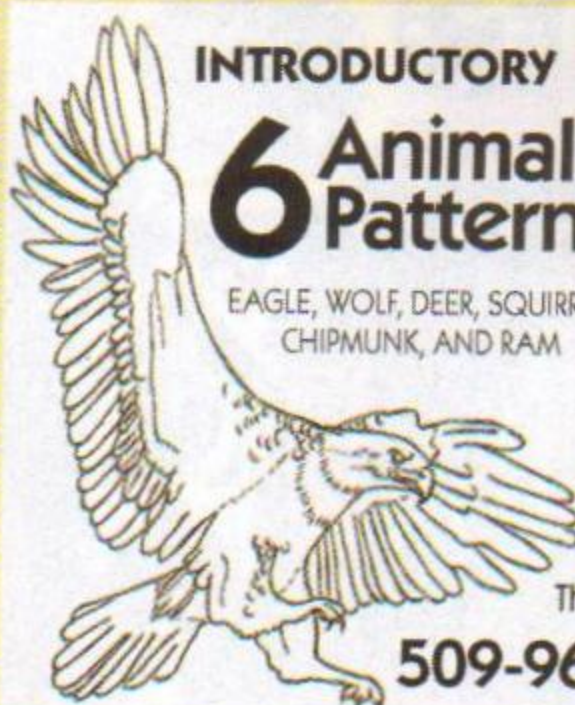
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Wooden Gear Clock

Just want to say a big thank you to Clayton Boyer for the plans for his wooden gear clock. It has been a really fun project. I don't have it fully adjusted yet, but it does run, which surprised me. This is my first clock, and to make a wooden gear clock was always on my bucket list.

If you ever get to run another clock in your magazine, please do! As you can see, I made a few changes to the design, but I am proud of the outcome

Howard C. Adams
Toulon, Ill.

Christmas in July

I would like to see Christmas patterns earlier than when the Holiday issue comes out. All my scroll-sawed Christmas ornaments require painting, and it would be a lot easier if the weather was a little warmer.

Bill Price
Concord, Calif.

Editor's Note: We had a cute monkey ornament in the Fall issue, which hit newsstands in July, and, as you can see, the Holiday issue comes out in September. If that doesn't give you enough time, please visit our website for lots of free patterns, plus pattern books and pattern packs for sale.



Howard Adams' adaptation of Clayton Boyer's wooden gear clock from *SSW&C* Spring 2011 (Issue 42).

Trying Intarsia

I have really enjoyed your magazine over the past year and have made several projects from your plans, learned new techniques, and discovered new suppliers. I had done a lot of intricate fretwork over the years and decided this winter to try my hand at intarsia. I am enjoying this new direction very much. I did want to particularly compliment Kathy Wise. I have just finished

the Frog and Lily Pad Box, *SSW&C* Summer 2012 (Issue 47), and it really is a fun project. Earlier I made a set of her bird Christmas ornaments. Please keep her projects coming! She has a great eye, her projects are creative, and her instructions quite straightforward. I look forward to future projects from Kathy.

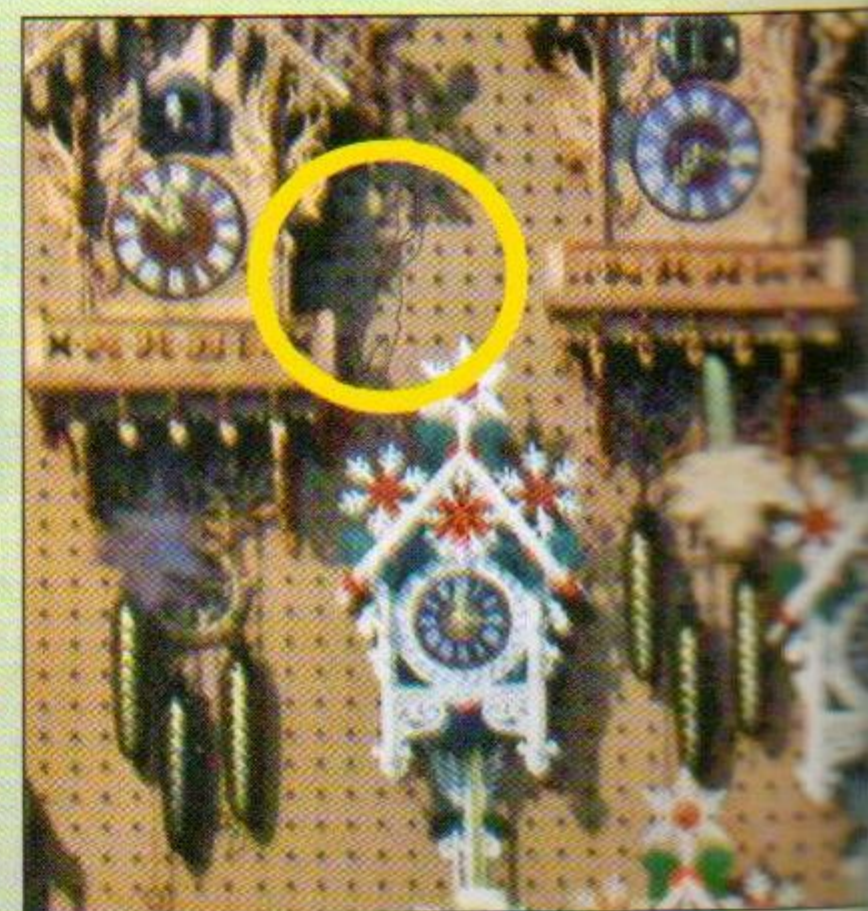
Ken Tesh
Via E-mail

Fox Hunt

Wayne Bogdan of Grayson, Sask., Canada, and Paul E. Baldwin, Jr., of Ocala, Fla., were randomly drawn from the participants who located the fox in our last issue (Fall 2012, Issue 48). The fox was located on page 6 among the cuckoo clocks in the lead photo.

Find the fox in this issue, contact us, and tell us the page number and location. Two readers randomly selected from all correct replies will receive a \$25 Fox Chapel Publishing gift certificate. Entries must be received by November 27, 2012, to be eligible. *NOTE: The contest fox is an outline drawing that would face left if his feet were on the "ground" (other foxes appearing in *SSW&C* don't count).*

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



Out of Ideas?

I purchased your *Boxes, Bowls & Baskets* special issue. I have been buying your magazine since the spring of 1999 and have kept every copy filed with the patterns ever since. This could quite possibly be the last time I purchase your magazine. The last two themed books you have put out are mostly repeat patterns (toys was the other one).

I am thinking that you have run out of new ideas for me, the reader. So, I will continue to make projects from the old books, and thank you for those. But I have no need for repeat patterns.

Linda Breuer
Via E-mail

Editor's Note: I'm sorry you were disappointed in Boxes, Bowls & Baskets, our recent special issue. While some readers enjoy having a selection of similarly themed projects in one issue, others don't care for that format. We guarantee all of our products, so you are welcome to return the issue to us for a refund or exchange. I hope you'll continue to read the regular issues of Scroll Saw Woodworking & Crafts. We usually include 18 to 20 new projects in every issue.

SET IT STRAIGHT

The Fretwork Wall Clock designed by John A. Nelson, which appeared in *Scroll Saw Woodworking & Crafts* Fall 2012 (Issue 48) was cut by Ben Fink, not Leldon Maxcy.

Let's Hear From You

We'd love to hear your thoughts on our projects, ideas for new patterns, scrolling experiences, and woodworking show stories. Write to us at:

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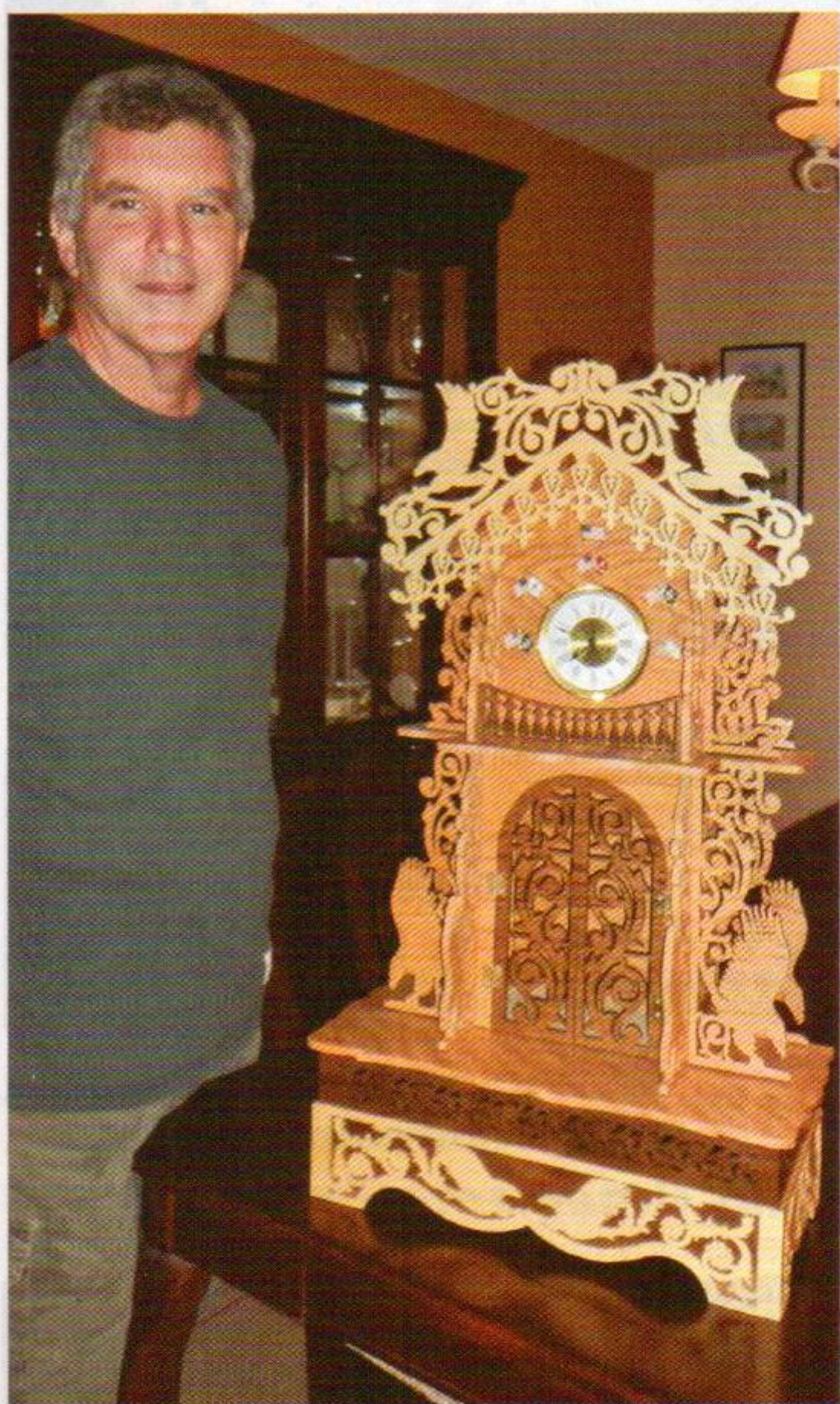
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Golf Course Logo ▶

Ken Ward of Cary, Ill., created this wall hanging based on the logo of the Palatine Hills Golf Course, where he works as a starter/ranger. The logo is made from ¼"-thick wood. Ken used walnut, maple, bloodwood, and yellowheart, and mounted the pieces on a Baltic birch plywood backing board. He made a custom frame from red oak.



◀ **Fretwork Mantle Clock**

Mark Russo of Laurel Springs, N.J., created this clock using plans from the Berry Basket. The clock, called *American Pride Mantle Clock*, is made from red oak, Baltic birch, mahogany, and padauk. To show more American pride, Mark added lapel pins representing the U.S. armed forces, the U.S. Coast Guard, and an American flag around the clock face. The project took Mark 31½ hours to complete.

Wildlife Silhouettes ▼

Louis Kraay of Zeeland, Mich., created this piece using a basswood disc with bark still attached. Louis made patterns of 12 forest animals, arranged them on the disc, and attached them to the disc with spray adhesive. After Louis cut the silhouettes, he applied a spray varnish finish and attached heavy black felt to the back to make the silhouettes stand out.



Share Your Latest Work!

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

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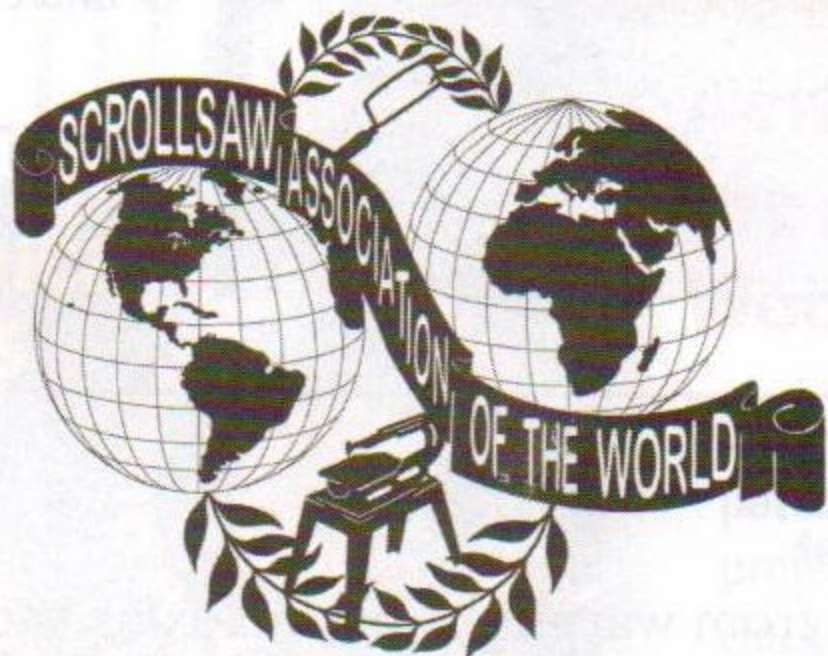
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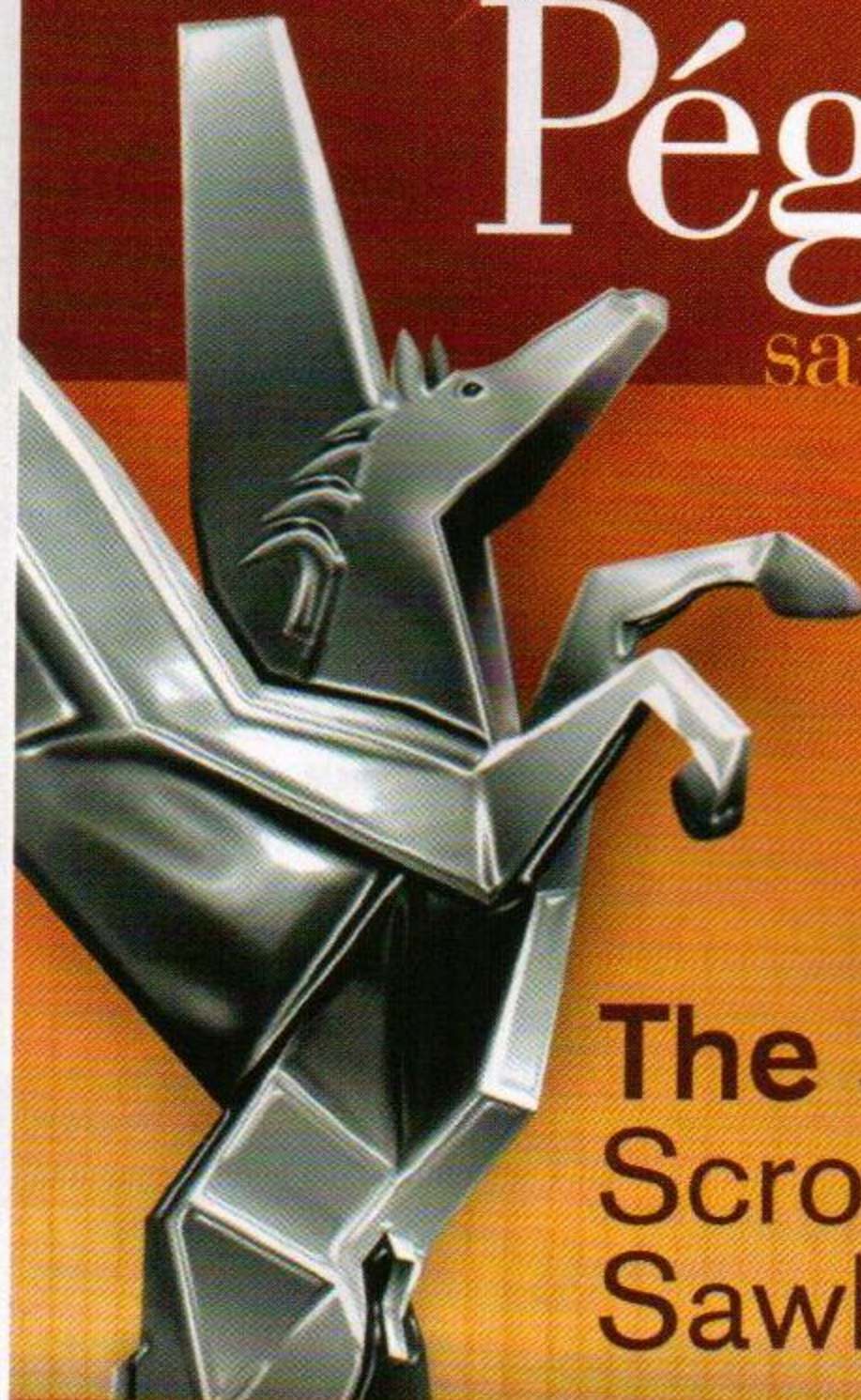
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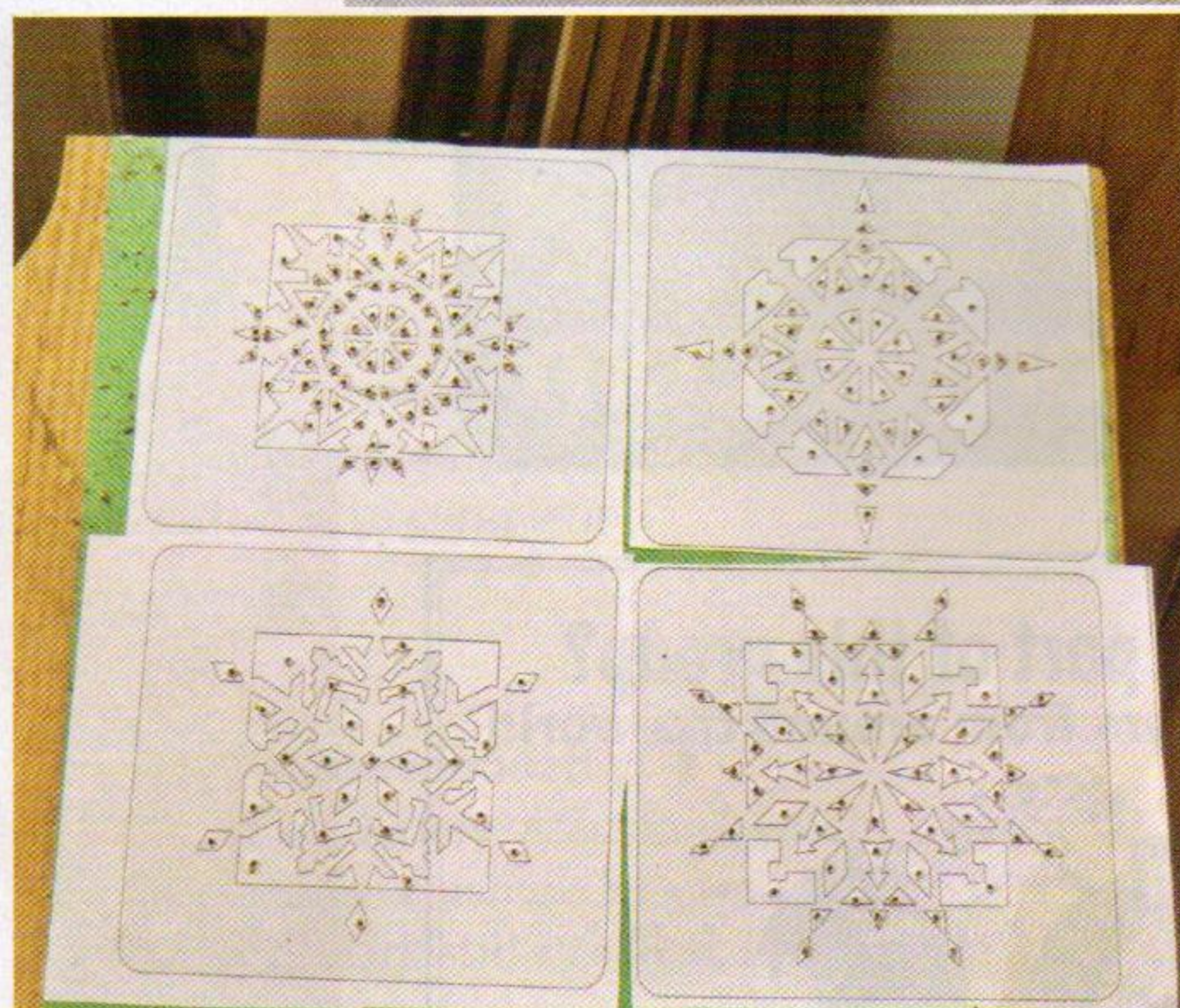
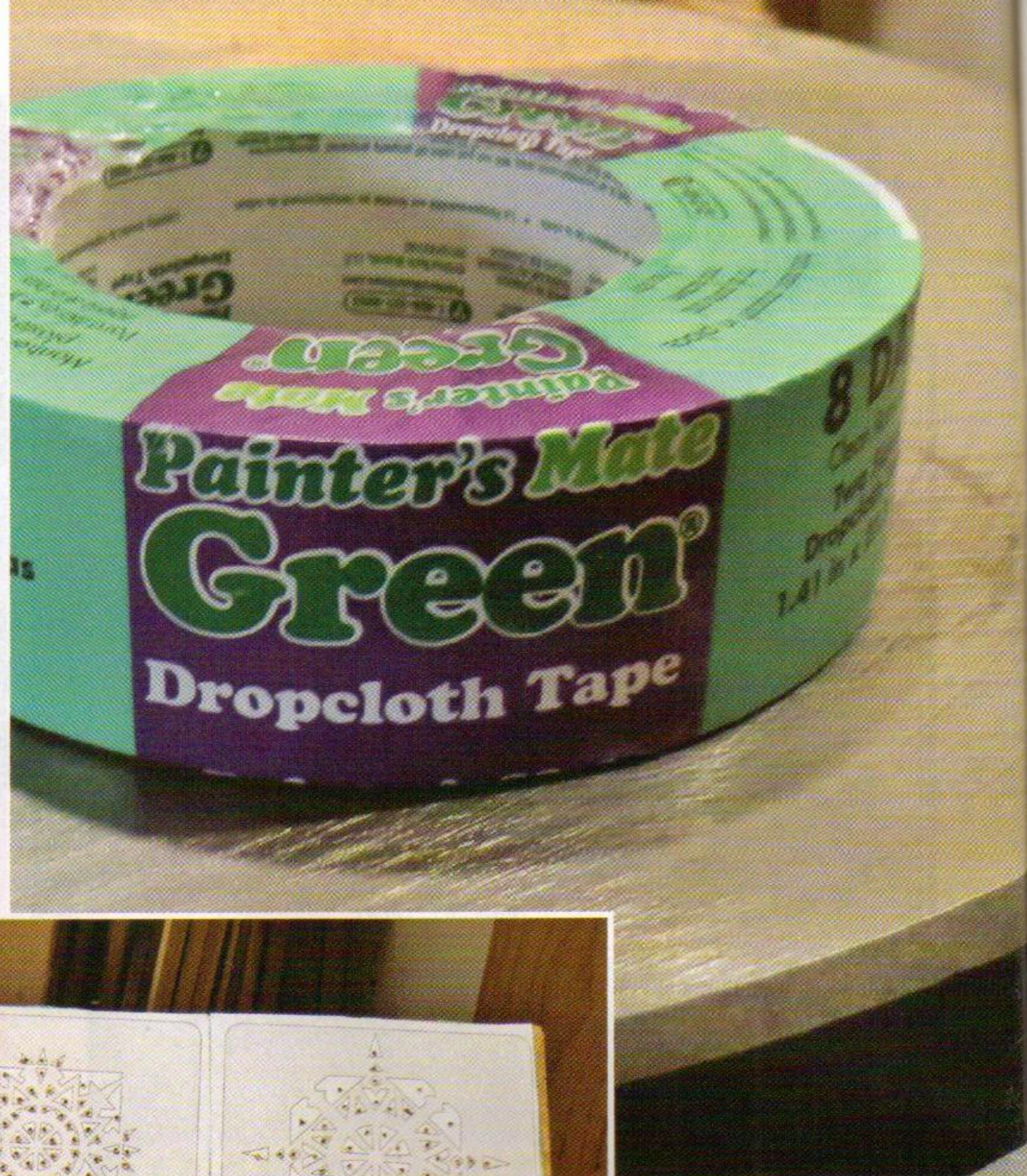
Attaching Patterns to Blanks



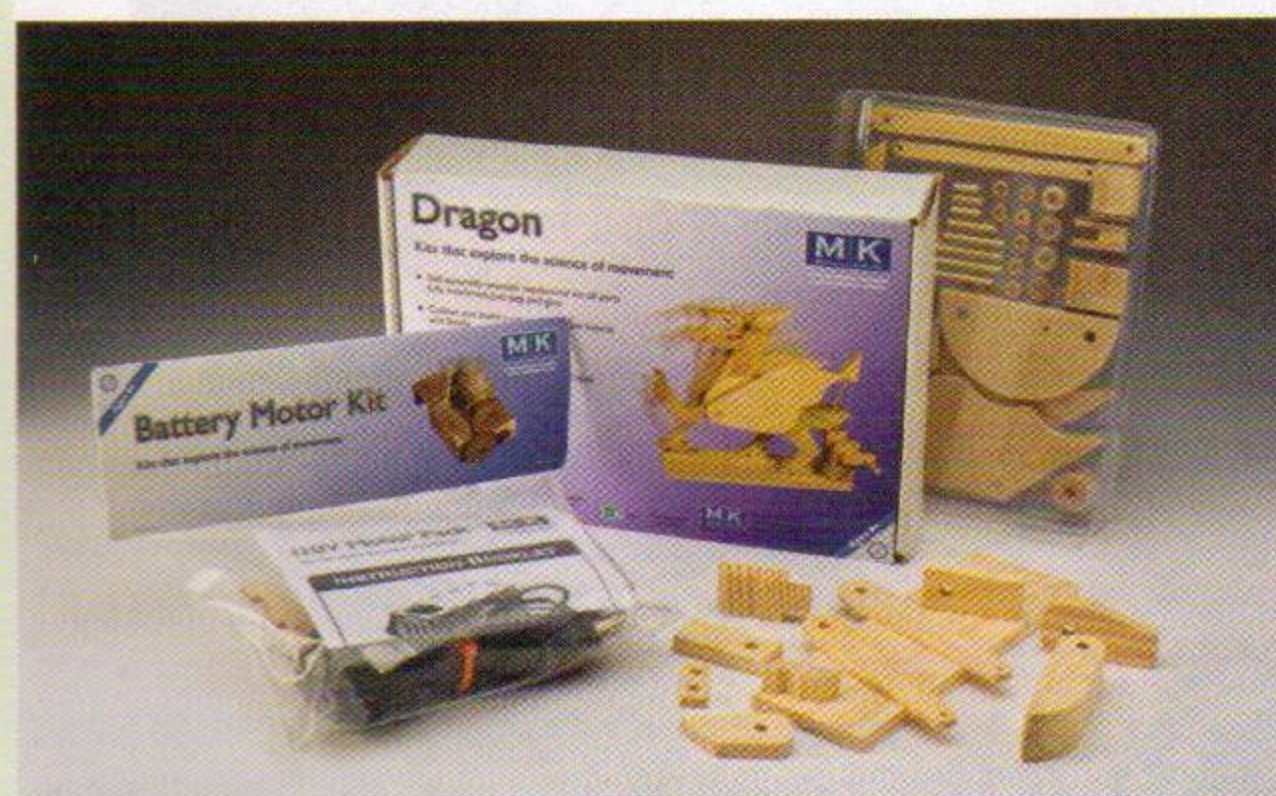
Instead of using messy spray adhesive or glue sticks that don't always stick to wood, I use double-sided dropcloth tape. I found Painter's Mate Green dropcloth tape in the paint section of my local hardware store. Apply the tape to the wood, remove the backing, and place the pattern in position. The tape holds the pattern tightly, but you can lift the pattern off and reposition it as necessary. The tape and pattern are easy to remove after you finish cutting.

Keith Deck
Marseilles, Ill.

Editor's Note: To find a local supplier for Painter's Mate Green dropcloth tape, visit www.paintersmategreen.com.



Double-faced dropcloth tape makes attaching patterns clean and easy.



TOP TIP in our Spring issue wins a dragon automaton kit with an electric motor unit from Timberkits, www.timberkits.com. Send your tips or techniques to Bob Duncan, Fox Chapel Publishing, 1970 Broad Street, East Petersburg, PA 17520, or Duncan@FoxChapelPublishing.com

Keeping Plywood Flat

To keep my plywood from warping, I buy an extra sheet of ½"-thick plywood and cut it to the nominal dimensions of my plywood blanks. I place a ½"-thick piece on a stack of blanks, making sure the sides are square, and then weight the top with concrete stepping stones to prevent warping.

Bob Gatlin
Waco, Tex.

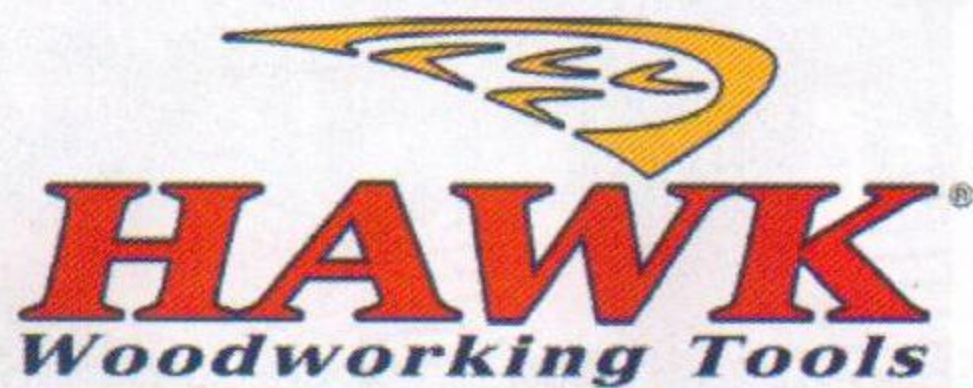
Saving Blades

I keep a box near my saw and save some of my old scroll saw blades. I use them when I rough-cut a piece of wood to size. It saves my new blades for my project.

Howard Lampa
Bonita Springs, Fla.

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Machines That Move!

**New Special Issue from
the editors of Scroll Saw
Woodworking & Crafts**

Gizmos & Gadgets features full-size patterns and instructions for 9 new projects, PLUS the best-selling gear clock from SSW Issue 42!

- Gumball Machine
- Smoke Grinder
- Mini Wooden Padlock and matching Treasure Chest
- Automata & moving sculpture
- And more!

Rapid-Fire Rubber Band Gun

Wooden launch gun shoots rubber bands up to 25 feet

This is a great project for the beginner woodworker. It's a fun and easy project to make and it's a great gift for the holidays. The gun is made of wood and is very sturdy. It can shoot rubber bands up to 25 feet. It's a great project for the beginner woodworker.

Step 1: Cut the pieces. Cut all of the pieces to size. Use a hand saw to cut the pieces. Use a hand saw to cut the pieces.

Step 2: Assemble the gun. Assemble the gun by following the instructions. Use a hand saw to cut the pieces.

Step 3: Test the gun. Test the gun by shooting rubber bands. Use a hand saw to cut the pieces.

Step 4: Finish the gun. Finish the gun by sanding the pieces. Use a hand saw to cut the pieces.

Step 5: Use the gun. Use the gun to shoot rubber bands. Use a hand saw to cut the pieces.

Step 6: Enjoy the gun. Enjoy the gun by shooting rubber bands. Use a hand saw to cut the pieces.

Step 7: Share the gun. Share the gun with your friends. Use a hand saw to cut the pieces.

Step 8: Thank you. Thank you for reading this article. Use a hand saw to cut the pieces.

Step 9: Goodbye. Goodbye to this article. Use a hand saw to cut the pieces.

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SAW Expo

The Scrollsaw Association of the World (SAW) held its biennial convention last July at the Ramada Oasis hotel in Springfield, Mo. The show hosted about a dozen vendors and ongoing educational seminars. Attendees enjoyed door prizes donated by SAW and its supporters, as well as demonstrations on the show floor by Rick Hutcheson and the staff of Bushton Manufacturing, among others. Scrolling enthusiasts gathered for group meals twice to enjoy each others' company and accomplish SAW's annual business meeting.

The scrolling contest was the highlight of the weekend. Dozens of entrants competed in 12 categories comprising various levels of fretwork, intarsia, shadow art, open, and junior. The Best of Class winners were Ean Bonjour, Stillwater, Okla.; Katie Nielsen, Stillwater, Okla.; Gail Musser, Sapulpa, Okla.; and Mike Binney, Goose Creek, S.C. The Best in Show winner was Gail Musser, and the Scrollers' Choice award went to Jerry Payne of Willard, Mo. For a complete list of winners, please visit SAW's website.

The next SAW Expo will take place in 2014; the location has not yet been determined. For more information about the organization, please visit www.saw-online.com.

Steve Garrison of Russellville, Ark., presented a class on making spiral shells.



Jerry Payne of Willard, Mo. (right) accepts the Scrollers' Choice award, for his intarsia piece, *Family Affair*.



Expo organizer Gene Jamtgaard (left) presents the Best in Show award to Gail Musser of Sapulpa, Okla., for her intarsia piece, *Autumn Leaves*.

Niki Orth of Bushton Manufacturing demonstrated Hawk scroll saws.



Midwest Scroll Saw Trade Show

Bustling crowds and busy vendors characterized the Midwest Scroll Saw Trade Show, held as usual during the first weekend of August in Richland Center, Wisc. The show had several new vendors and seemed to enjoy an uptick in attendance. The class schedule was packed and full of interested students; Michele Parsons' woodburning classes were especially popular.

The Friday night banquet is always a fun social gathering for scrollers and vendors alike. This year, it included an entertaining slideshow by members of the Veterans Freedom Center in Dubuque, Iowa, highlighting the features of their new facility. The VFC teaches scroll sawing, and members have used scrolling projects both as gifts to veterans and fundraisers for the facility. The VFC also hosted a booth at the show with demonstrations of scrolling and turning, as well as hands-on projects that attendees made for veterans.

Scrollers entered their work in nine competition categories, filling the display area with fretwork, intarsia, and other scrolled artwork. The Best in Class awards were won by Allan Wilkins, Curtis Gray, and Nathan Krupp. Nathan also won the Best in Show award for his fretwork cuckoo clock. Don Fry won the Scrollers' Choice award, and Ben Krupp won the Junior Scroller award.

The Midwest Scroll Saw Trade Show will take place again next August. Visit www.midwesttradeshow.com for dates and location.

Scroller and SSWC test-cutter Dale Helgerson served on the contest judging panel.

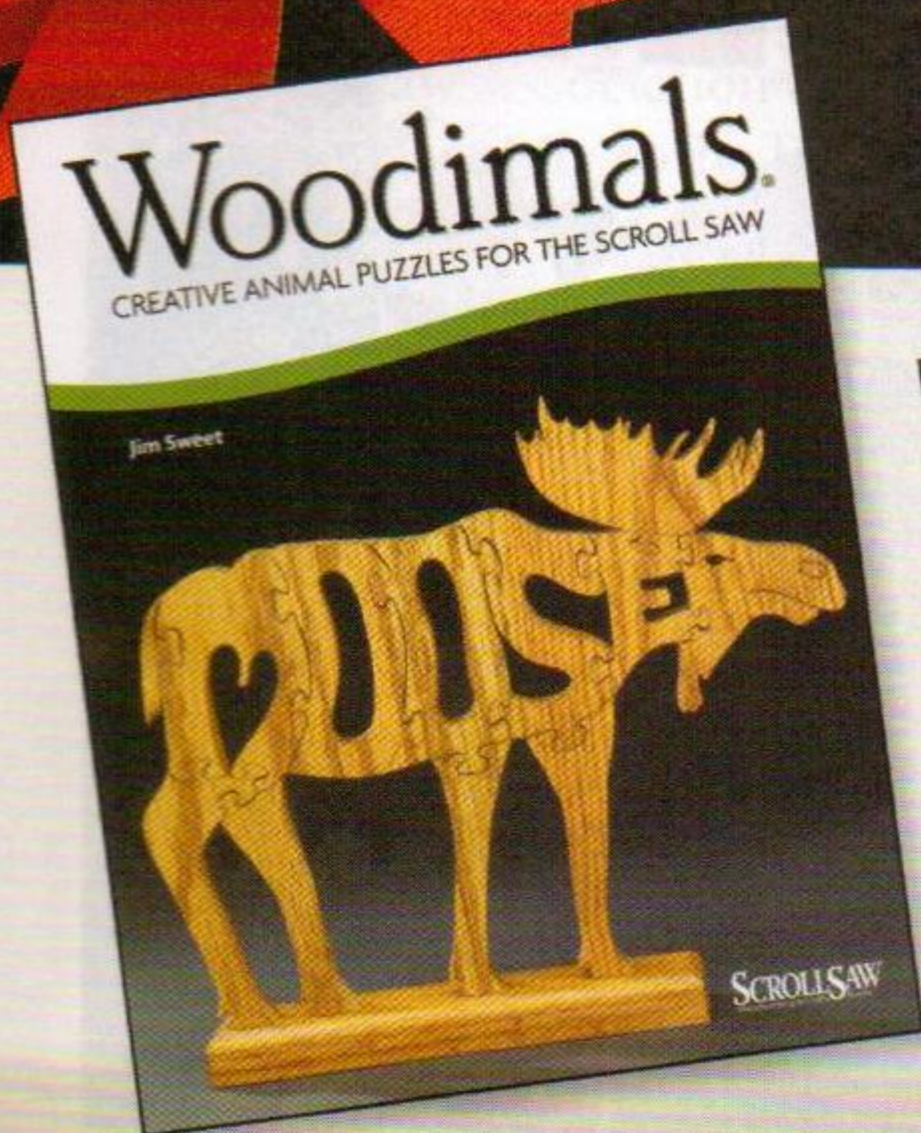


Nathan Krupp won both a Best in Class and the Best in Show awards for his fretwork cuckoo clock.



Show organizer Dirk Boelman (left) presents the Scrollers' Choice award to Don Fry.

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By Jim Sweet
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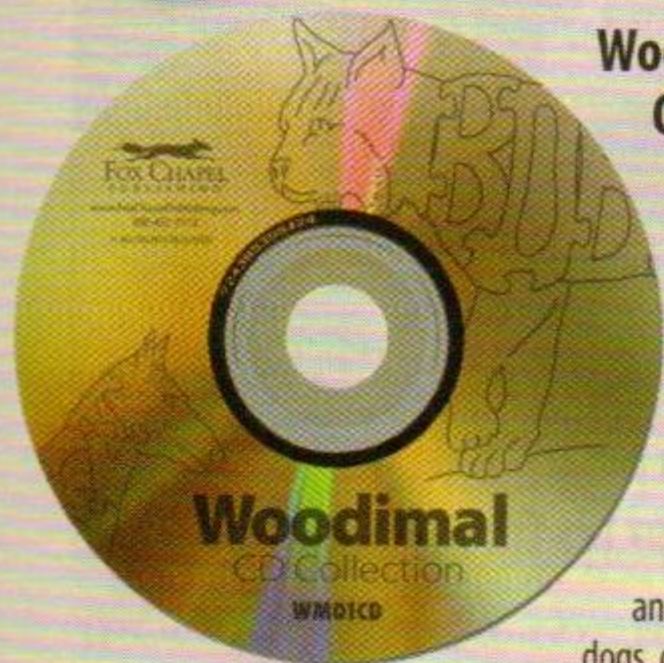
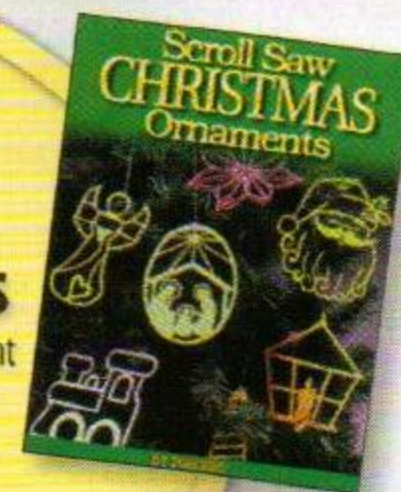
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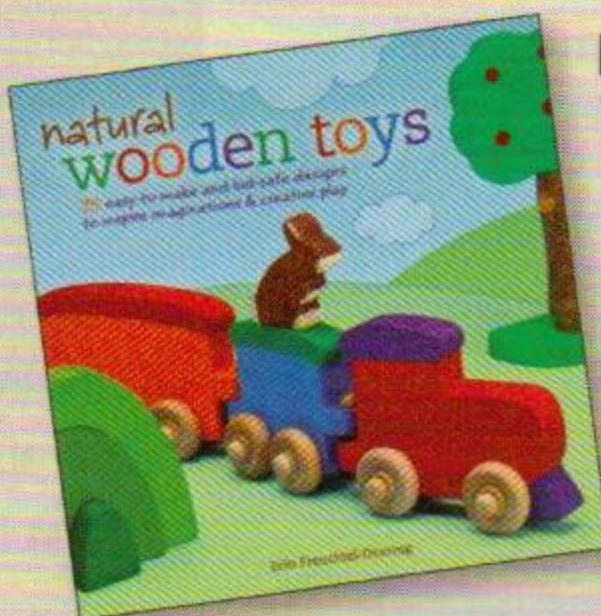
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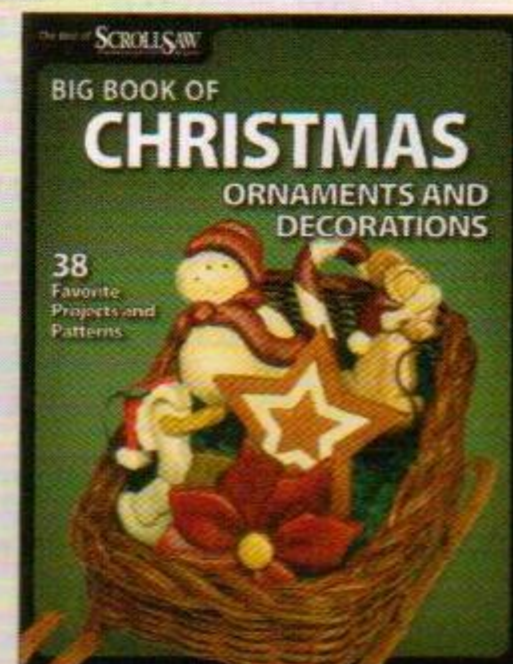
75 Easy-To-Make and Kid-Safe Designs to Inspire Imaginations & Creative Play
By Erin Freuchtel-Dearing

Learn how to make

safe, colorful, and irresistible

imagination-building wooden toys.

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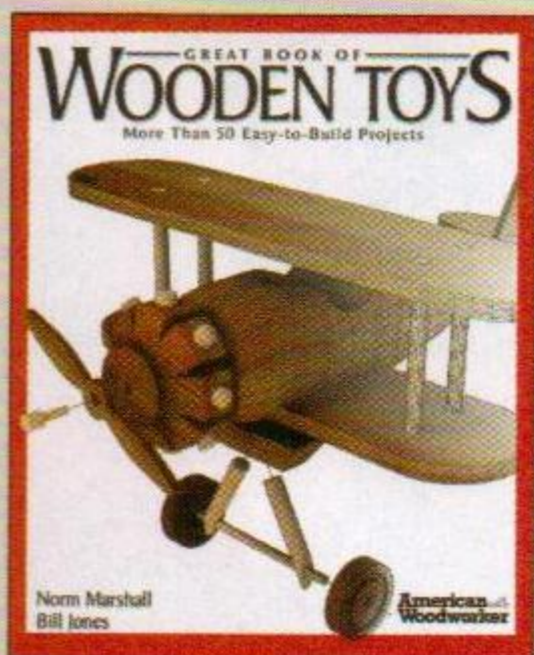
Big Book of Christmas Ornaments and Decorations

38 Favorite Projects and Patterns
By the Editors of Scroll Saw Woodworking & Crafts

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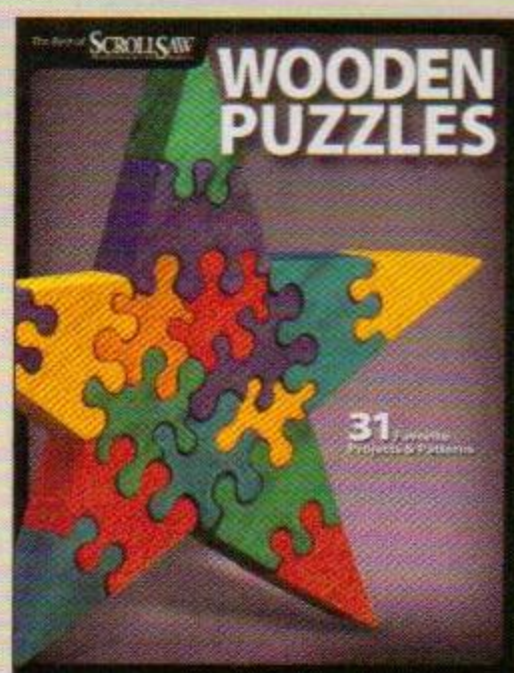


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More Than 50 Easy-to-Build Projects

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Over 50 easy to follow projects for building classic wooden toys, including a Model T car, a bulldozer, steam engine, biplane and many more.

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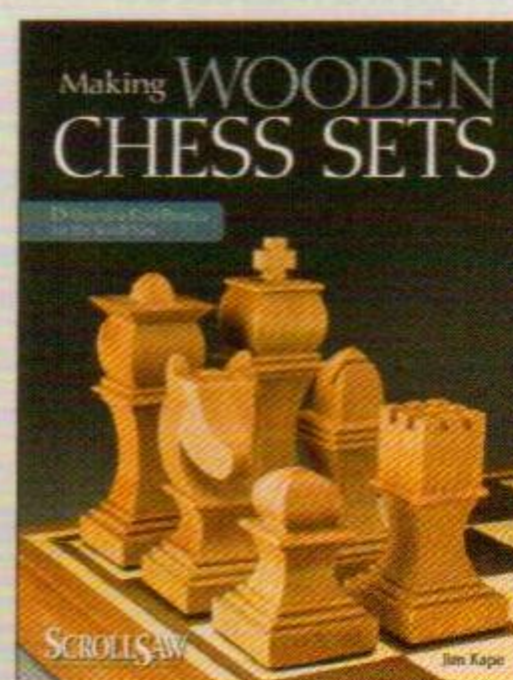


Wooden Puzzles

31 Favorite Projects and Patterns

By the Editors of Scroll Saw Woodworking & Crafts
Puzzle makers will love this collection of the most popular puzzles from the pages of Scroll Saw Woodworking & Crafts.

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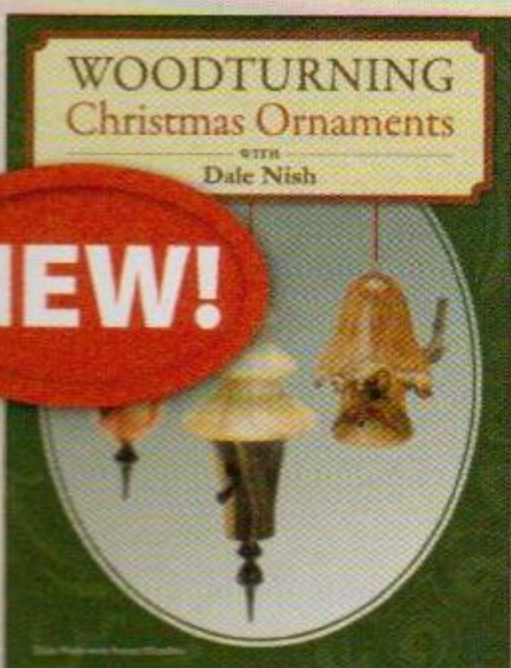


Making Wooden Chess Sets

15 One-of-a-Kind Projects for the Scroll Saw

By Jim Kape
Includes all the know-how and patterns you need to create 15 unique chess sets, each inspired by the classic architectural beauty of cities like Paris, San Francisco, Berlin, Venice and more.

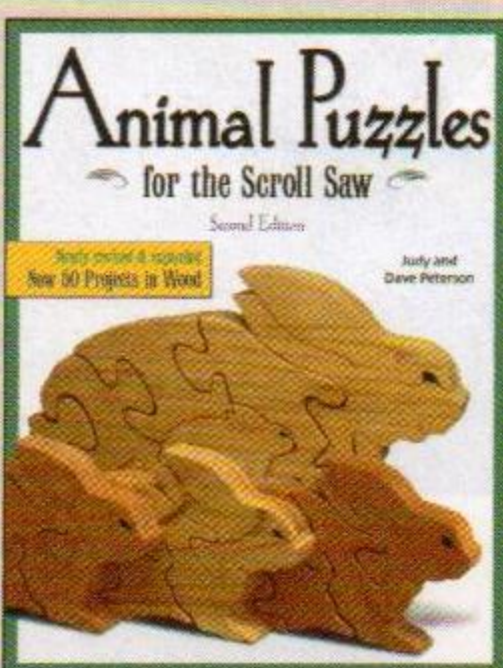
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Woodturning Christmas Ornaments with Dale L. Nish

Master woodturner Dale Nish shares his best projects and techniques for making 12 wooden ornaments.

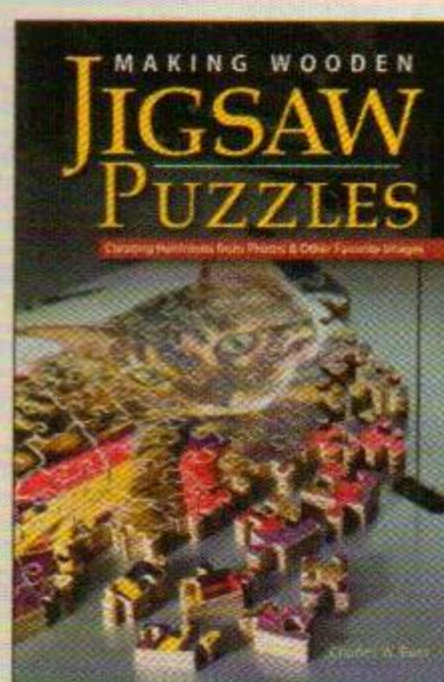
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Animal Puzzles for the Scroll Saw, 2nd Edition

Revised & Expanded, Now 50 Projects in Wood
By Dave & Judy Peterson
Create fascinating puzzles for your furry and feathered friends.

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Making Wooden Jigsaw Puzzles

Creating Heirlooms from Photos & Other Favorite Images
By Charlie Ross
Add a new twist to puzzle making and puzzle solving, by making personalized puzzles from photos and digital images.

\$14.95
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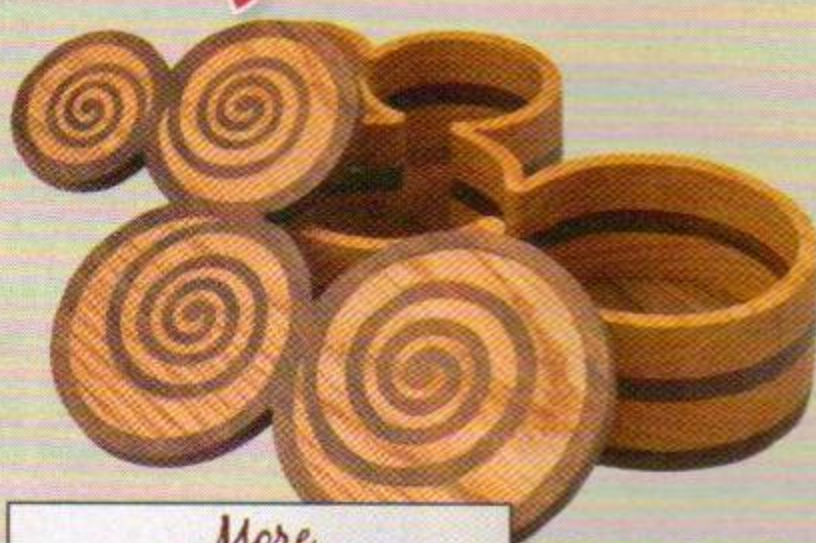
New Books for Stylish Scroll Saw Projects



Fresh Designs for Woodworking
Stylish Scroll Saw Projects to Decorate Your Home

By Thomas Haapapuro
Awaken your modern design aesthetic with 21 striking contemporary designs for scroll saw woodworking.

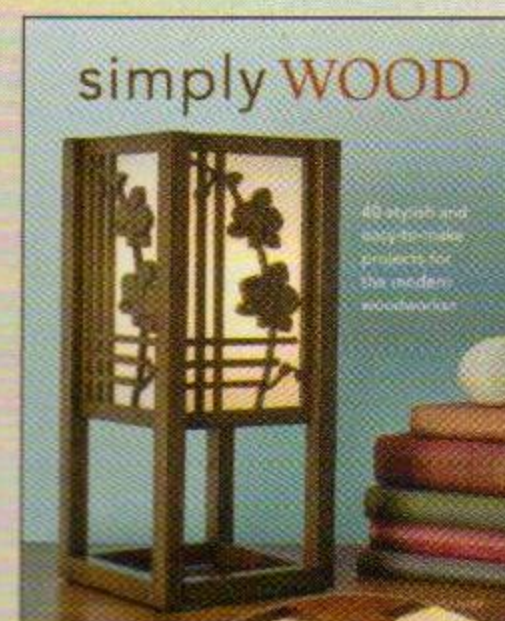
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More Fresh Designs for Woodworking Pattern Pack

By Thomas Haapapuro
Nine additional original and artful projects for the scroll saw from Thomas Haapapuro.

\$9.99
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Simply Wood
40 Stylish and Easy To Make Projects for the Modern Woodworker

By Roshan Ganief
A bright, creative force in scroll sawing breathes new life into the craft with modern, hip designs for decorating the home.

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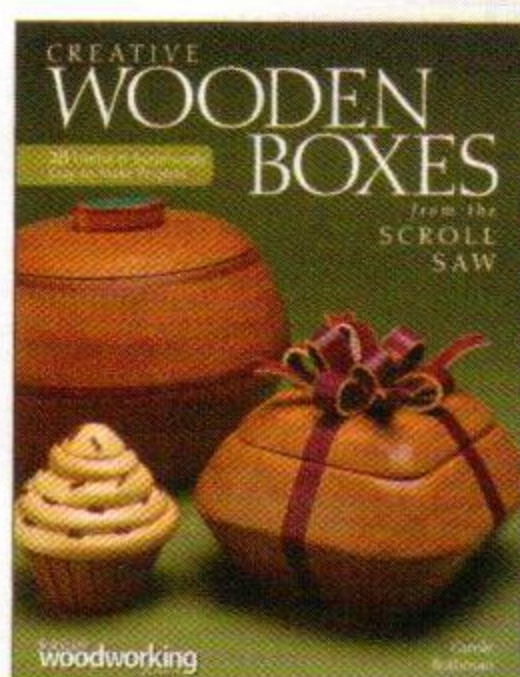


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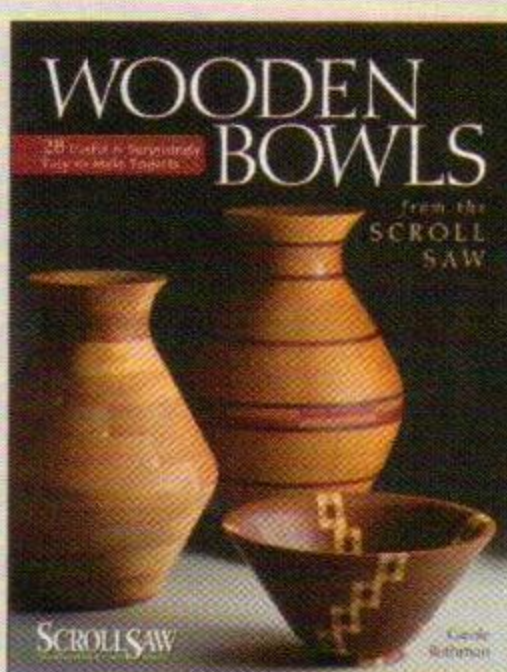
Creative Wooden Boxes from the Scroll Saw

28 Useful & Surprisingly Easy-to-Make Projects

By Carole Rothman
Use the versatility of the scroll saw to make extraordinary projects like bandsaw-style boxes,

jewelry boxes, lidded boxes and more.

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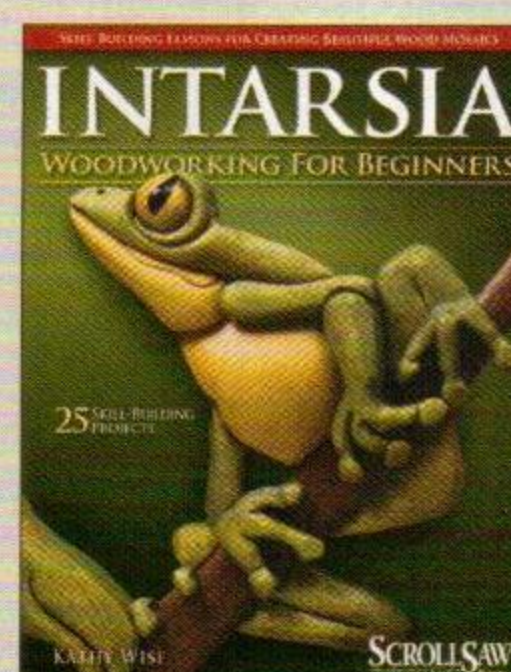


Wooden Bowls from the Scroll Saw

28 Useful and Surprisingly Easy-to-Make Projects

By Carole Rothman
Create amazing bowls, vases, candy dishes, and jars with just a flat piece of wood and your scroll saw.

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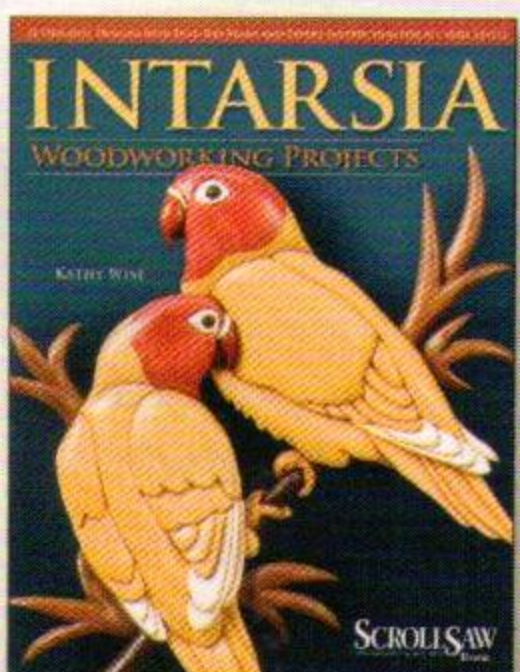


Intarsia Woodworking for Beginners

Skill-Building Lessons for Creating Beautiful Wood Mosaics: 25 Skill Building Projects

By Kathy Wise
Learn the art of intarsia with this skill building guidebook.

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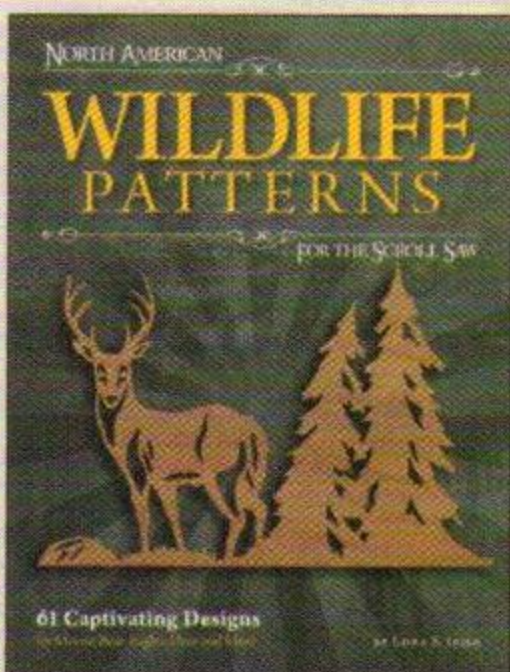
Intarsia Woodworking Projects

21 Original Designs with Full-Size Plans and Expert Instruction for All Skill Levels

By Kathy Wise
This original collection of 21 full-size patterns captures the beauty of

wildlife and the magnificence of the great outdoors.

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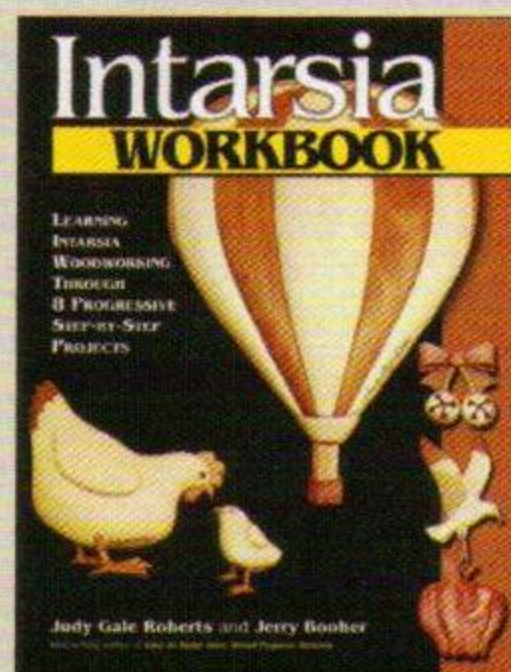
North American Wildlife Patterns for the Scroll Saw

61 Captivating Designs for Moose, Bear, Eagles, Deer and More

By Lora S. Irish
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A Visit to Tim's Toys

**Woodworker makes simple
toys in his tiny shop**

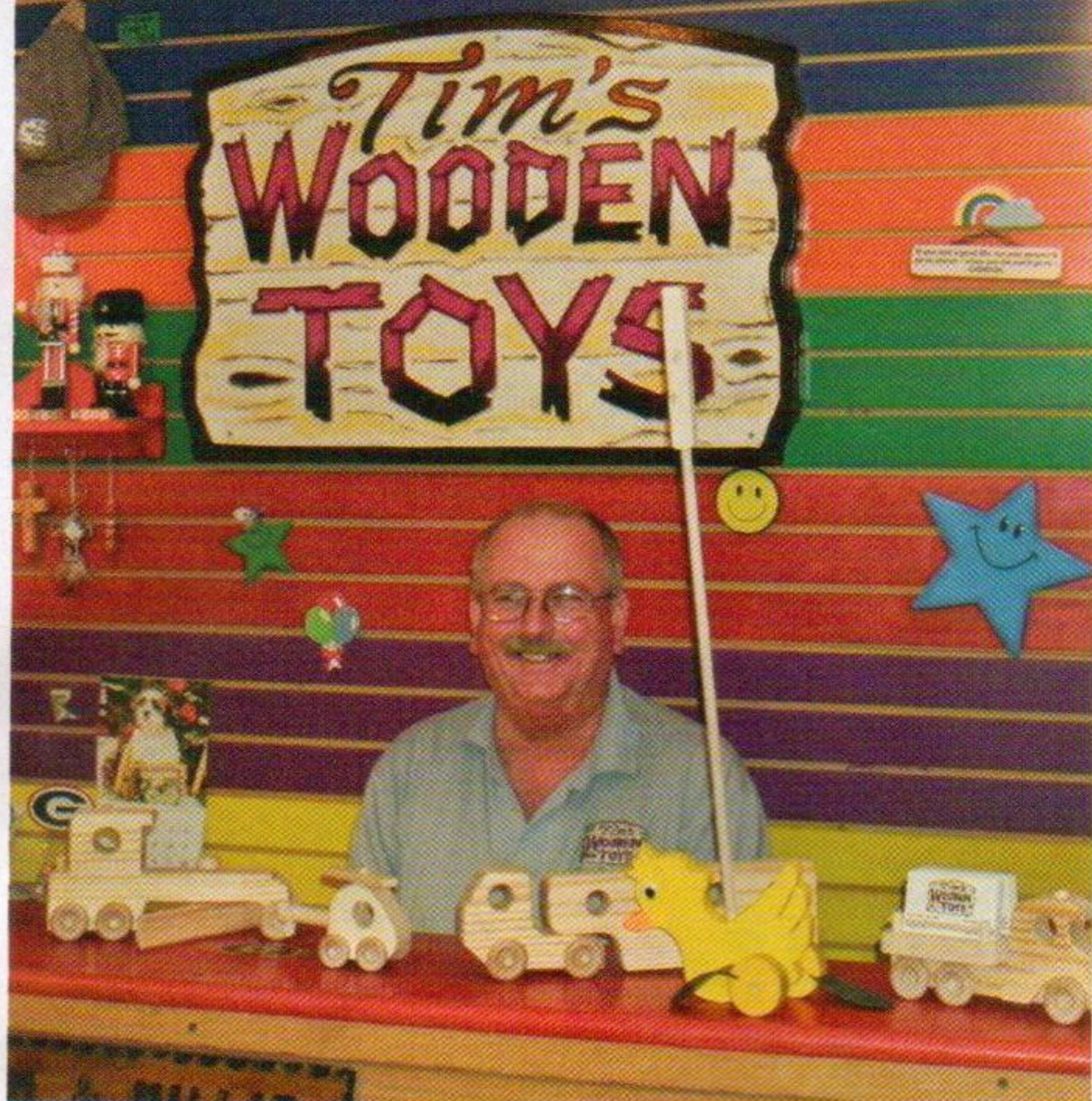
By Kathleen Ryan

Tim Bramlett is no Geppetto, but the way the 57-year-old toymaker's handmade wooden toys fly off the shelves is magical. Tim's Wooden Toys is located in the Bavarian tourist town of Helen, Ga., and you can hear giggles and squeals of delight spilling onto the sidewalk before you open the door. "I wanted my shop to be a place where kids and adults could come to play and forget about stress and pressures of everyday life—a place where everyone leaves with a smile," Tim said.

Over the past 23 years, the prolific toymaker has created more than 300 original designs and produced 500,000 toys. Tim lines his colorful shelves with traditional push and pull toys, cars, trucks, trains, airplanes, helicopters, hobby horses, toolboxes, puzzles, and games. Every toy in the shop is handmade by Tim.

Rather than posting "Do Not Touch" signs, Tim encourages visitors to try the toys. "We have many simple games throughout the shop to play with, as well as store challenges for adults and kids. There is also an indoor shooting range where they can try out the rubber band guns or ping-pong shooters, along with a track to test-drive the vehicles," he said. "We play all the time, and we encourage customers to do the same. We have to grow older, but we never have to grow up."

Another unique aspect of Tim's Wooden Toys is the workshop—a 5½' by 7½' room built into a back corner of the store. It has a big window where folks can watch Tim create new toys. "People seem to enjoy watching me work," Tim said. "They knock on the window and wave at me, or give me a thumbs up and take pictures of me working. I often hear, 'Wow, he's



Toymaker Tim Bramlett with some of his designs.

really making it.' Many people want to buy the actual toy they watch me make, so a lot of my toys never even hit the shelves."

Tim has no shortage of ideas for new toys. "Adult customers often tell me about something from their childhood they'd like me to make. Kids ask if I could change a toy by adding this or that," he explained. "Many of my new designs actually come from mistakes I've made while trying to make something else. I'll mess it up and then recreate it into something different so as not to waste the wood or the work."

Tim made toys as a hobby and sold them at craft shows around the country for 20 years before he and his wife, Millie, decided to open the shop. He chose the location carefully. "I have to have a large flow of constantly changing customers, so a tourist town works great for me. It's also important to know your competition and be true to yourself. Don't try to make what you think will sell; make what you like and have a passion for, and it will sell. And when you make a little money, save it to help you survive the slow times. But mostly, have fun! If you don't, then why bother?"

Tim's Wooden Toys has enjoyed tremendous success even in a slow economy. "We've experienced big jumps in sales each year since opening the shop four years ago," he reported. "I think this goes to show that handmade and American-made items are still very much sought after and appreciated. God has really blessed me with a job and life I love, and I want to share it with everyone. Come by to see what I saw anytime. I'm always here, and sawdust is always flying!"

Ten Tips for Making Toys

By Tim Bramlett

The art of making wooden toys has been around a long, long time. Here are a few practical tips that I've come up with to help make toymaking more safe, economical, efficient, and fun.

- 1. Reuse:** Scraps are a great resource that you've already paid for. Keep a box under or beside the saw for all scraps. Even small pieces or mistakes can be turned into new toys.
- 2. Resize:** Enlarge or reduce the size of your favorite pattern to create a whole new line of toys.
- 3. Reorganize:** Never hunt for a pencil again. Use scrap pieces of wood as pencil holders. Drill two holes in them and screw them to the wall all around the shop.
- 4. Recycle:** The plastic dividers in the frozen food section of the grocery store are great for making patterns and cut easily with scissors. Ask your grocer for old dividers.
- 5. Refresh:** To cut down on airborne dust in your shop and breathe easier, attach a cheap air conditioner filter to the back of a basic box fan.
- 6. Retrieve:** Cut a worn-out sanding belt into 2"-long pieces and keep one in your apron pocket where you can retrieve it easily for quick touch-ups on any rough edge.
- 7. Retain:** Make cleanup easier and keep sawdust and chips from blowing all over the shop by placing a low level box around the drill press or under the scroll saw.
- 8. Research:** Check out the wood molding section at the lumber store for easy alternate uses. Lattice strips make great airplane wings, and corner molding is perfect for bulldozer blades.
- 9. Rethink:** Sitting around watching television is a good time to attach a wheel to an axle to speed up production later.
- 10. Recreate:** For a quick, simple, and fun top, cut a 1/4"-diameter dowel into a 2"-long section. Sharpen one end, insert it into a leftover toy wheel, and then paint as desired.

Visit Tim's Wooden Toys at 8635 Main St., Unit 8 Swiss German Plaza, Helen, Ga. 30545 or timswoodentoyshop.com.

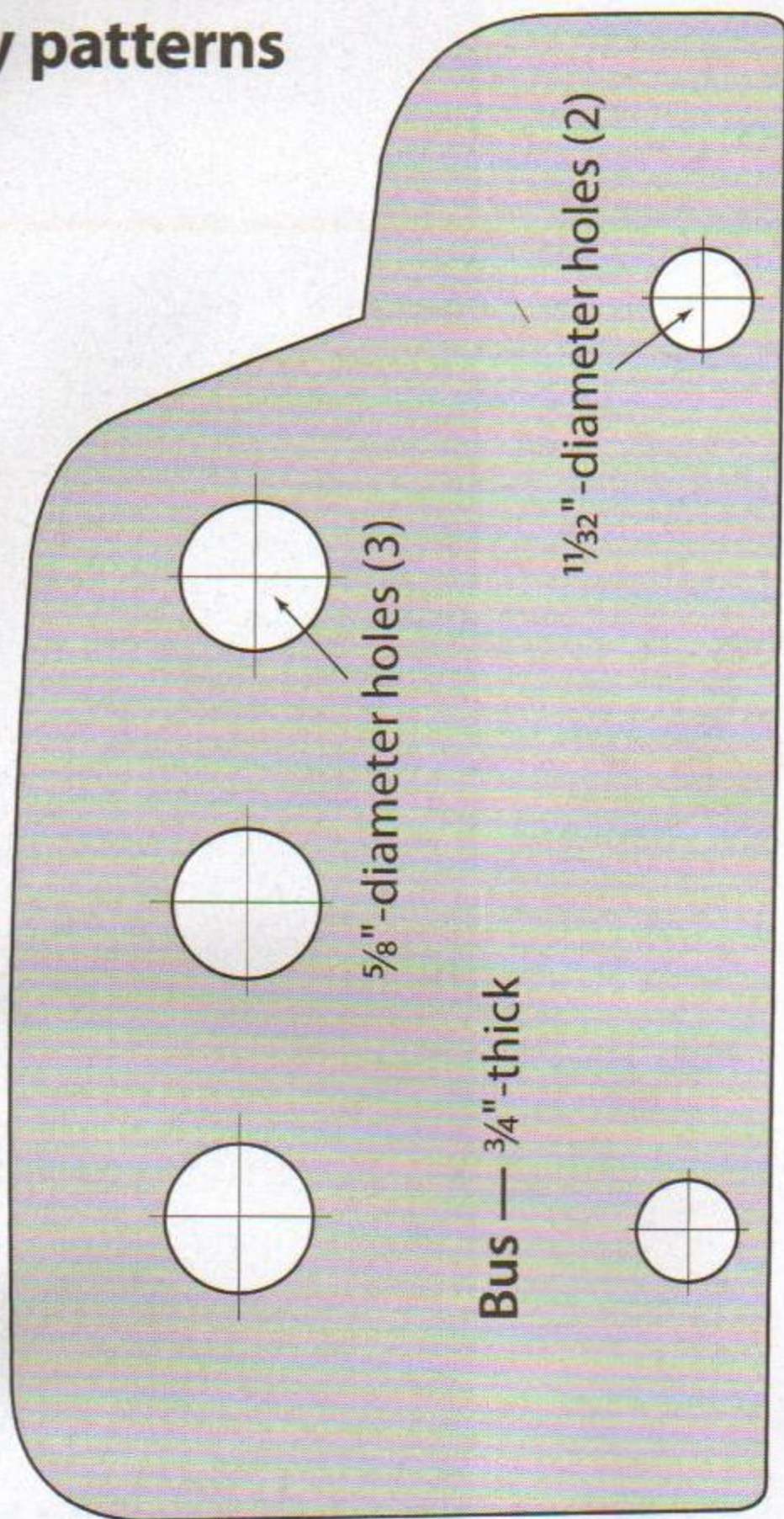


Make Your Own Toys

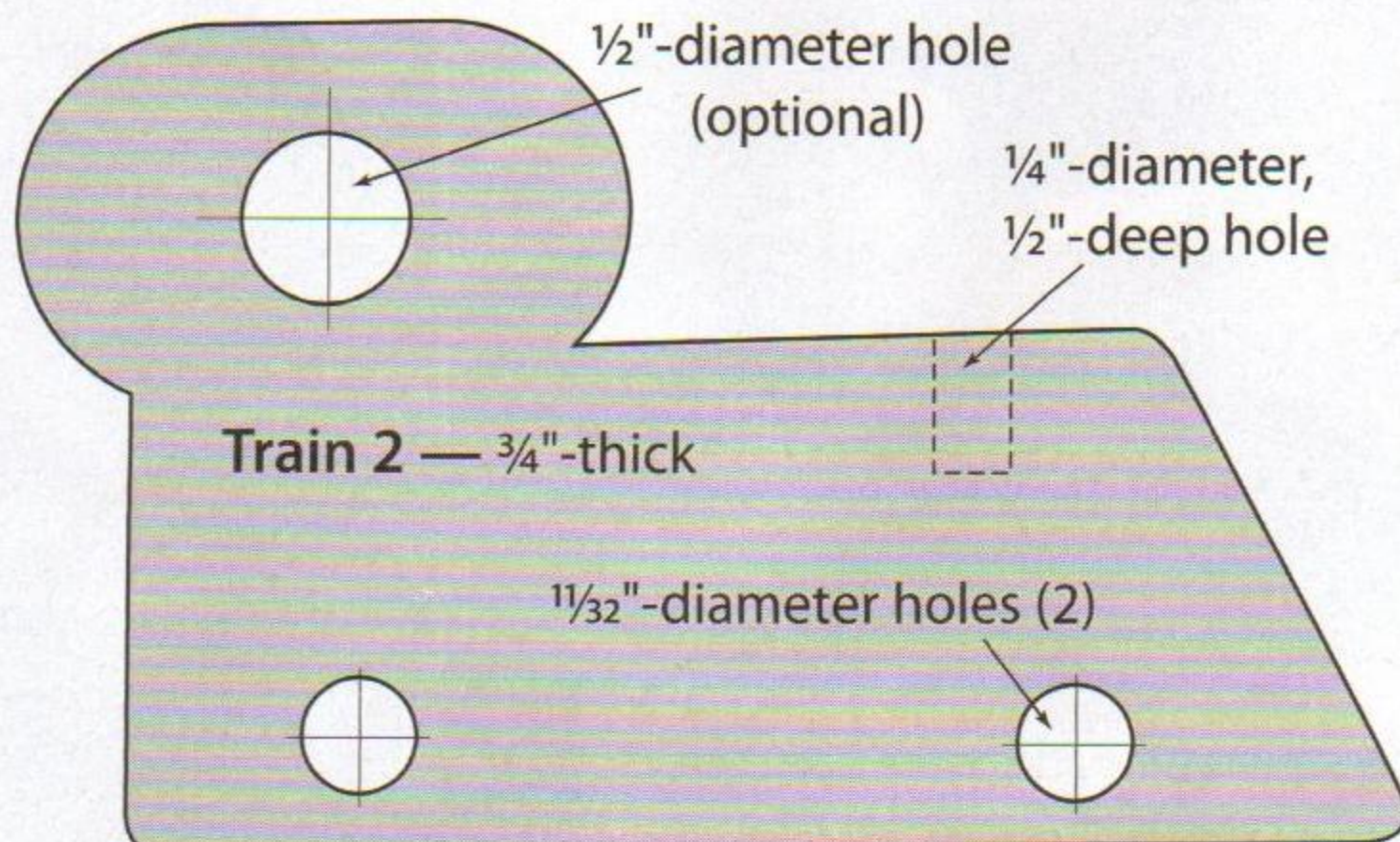
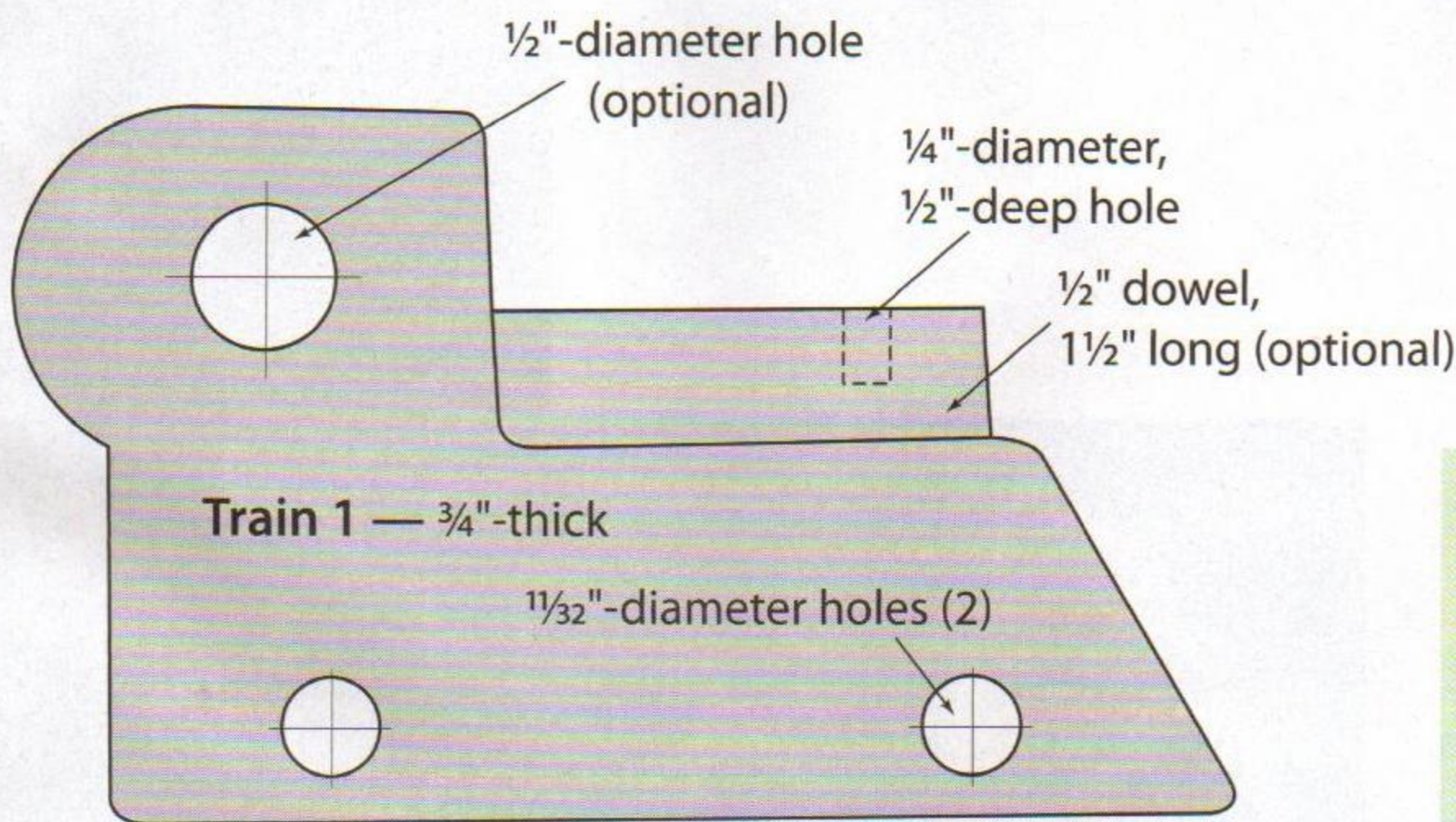
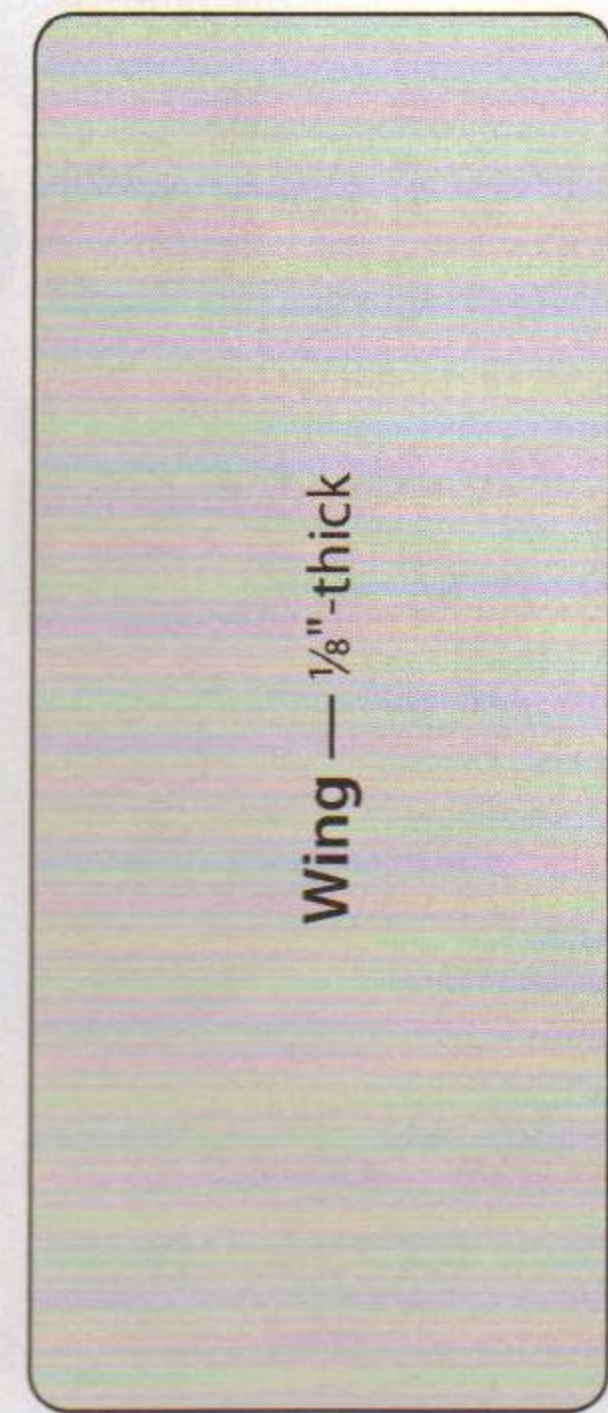
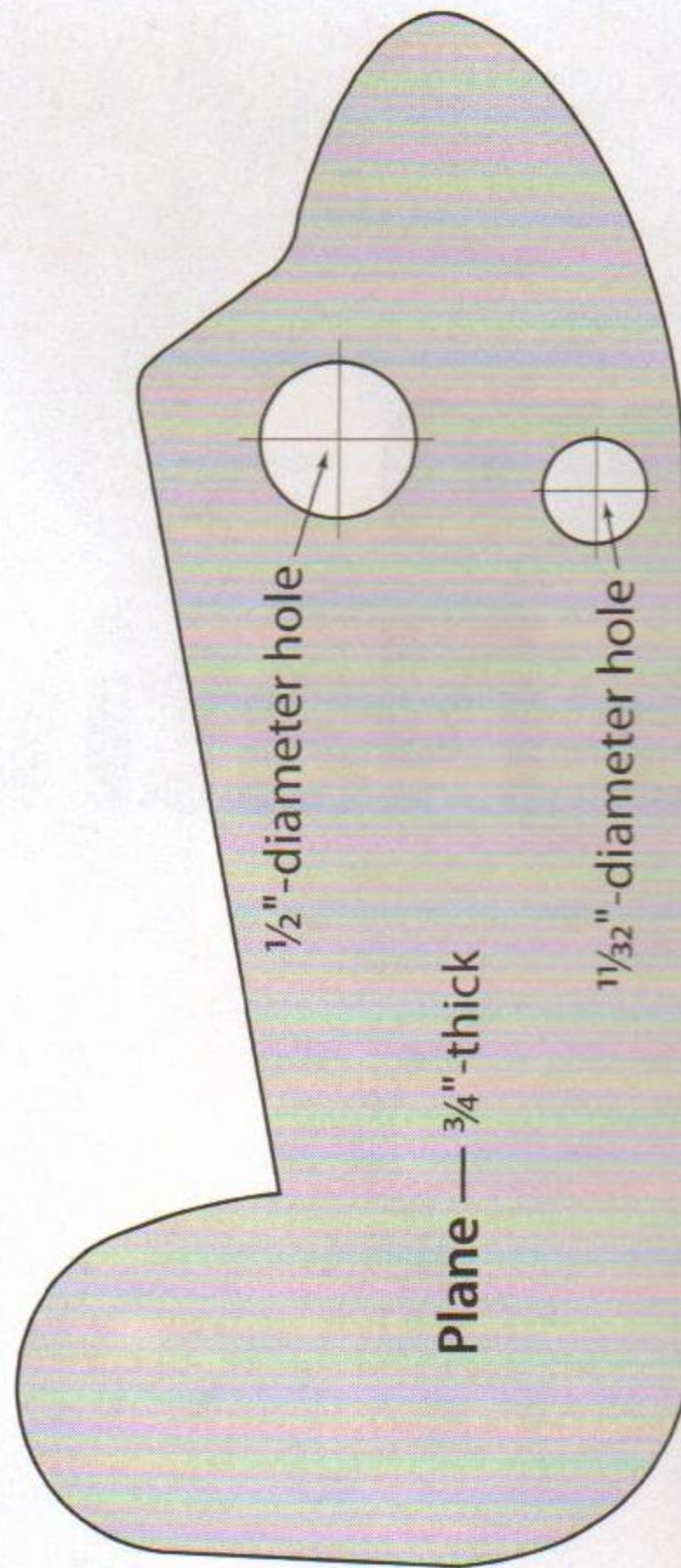
By Tim Bramlett

Toymaking is fun and easy. Use these patterns to get started, and then add your own flourishes to make the toys unique. All you need to do is cut the toys, sand them, and use dowels or axles to attach purchased wheels. You can give them for Christmas or make a bunch and let the kids paint or decorate them for a fun craft any time of year.

Toy patterns



© 2012 Scroll Saw Woodworking & Crafts



Materials & Tools

Materials:

- Pine, 3/4" (19mm)-thick: train, 2 1/4" x 4" (57mm x 102mm); bus, 2 1/2" x 4 1/2" (64mm x 114mm); airplane, 2" x 4 1/2" (51mm x 114mm)
- Pine, 1/4" (6mm)-thick: airplane wing, 1 1/2" x 3 1/2" (38mm x 89mm)
- Dowel, 5/8" (16mm)-diameter: steam engine, 1 1/2" (38mm) long
- Dowel, 1/4" (6mm)-diameter: axles, 1 to 2 for each vehicle, 1 1/2" (38mm) long
- Axle pegs, 1/4" (6mm)-diameter: train smokestack, 1" (25mm) long

- Wheels, 1" (25mm)-diameter: 2 to 4 for each vehicle
- Wood glue
- Sandpaper

Tools:

- Blades: #3 reverse-tooth
- Drill with bits: 1/4" (6mm) and 3/4" (19mm) diameter
- Router with bit: 1/4" (6mm)-radius round-over
- Clamps

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

Heirloom Intarsia Nativity

Create the look of a carved display with these two-sided designs

By Kathy Wise

Celebrate the holiday season with a striking freestanding nativity scene focusing on the holy family. These two-sided intarsia figures will become instant family heirlooms. For a simpler nativity, use a backing board instead of making the second side. You could also reduce the patterns to make one- or two-sided ornaments.

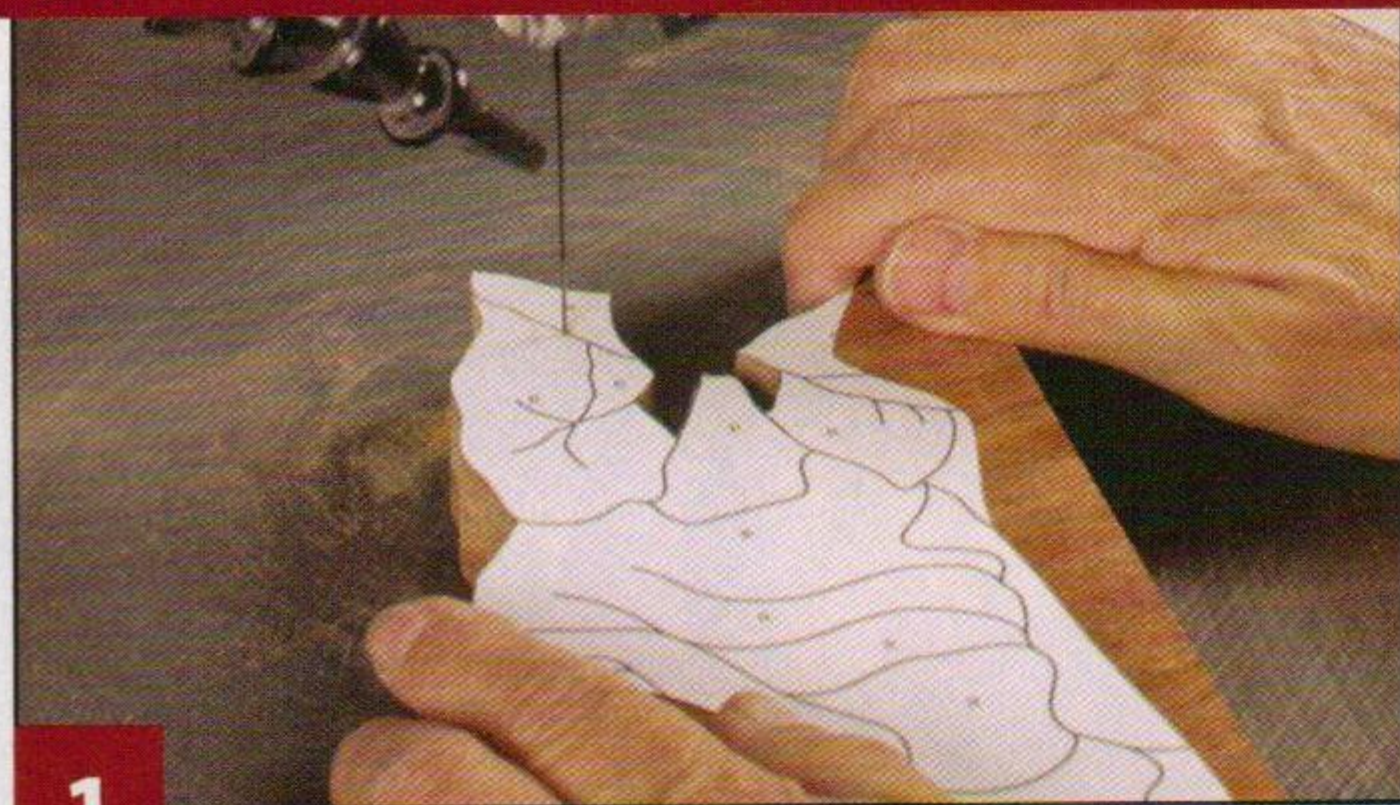
To start, make six copies of the pattern (always keep a master copy for later reference). Cut the individual pattern pieces and arrange them into groups by the wood color. Apply spray adhesive to the backs of the pattern pieces and attach them to the shiny side of Con-Tact Brand clear adhesive paper. Using adhesive paper lubricates the blade and makes it easy to remove the patterns without leaving a sticky residue. Cut the pattern pieces apart. Place a full-size pattern on a flat piece of wood for the assembly board (and backing board if you make one-sided projects). To make sure your pieces fit tightly together, start with flat wood. Plane any wood that is not flat, and then peel and stick the pattern pieces onto your selected blanks.



Attach intarsia backs to the figures to create a freestanding display.



NATIVITY: CUTTING THE PIECES



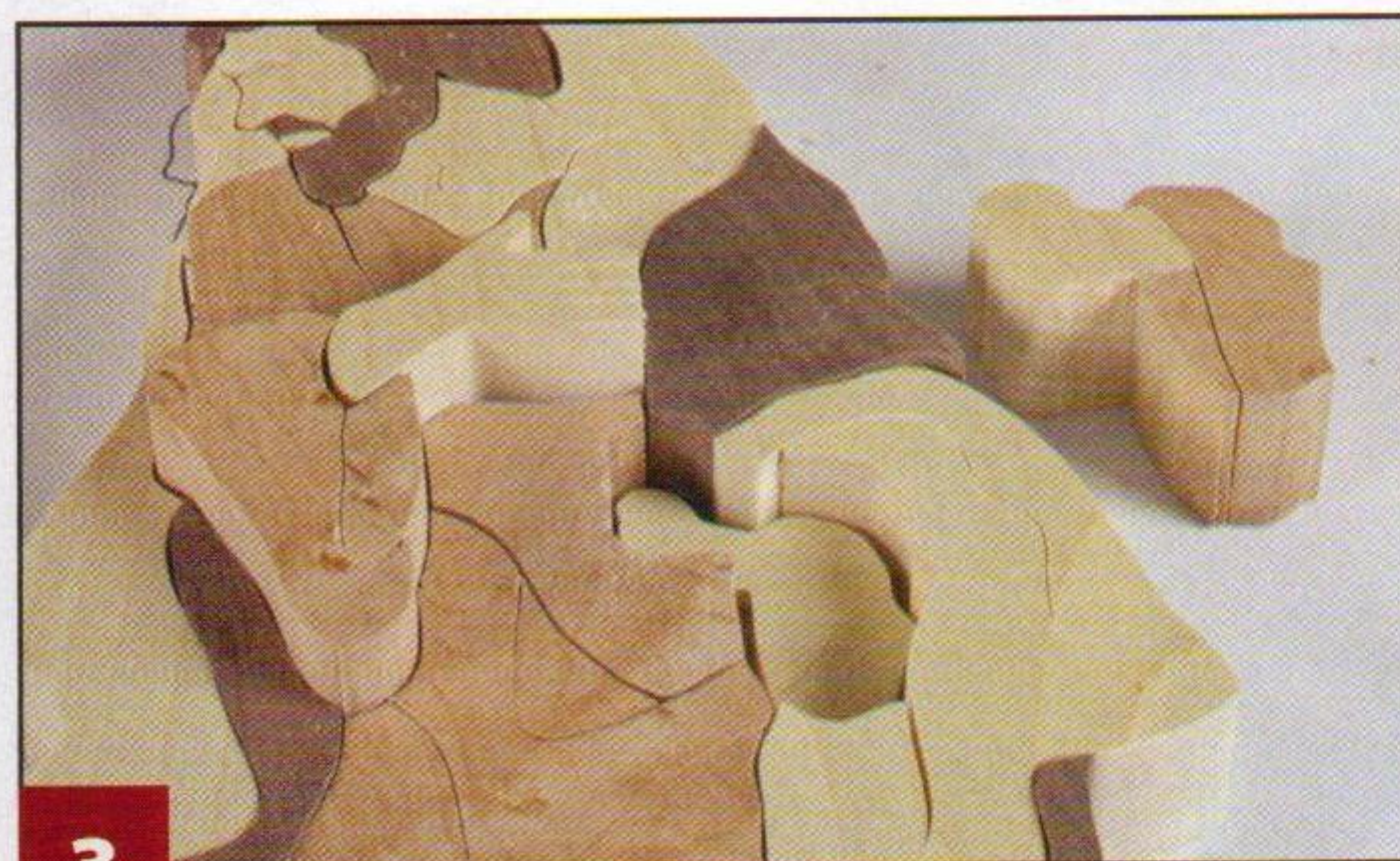
1

Cut the pieces. Use a #5 reverse-tooth blade for the softer woods, such as poplar, and a #5 skip-tooth blade for the harder woods. Cut the larger pieces first. Then, use a #3 reverse-tooth blade to cut the larger pieces into smaller sections. Cut away the smaller pieces so you have a large piece to hold on to. Cut the staff and Jesus' hand from separate pieces of wood; they are both overlays.



2

Check the fit and flow of the pieces. Mark the bottom of each cut piece with a pencil to make sure you don't sand and shape the wrong side. Place the cut pieces on the assembly board and make sure they fit tightly together. Make any necessary adjustments.



3

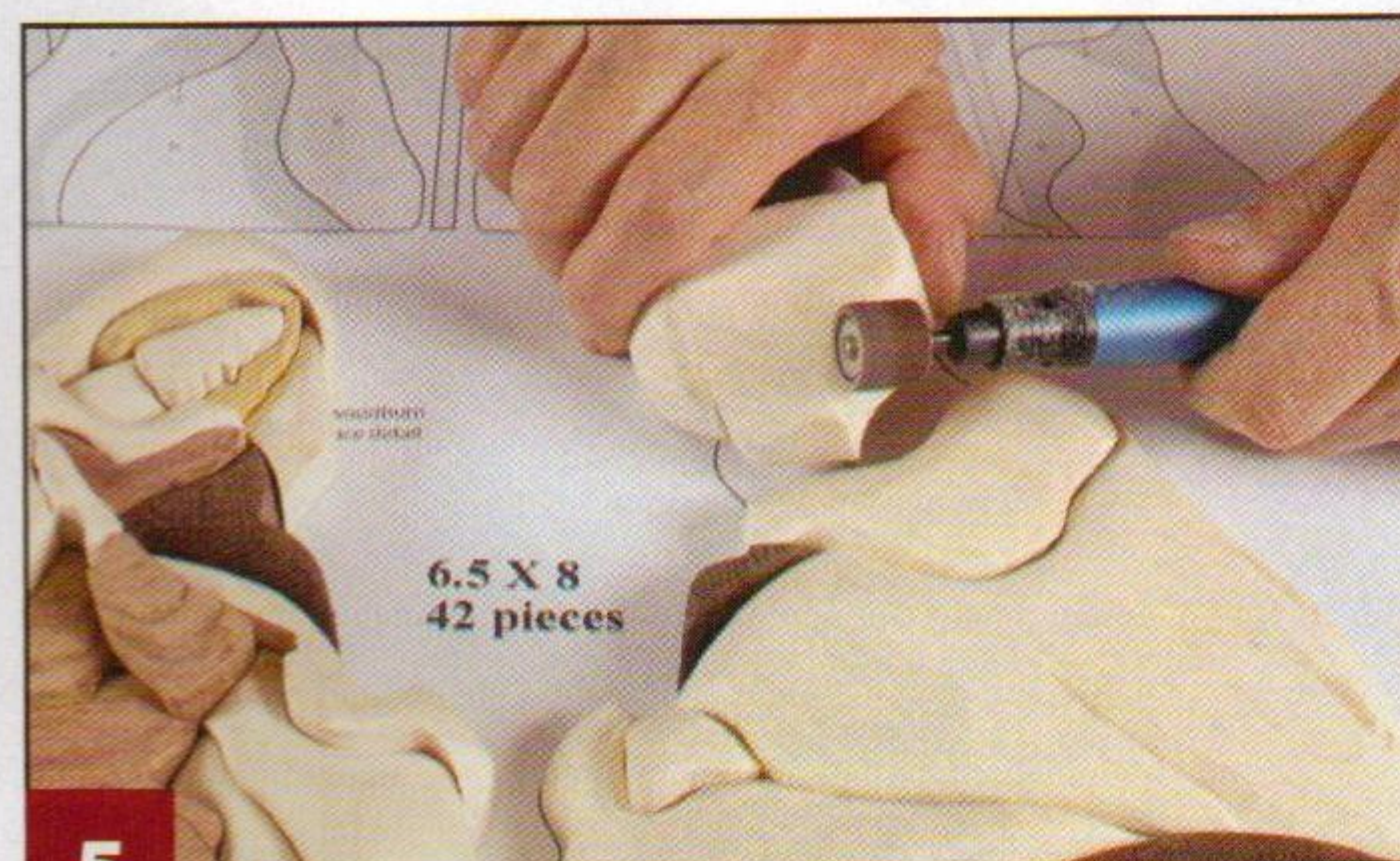
Add the risers. Cut risers for the parts that protrude above the surrounding parts, such as the arms and the bottom back pieces. I use 1/4" (6mm)-thick plywood. Cut the risers smaller than the pieces they support to keep them from interfering with the way the pieces fit together. Then, use the sanding guides on the patterns to mark the lower areas on the cut pieces.

NATIVITY: SHAPING THE PIECES



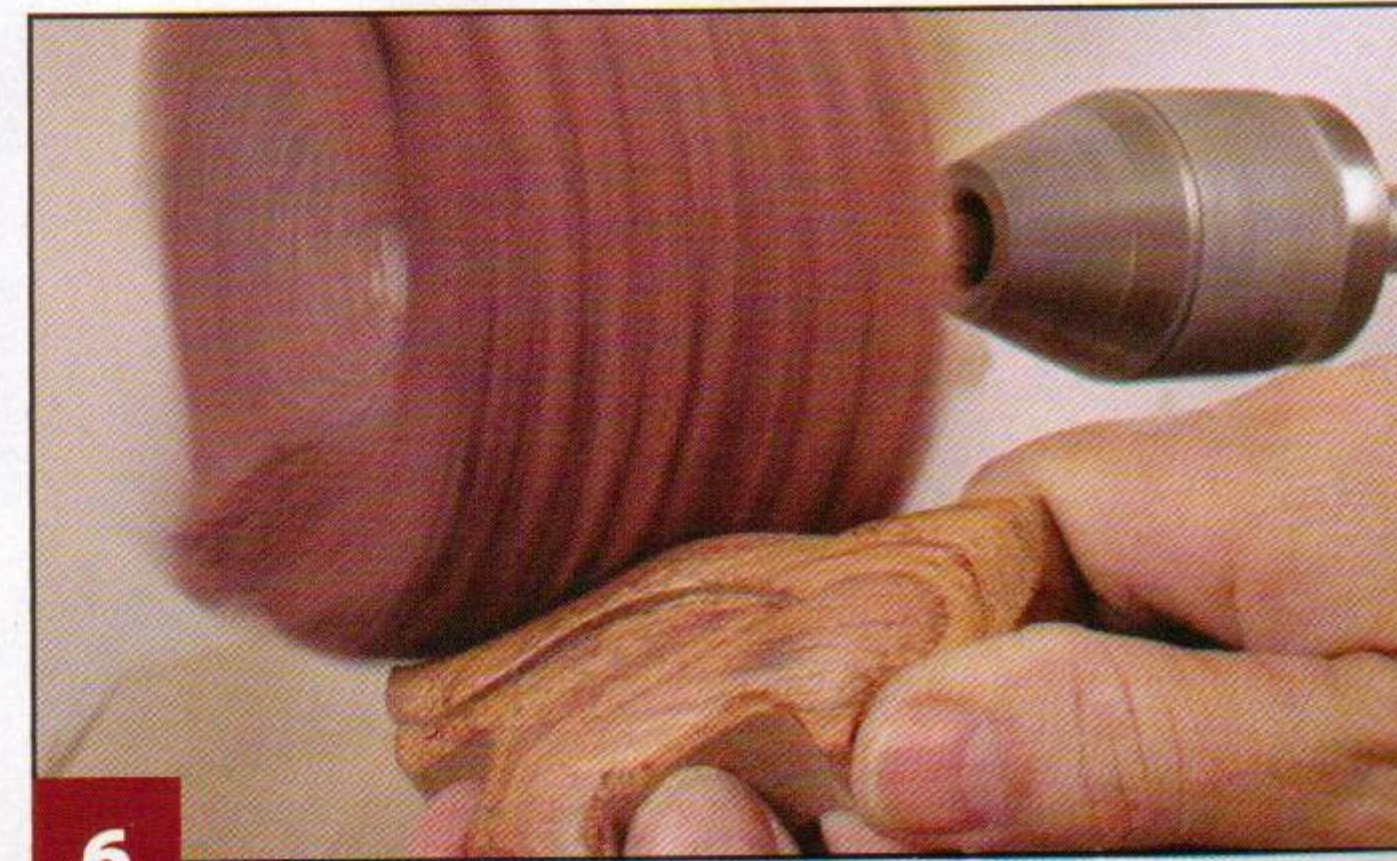
4

Begin shaping the figures. Use a drum sander to round the edges of the pieces. Use forceps or pliers to hold the small pieces. Then, start sanding the lowest (closest to the background) pieces. Mark the level of the lowest pieces on the surrounding pieces and sand the surrounding pieces down to that line.



5

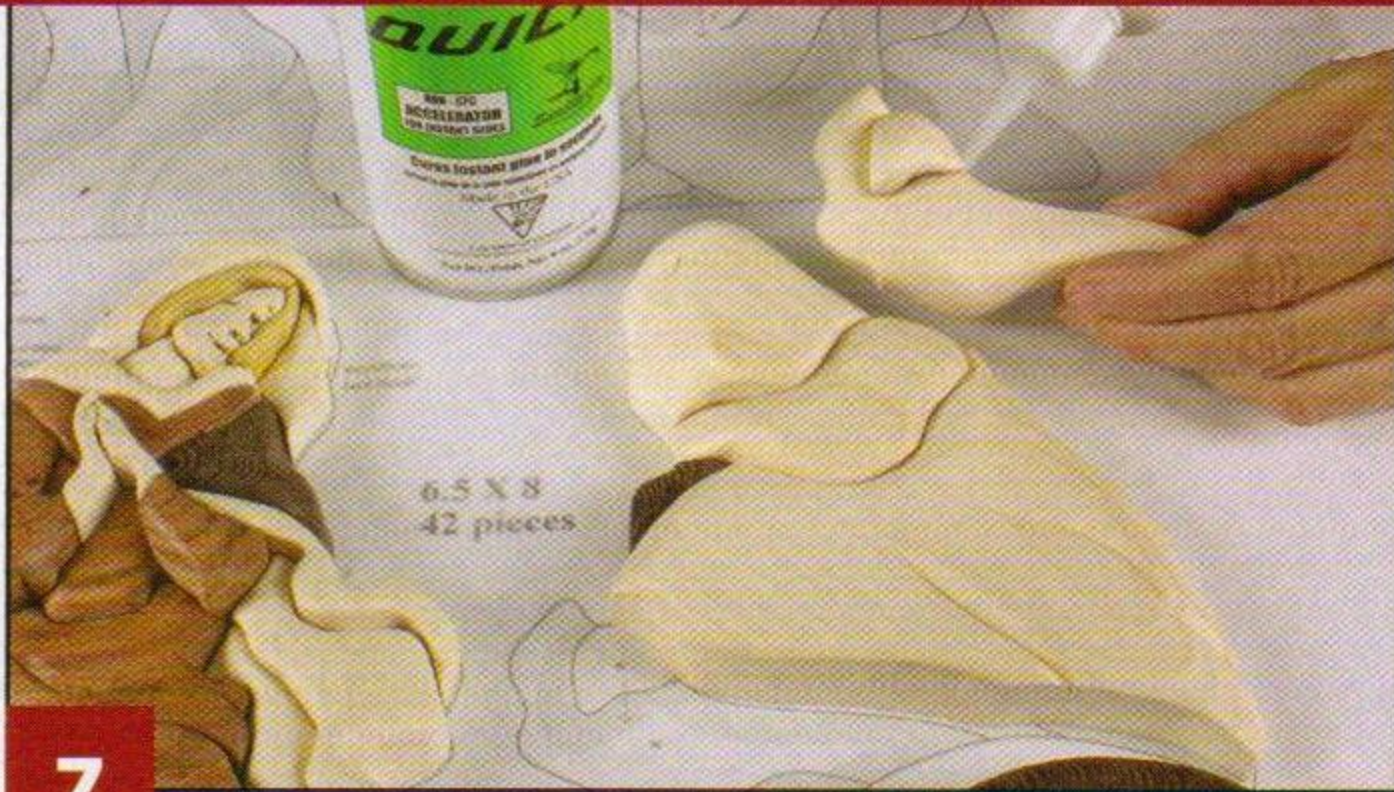
Finish shaping the pieces. Use an oscillating spindle sander, rotary carver, or die grinder to round the inside edges. Lay out all of the pieces and check for final fit. Use a woodburner to add the face and hay details. Drill a hole in Joseph's hand to hold the staff.



6

Buff the pieces. Use a scuffing wheel to smooth uneven areas and remove scratches made by the coarse sanding drum. Then, use a sanding mop to buff the pieces smooth and make them easy to varnish.

NATIVITY: ASSEMBLING THE PROJECT



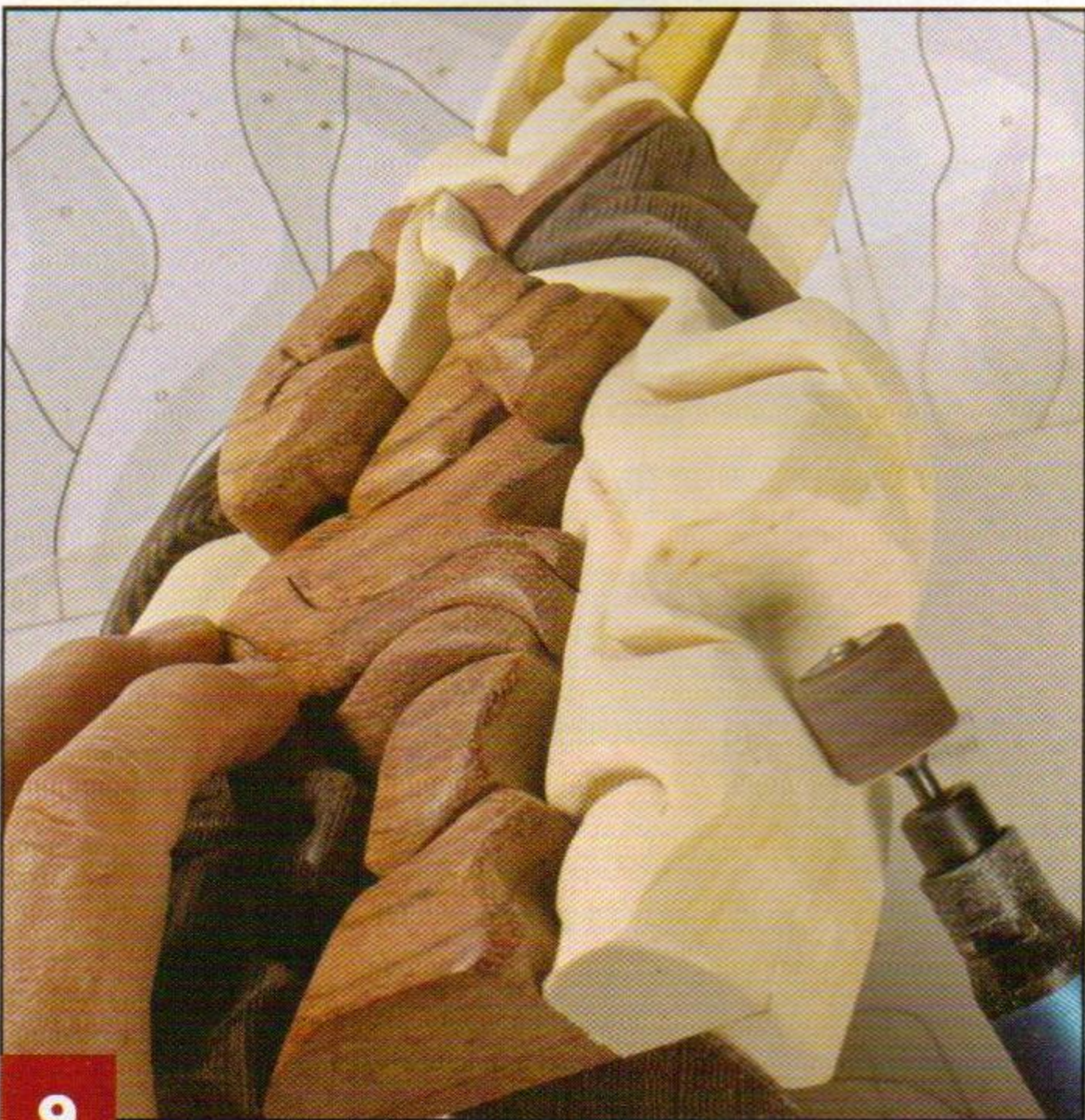
7

Glue the pieces together. Place the pattern on a flat surface and position a sheet of waxed paper on it. Place dots of cyanoacrylate (CA) glue on the sides of the pieces, starting with the head, and put the surrounding pieces against the glue. Use accelerator to speed the drying process if desired.



8

Attach the front and back pieces. Sand the flat sides of the front and back pieces. I use a portable drum sander, such as a Sand-Flee. Add dots of wood glue and CA glue to the flat side of the front piece, and spray CA glue accelerator on the flat side of the back piece. Press the two parts together until the CA glue sets.



9

Finish the pieces. Use a rotary carver or die grinder and a 1/2" (13mm)-diameter sanding drum with a 120-grit band to shape the edges of the pieces. Buff the edges with the scuffing wheel, and then use the sanding mop for a smooth finish. Use 220-grit sandpaper to hand-sand the tight spaces, and sand the bottom of each figure flat so it will stand upright. Apply a clear satin spray finish to the pieces and allow the finish to dry overnight.

Materials & Tools

Materials:

- Dark wood, such as black walnut, 1" (25mm)-thick: Jesus' hair, 2" x 2" (51mm x 51mm); Joseph's robe and hair, 9" x 15" (229mm x 381mm)
- Black wood, such as wenge, 1" (25mm)-thick: manger, 5" x 7" (127mm x 178mm; Mary's gown, 8" x 10" (203mm x 254mm)
- Yellow wood, such as yellowheart, 1" (25mm)-thick: hay, 8" x 8" (203mm x 203mm)
- White wood, such as holly, 1" (25mm)-thick: Jesus' robe, 2" x 3" (51mm x 76mm)
- Light wood, such as poplar, 3/4" (19mm)-thick: Mary and Joseph, 8" x 24" (203mm x 610mm)
- Red wood, such as Brazilian cherry, 1" (25mm)-thick: Mary's gown, 5" x 8" (127mm x 203mm)
- Medium wood, such as bird's-eye maple, 1" (25mm)-thick: Joseph's robe, 5" x 11" (127mm x 279mm)
- Medium-dark wood, such as zebrawood, 1/4" (6mm)-thick: staff, 1/4" x 12" (6mm x 305mm)
- Plywood, 1/4" (6mm)-thick: assorted scraps (risers)
- Spray adhesive
- Adhesive paper: Con-Tact Brand clear
- Glue: cyanoacrylate (CA); wood
- CA glue accelerator
- Waxed paper
- Finish: clear satin spray
- Sandpaper

Tools:

- Blades: #5 reverse-tooth, #5 skip-tooth, #3 reverse-tooth
- Sanders: pneumatic drum, oscillating spindle, rotary carver or die grinder, portable drum such as a Sand-Flee, sanding mop, scuffing wheel such as Scotch Brite
- Pencil
- Forceps or pliers
- Woodburner

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



A nationally acclaimed intarsia artist, Kathy Wise has written two books and more than 30 articles. Her new book, *Intarsia Birds: Woodworking the Wise Way*, has more than 30 beautiful bird patterns. Private and semi-private intarsia classes are available. For a free catalog of 500 patterns, contact Kathy Wise Designs Inc., P.O. Box 60, Yale, Mich. 48097, fax 810-387-9044, www.kathywise.com, kathywise@bignet.net.



German Shepherd #070

Patterns for the **HEIRLOOM INTARSIA NATIVITY** are in the pattern pullout section.



HAVE YOURSELF A MERRY LIT CHRISTMAS



Santa and Stockings Ornament Set

Personalize the dangling stockings with names or designs

By Ruth Chopp

These charming Santa ornaments are simple to cut and paint, and you can easily personalize them with names, dates, or holiday messages. Change the number of stockings to suit your family, or leave them off the smaller ornament for a different look.

You can stack-cut the individual pieces to make the ornaments quickly. Stack the blanks (see page 78 for instructions), attach the patterns, and drill the holes as marked. Do not drill the stocking holes in the Message Santa until you've glued the pieces together. Cut the pieces and separate the stacks. Sand the edges and backs as necessary.

It's easiest to paint the pieces separately. Remember to paint the backs of the Santas, arch, and stockings. When they are dry, use the photo as a guide to glue the pieces in place. Then, drill the holes for the hanging wires and attach the stockings.

Painting and Assembling Tips

- Use a small stylus dipped in paint to add the leaf outline and to fill in the center of the leaf.
- Use a Phillips-head screwdriver and a hammer to punch the small indentations shown on the white Santa hat and coat parts.
- To install the wooden ball for the nose, use a toothpick to put glue around the edge of the nose hole, and then force the ball into the hole with a small clamp.
- To curl the wire for the stockings, wrap it around a small bamboo skewer.
- To make eyes, I drill holes with a #60 wire bit, cut most of the pin off of black appliqué pins, and glue the small section of pin into the holes. You could also just add dots of black paint with the stylus.
- Use an ultra-fine-tip permanent pen to make the stitch marks on the stockings and to outline the trim on Santa's coat and hat. Use a fine-tip permanent pen to write the message on the arch.

Materials:

Standing Santa

- Baltic birch plywood or pine, ¼" (6mm)-thick: Santa body, 4½" x 5¾" (114mm x 146mm); stockings, 5 each, 1" x 1½" (25mm x 38mm)
- Baltic birch plywood, ⅛" (3mm)-thick: hat trim, 1¼" x 1½" (32mm x 38mm); beard, 1¼" x 1¾" (32mm x 44mm); moustache, 2 each ½" x ¾" (13mm x 19mm)
- Wooden ball, ¼" (6mm)-diameter
- Small red beads

Message Santa

- Baltic birch plywood or pine, ¼" (6mm)-thick: Santa, 2½" x 4" (64mm x 102mm); stockings, 5 each 1" x 1½" (25mm x 38mm)
- Baltic birch plywood, ⅛" (3mm)-thick: arch, hat trim, hat ball, 3½" x 3¾" (89mm x 95mm); beard, 1¼" x 1¾" (32mm x 44mm); moustache, 2 each ½" x ¾" (13mm x 19mm)
- Wooden ball, ¼" (6mm)-diameter

Materials & Tools

Both Ornaments

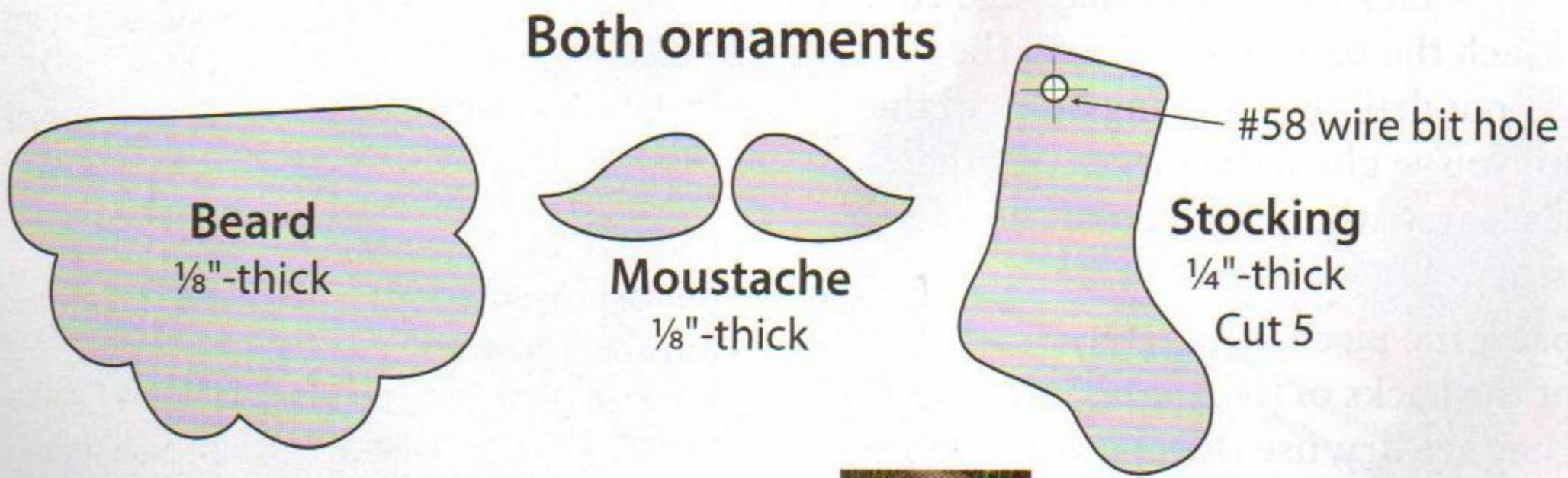
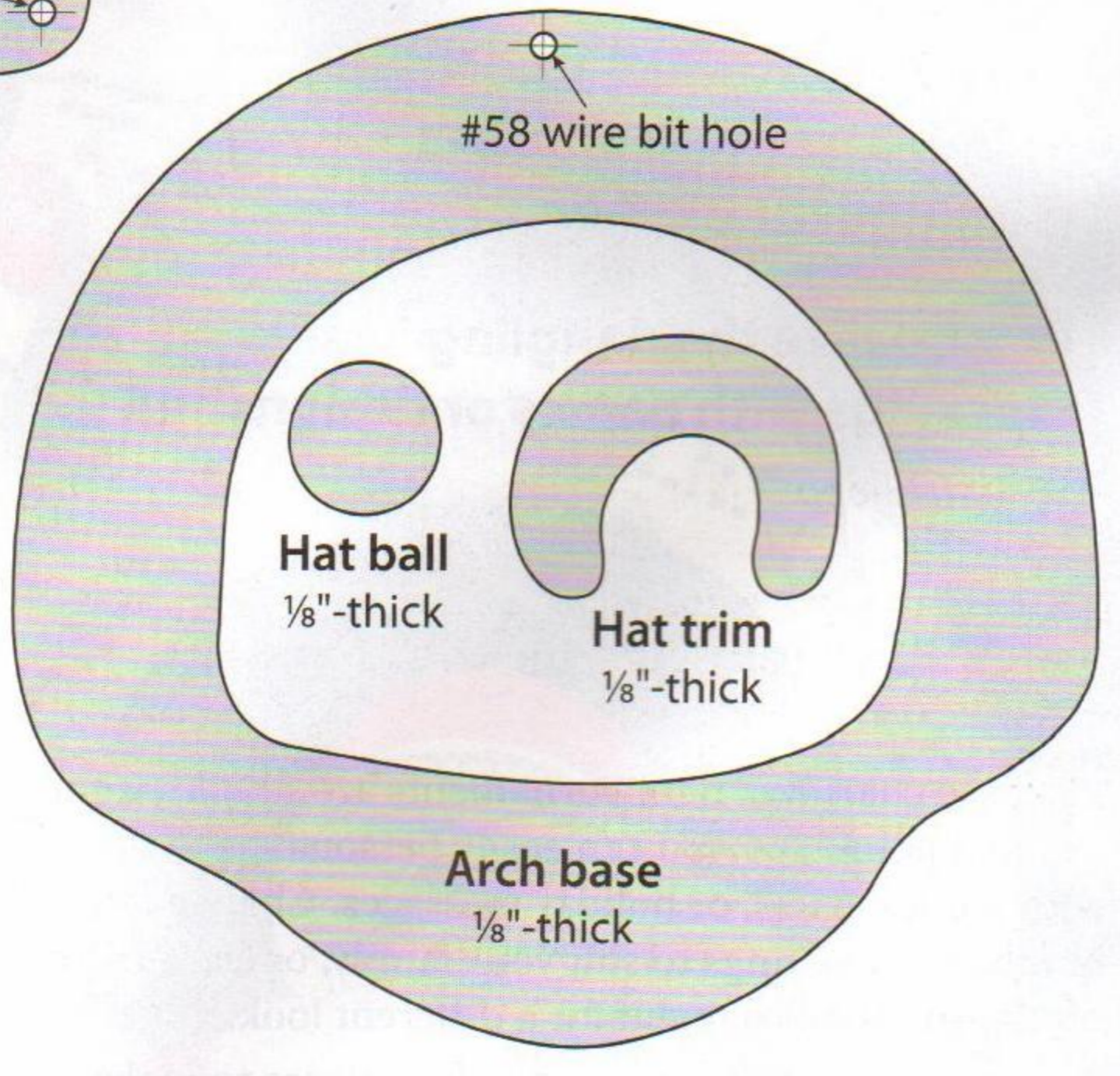
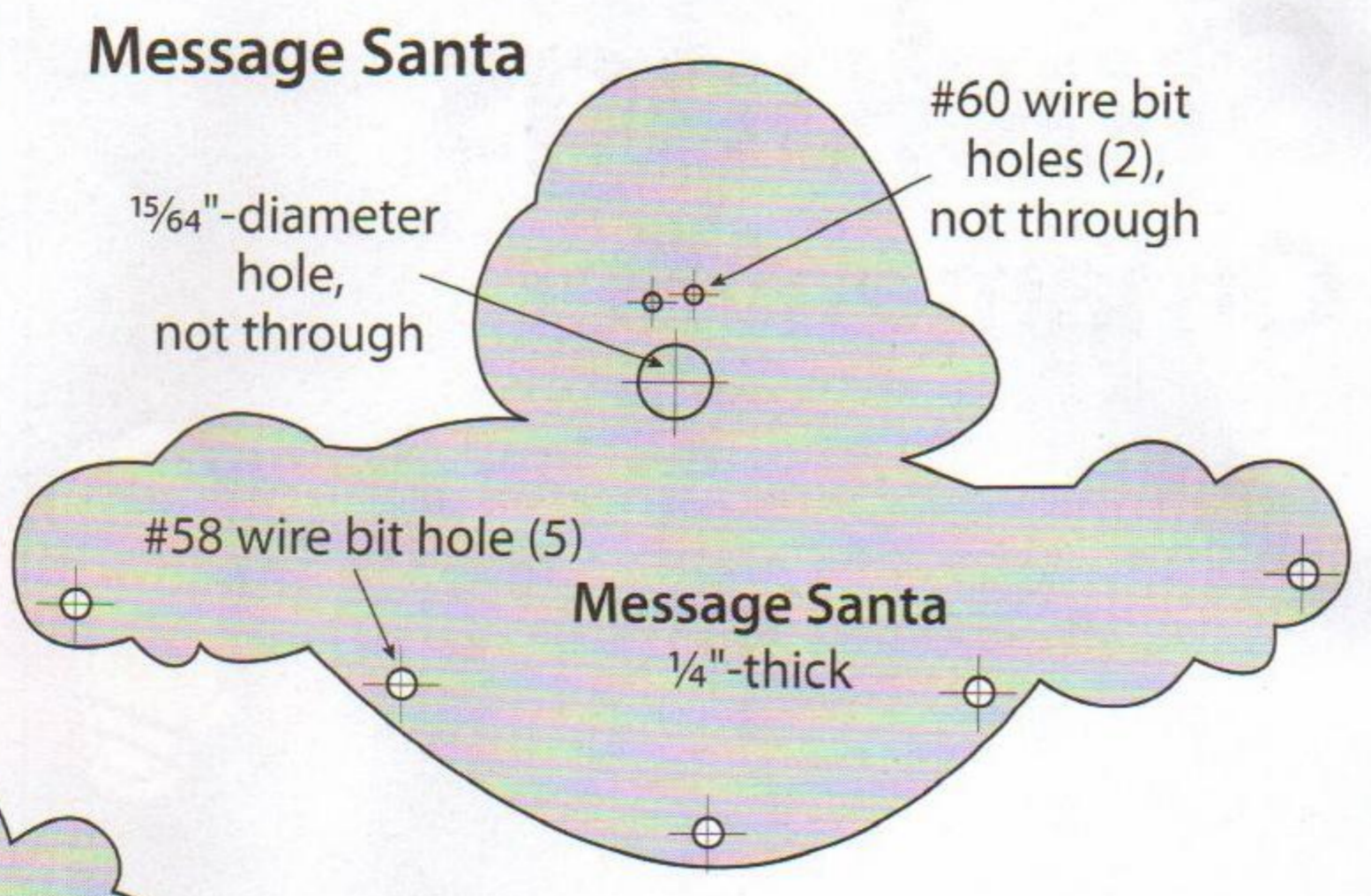
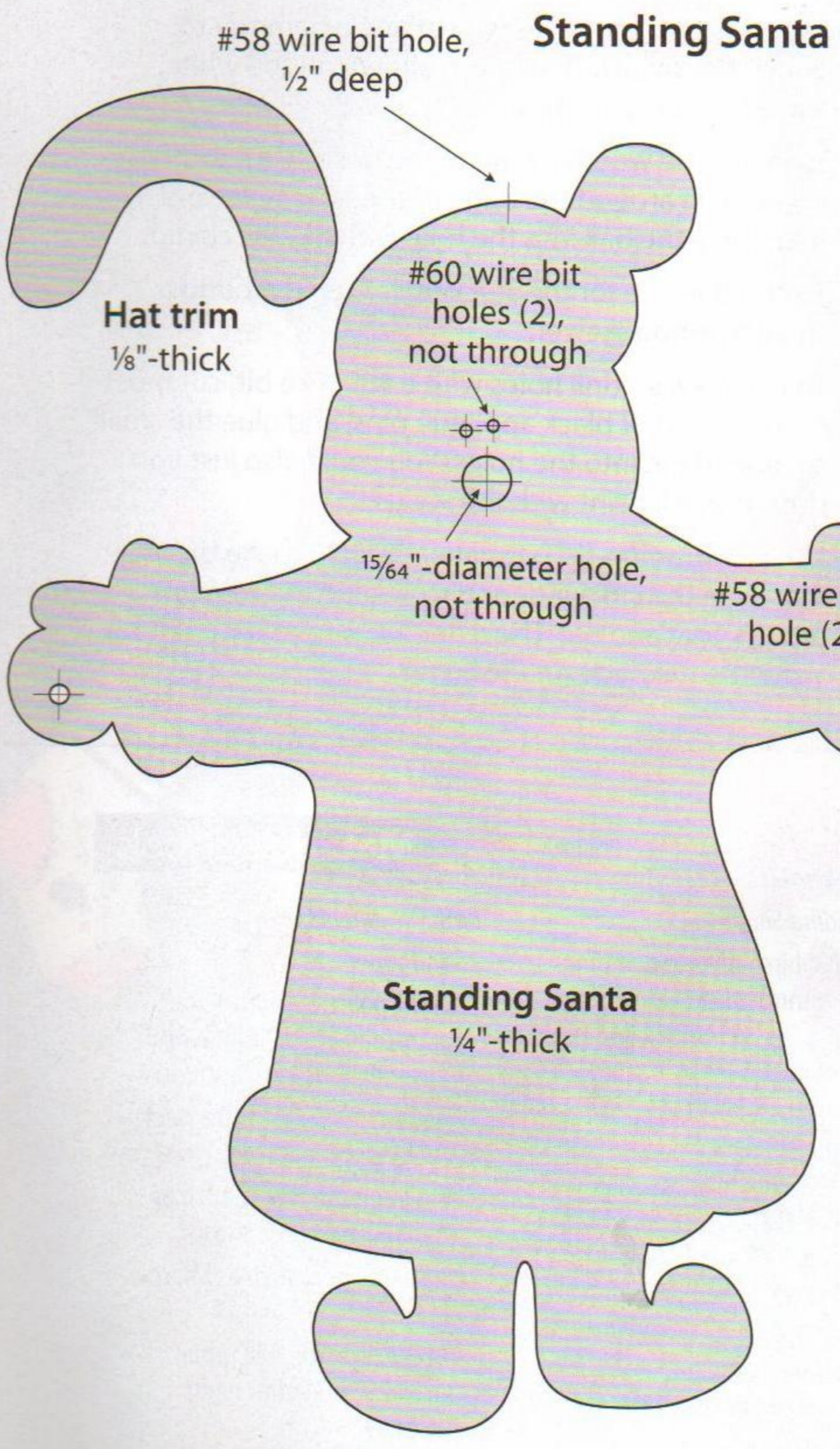
- Sandpaper
- Acrylic paint, such as Delta Ceramcoat: black, light ivory, Hauser dark green, flesh tone
- Acrylic paint, such as DecoArt Americana: Santa red
- Fine permanent pen, such as Pigma Micron 005: black
- Ultra-fine pen, such as Sharpie: black
- Wire: #28 black; #26 green floral, 25" (635mm) long; #24 black
- Small bamboo skewer
- Appliqué pins, such as Dritz: black
- Finish, such as Krylon: matte spray

Tools:

- Blades: #3 reverse-tooth
- Small Phillips-head screwdriver
- Small stylus
- Drill with bits: 15/64" (5.75mm) diameter; #56 and #60 wire bits

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

Santa and stockings ornament patterns



Ruth Chopp began her career as a home economics teacher. When her children left home, she decided to try woodworking, noting that using a scroll saw and a sewing machine are really quite similar. Ruth loves wooden Christmas tree ornaments, so she designed her own; she now has about 300 patterns. Contact Ruth via e-mail at melchopp@comcast.net.

12 Days of Christmas Tree

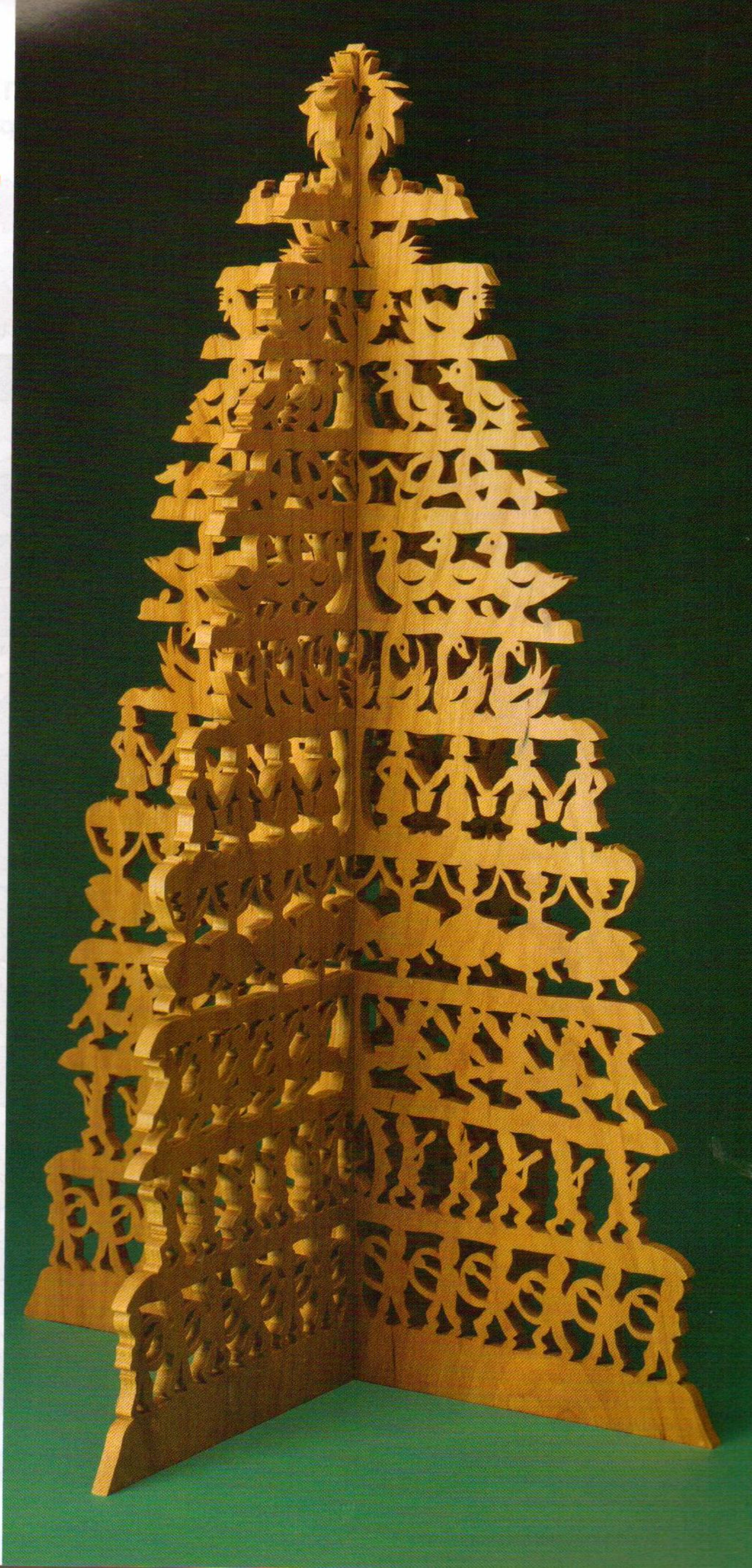
Fretwork tree symbolizes the classic Christmas carol

*By Gloria Cosgrove
Cut by Dale Helgerson*

Everyone remembers the first few verses of "The 12 Days of Christmas," but things usually bog down after the five golden rings. This stylized holiday decoration will help you keep the verses straight all the way through 12 drummers drumming.

You can cut the tree as a simple wall hanging or follow test-cutter Dale Helgerson's lead and make a 3-D tabletop tree. Stack-cut two pieces and cut opposing slots so you can slide them together to make a freestanding design. Dale's slots are included on the pattern. Dale cut his tree from $\frac{1}{4}$ "-thick mahogany. For a lighter and more durable tree, cut it from $\frac{1}{8}$ "-thick Baltic birch plywood.

You can glue the pieces together if you like; Dale cut the slots to fit tightly enough that the tree stays together without glue. That way, you can take it apart after Christmas for safe storage.



Materials & Tools

Materials:

- Mahogany, 1/4" (6mm)-thick:
2 each 10 1/2" x 16 1/2"
(267mm x 419mm)
- Sandpaper
- Danish oil
- Wood glue (optional)

Tools:

- Blades: #1 reverse-tooth
- Drill with assorted small bits

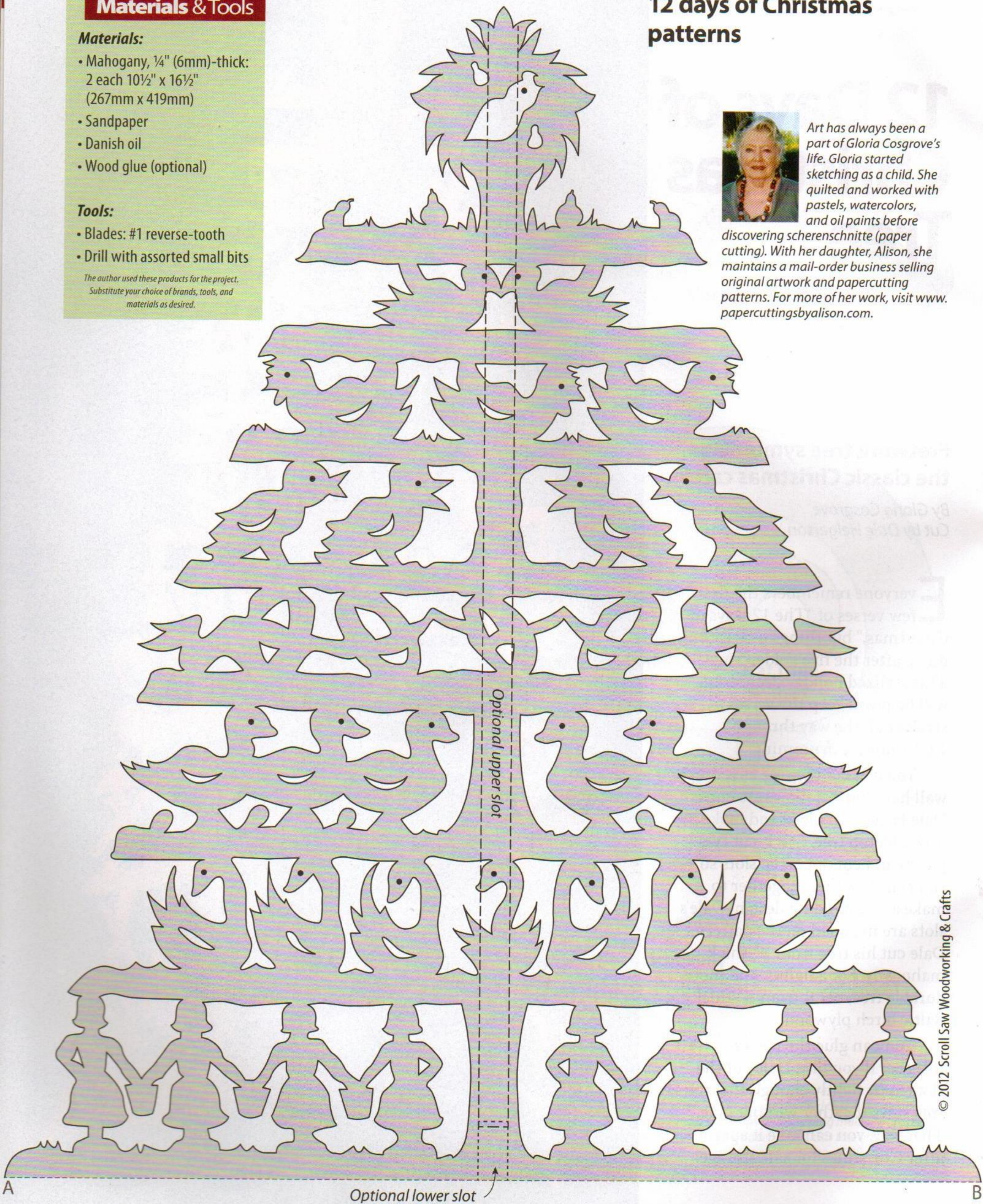
*The author used these products for the project.
Substitute your choice of brands, tools, and
materials as desired.*

12 days of Christmas patterns

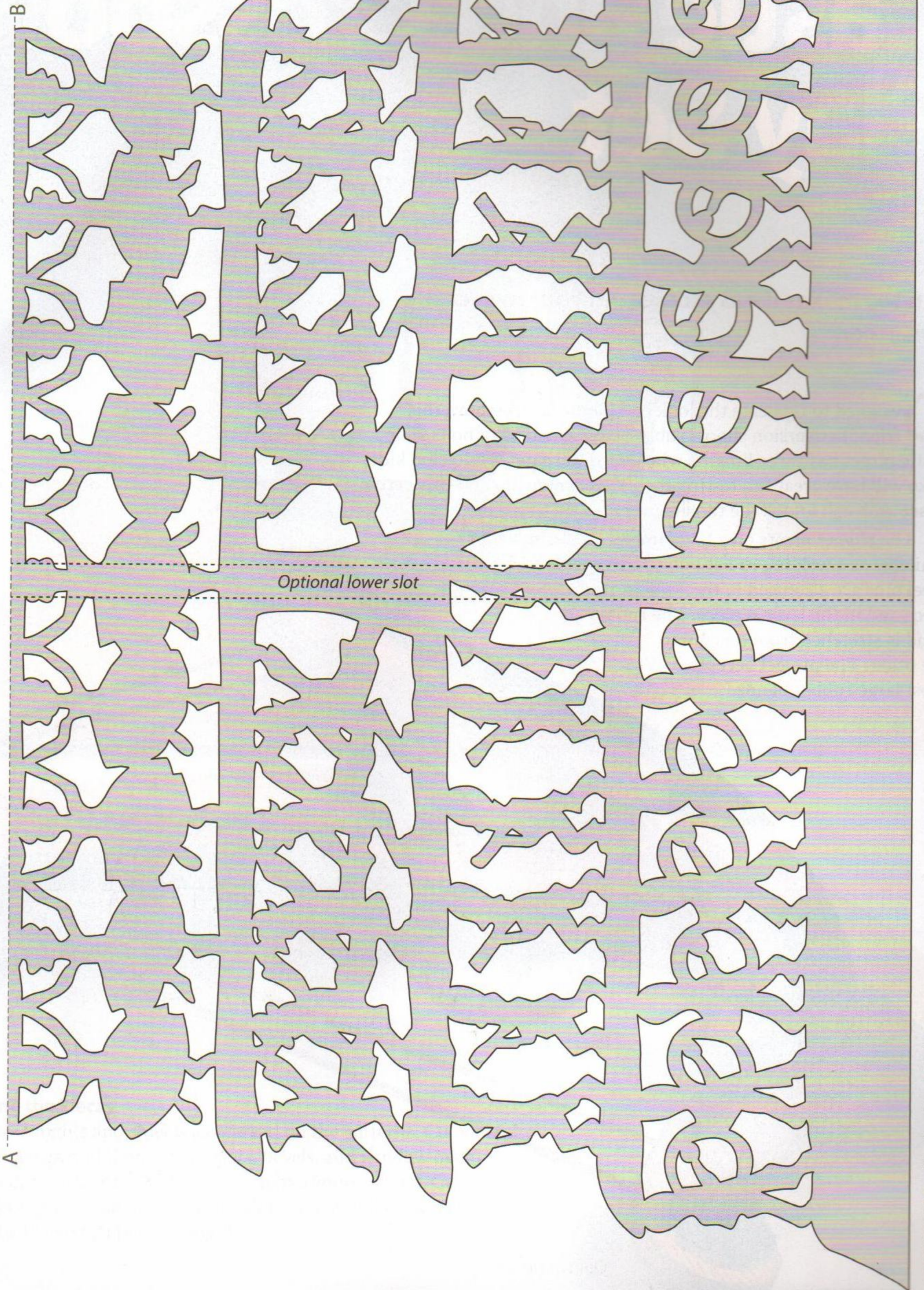


Art has always been a part of Gloria Cosgrove's life. Gloria started sketching as a child. She quilted and worked with pastels, watercolors, and oil paints before

discovering scherenschnitte (paper cutting). 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.



12 days of Christmas patterns



Castle and Crossbow Play Set

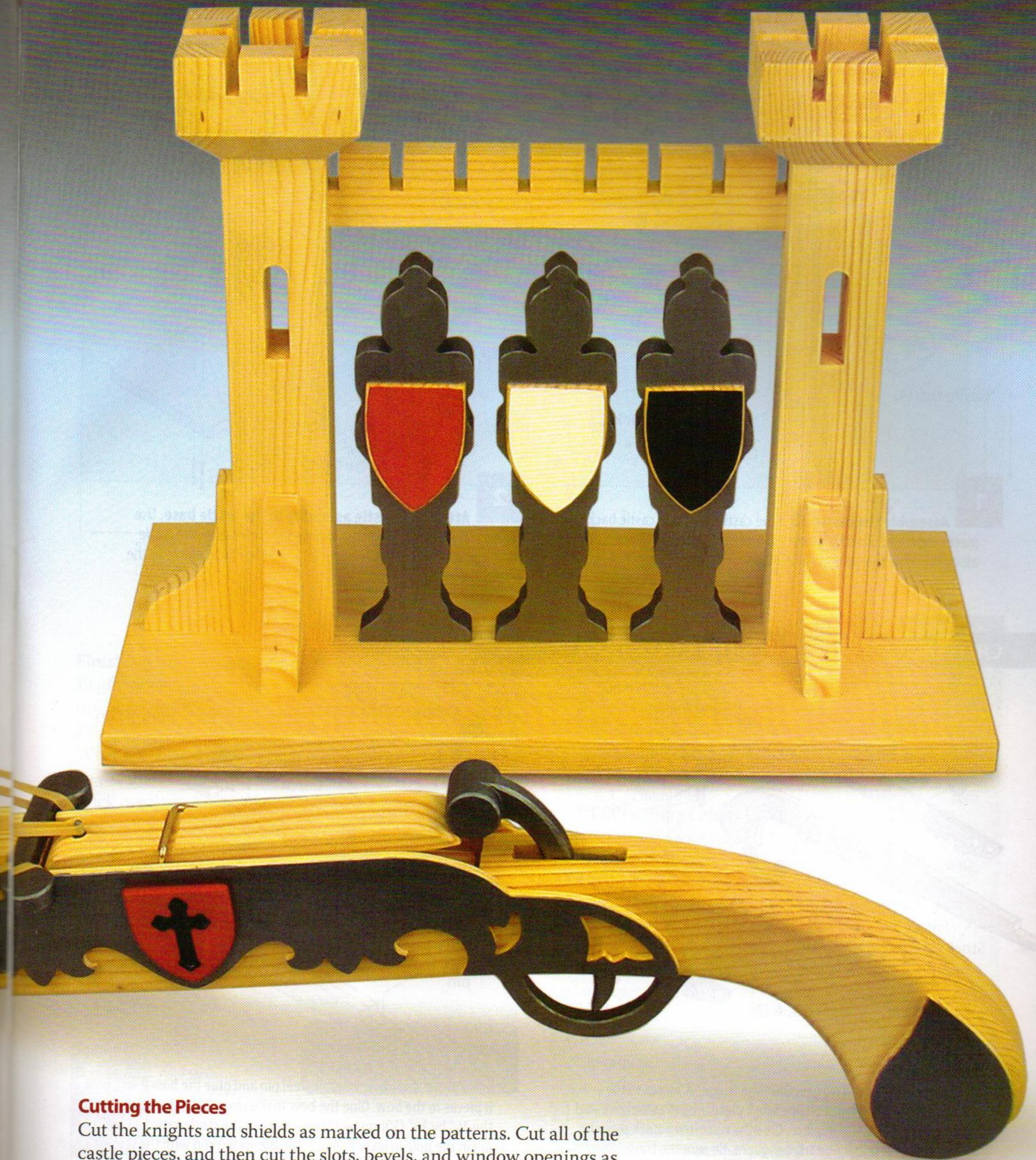
Fun toy makes it easy to defend your own castle

By Paul Meisel

Designed to replicate the look of a medieval crossbow, this friendlier version shoots rubber bands instead of bolts. The castle target has three knights who guard the gate. Adults and kids alike will have great fun testing their marksmanship and competing to see who can knock the targets over.

The trigger pivots on a $\frac{1}{8}$ "-diameter steel pin, which is available as a welding rod at many hardware stores. Steel pins are also used in the front of the bow piece and in the lever B piece. The rubber band is stretched from one pin to the other. The project accepts most large rubber bands.

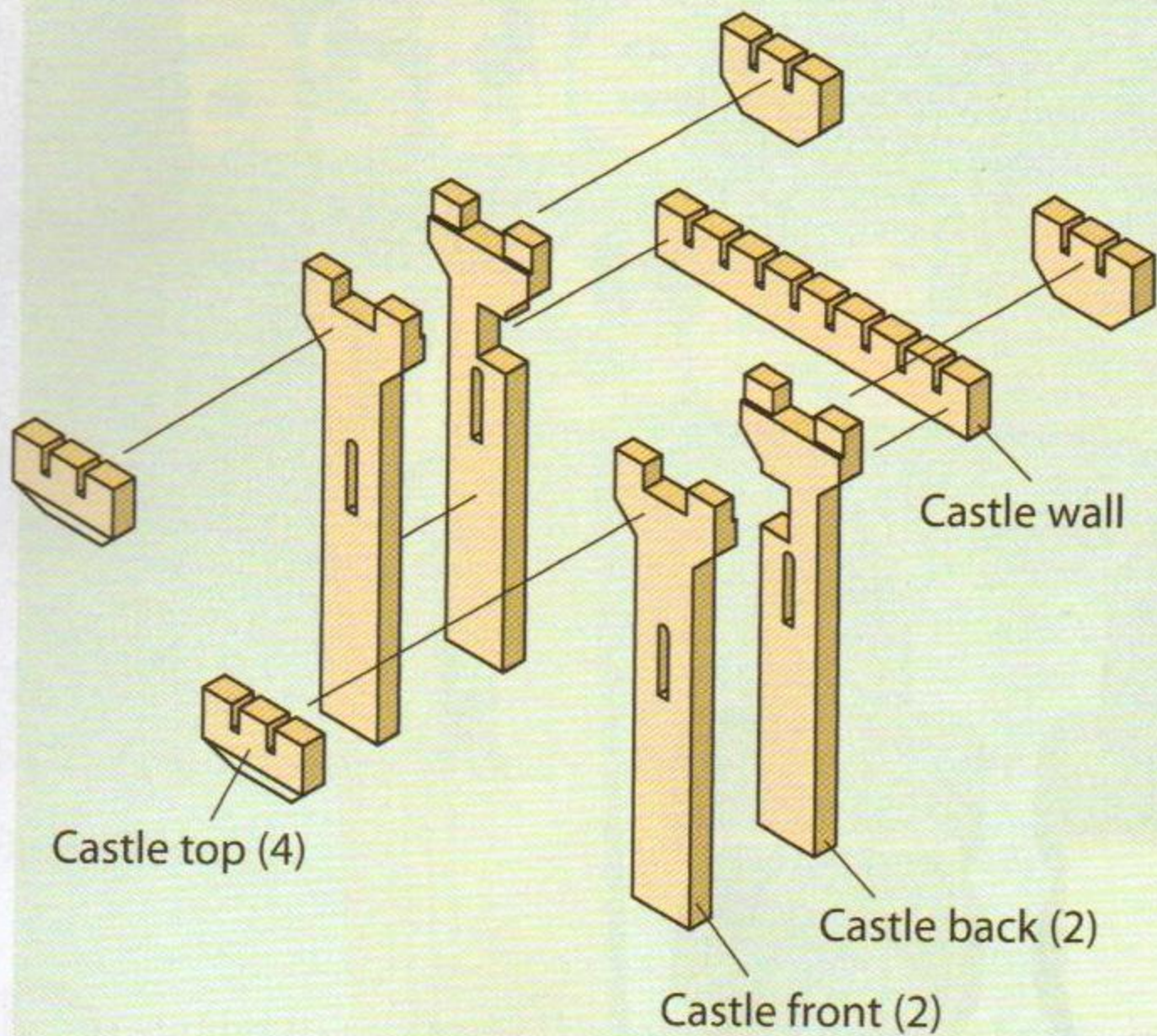




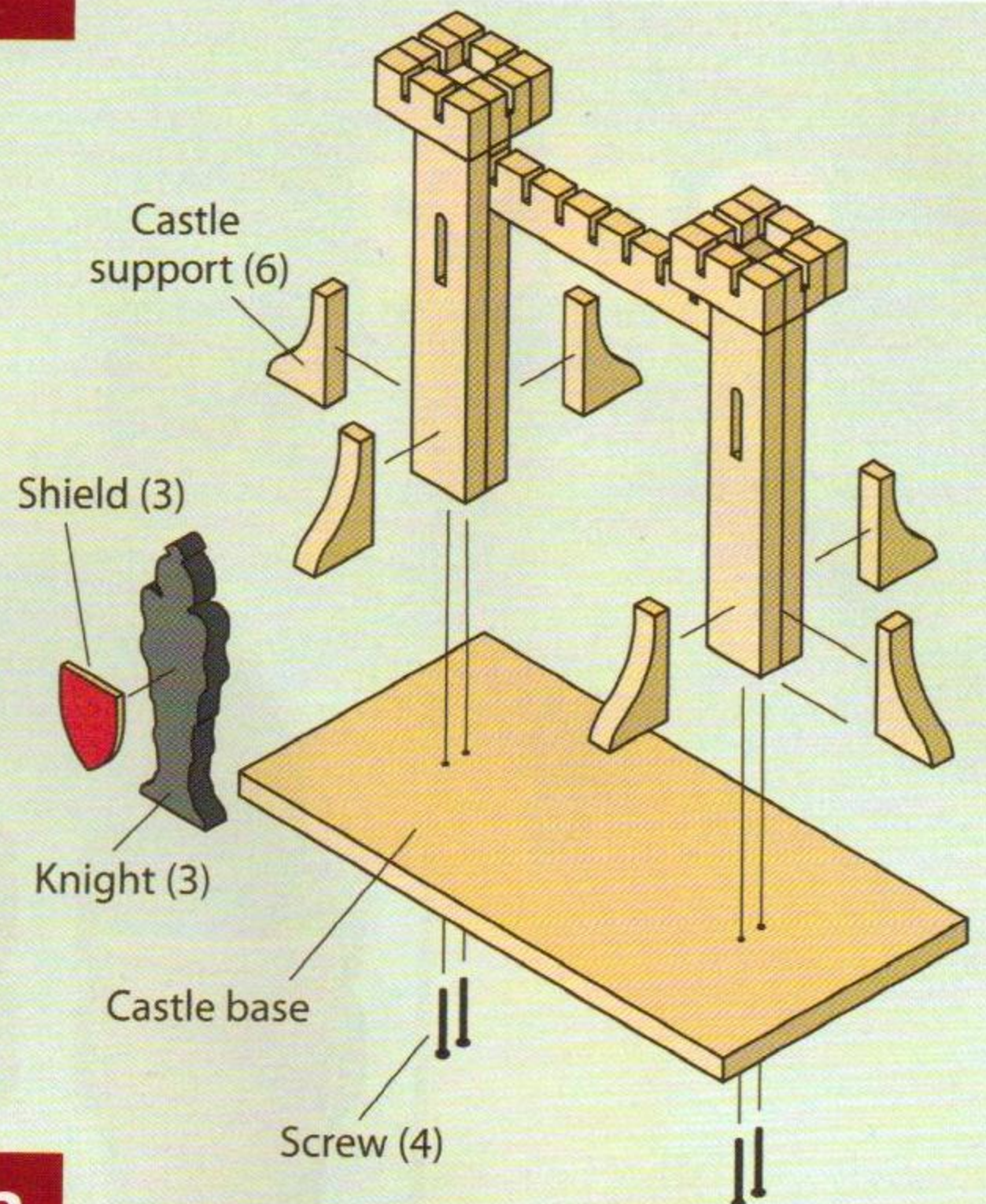
Cutting the Pieces

Cut the knights and shields as marked on the patterns. Cut all of the castle pieces, and then cut the slots, bevels, and window openings as marked, as well as the $\frac{1}{8}$ " by $\frac{3}{4}$ " (3mm by 19mm) rabbet. Cut all of the crossbow pieces, and then cut the slots and drill the holes as marked. Cut the three steel pins to length.

CROSSBOW: ASSEMBLING THE CASTLE

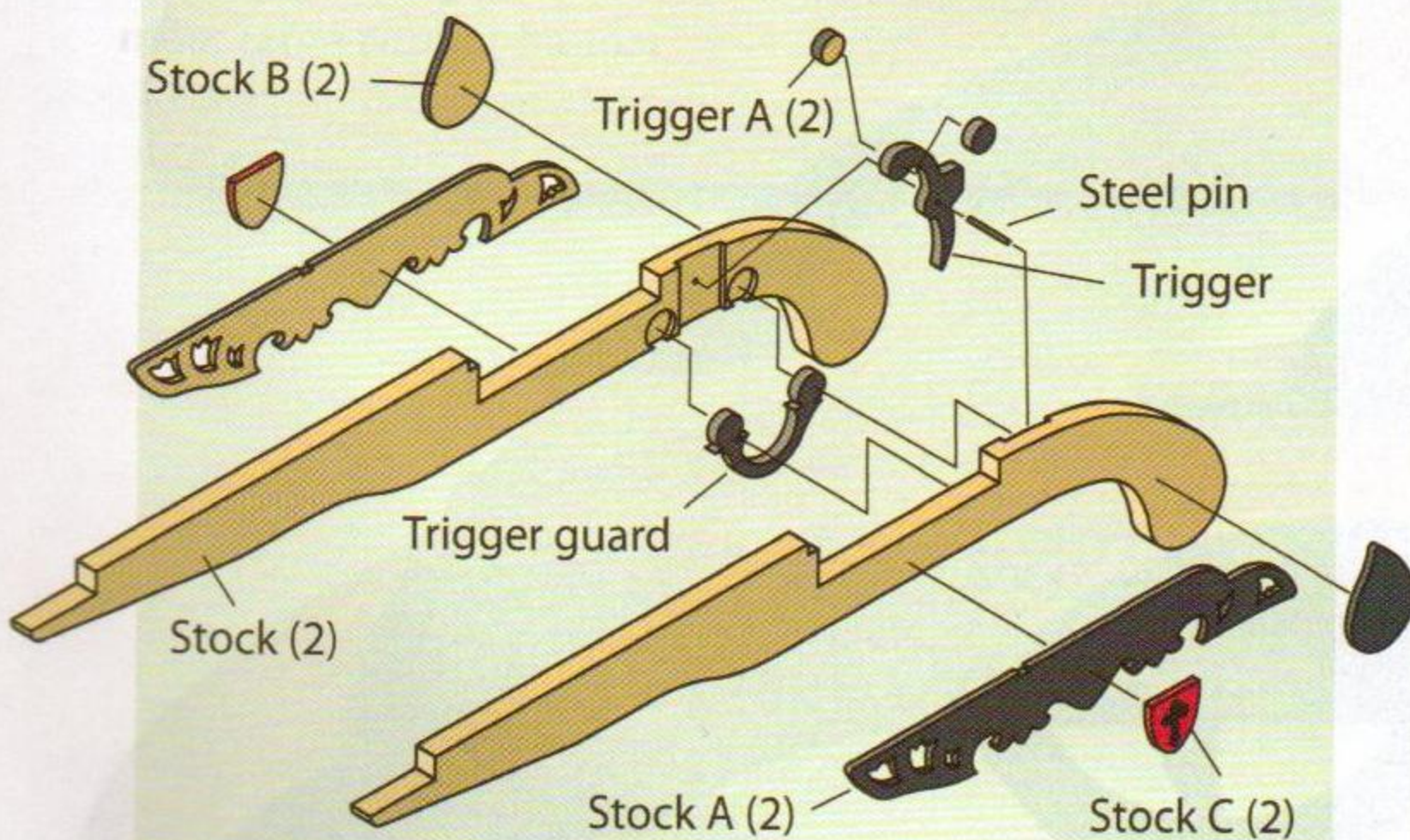


1 Assemble the castle. Glue the castle front and castle back pieces together. Glue the castle top pieces to the castle front/back assembly. Glue the castle wall in place.

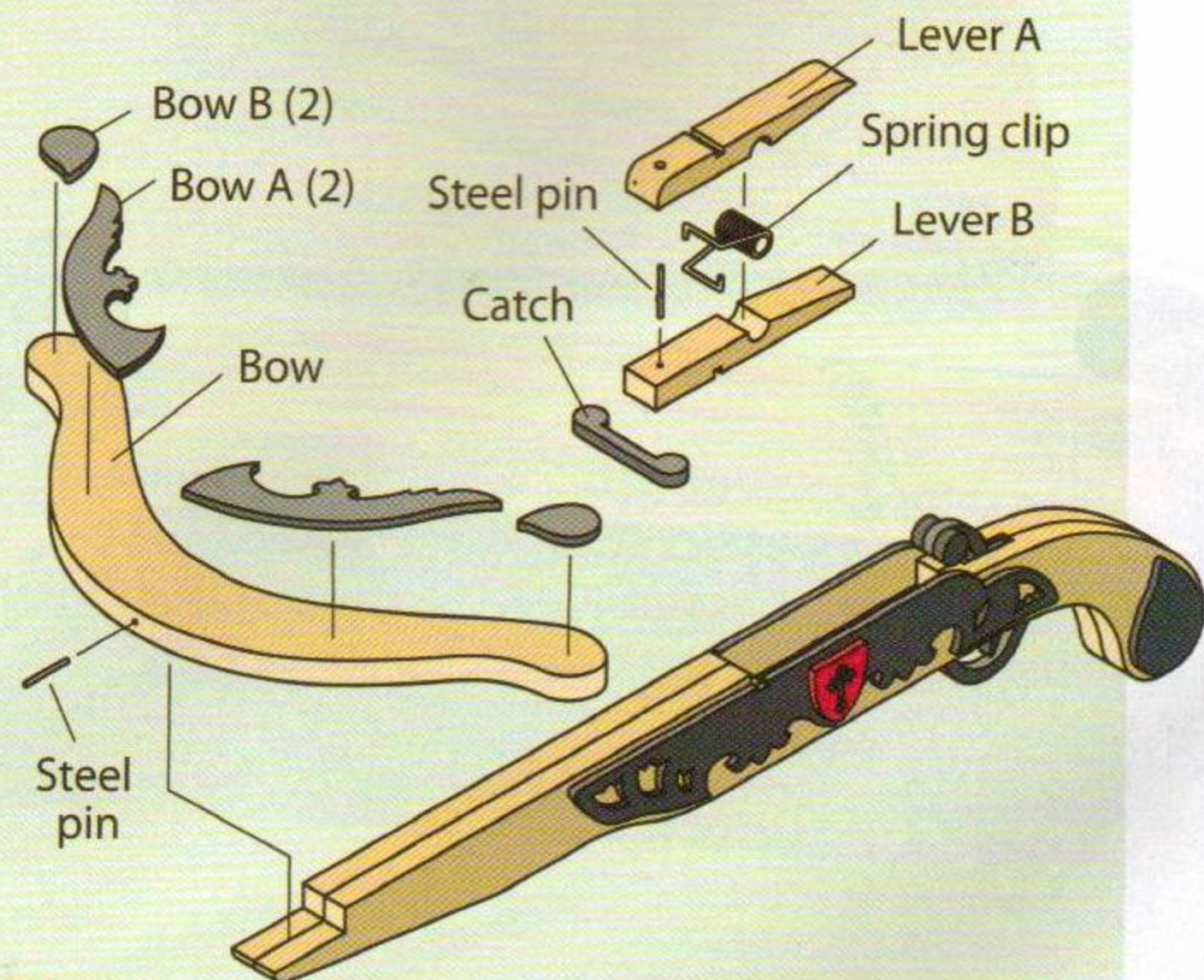


2 Attach the castle assembly to the castle base. Use #6 x 2" (51mm)-long flat-head wood screws. Glue the castle support pieces in place as shown. Glue the shield pieces to the knights as shown.

CROSSBOW: ASSEMBLING THE CROSSBOW

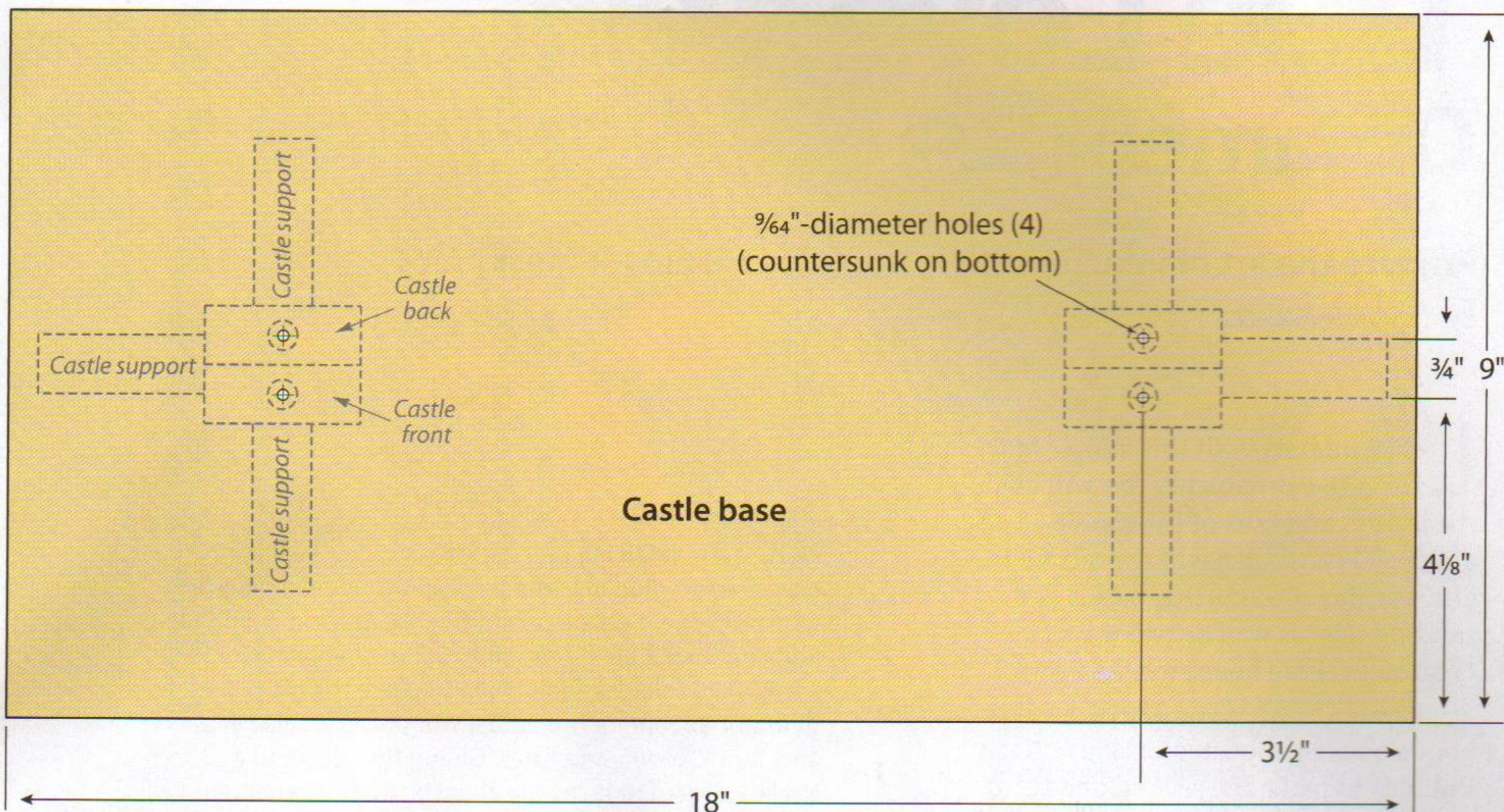


3 Assemble the trigger. Glue the trigger A pieces to the trigger. Place the trigger on one stock piece, insert a steel pin, and glue the trigger guard in place. Glue the remaining stock piece in place over the trigger and trigger guard. Be sure the trigger moves freely. Glue the stock A and stock B pieces to the stock. Glue the stock C pieces to the stock A pieces.



4 Make the bow. Insert a steel pin and glue the bow A and bow B pieces to the bow. Glue the bow to the stock. Glue the catch in the $\frac{3}{8}$ " by $\frac{3}{8}$ " (10mm by 10mm) notch in the stock. Insert a steel pin in the hole in lever B. Assemble the spring clip with the lever A and lever B pieces. Glue the lever B piece centered from side to side in the 7" (178mm)-long notch in the stock. Make sure the trigger mechanism works correctly to push the lever B piece down in back and up in the front so it will release the rubber band from the pin.

Castle base measured drawing



Finishing the Projects

Begin by brushing a coat of sanding sealer over all of the parts. When the sealer is dry, sand everything with 220-grit sandpaper and brush on a coat of polyurethane. With 220-grit sandpaper, sand just the areas that will be painted. Paint only the top surface of the 1/4" (6mm)-thick overlays. Mix eight parts silver with one part black to get silver-gray, and then paint the crossbow overlays and the knights silver-gray. Paint the top surface of one of the knight's shields and the top surface and edges of both stock C pieces red. Paint one of the knight's shields white. Paint one of the knight's shields and the inside of the stock C pieces black. Top-coat the painted parts with polyurethane to make them glossy.



Paul Meisel of Mound, Minn., has designed more than 3,000 woodworking plans.

For more ideas of what to build, to order parts, or to request a catalog, call 800-441-9870, or visit his website, www.meiselwoodhobby.com.

Patterns for the **CASTLE AND CROSSBOW PLAY SET** are in the pattern pullout section.

Materials & Tools

Materials:

- Baltic birch plywood, 1/4" (6mm)-thick: 24" x 24" (610mm x 610mm) (#8171)*
- Baltic birch plywood, 3/8" (10mm)-thick: 12" x 12" (305mm x 305mm) (#9563)*
- Pine, 1" (25mm)-thick: 10" x 8' (254mm x 2,286mm)
- Giant clothespin spring clip (#1667)*
- Rubber bands: 8" (#7339)*
- Steel welding rod or brass rod: 1/8" (3mm)-diameter
- Flat head screws: 4 each #6 x 2" (51mm) (#1446)*
- Sandpaper: 80, 120 grits
- Wood glue
- Sanding sealer
- Polyurethane

- Acrylic paints, such as Delta Ceramcoat®: black (#02506)*, white (#02505)*, red (#02507)*, silver (#02603)*

Tools:

- Blades: #5 reverse-tooth, such as Olson #443-R & #446-R
- Drill press
- Twist drill bits: 7/64" (2.75mm), 1/8" (3mm), 9/64" (3.5mm), 1/4" (6mm) diameters
- Forstner bit: 1 1/8" (29mm) diameter (#30635)*
- Countersink bit
- Paintbrushes
- Clamps
- Phillips screwdriver

SPECIAL SOURCES:

Items marked with an asterisk are available from Meisel Hardware Specialties. Call 800-441-9870 or visit their Website, www.meiselwoodhobby.com.

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

True Love's Gifts Ornament Set

Practice the art of intarsia with lessons from a master designer

By Judy Gale Roberts

Learn intarsia with this simple but attractive ornament. You will enjoy the lesson, and fans of the classic carol and bird lovers alike will appreciate the gift. I've included cutting basics and sanding tips, as well as two ways to create a backing board for the project.

If you like what you learn, use the bonus patterns (located on the Pattern Pullout) to make the second and third ornaments in the set. The other nine patterns are available at my website.

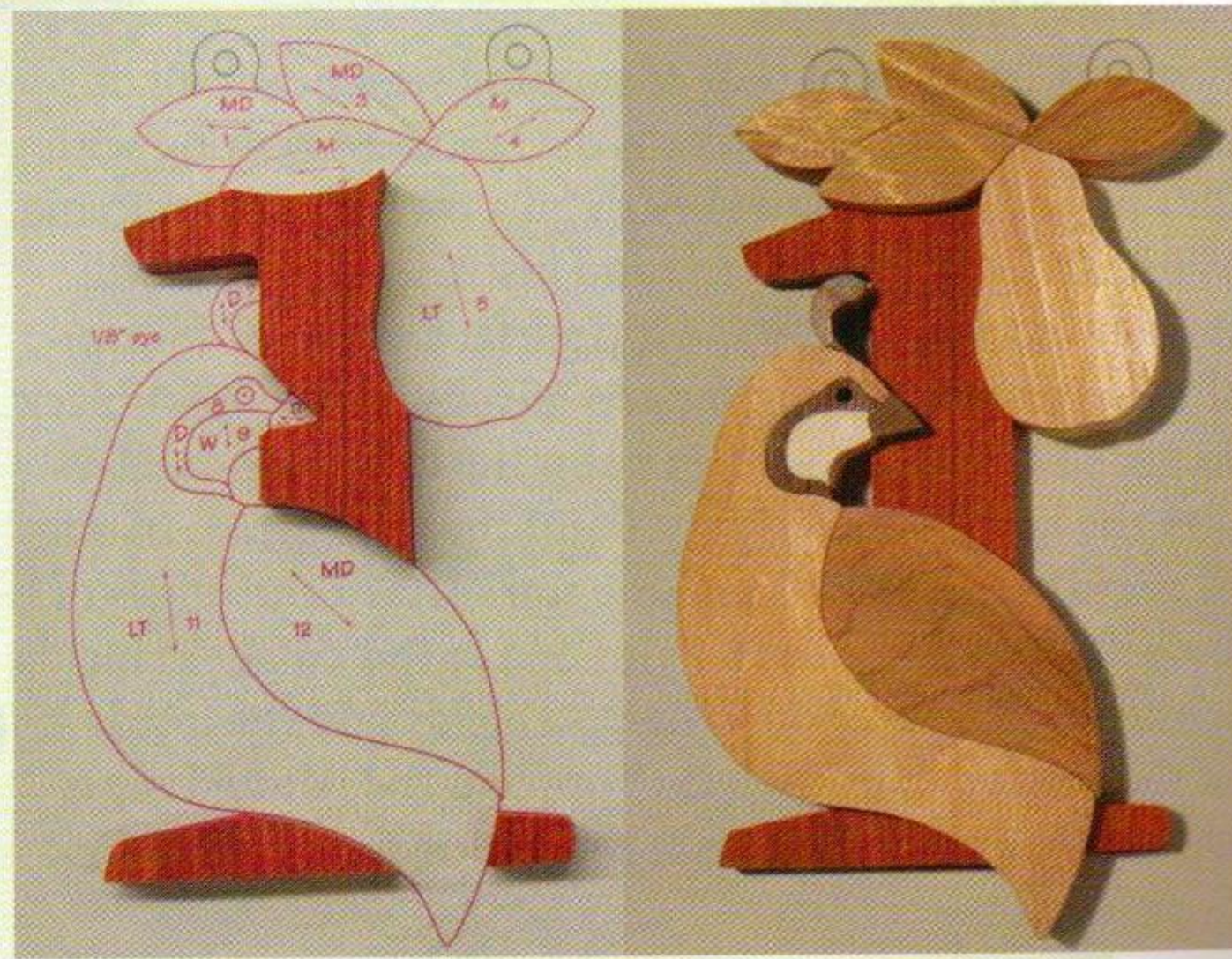
Backing Board Options

I rarely edge-glue my intarsia pieces together. Instead, I glue all of the pieces to a backing board. Wood expands and contracts due to humidity, so the glue joints can break, especially between pieces where the grain runs in different directions. Individual wood species also expand and shrink at different rates. Gluing the pieces to a backing board reduces the chances that an ornament will break apart.

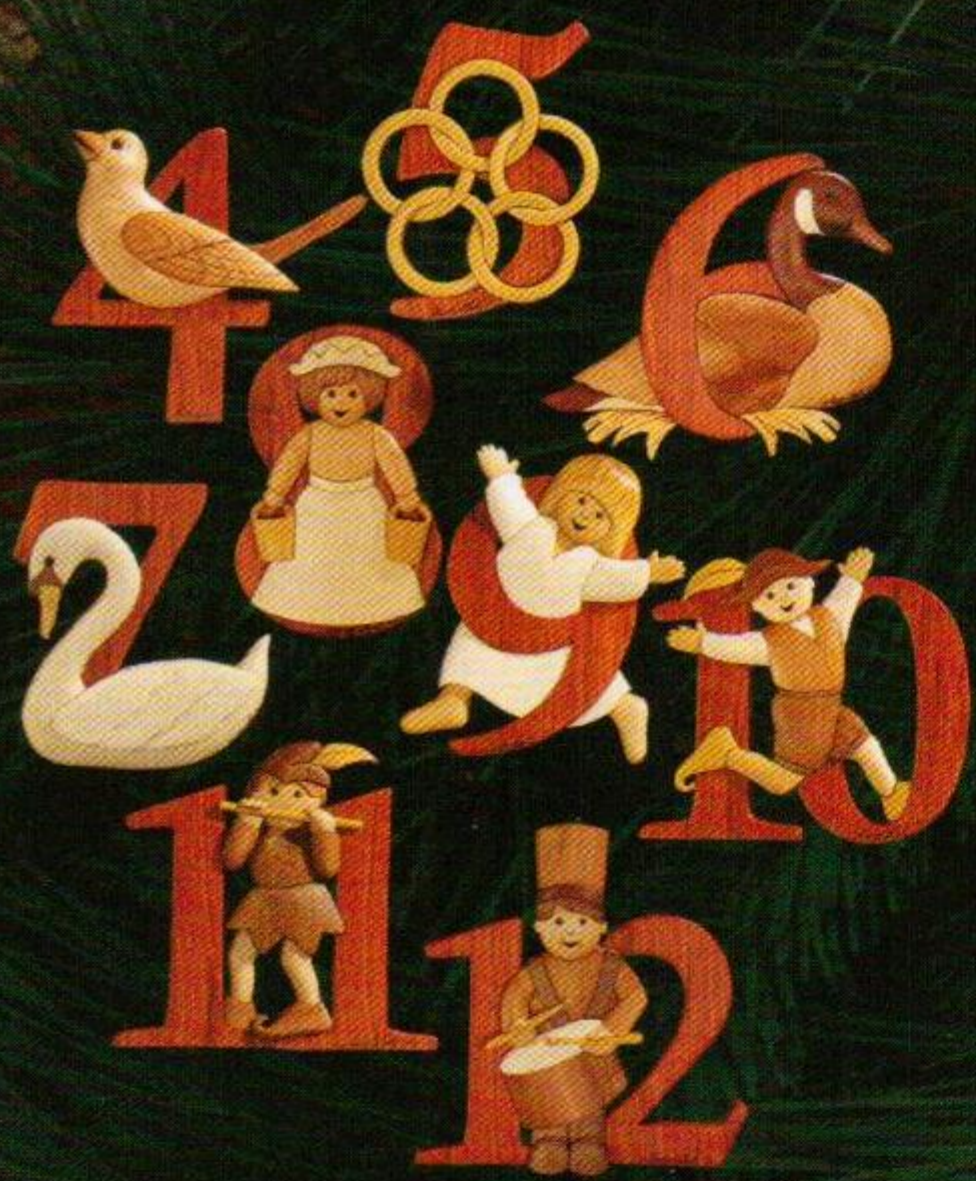
For this project, you can use either of two types of backing board. You'll use the same pattern and type of wood for each, but cut the pieces differently.



Option 1: Make a hardwood backing board. Cut the entire perimeter of the pattern (including the hanging loops) from a 1/4" (6mm)-thick piece of red wood and glue the other elements to it. The red number 1 will be visible between the pear and partridge.



Option 2: Use a tempered hardboard backing board. Cut all of the pieces individually, including the three visible pieces of the number 1. Attach a copy of the pattern to a piece of 1/8" (3mm)-thick tempered hardboard. Include the hanging loops on the top, and cut 1/16" (2mm) inside the pattern lines. Glue the cut pieces onto the tempered hardboard backing board.



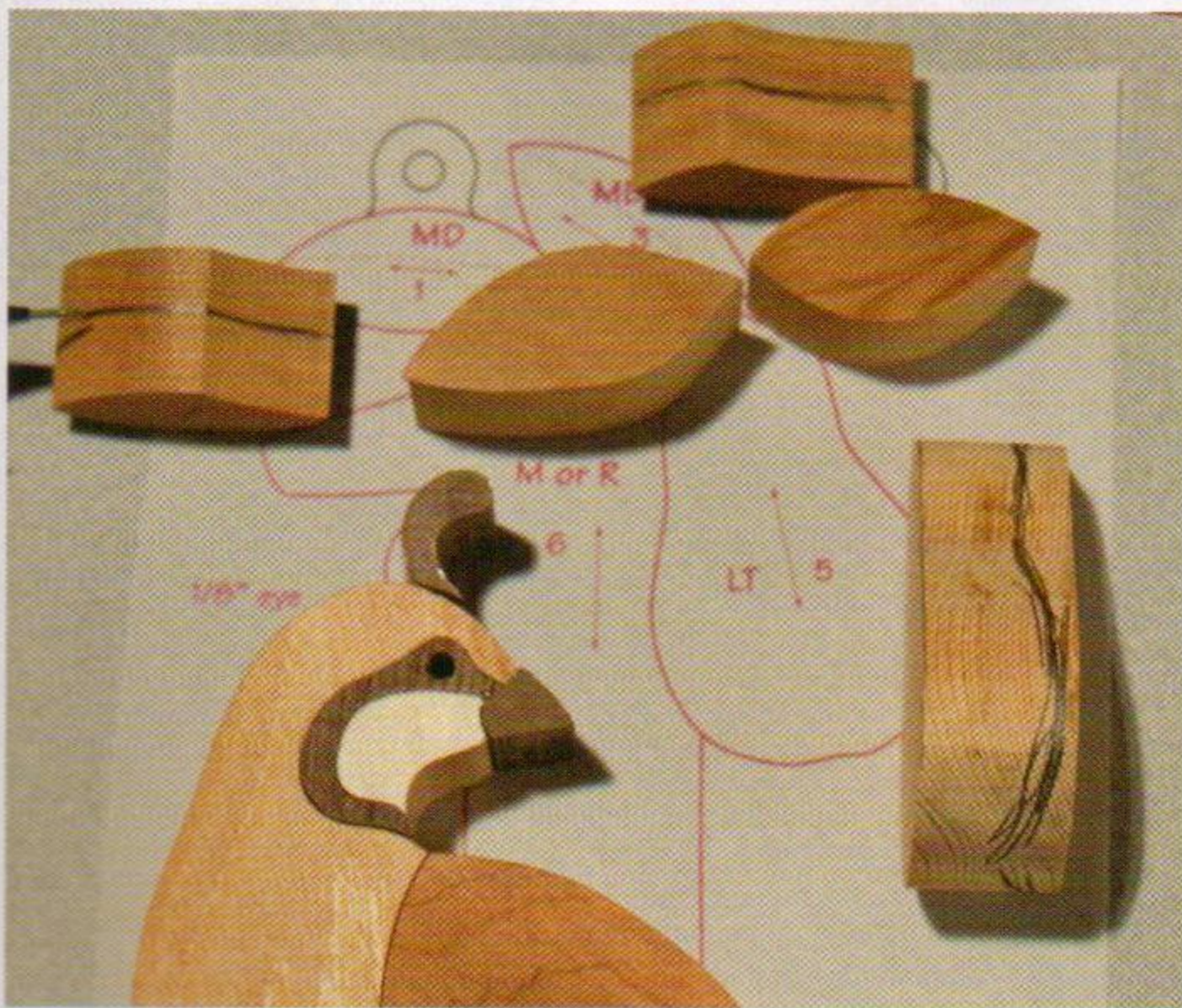
PARTRIDGE: CUTTING THE PIECES

Step 1: Prepare the blanks. After deciding which backing board to use, sand all of the blanks as flat and smooth as possible to ensure a good fit. Cut the pieces to rough size and remove all of the dust. Make multiple copies of the pattern, cut the pieces apart, and glue them securely to the different shades of wood. Cut the patterns oversized and leave some space between the patterns so you can get the blade on the line before you start cutting each piece.

Step 2: Cut the pieces. Drill the holes for the bird's eyes before you start cutting those sections. Use a #5 blade for the $\frac{3}{4}$ " (19mm)-thick wood. To make interior cuts, like the wing on the hen, use a smaller blade, such as a #1, #0, or #2/0. Check the parts often to make sure you are cutting square. Take your time and do not push the wood.

Step 3: Refine the cuts. Leave the pattern on the wood until you have cut all the parts. Sand any fuzzies off the back of each part. Transfer the part number to the back of each piece. Then, check the fit of the piece. If the parts do not fit, check for heavy pattern lines and trim those areas with a sharp blade. It is difficult to keep the edges square if you sand to the line. Practice trimming along the line with scrap wood or along the outside edges of your pieces. Remove the pattern after all parts are numbered and fit together tightly.

PARTRIDGE: SHAPING THE PIECES

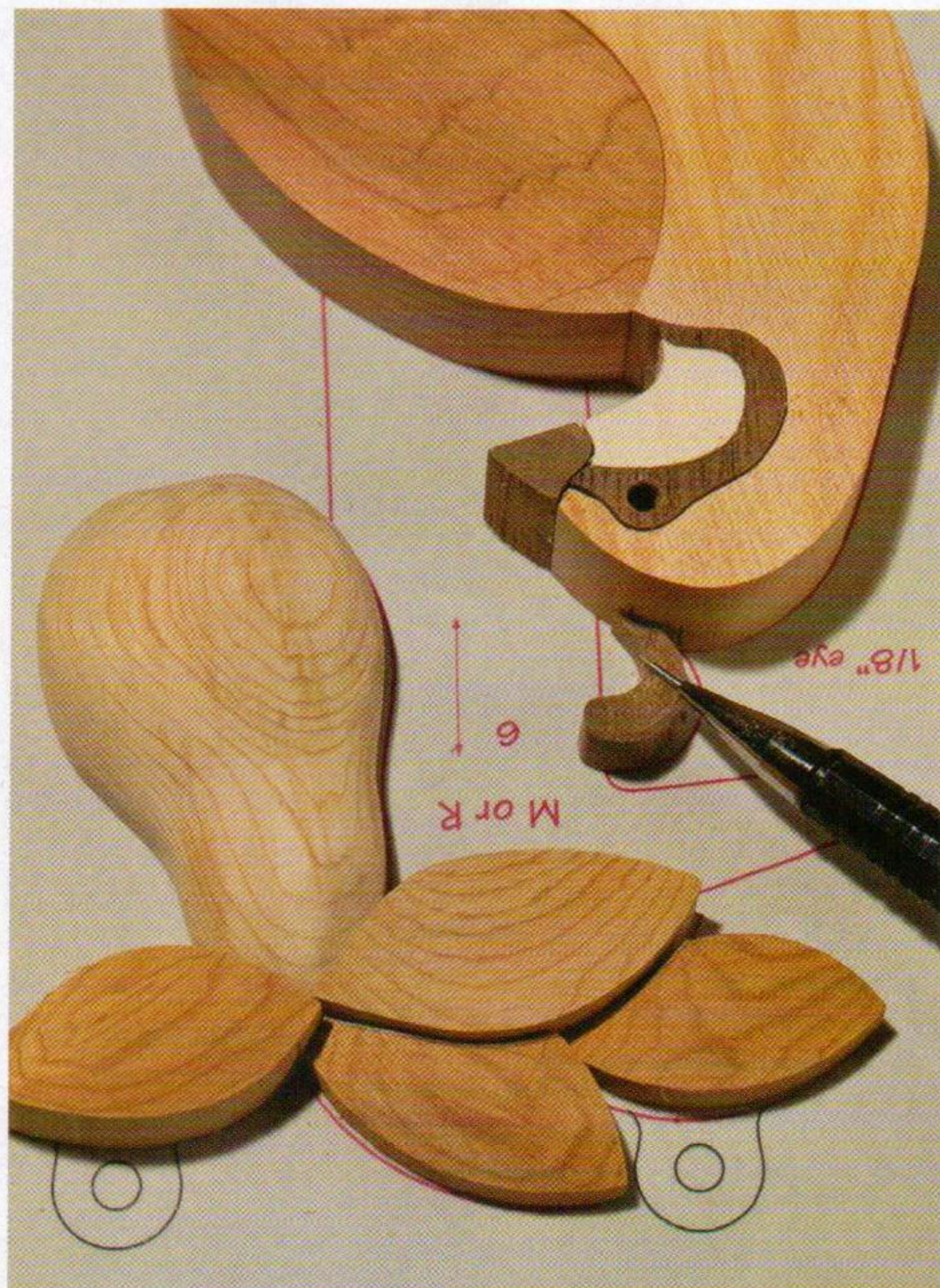


▲ Step 4: Sand the lowest parts. I rough out the entire project using an inflatable drum sander and an 80-grit or 100-grit drum. My goal is to get it close to the finished thicknesses; later I will fine-tune the

TIP MARKING SANDING DEPTHS

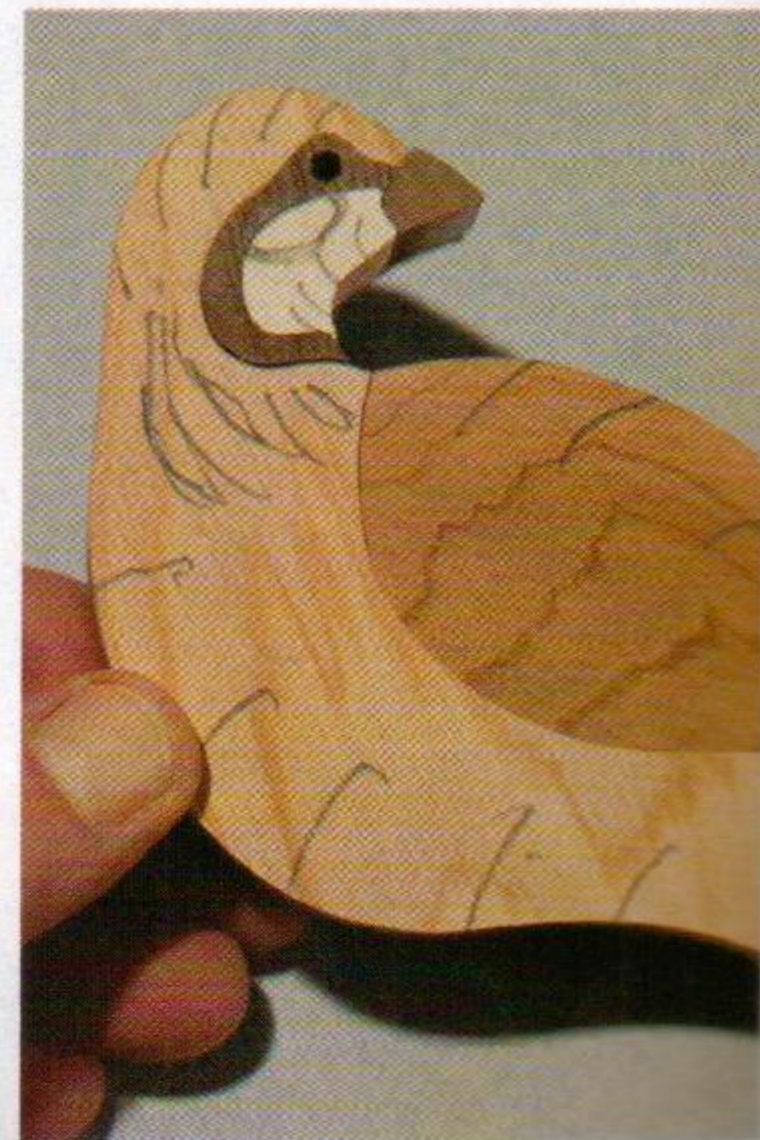
After sanding a part, mark the sides of any adjoining pieces with a pencil so you don't sand too much wood off them.

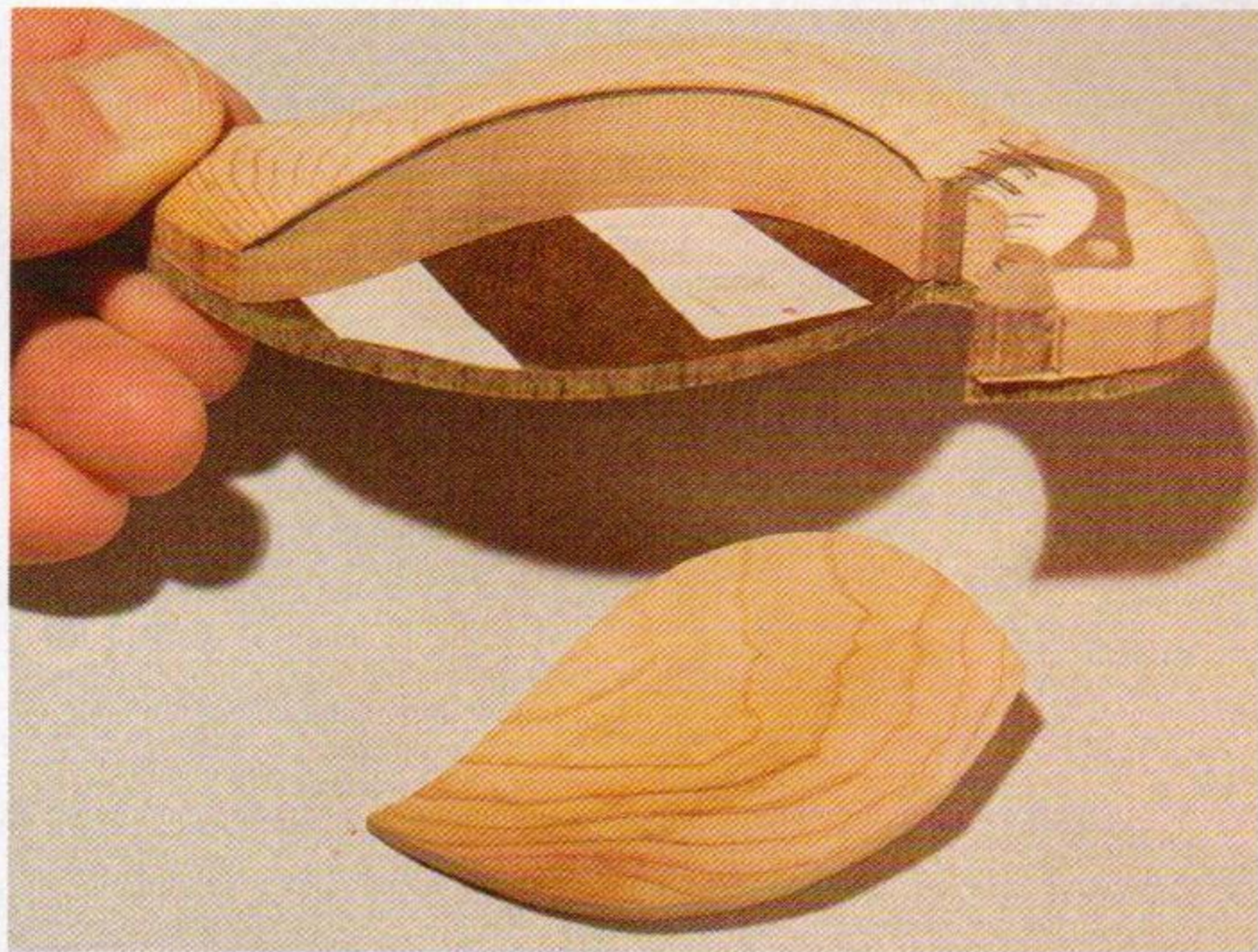
pieces so the project comes together at about the same time. Start with the top two leaves (Parts #1 and #3). Sand the $\frac{3}{4}$ " (19mm)-thick wood down to $\frac{3}{8}$ " (10mm) thick. Draw a line to sand down to. Then, thin the points of the other two leaves, but leave the middle thicker (similar to a football).



▲ Step 5: Finish shaping the lowest pieces. Round and shape the pear (#5). Then, sand down the partridge's dark top feather (#7).

► Step 6: Create a sanding shim for the partridge. The pieces of the partridge will be shaped as a single unit. Cut a piece of thin plywood or tempered hardboard to the rough shape of the partridge and use double-sided tape to attach the pieces to the shim. Then, round the outside edges of the bird.





▲ **Step 7: Refine the body.** Use a thin putty knife or a palette knife to carefully remove the wing from the sanding shim. Reduce the thickness of the bird's body $\frac{1}{16}$ " (2mm) so the wing is a little thicker than the body. Mark the thickness of the body onto the wing.



▲ **Step 8: Refine the wings.** Sand and shape the wings, staying $\frac{1}{16}$ " (2mm) above the pencil line indicating the thickness of the bird's body. Then, sand the bird parts with a 220-grit sanding drum. Remove the pieces from the sanding shim and reassemble them. Using progressively finer grits of sandpaper up to 220-grit, hand-sand the pieces in the direction of the grain. Remove any across-the-grain scratches.



▲ **Step 9: Add the texture details.** Draw the leaf grooves using the pattern as a guide. Carve a groove along those lines. I use a Wonder Wheel to carve and burnish the detail lines. You can also use a rotary tool with a carving bit.

► **Step 10: Add the eye.** Cut a $\frac{1}{8}$ " (3mm)-diameter maple dowel to $1\frac{1}{2}$ " (38mm) long. Round one end of the dowel, and then burn and burnish the end of the dowel. I use a Wonder Wheel, but you could use a woodburner or a propane torch. Cut the extra length off the bottom of the dowel and glue it in place. Blow the dust off the pieces using compressed air. Check to make sure everything is sanded smooth.



PARTRIDGE: COMPLETING THE ORNAMENT

Step 11: Apply a heavy coat of clear satin gel polyurethane. Let the wood soak up what it needs to fill in any open grain. Coat the top and sides of each part, but avoid getting finish on the backs of the pieces. Allow the gel to soak in for about a minute, and then wipe off the excess finish. A good rule of thumb is that by the time you've applied finish to three pieces, the first piece is ready to be wiped. Fold paper towels into quarters and wipe off the excess finish. Keep a clean paper towel handy to remove any really wet finish. I use many paper towels; if you overuse a paper towel, it will start to deposit lint and bits of paper on the project. Allow the first coat to dry overnight. Apply lighter second and third coats six to eight hours apart.



▲ Step 12: Glue the pieces together. Place the parts on the backing board. If you are using a tempered hardboard backing board, check that it is not visible and trim it if necessary. Apply a few dots of glue to the pieces (on the backs, not the edges) and press them into place on the backing board.

Materials:

- Dark wood, such as dark Western red cedar or walnut, 3/4" (19mm)-thick: 2" x 4" (51mm x 102mm)
- Medium-dark wood, such as Western red cedar, mahogany, or cherry, 3/4" (19mm)-thick: 4" x 6" (102mm x 152mm)
- Medium wood, such as Western red cedar, pecan, or red oak, 3/4" (19mm)-thick: 4" x 6" (102mm x 152mm)
- Red wood, such as redheart, padauk, or bloodwood, 1/4" (6mm)-thick: optional hardwood backing board, 5" x 18" (127mm x 457mm); just numbers, 5" x 11" (127mm x 279mm)
- Light wood, such as light Western red cedar, oak, or Northern white cedar, 3/4" (19mm)-thick: 4" x 8" (102mm x 203mm)
- White wood, such as aspen, white pine, or holly, 3/4" (19mm)-thick: 4" x 6" (102mm x 152mm)
- Maple dowel, 1/8" (3mm)-diameter: 1 1/2" (38mm) long

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

Materials & Tools

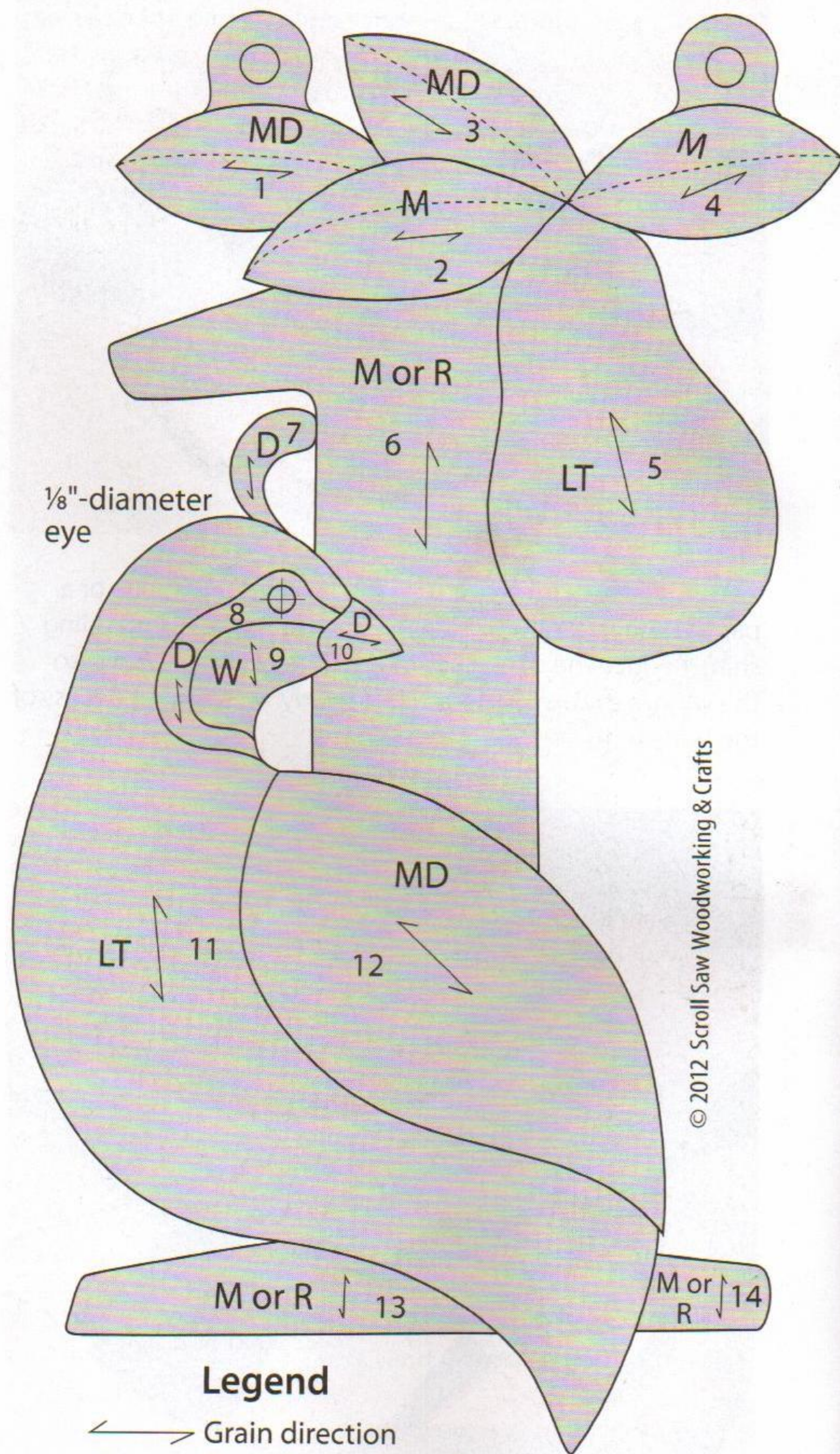
- Tempered hardboard, 1/8" to 1/4" (3mm to 6mm)-thick: backing board, 6" x 18" (152mm x 457mm); sanding shim, assorted scraps
- Photocopies of the pattern: 5 each
- Glue stick or spray adhesive
- Double-sided light-duty carpet tape
- Pencil
- Sandpaper: assorted grits up to 220
- Polyurethane: clear satin gel
- Paper towels
- Wood glue

Tools:

- Blades: #5 and #1, #0, or #2/0 skip-tooth
- Sanders, such as drum sander
- Thin spatula or palette knife
- Wonder Wheel or rotary power carver with assorted bits
- Woodburner or propane torch (optional)
- Paintbrushes

Additional patterns for the **FIRST DAY OF CHRISTMAS ORNAMENT** are in the pattern pullout section.

Partridge ornament pattern



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Legend

- ← → Grain direction
- D..... Dark shade of wood.
- MD..... Medium dark shade of wood.
- M..... Medium (or red for the numbers) shade of wood.
- ML..... Medium light shade of wood.
- LT..... Light shade of wood.
- W..... White pine, aspen, or any white wood.



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 or information on classes held at her home studio in Seymour, Tenn., contact Judy at 800-316-9010, or visit www.intarsia.com. Judy's numerous intarsia books are available at www.FoxChapelPublishing.com.

Classic Fretwork Ornaments



Traditional designs are perfect for every tree

*By Lora S. Irish
Cut by Leldon Maxcy*

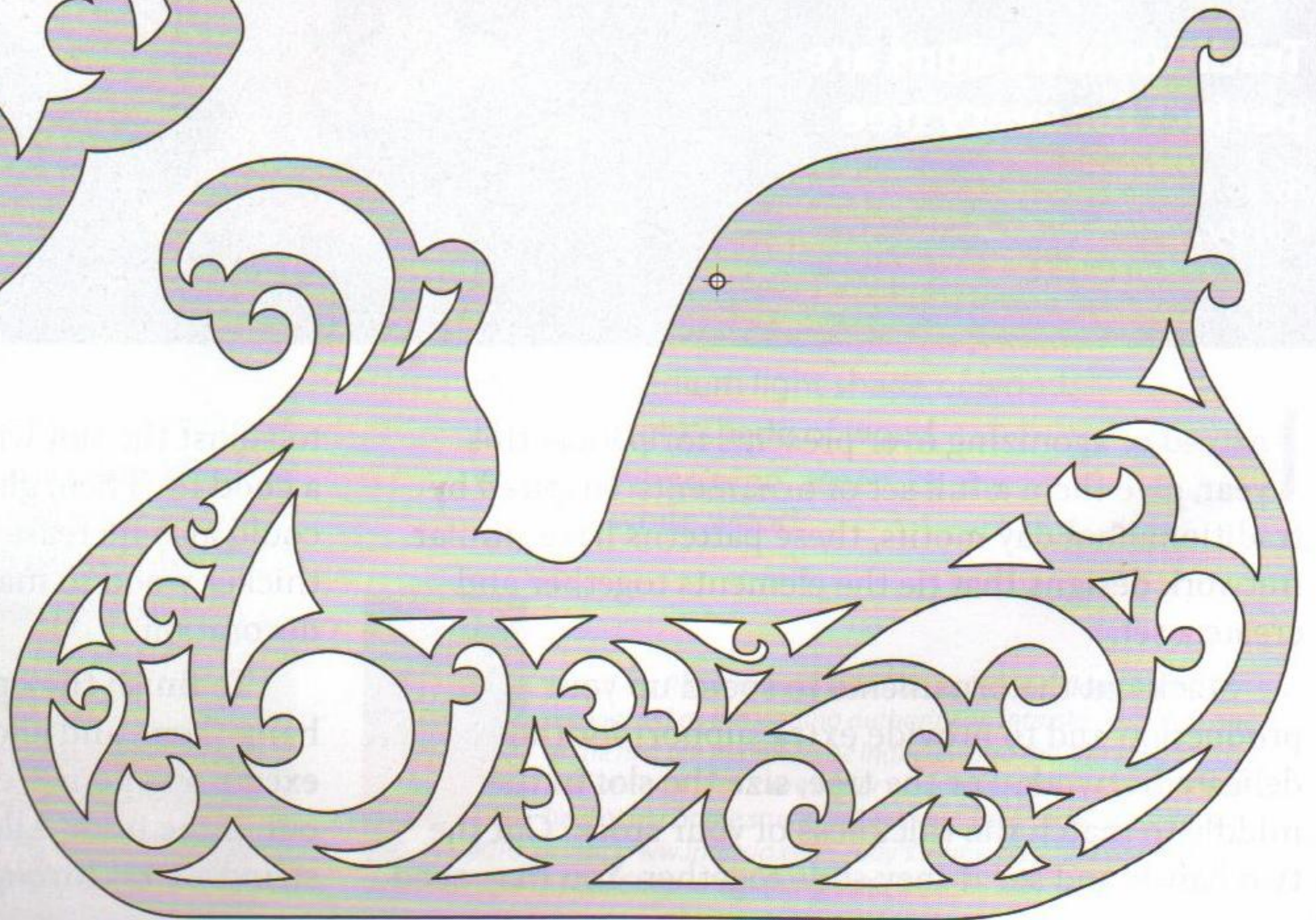
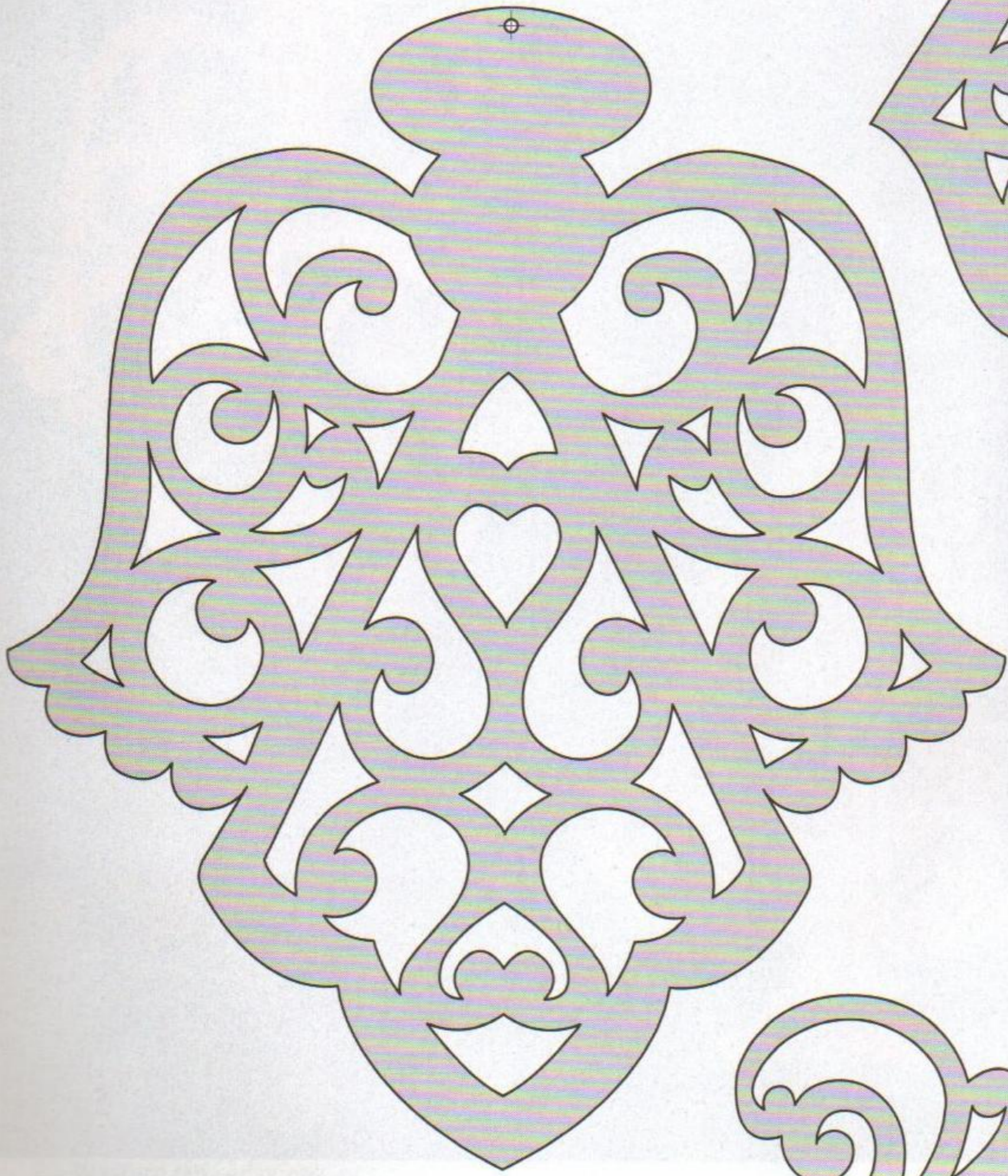
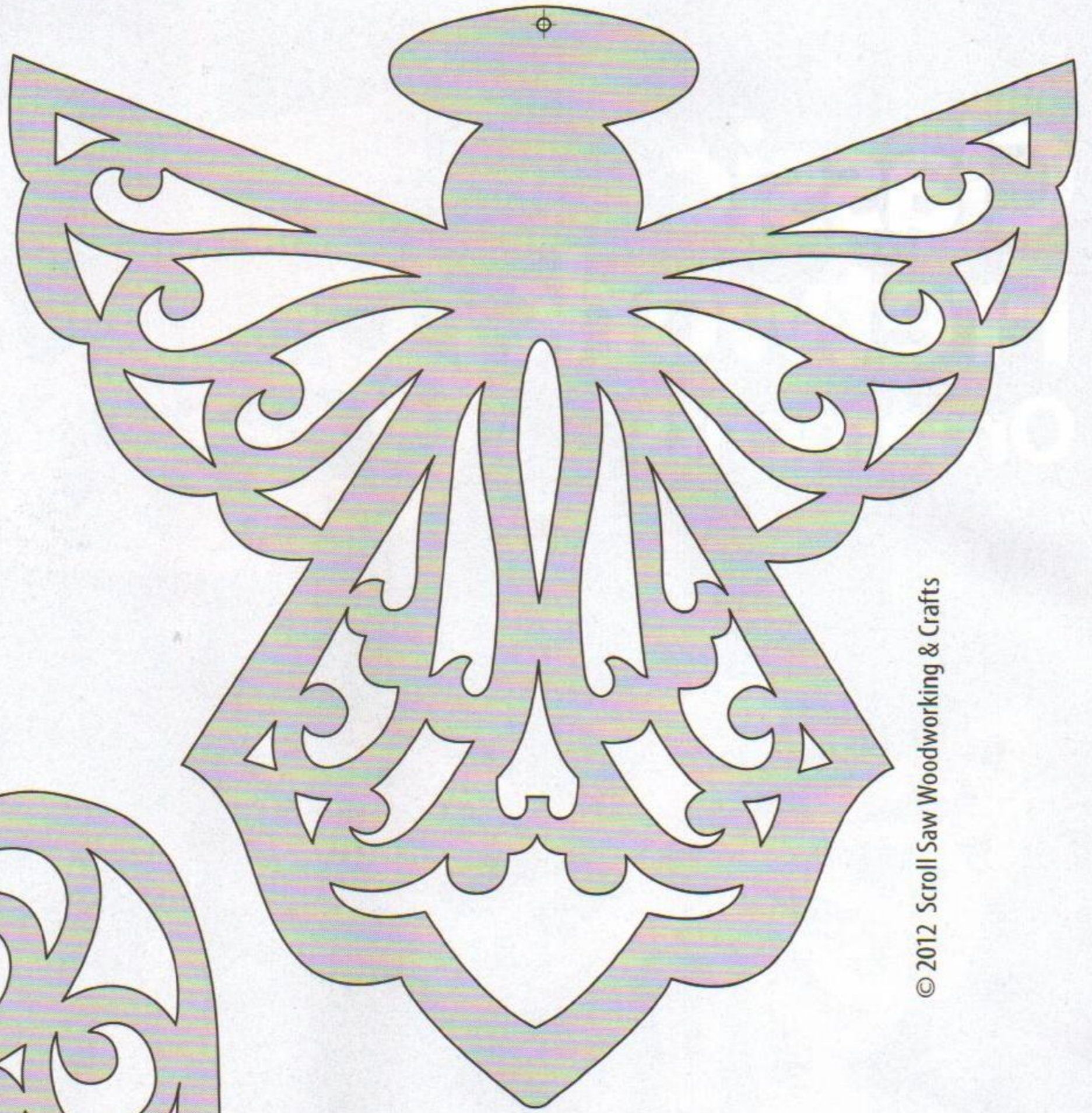
Instead of agonizing over presents for people this year, give them a full set of ornaments. Inspired by traditional holiday motifs, these patterns have similar fretwork designs that tie the elements together and create a set.

Stack-cut the ornaments to speed up your production and to provide extra support for the delicate fretwork. For the tree, size the slot in the middle to match the thickness of your stock. Cut the two halves and see if they slide together. You may need

to adjust the slot with needle files or sandpaper to get a good fit. Then, glue the two pieces together. You could also increase the size of the tree and cut it from thicker wood to make a free-standing centerpiece or decoration.

To finish the ornaments, dip them in Danish oil, hang them, and allow the oil to drip off. Wipe off the excess oil and use compressed air to blow the finish out of the frets. Allow the finish to dry overnight and string a cord through the top hole.

**Classic fretwork
ornament patterns**

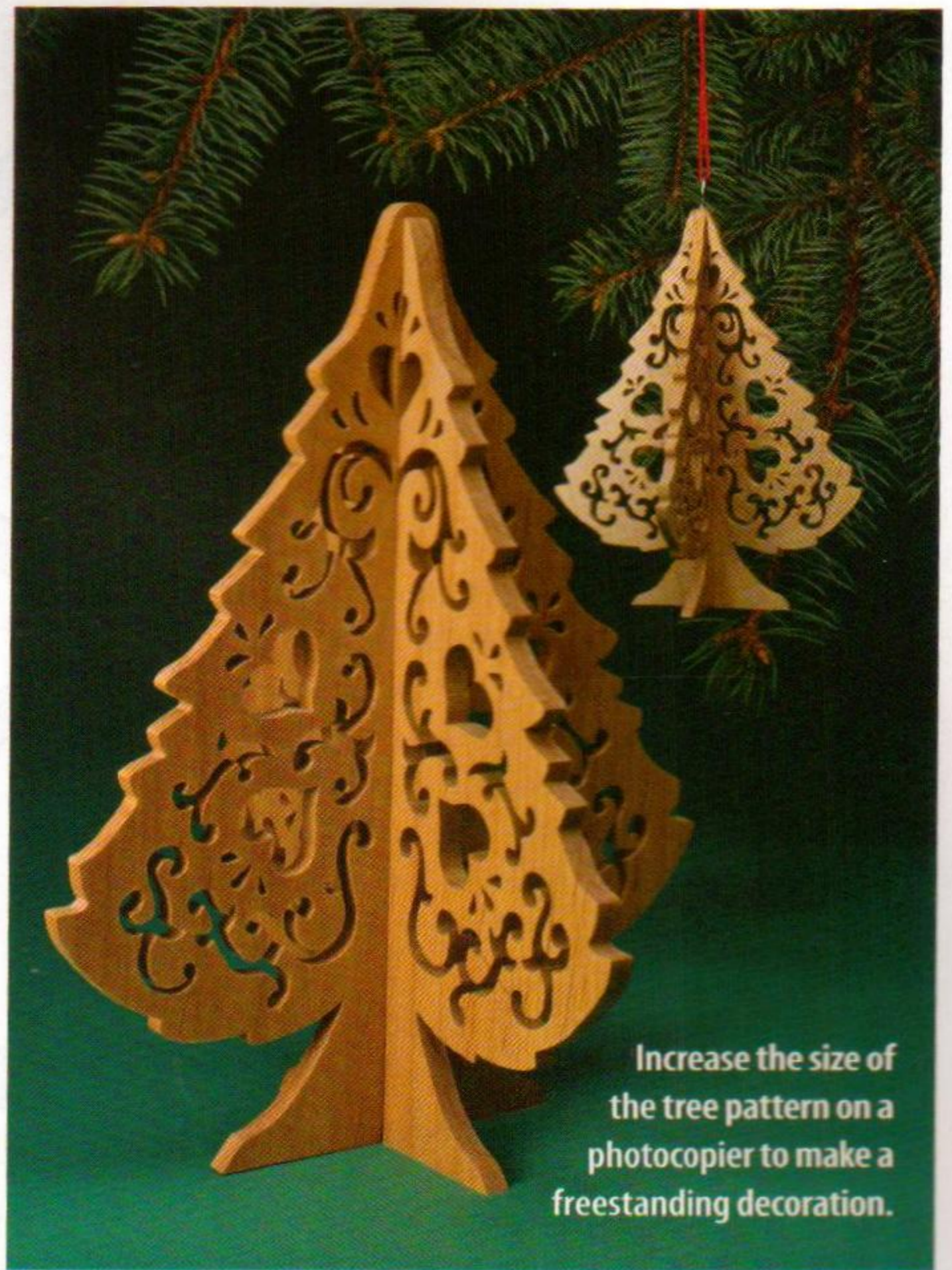


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**Classic fretwork
ornament
patterns**



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Increase the size of the tree pattern on a photocopier to make a freestanding decoration.

Step 1: Use a scroll saw to cut out the patterns to the lines.
Step 2: Make the freestanding tree. Cut a 1/2" wide blade-entry hole in the trunk and glue the two halves together. Use a 1/2" blade for the trunk and the inside of the tree. Use a 1/4" blade for the outside of the tree.
Step 3: Cut the ornament. Use a single universal blade.

Materials & Tools

Materials:

- Hardwood, 1/8" to 1/4" (3mm to 6mm)-thick: 5" x 5" (127mm x 127mm) per ornament; tree requires two blanks
- Spray adhesive
- Wood glue
- Danish oil
- Sandpaper
- Cord

Tools:

- Blades: #1 reverse-tooth
- Drill with bits
- Air compressor or compressed air can

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



Lora S. Irish is a nationally known artist and author. Her Fox Chapel Books include North American Wildlife Patterns for the Scroll Saw and World Wildlife Patterns for the Scroll Saw. Visit Lora's digital pattern warehouse, www.CarvingPatterns.com, which features patterns free and for purchase.

Compound-Cut Candleholders

Solid wood stands support small candles

By Sue Mey
Cut by Leldon Maxcy

Although many commercial candleholders are available, I prefer handmade candle stands like these, which are made from a solid piece of wood. The stands are particularly attractive if cut from blanks made of laminated hardwood species. Use the stands to display battery-operated tea lights, votives, or small pillar candles, adding glass holders as needed. Do not place candles in a draft, and never leave burning candles unattended.

MAKING CANDLEHOLDERS

Step 1: Attach the patterns to the blanks. Fold the patterns along the dotted lines. Cover the blanks with masking tape. Use spray adhesive or a glue stick to attach the patterns to the blanks.

Step 2: Make the internal cuts. Drill $\frac{1}{8}$ " (3mm)-diameter blade-entry holes. Using a #7 or #9 blade for softer wood or a #12 blade for hardwood, make the inside cuts on both sides of the project.

Step 3: Cut the perimeter. Make a single uninterrupted cut on each side. Vacuum away the dust. Wrap clear packaging tape around the block to hold the cut pieces in place. Rotate the blank 90° and cut along the pattern lines. Remove the waste pieces.

Step 4: Sand the candle stands. Clean the frets with needle files or sandpaper as needed. Sand the pieces with 320-grit sandpaper. Remove all sanding dust using a stiff-bristled paintbrush.

Step 5: Apply a finish to the pieces (optional). Use a medium-sized artist's brush to apply deep-penetrating furniture wax or Danish oil to the ornaments. Wipe all surfaces with a dry, lint-free cloth to remove any residue, and place them in the sun to dry.

Step 6: Varnish the stands. Apply several thin coats of clear spray varnish to the pieces, sanding with 600-grit sandpaper between coats. Allow the varnish to dry thoroughly.



Materials:

- Wood, 2" (51mm)-thick: 2" x 6 $\frac{1}{4}$ " (51mm x 159mm)
- Tape: masking; clear packaging
- Temporary-bond spray adhesive or glue stick
- Sandpaper: 320- and 600-grit
- Spray varnish: clear
- Battery-operated tea light candles or small votive candles in glass holders
- Deep-penetrating furniture wax liquid or Danish oil (optional)

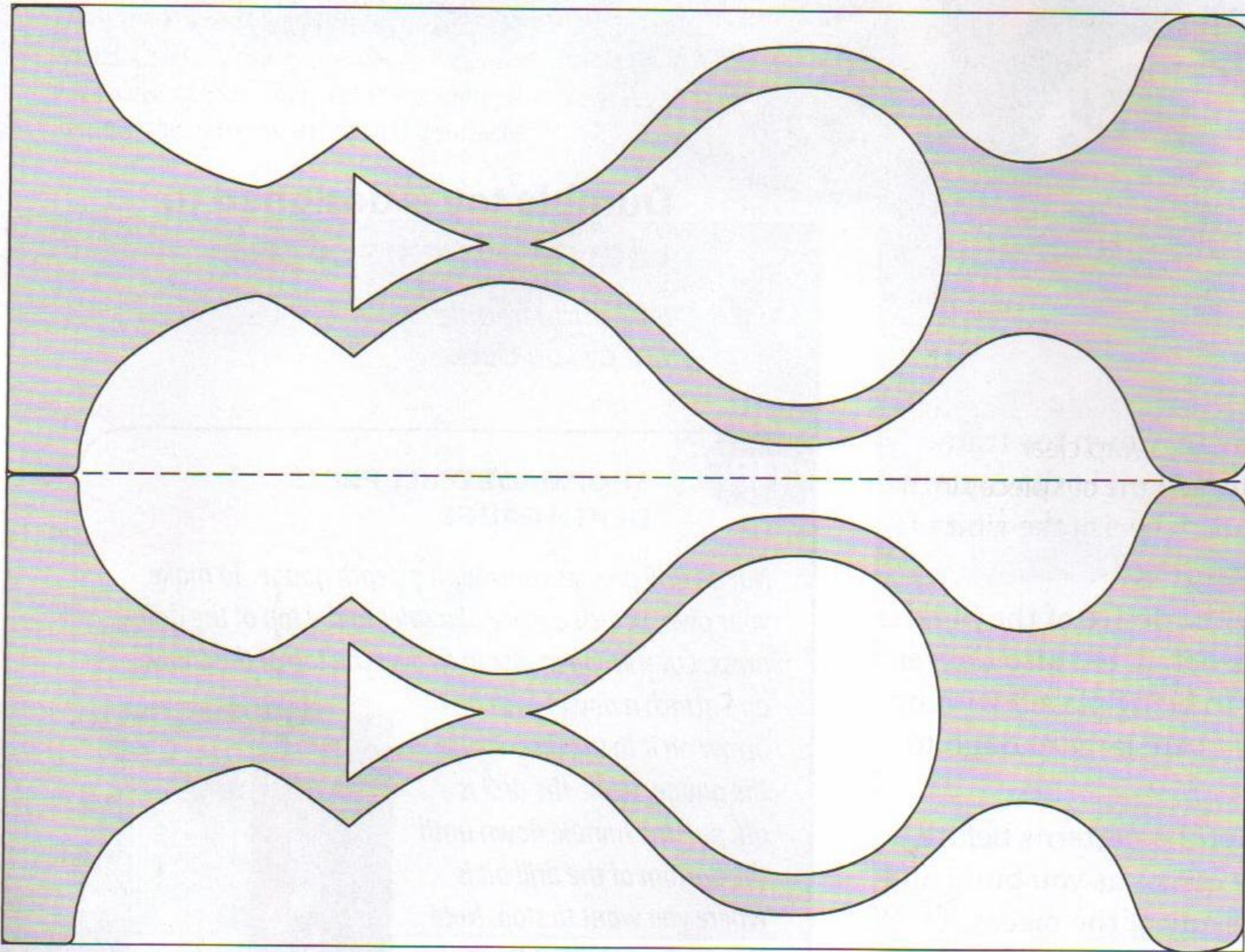
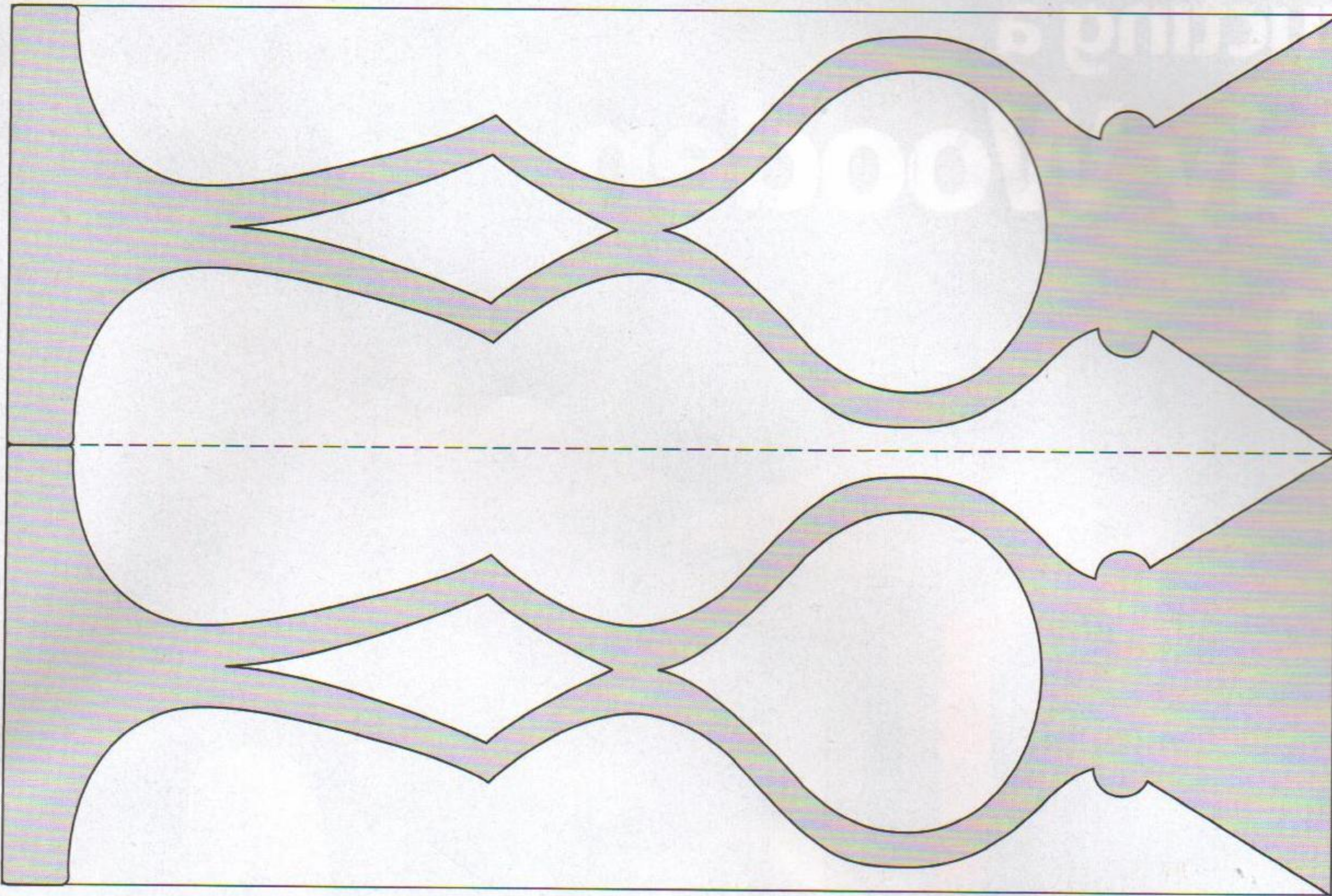
Materials & Tools

Tools:

- Blades: #7, #9, or #12 skip-tooth blades
- Drill press and $\frac{1}{8}$ " (3mm)-diameter bit
- Disc sander
- Needle files
- Paintbrushes: stiff-bristled; medium-sized artist's
- Lint-free cloth

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

Candleholder patterns

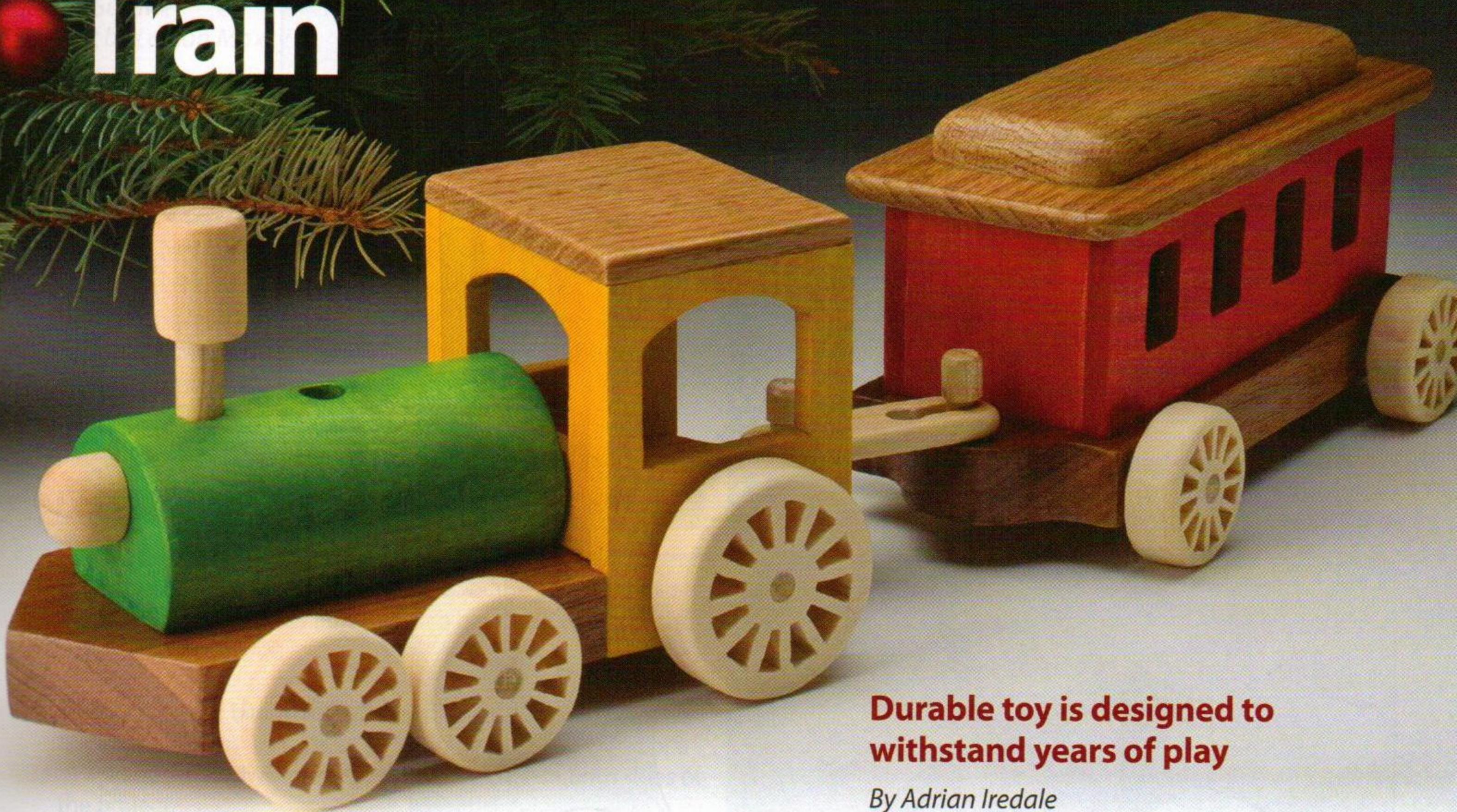


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Sue Mey lives in Pretoria, South Africa. To see more of her work, including a wide variety of patterns and pattern-making tutorials available for purchase, visit www.scrollsawartist.com. Contact Sue at suem@storage.co.za or sue@scrollsawartist.com.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

Constructing a Sturdy Wooden Train



Durable toy is designed to withstand years of play

By Adrian Iredale
Cut by Jon Deck

Every child should have their very own toy train. This train is entirely handmade, right down to the wooden wheels. These shopmade wheels take a bit of effort, but the end result is rewarding.

This design aims to satisfy the desire of the builder to build something with a little detail, but also deliver a robust toy that will stand up to being played with by children. Also, the train and cars are large enough to be used by children of any age.

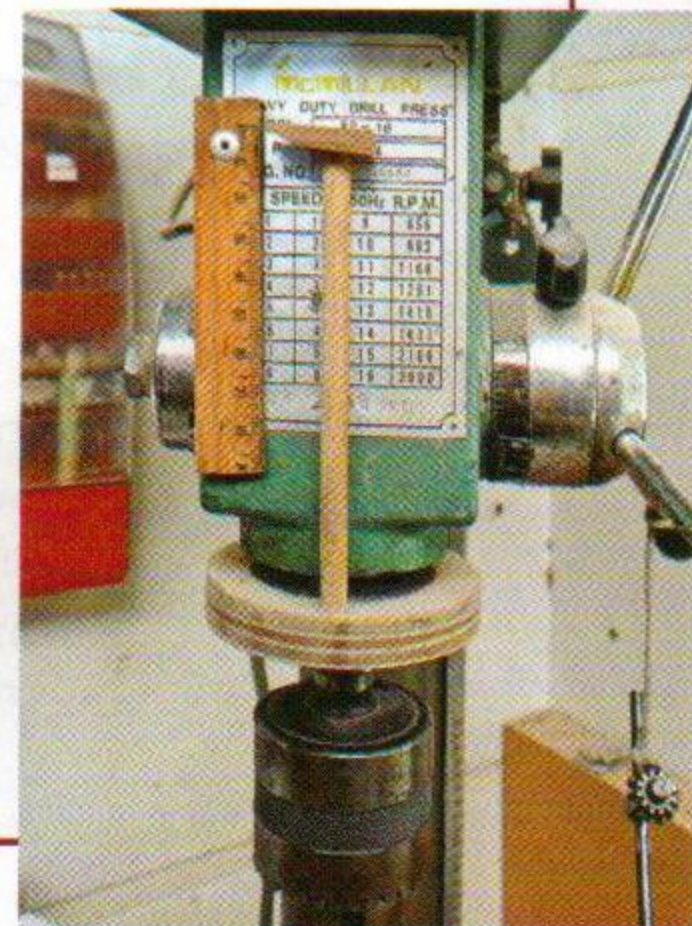
Make several photocopies of the patterns before you begin. You can refer to the copies as you build and use them if you have to remake any of the pieces.

When you cut out the patterns, leave a margin around each piece. Attach the patterns to the blanks with spray adhesive. When cutting the pieces on the scroll saw, cut down the middle of the pattern lines, or cut a little outside the lines and sand up to them.

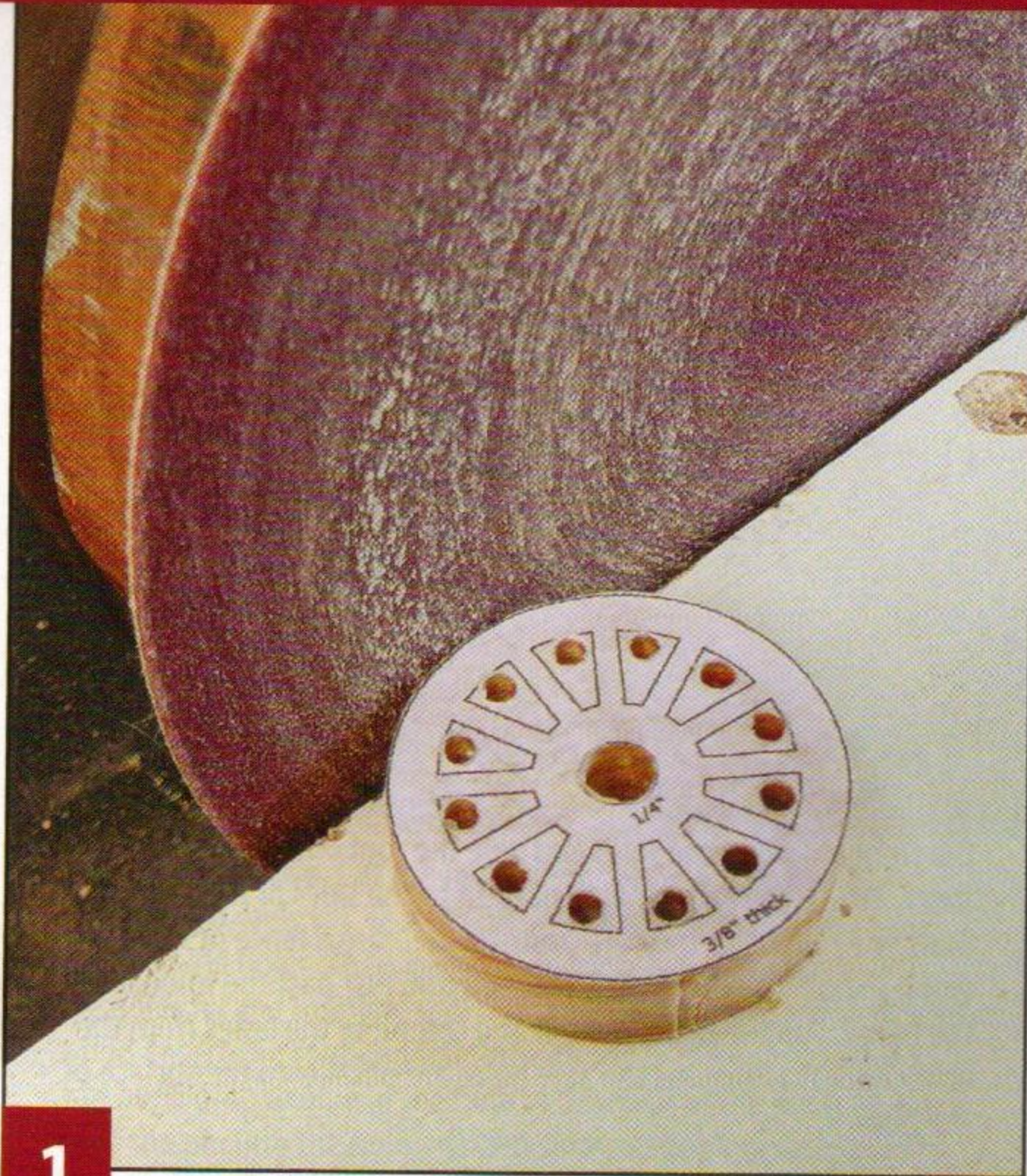
TIP

SHOPMADE DRILL PRESS DEPTH GAUGE

Not all drill presses come with a depth gauge. To make your own, attach a piece of a ruler to the top of the drill press. Cut a wooden disc to fit over the top of the chuck, and attach a dowel with an arrow on it to the disc. To use the gauge, while the drill is off, pull the handle down until the bottom of the drill bit is where you want to stop. Note the measurement at the arrow. Release the handle, turn on the drill, and then drill until the arrow is at the measurement you noted.



TRAIN: CUTTING THE WHEELS & COUPLERS



1 **Cut the wheels.** Drill the $\frac{1}{4}$ " (6mm)-diameter axle holes and $\frac{1}{16}$ " (2mm)-diameter blade-entry holes for the spokes. Cut just outside the lines as you cut around the perimeter of each wheel. Carefully round the wheels as you sand up to the lines with a disc sander. Then, cut the openings between the spokes. Remove the patterns and sand the surfaces.

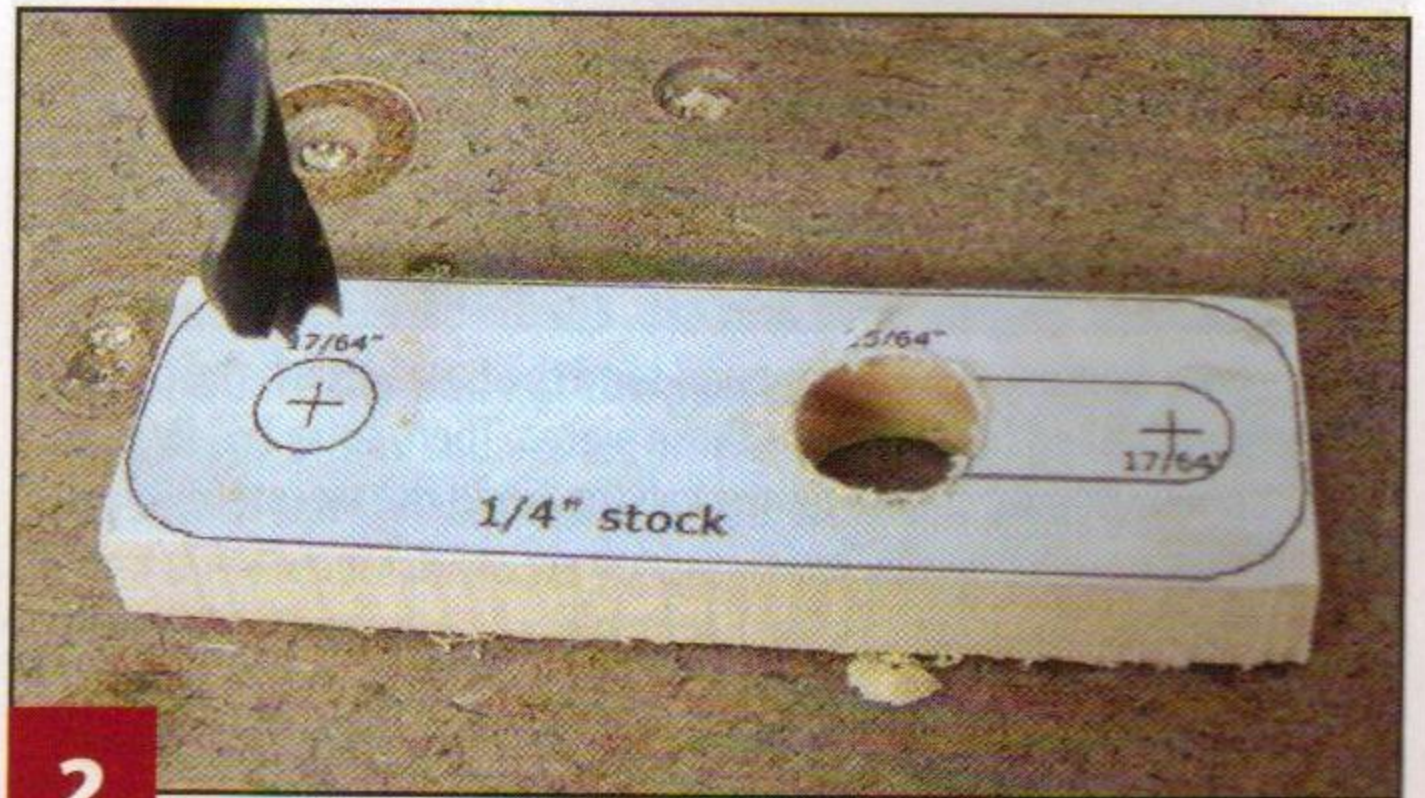


3 **Build a jig for drilling dowels.** This simple jig makes it easy to drill the holes in the coupling pins. Drill a $\frac{3}{8}$ " (10mm)-diameter by $\frac{3}{8}$ " (10mm)-deep hole in a piece of scrap. In the center of this hole, drill a $\frac{1}{4}$ " (6mm)-diameter hole the rest of the way through the scrap. The smaller hole allows you to push the dowel out after drilling the hole.

TIP

DOWEL SIZES

When you buy a dowel, measure its actual diameter and adjust the corresponding hole accordingly. For example, a $\frac{1}{4}$ "-diameter dowel may measure 6mm, which is slightly smaller than $\frac{1}{4}$ ". For most measurements, this miniscule difference in size won't matter, but for the axle holes through the wheels, the slightly oversized holes won't create a strong glue joint.

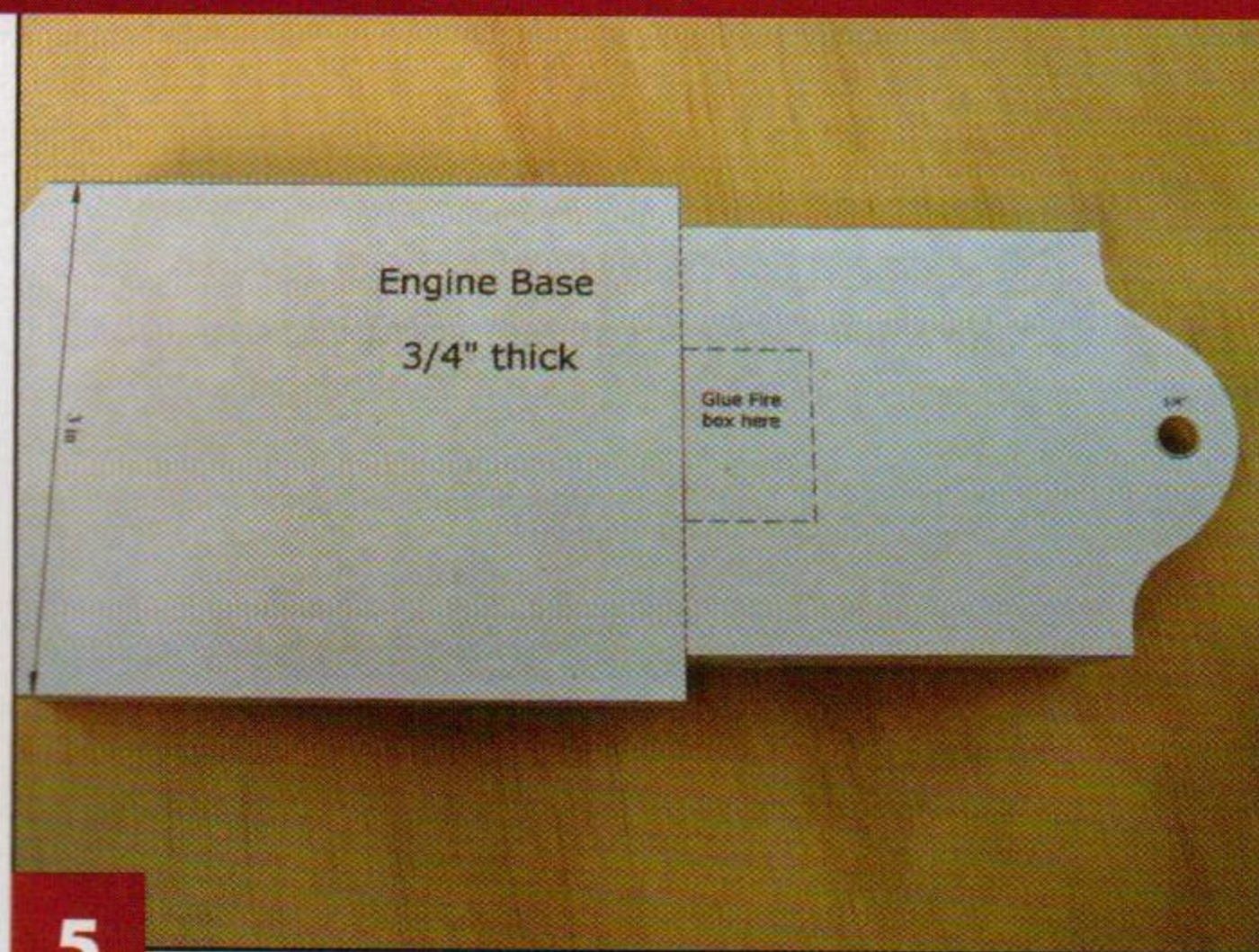


2 **Make the coupling.** The passenger car has a coupling on the front to attach to the engine. Drill the holes marked on the pattern and cut the slot with a scroll saw. Then, cut the perimeter of the coupling, remove the pattern, and sand the piece.



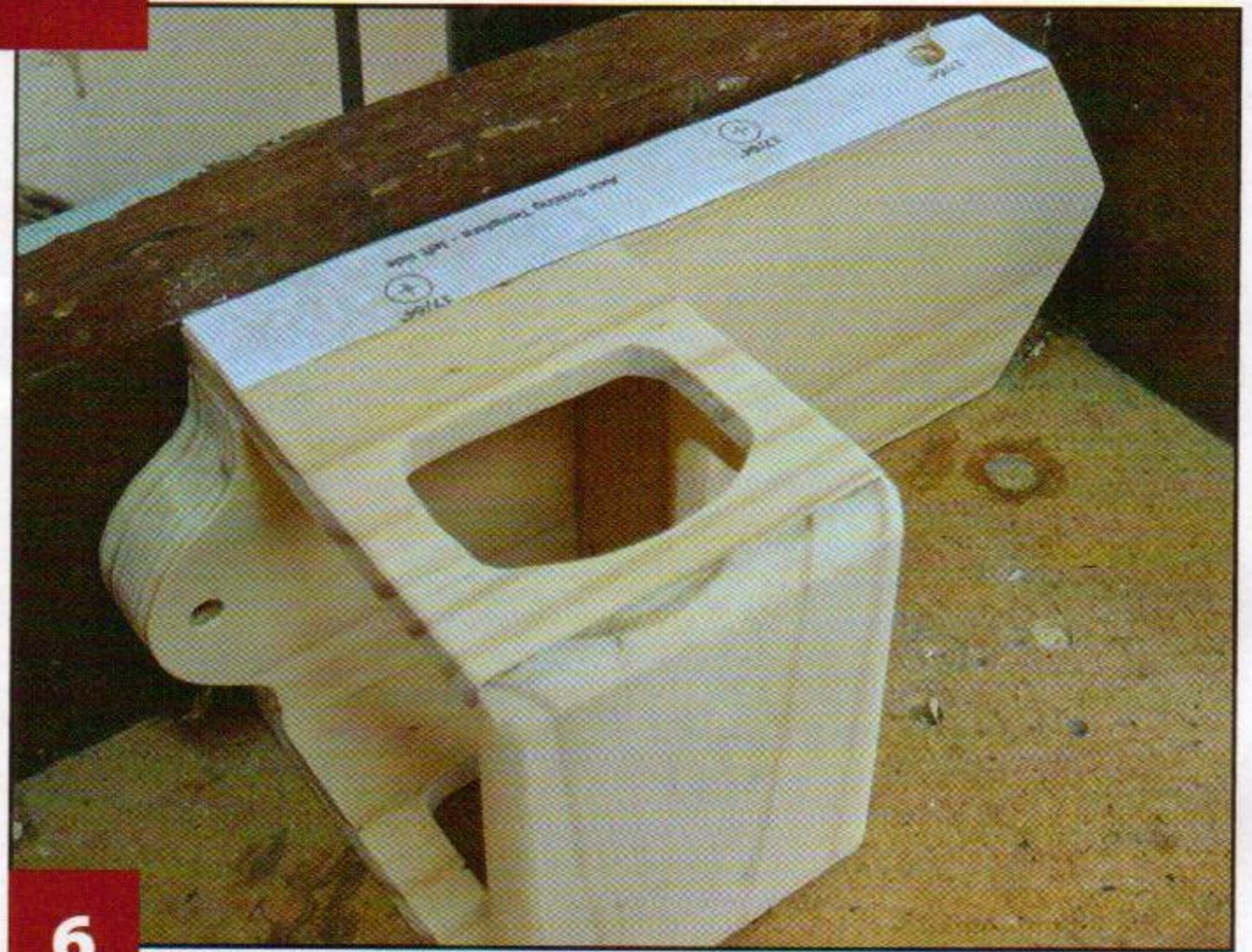
4 **Make the coupling pins.** Cut a piece of $\frac{3}{8}$ " (10mm)-diameter dowel to $\frac{3}{4}$ " (19mm) long and insert it into the jig. Drill a $\frac{1}{4}$ " (6mm)-diameter by $\frac{1}{4}$ " (6mm)-deep hole in the end of the dowel. Repeat on the opposite end of the dowel. Remove the dowel from the jig and cut it into two $\frac{3}{8}$ " (10mm)-long pieces. Glue $\frac{1}{4}$ " (6mm)-diameter by 1" (25mm)-long dowels into the holes in the ends, and round the ends of the pins with a disc sander.

TRAIN: MAKING THE ENGINE



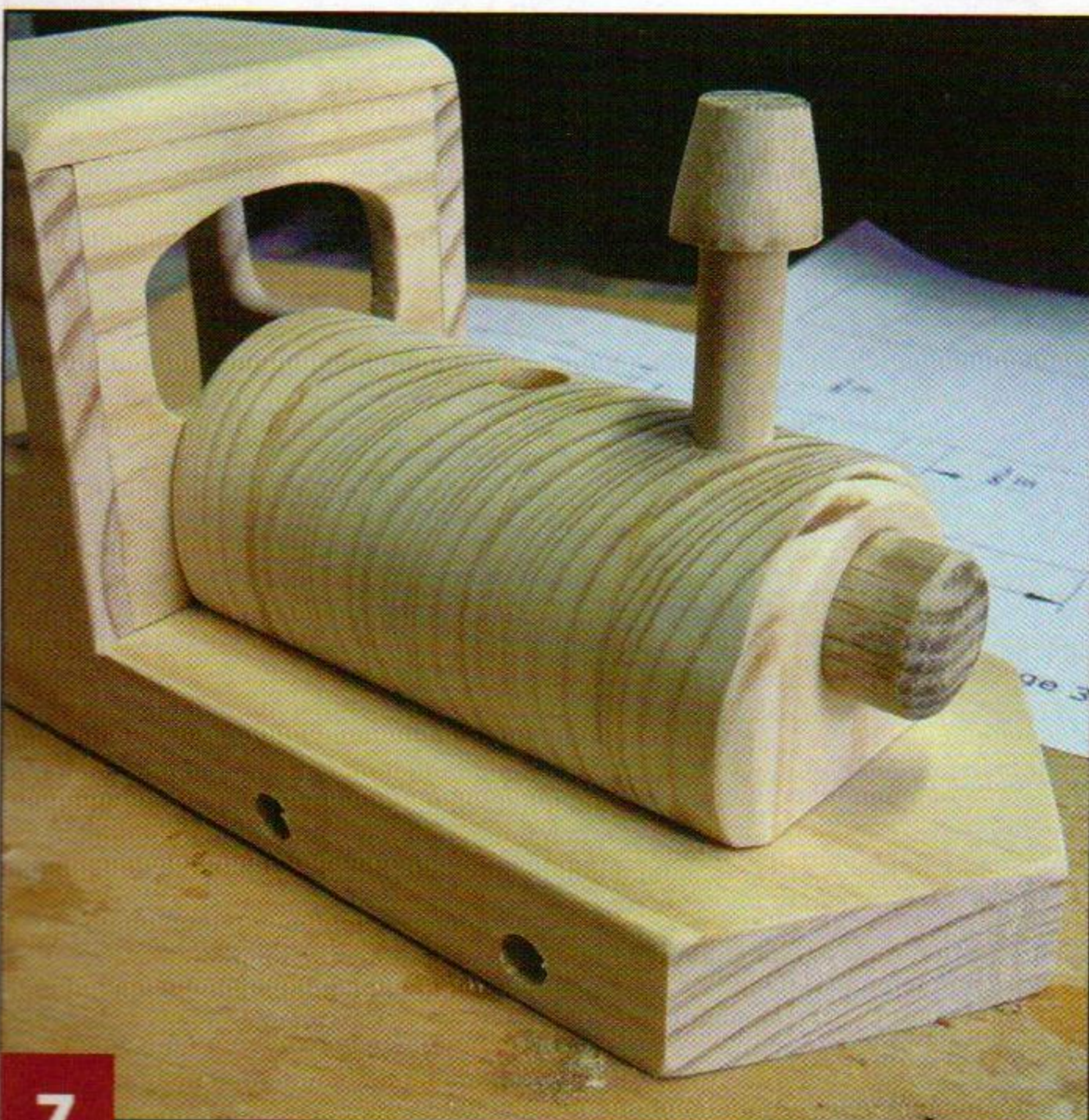
5

Cut the engine base and cab. Cut the base to shape and drill the hole. Remove the patterns and sand the base. Attach the patterns to the sides and front, and cut those pieces. Then, cut a 2½" by 2½" (64mm by 64mm) square for the cab top. Sand the pieces.



6

Assemble the cab. Glue the sides to the base. Then, glue the front between the sides and glue the roof onto the sides and front. Attach the axle-drilling pattern to the sides of the base and mark the centers of the holes with an awl. Use a fence or scrap wood to hold the base upright as you drill just past the middle of the blank. Flip the blank around and complete the holes from the other end. This ensures the axle holes are parallel to the surface of the base.



7

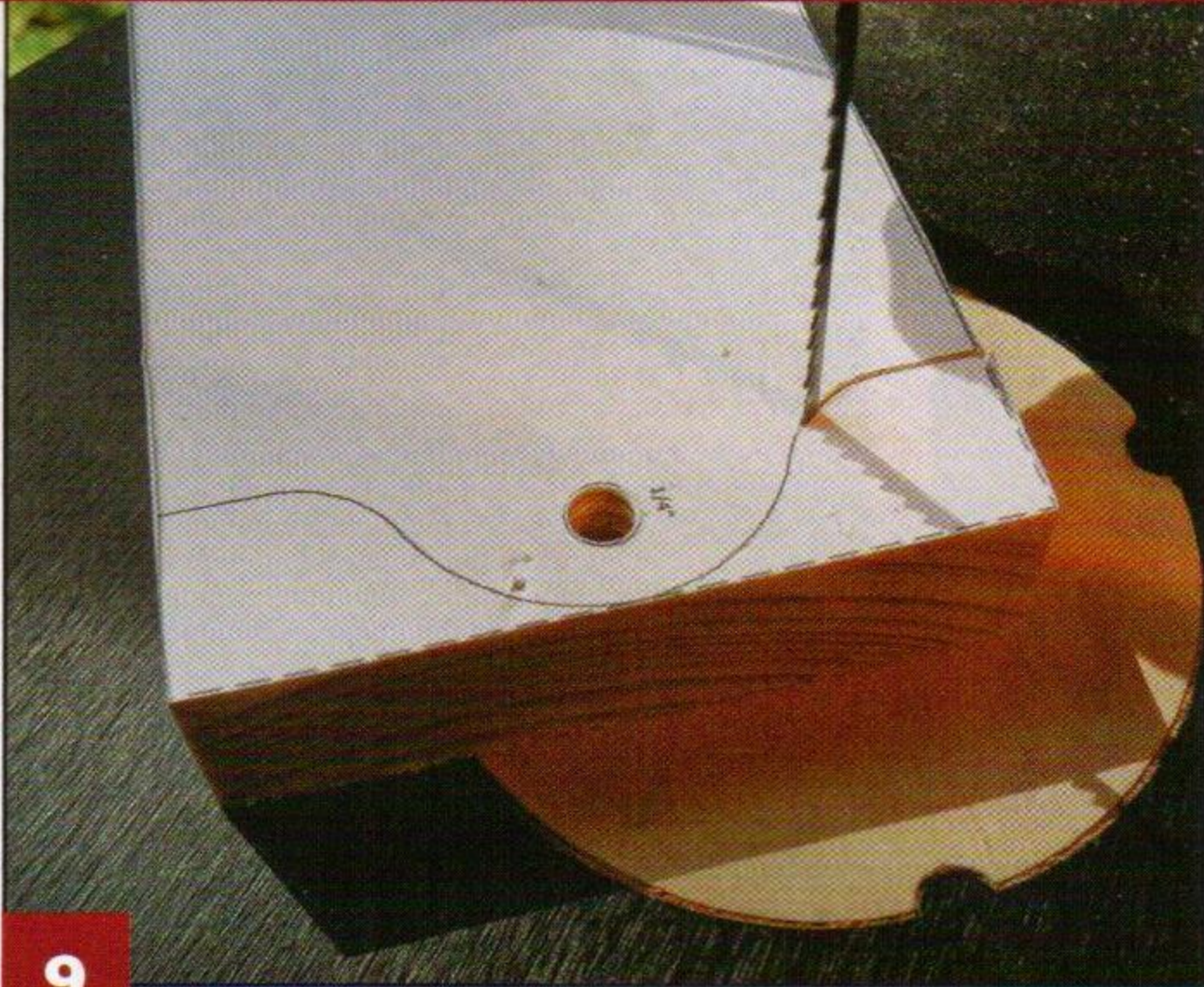
Cut the boiler. You can sand a large dowel to shape, turn a piece of wood on a lathe, or use the pattern to cut and glue together five sections to make the boiler. To make the exhaust pipe, follow the coupling pin technique explained in Step 4 and use a ⅜" (10mm)-diameter by 1" (25mm)-long dowel for the pipe and a ¼" (19mm)-diameter by 1" (25mm)-long dowel for the cap. Taper the cap after assembly. Glue the exhaust pipe in place, and then cut and round the ¼" (19mm)-diameter by ½" (13mm)-long dowel for the front of the boiler. Glue the front in place.



8

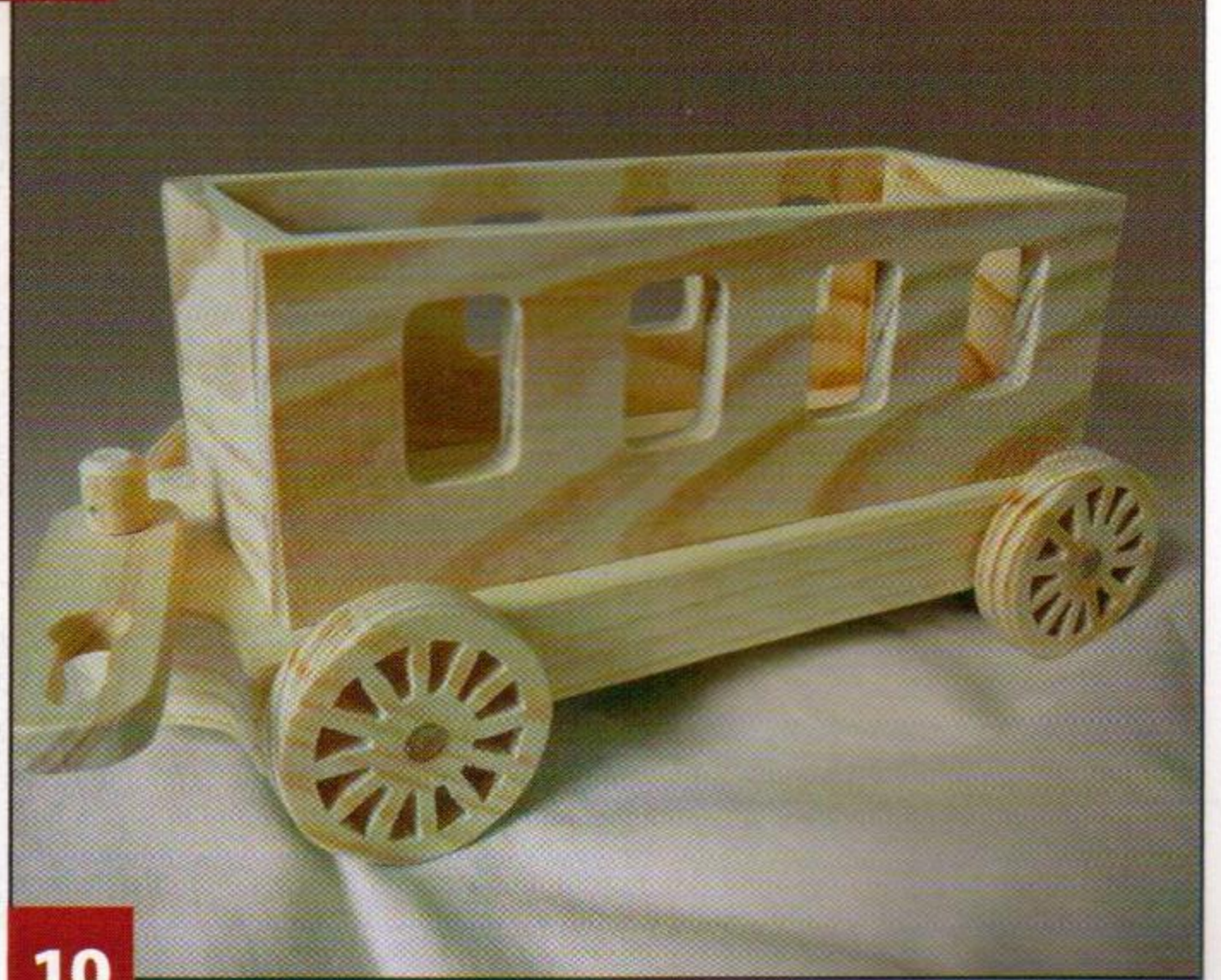
Finish the engine. Cut and glue the firebox inside the cab. Cut the axles to length and glue a wheel onto one end of each axle. Rub hard cake-type soap onto the axles and insert them through the body. Make sure there is enough room for the axles to turn freely, and then glue a wheel onto the other end of each axle. Add a drop of glue to the hole and push the coupling pin into it. Make sure at least ⅜" (10mm) of the ¼" (6mm)-diameter dowel protrudes from the top of the engine base to allow enough space for the coupling.

TRAIN: MAKING THE PASSENGER CAR



9

Cut the base. Cut the rectangular base to size. Do not cut the rounded ends yet. Use the technique explained in Step 6 to drill the axle holes. Then, cut the rounded end shapes and drill the holes for the coupling pins. Remove the pattern and sand the wood. Insert the coupling pin through the hole in the coupling and put a drop of glue in the hole in the front of the passenger car. Slide the pin into the hole, making sure you don't get any glue in the coupling. The coupling must spin freely.



10

Create the body of the passenger car. Cut 2" by 2" (51mm by 51mm) squares for the front and back. Use the pattern to cut the sides. Place the four pieces in position on a flat surface and use a square to ensure 90° corners as you glue the pieces together. Then, glue the assembled body to the base. Cut the wheels and axles. Add the wheels and axles using the techniques explained in Step 8.

Finishing the Train

If you plan to let small children play with the train, apply a food-safe finish. Pure beeswax is an easy food-safe finish; shellac is also a good choice. Most commercial finishes are also safe if you allow the finish to fully cure, which can take 30 days or more (read the manufacturer's instructions carefully). You can use nontoxic paint or color-fast dyes to brighten the train if desired.



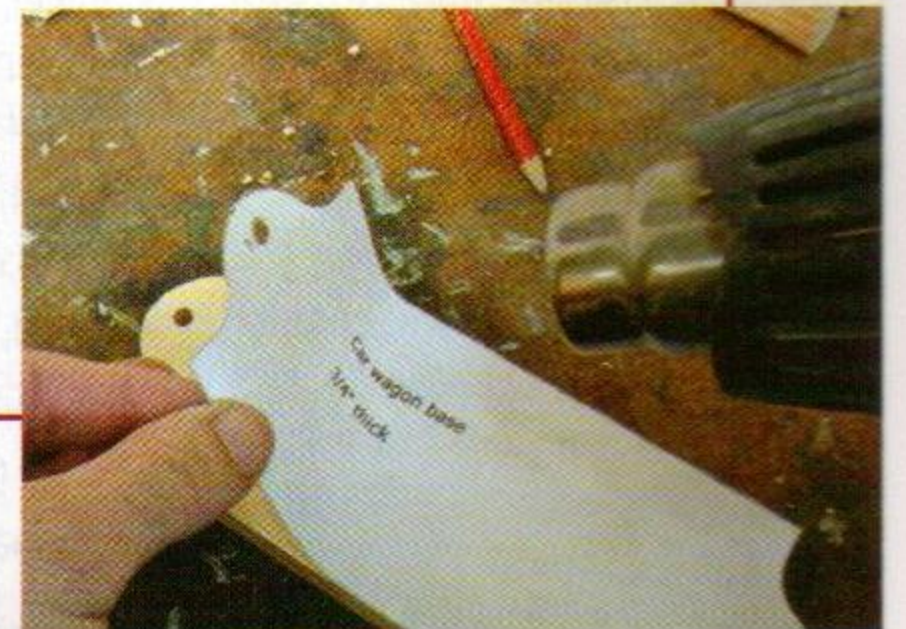
11

Finish assembling the passenger car. Cut the three roof pieces; the bottom part fits inside the top of the passenger car so the roof can be lifted. Make sure the bottom fits inside the body. Then, glue and clamp the three roof pieces together.

TIP

REMOVING THE PATTERNS

If a pattern doesn't peel off the wood easily, heat it with a heat gun or hair dryer. Look at the specifications of your spray adhesive to see which solvent base it uses. You can use that solvent to remove any glue left on the board. Dry the piece with a heat gun or hair dryer to evaporate the solvent, and then sand both faces of the piece to remove any remaining residue.



Making More Train Cars

Now that you have completed the engine and the passenger car, you can see that making extra train cars is easy. Use your imagination to build other types of train cars. You may be inspired by my full train set.



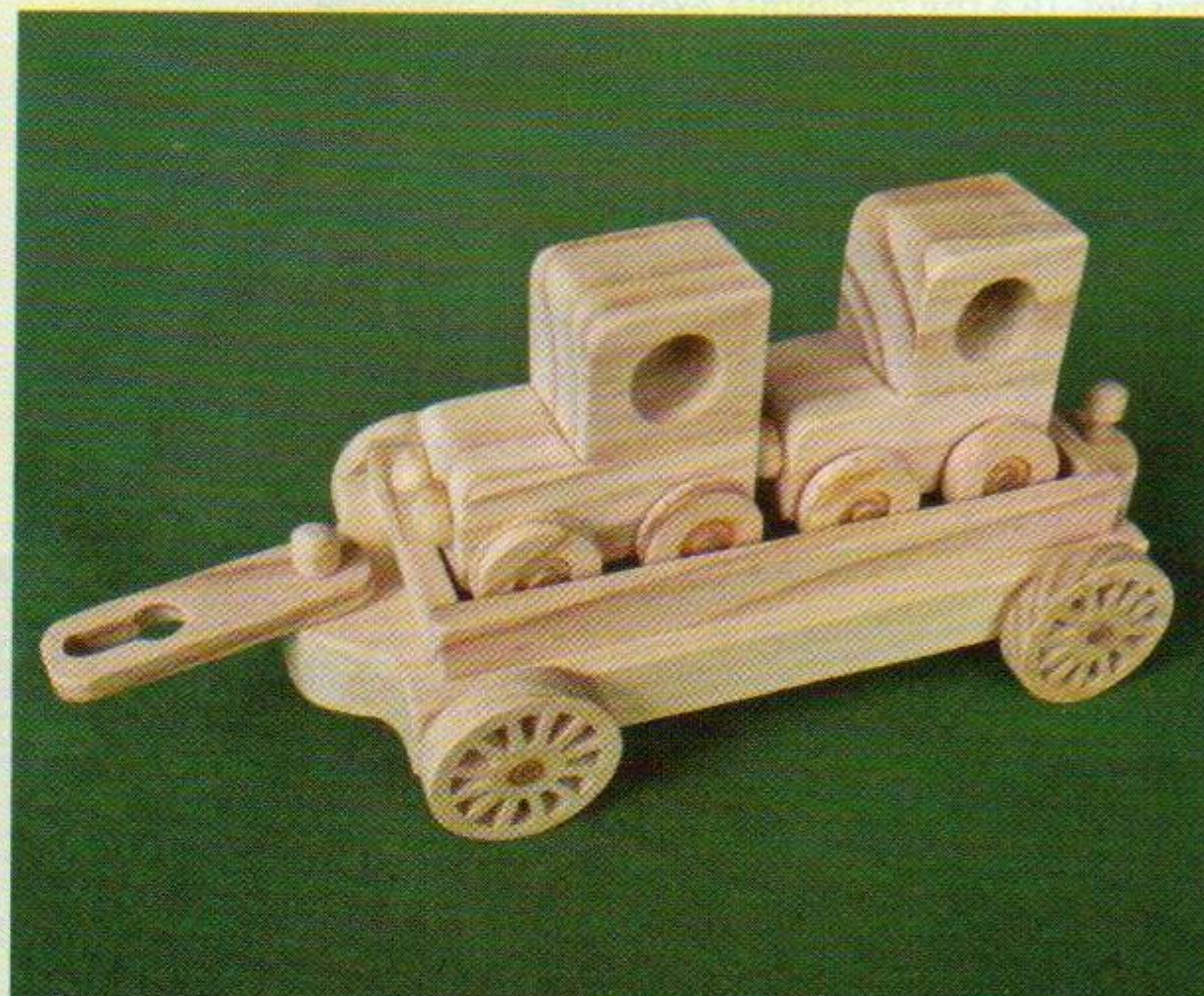
Tender car



Goods wagon



Log wagon



Car wagon

Materials:

- Pine 1/4" (6mm)-thick: engine and passenger car walls, engine roof, passenger car roof middle, passenger car roof bottom, couplings, 3" x 42" (76mm x 1066mm)
- Pine, 3/8" (10mm)-thick: wheels, 2 1/2" x 10" (64mm x 254mm)
- Pine, 1/2" (13mm)-thick: passenger car roof top, 2" x 6" (51mm x 152mm)
- Pine, 3/4" (19mm)-thick: engine and passenger car bases, 3" x 18" (76mm x 457mm); 5-disc method boiler, 2" x 10" (51mm x 254mm)
- Pine, 2 1/2" (64mm)-thick (optional): lathe method boiler, 2 1/2" x 6" (64mm x 152mm)
- Dowel, 1/4" (6mm)-diameter: coupling pins, wheel axles, 26" (660mm) long
- Dowel, 3/8" (10mm)-diameter: coupling pin caps, exhaust pipe, 3" (76mm) long
- Dowel, 3/4" (19mm)-diameter: exhaust cap, 1" (25mm) long
- Dowel, 1" (25mm)-diameter: front of boiler, 1" (25mm) long
- Wood glue
- Sandpaper

Materials & Tools

- Spray adhesive
- Soap, hard cake-type

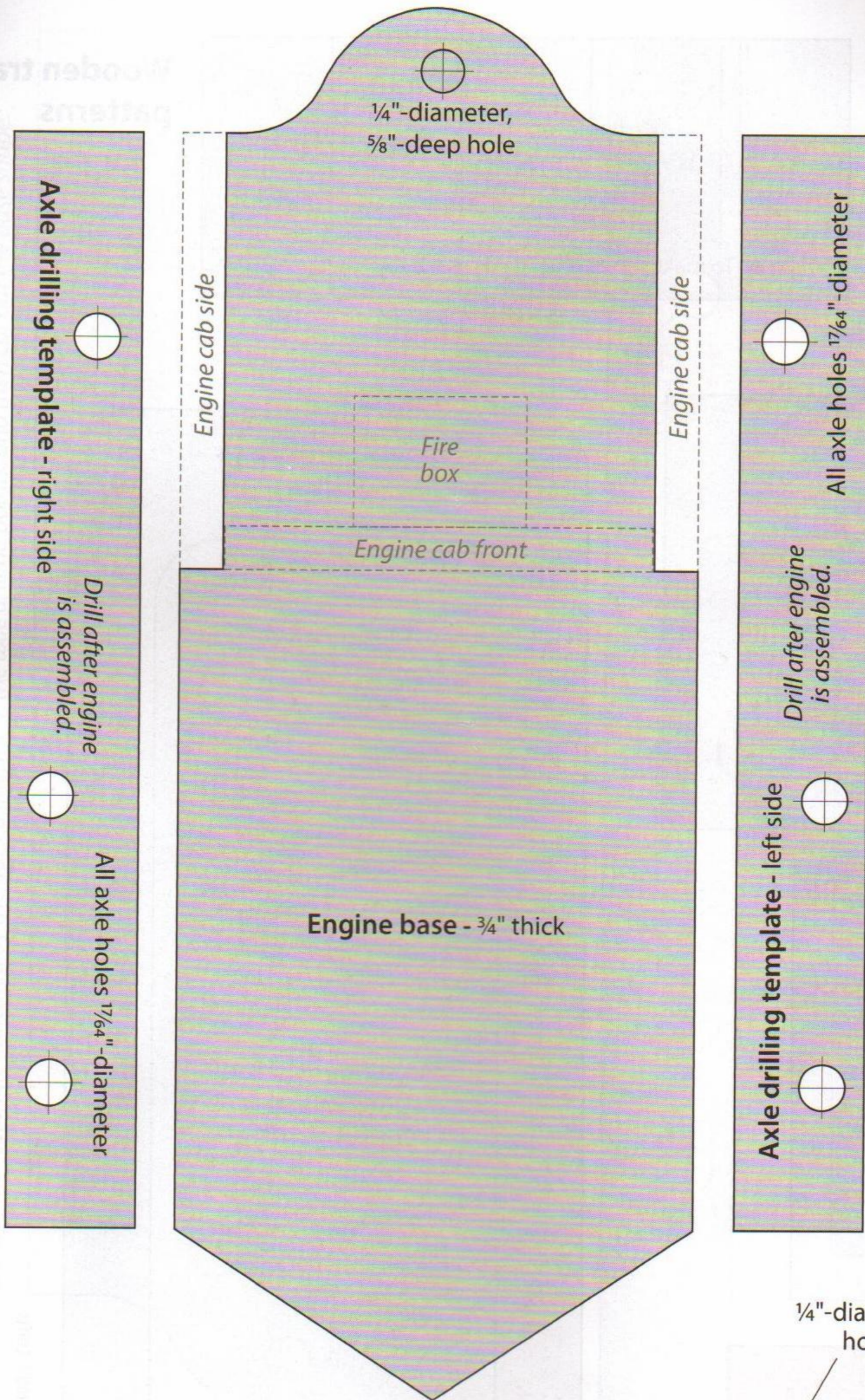
Tools:

- Blades: #5 reverse-tooth
- Drill press and assorted bits
- Disc sander and disc: 120-grit
- Clamps

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

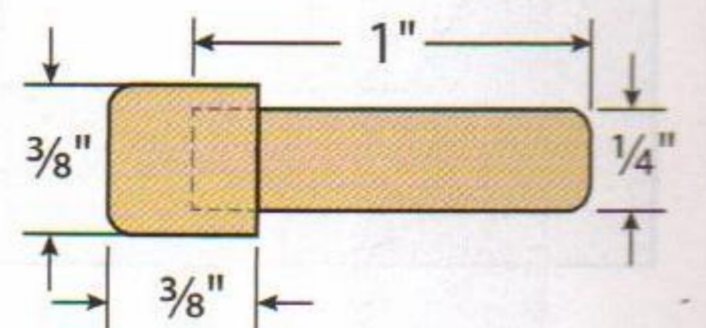
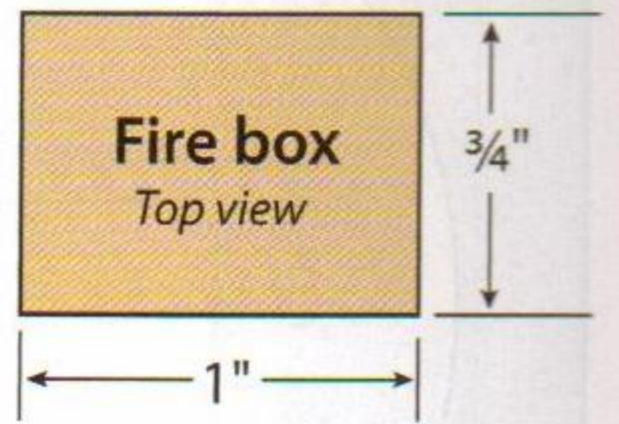
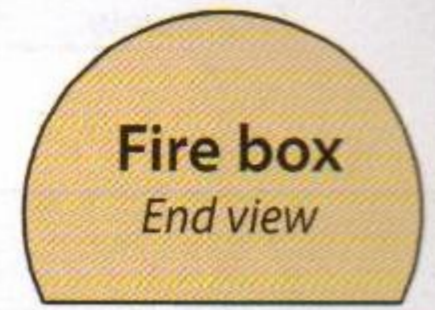


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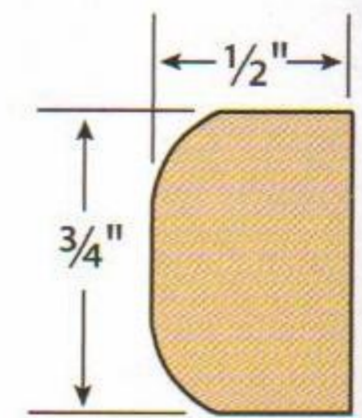


Wooden train patterns

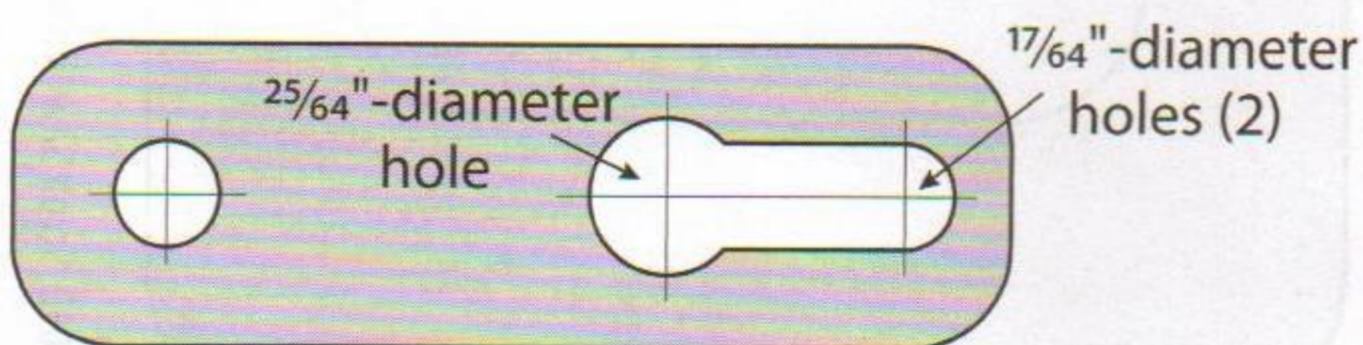
Drawings of parts made from dowels



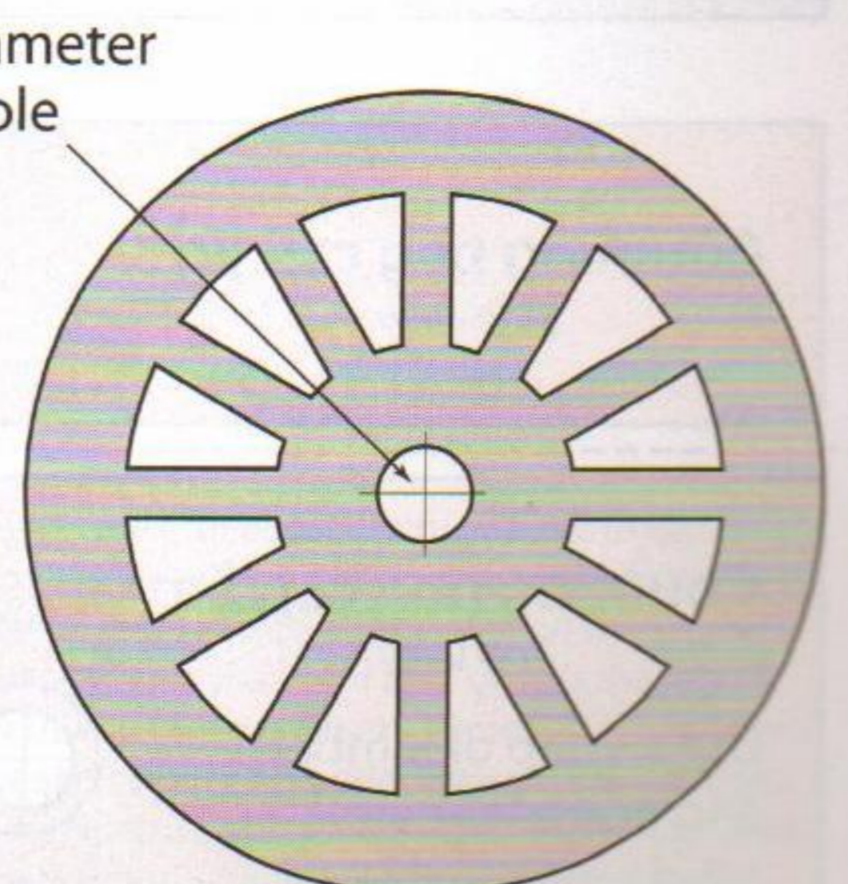
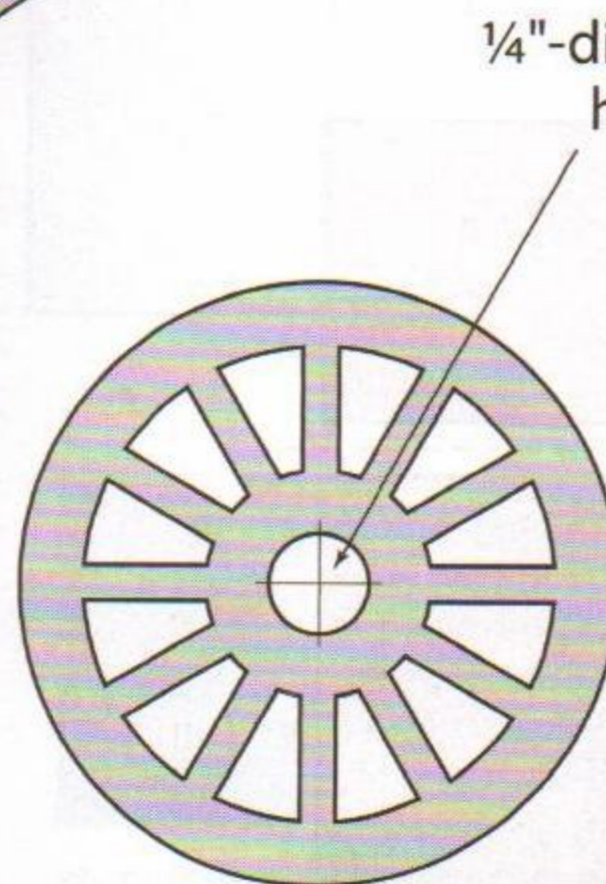
Coupling pins
Cut 2



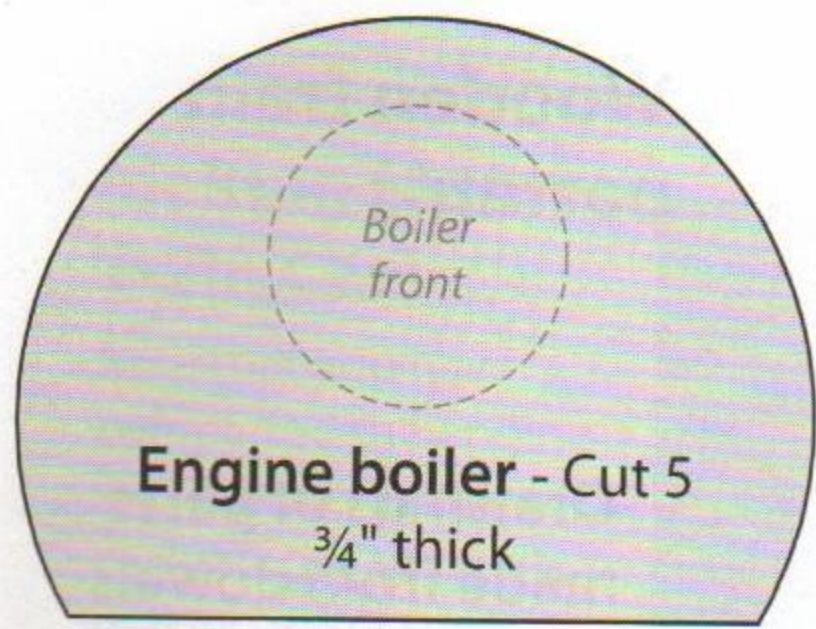
Boiler front
Side view



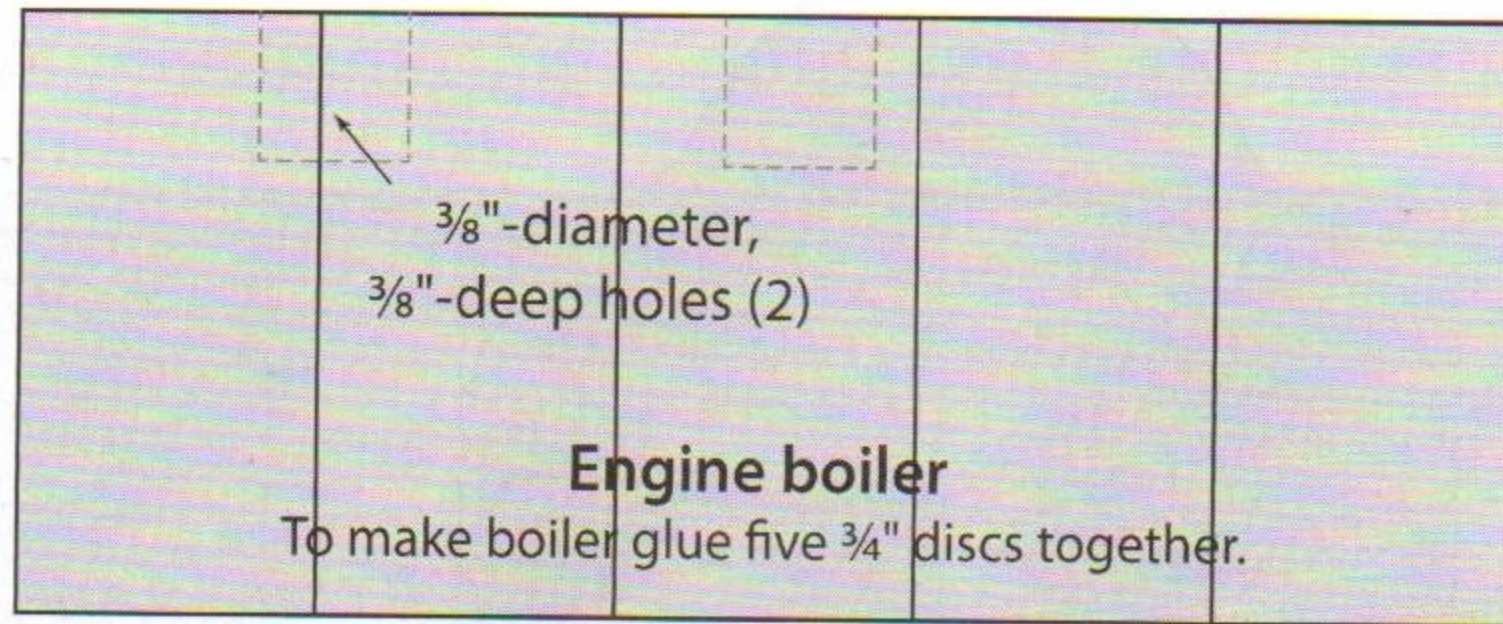
Coupling - Cut 2
1/4" thick



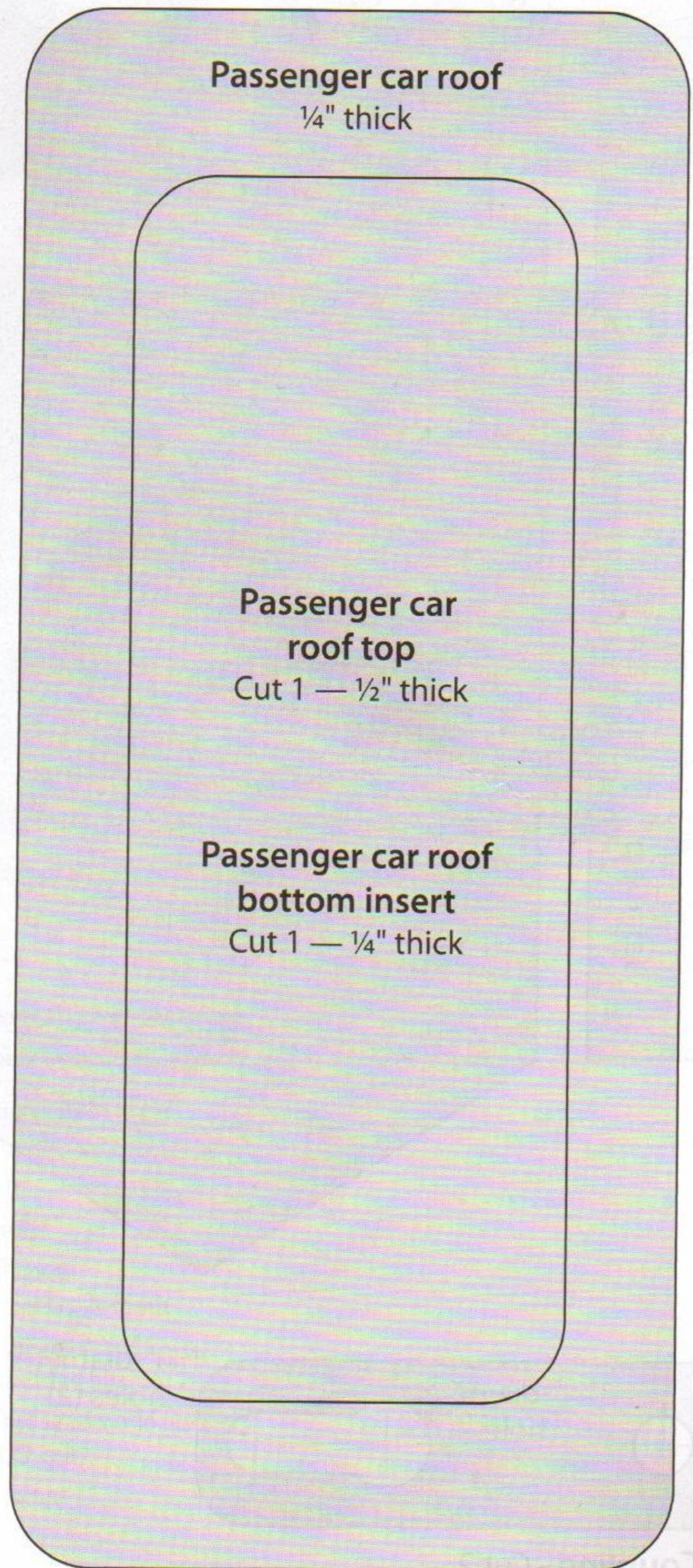
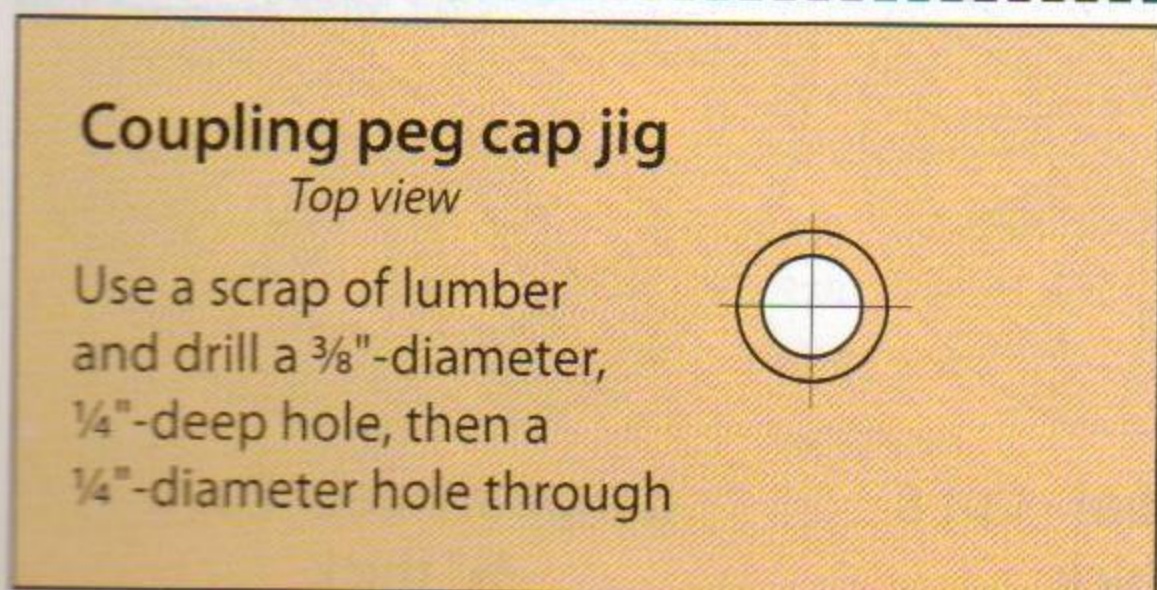
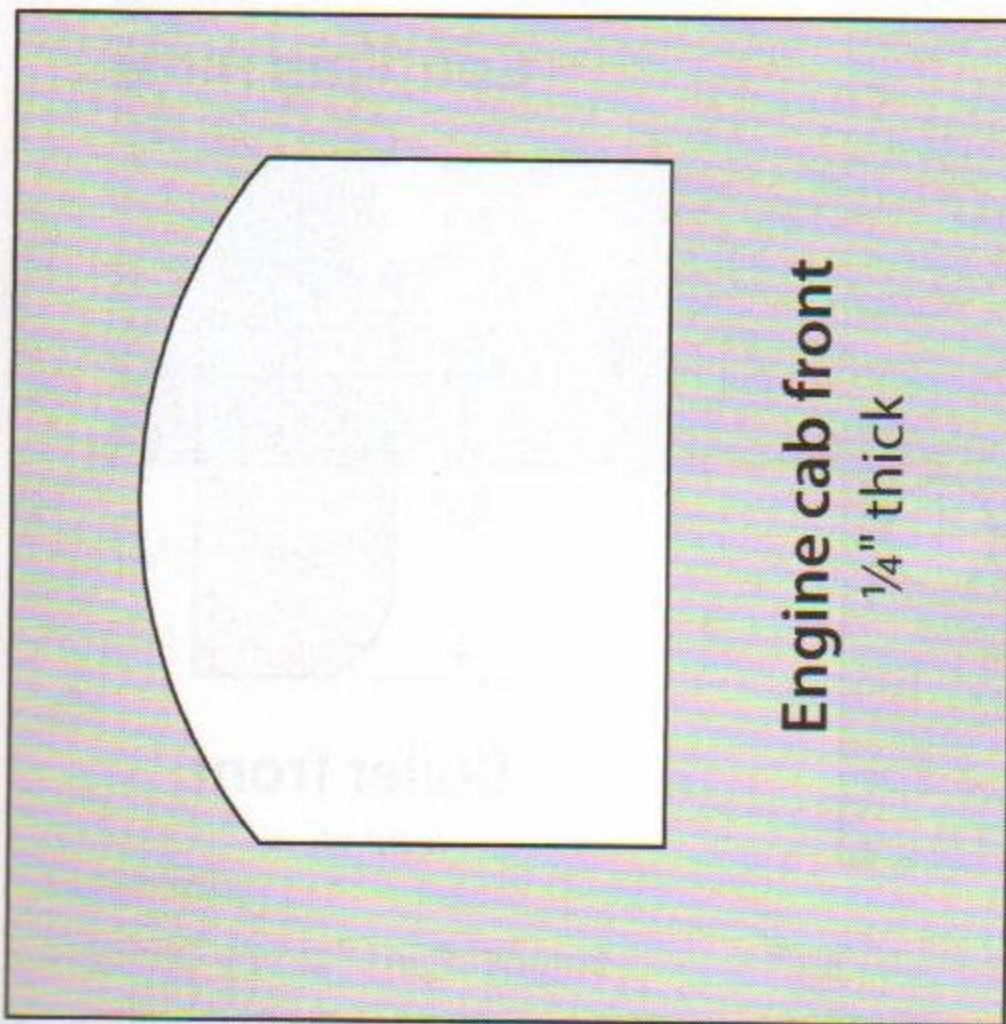
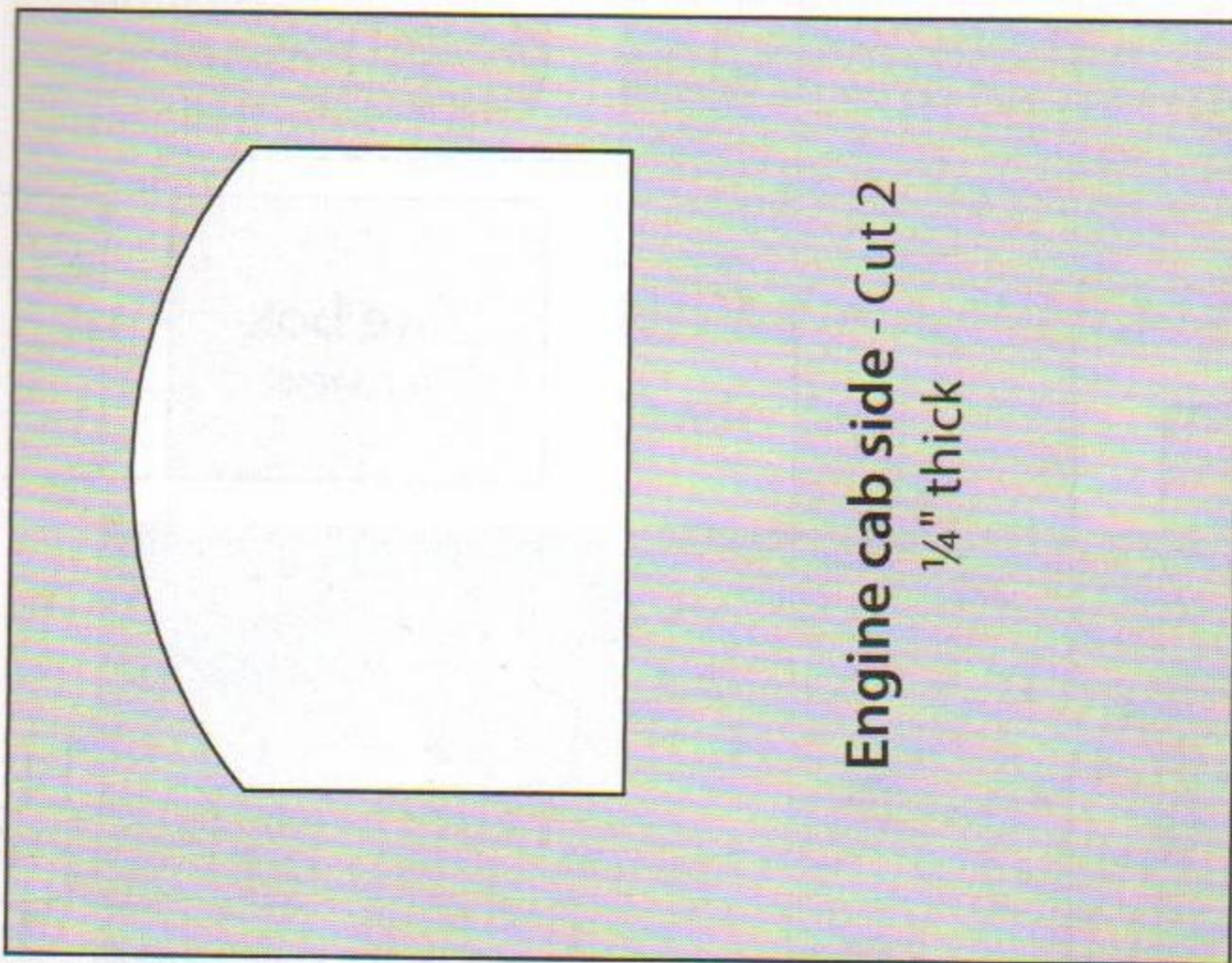
Wooden train patterns



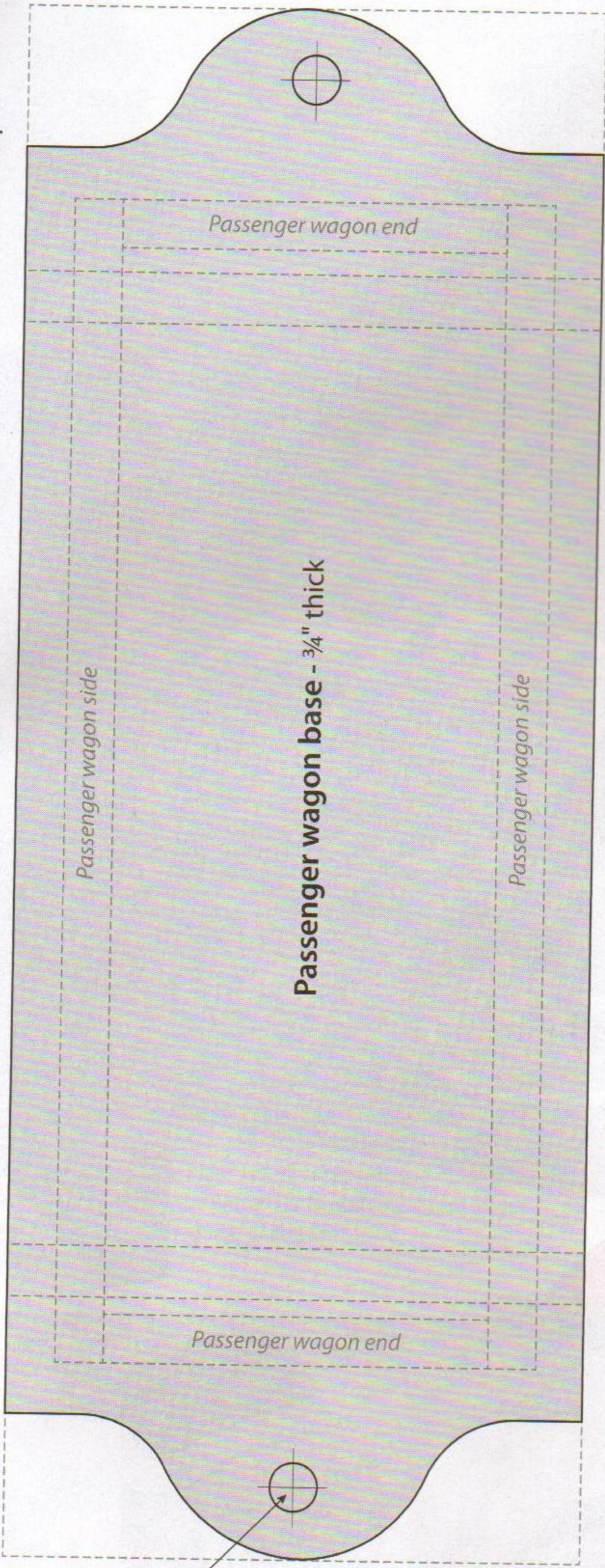
Front view



Side view



Cut out the rectangle indicated by the dotted line, mark the axle drilling points, and then cut out the base shape.

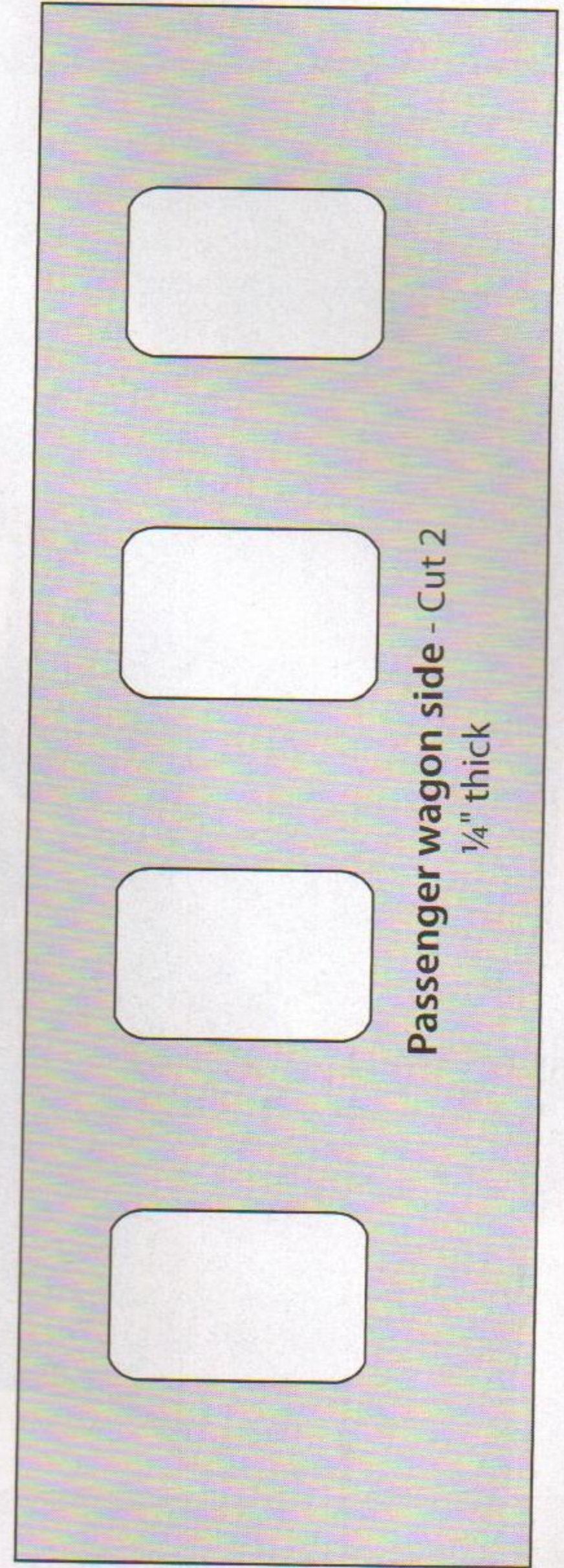


1/4"-iameter,
5/8"-deep
holes (2)

17/64"-diameter
holes (2)

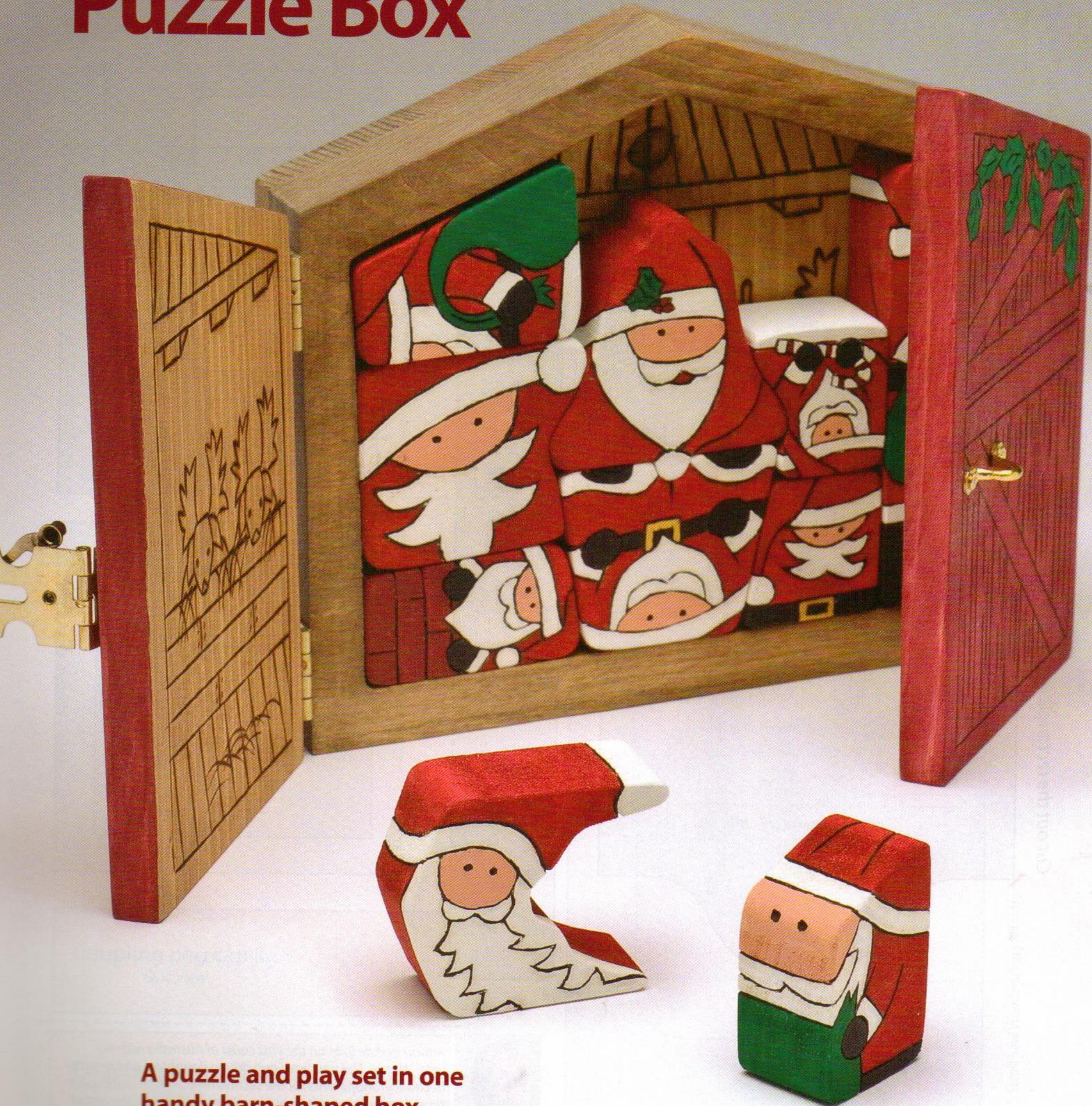
Axle drilling template
Print 2

Wooden train patterns



Adrian Iredale lives on the east coast of Australia with his wife, Wendy. The pair have two grown daughters and recently became grandparents for the second time. Adrian works part-time as a business software consultant and spends the rest of his time playing in sawdust; he considers himself to be a normal bloke with average skills and very modest woodworking tools. Adrian attributes his woodworking success to the tutelage and encouragement of greater craftspeople than himself, such as Clayton Boyer, the master wooden clock artist, and Adrian's uncle, Ian Fraser, who is 90 years old and who builds toys for charity.

Squished Santa Puzzle Box



**A puzzle and play set in one
handy barn-shaped box**

By Carolea Hower

Step-by-step photos by Kevin Hower

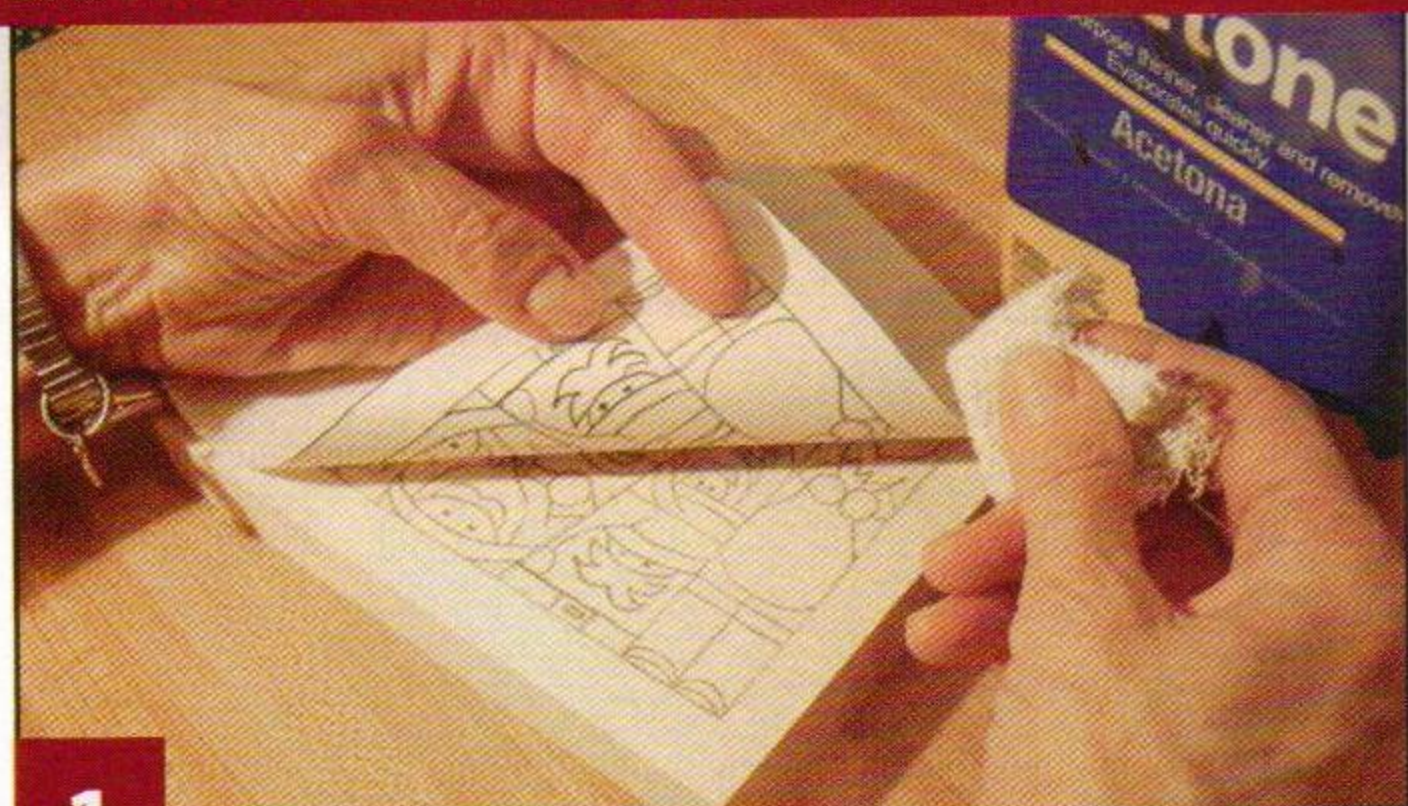
After designing my first puzzle several years ago, I was hooked. I had numerous requests for a Christmas puzzle, so I created these slightly squished Santas. This self-contained brainteaser is fun to assemble, but it's just as entertaining to play with the individual pieces. The solution is woodburned onto the back of the box, but try putting the pieces back into place without peeking.

Transferring the Pattern

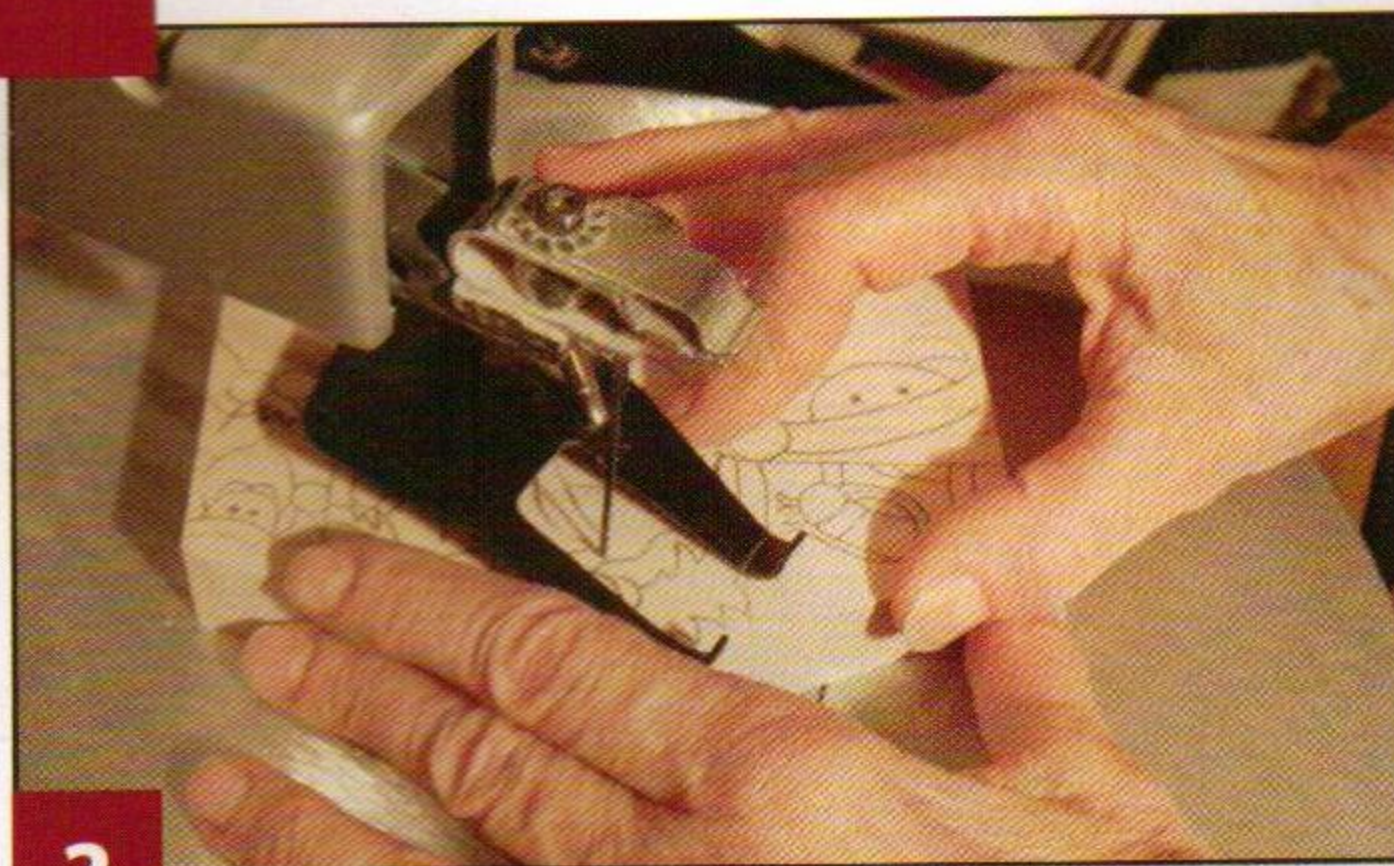
The pattern includes detail lines that are woodburned to enhance the finish. You can use the paper pattern when cutting the blank, but will need to transfer the detail lines for finishing.

There are several ways to transfer the detail lines to the wood. You can place graphite paper between the pattern and the blank and trace the lines onto the wood. You can also make a photocopy of the pattern and transfer the toner from the pattern onto the blank using heat. Trim the excess paper off of the photocopy and use tape to secure the pattern in position face down on the blank. Make sure the tape does not cover any of the pattern lines. Run a hot iron or heated stamping tool along the pattern lines. You could also apply a small amount of acetone to a rag and rub the rag firmly over the back of the pattern. The acetone will soak through the paper and dissolve a small amount of the photocopy toner, which will transfer to the blank. Pure acetone can damage your skin and lungs, so use caution and work in a well-ventilated area. With any of these methods, lift a corner of the pattern to make sure all of the pattern lines have transferred before removing the pattern.

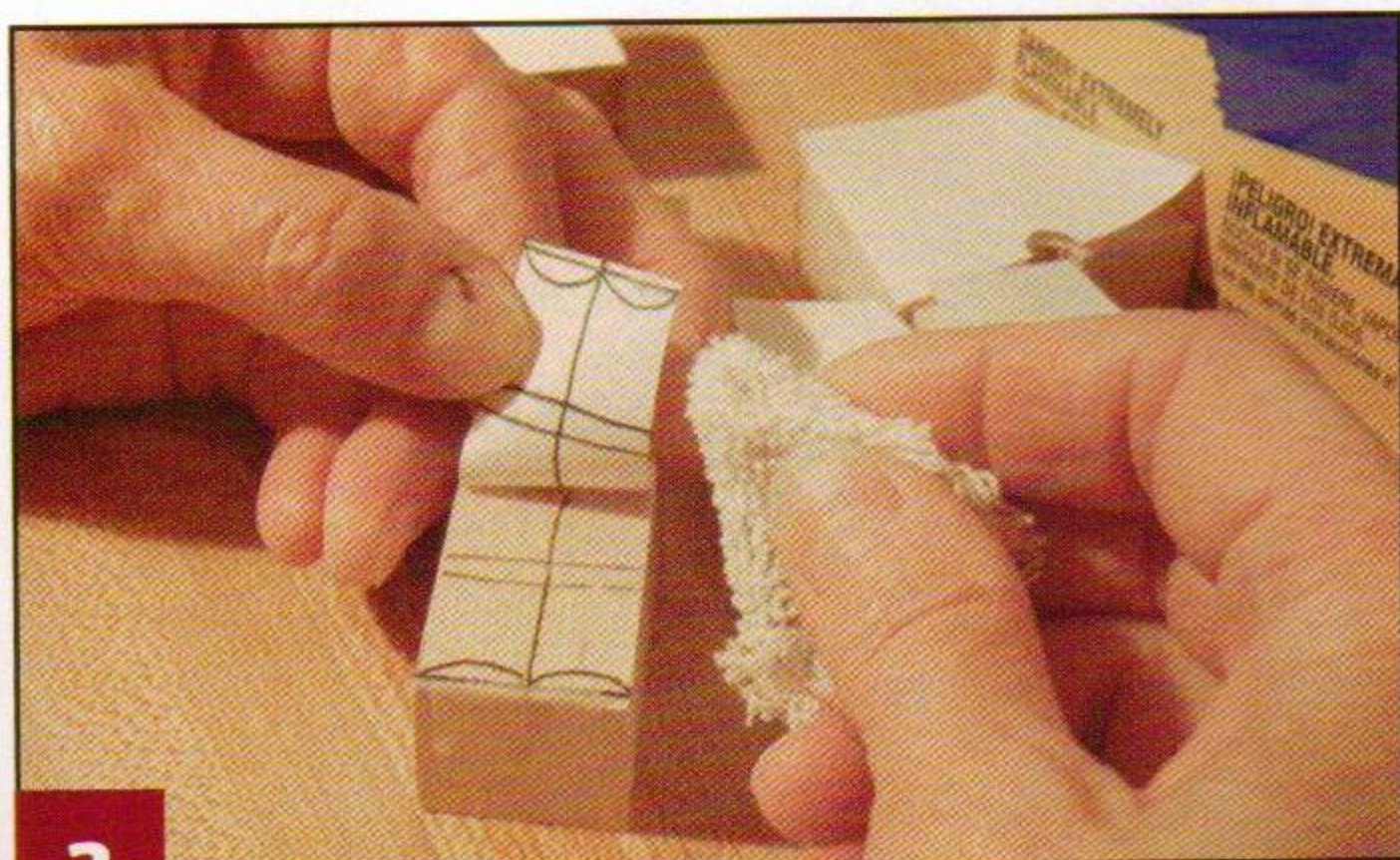
SANTA PUZZLE: CUTTING THE PIECES



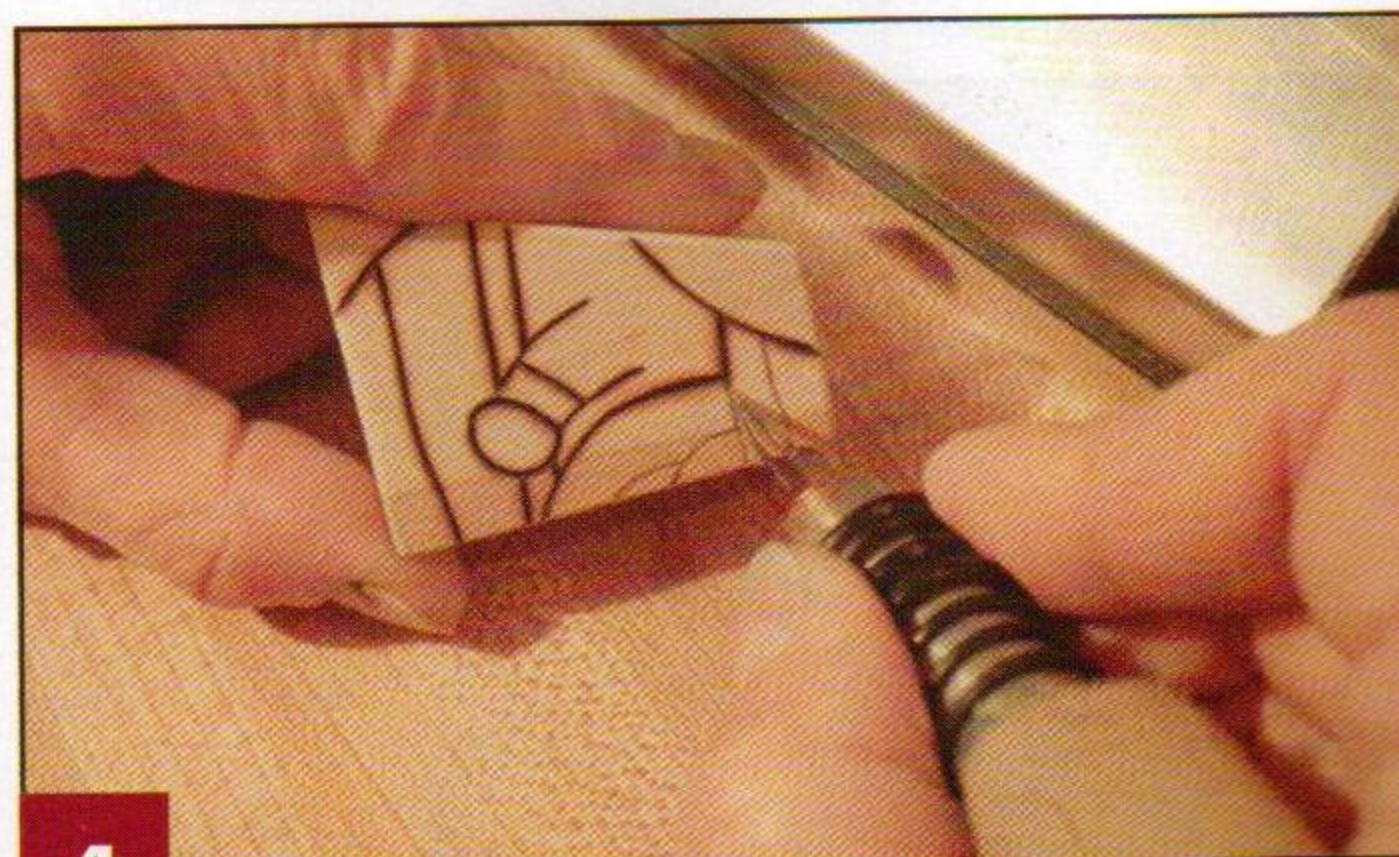
1 **Transfer the patterns to the blanks.** Use your method of choice. I use acetone to transfer the lines from a laser photocopy of the pattern onto the blank (see Transferring the Pattern, above). If you transfer the pattern with graphite paper, your project will be a mirror image of mine.



2 **Cut the pieces.** First, cut the perimeters of the door piece, box frame, and back. Drill a blade-entry hole where indicated on the frame and cut along the dashed line to remove the puzzle pieces. Hand-sand the frame. Begin cutting the puzzle pieces at the bottom with the upside-down Santa and the bell-shaped Santa, and work your way up, cutting all of the pieces.



3 **Add the detail patterns.** Round the sharp corners of the puzzle pieces. I use a 1" (25mm)-wide belt sander equipped with a 120-grit belt. Hand-sand the edges with 120-grit sandpaper. Then, transfer the additional detail patterns to the puzzle pieces, barn back, and doors using acetone or graphite paper.

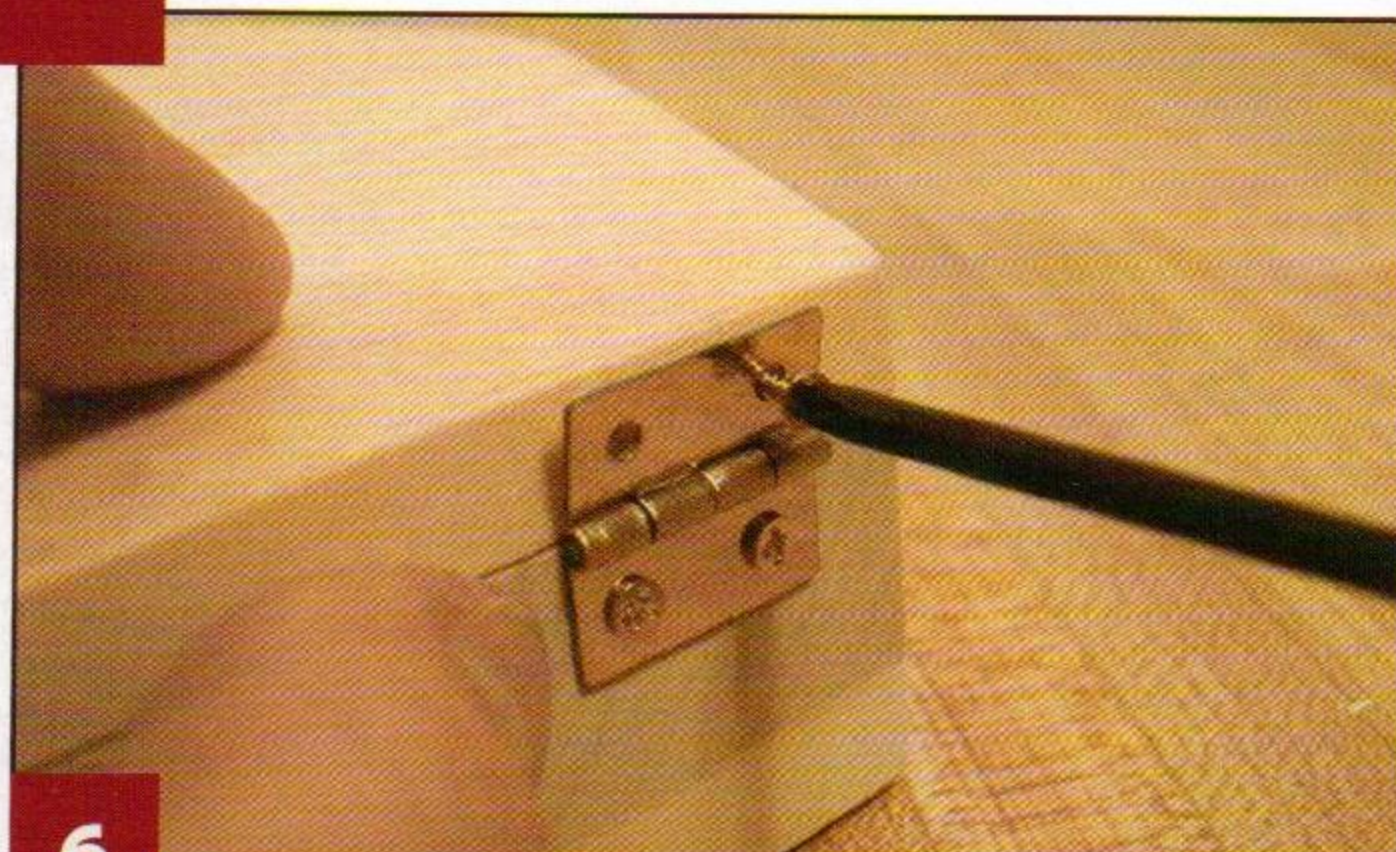


4 **Woodburn the details.** Woodburn the lines on the barn and all sides of the puzzle pieces using a hot setting and a skewer tip. Burn deep lines to help keep the paint edges crisp and add nice contrast on the stained barn doors and scene.

SANTA PUZZLE: BUILDING THE BARN

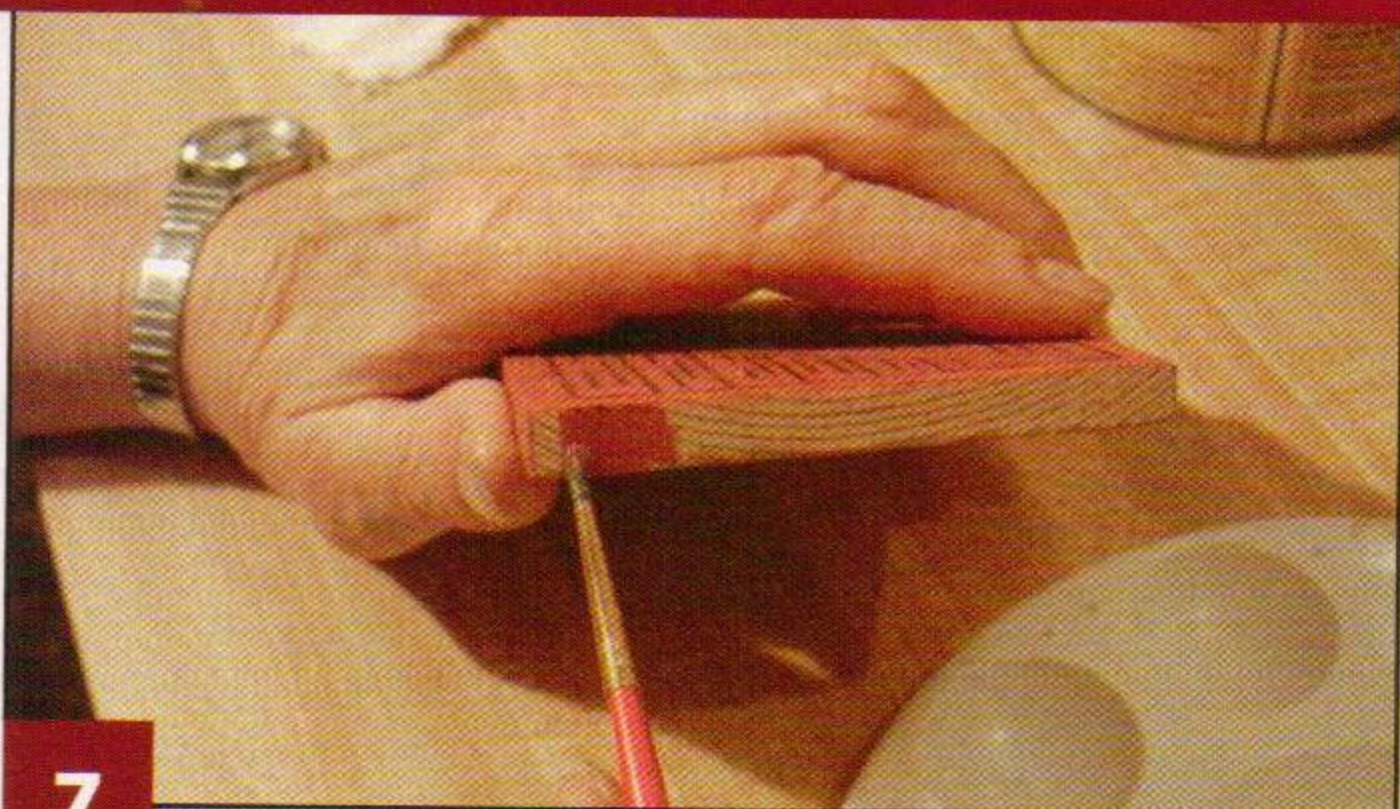


5 Sand the perimeters of the box pieces. Use 1" (25mm)-long brads to attach the back to the puzzle frame. Use clear two-sided tape to attach the door piece to the puzzle frame. Sand the outside edges of the project with a disc sander and 120-grit sanding disc until the layers are flush. Use a square to make sure the sides and bottom are square. Leave the door piece taped on and sand off the sharp edges and corners.



6 Add the hinges. While the door piece is still taped to the puzzle frame, mark the locations of the door hinges. Attach the hinges using small screws. Remove the hinges from the door piece, but leave them attached to the puzzle frame. Carefully pry off the door piece with a thin-bladed knife and remove the tape. Cut the door piece down the center.

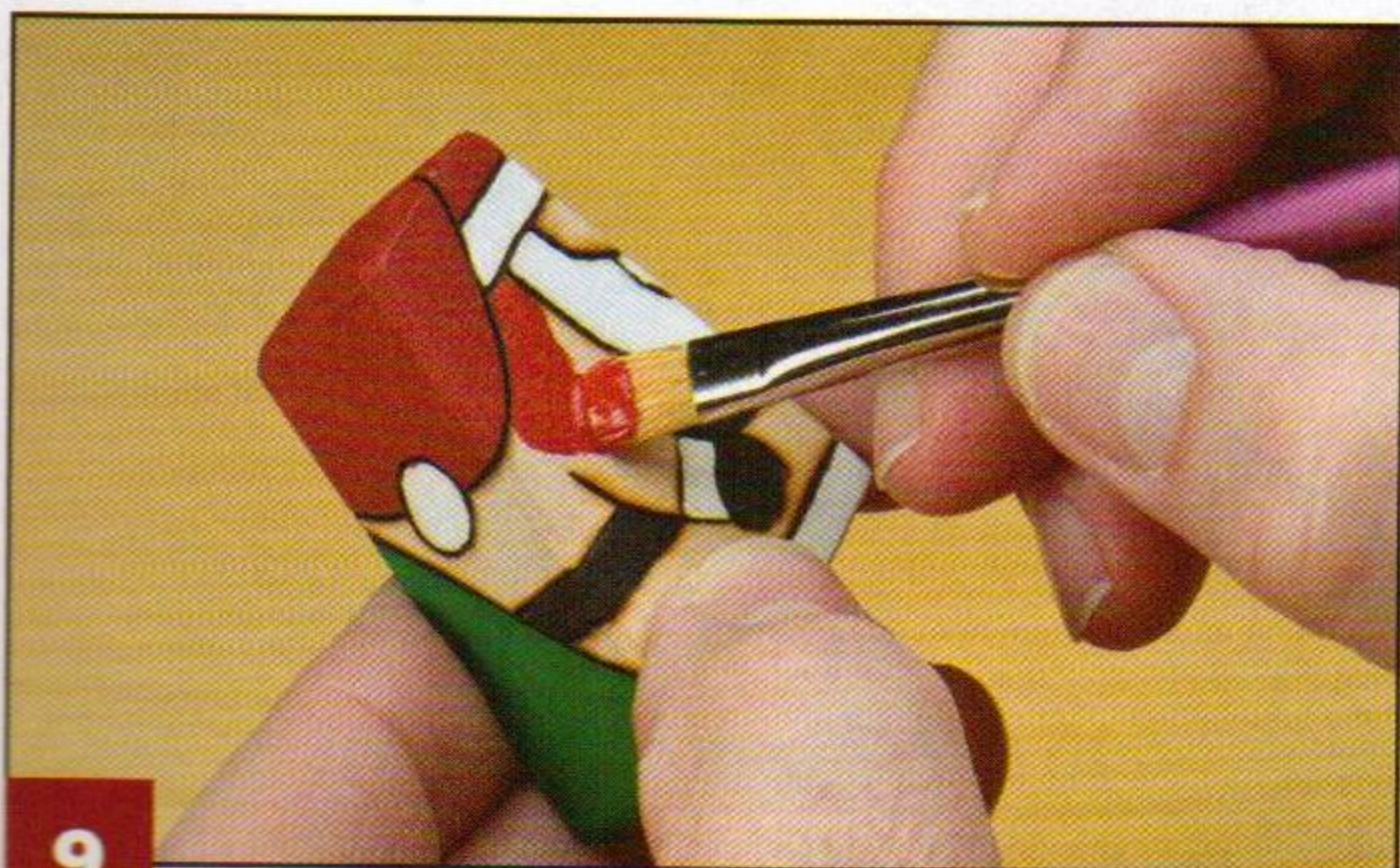
SANTA PUZZLE: FINISHING THE PUZZLE



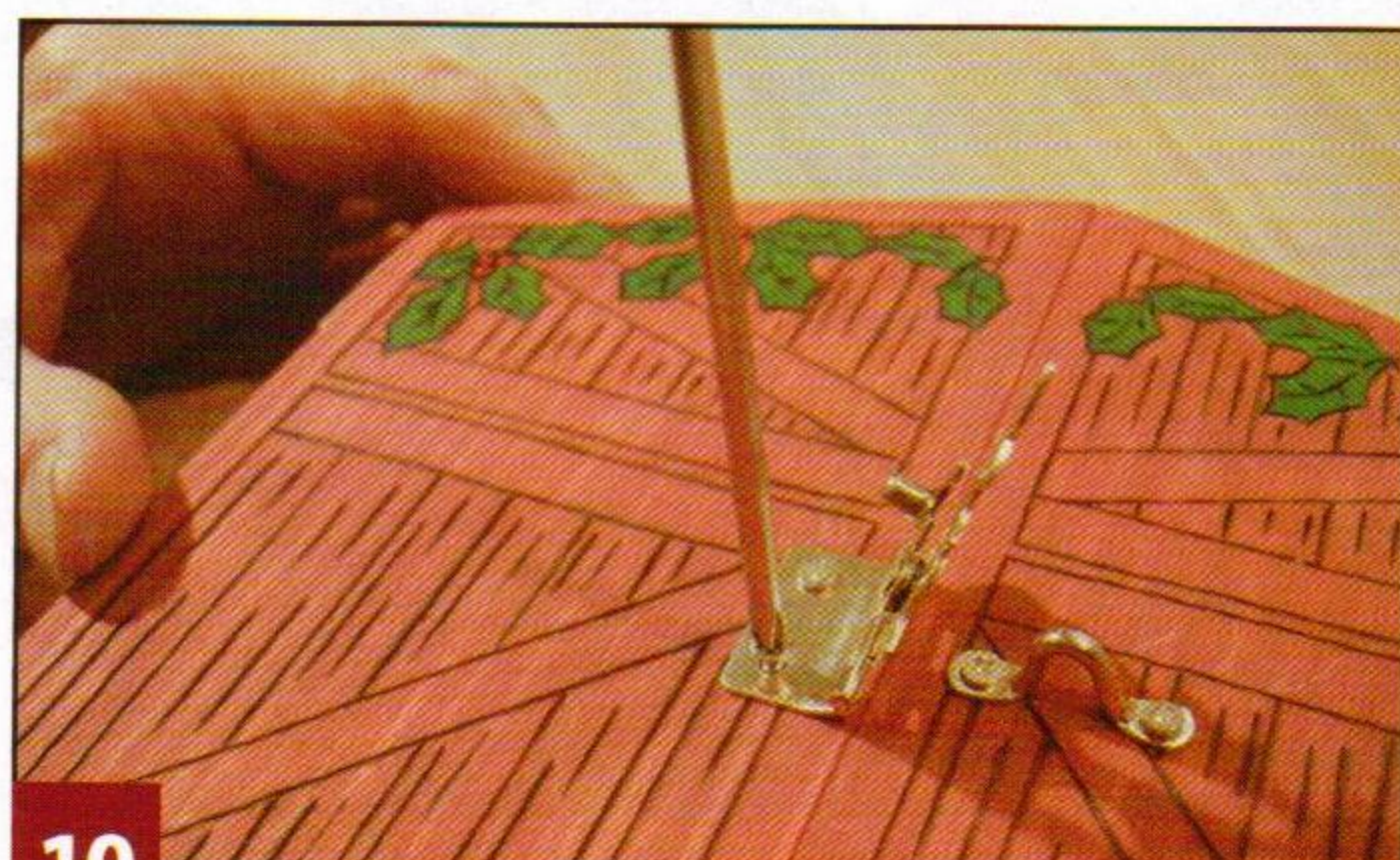
7 Paint the doors. Dilute one part Delta Ceramcoat barn red acrylic paint with two parts water to create a wash. Use this wash to stain only the front and sides of the doors. Paint the holly leaves using undiluted green acrylic paint.



8 Finish staining the box. Use Minwax stain in special walnut on the backs of the barn doors. Be careful not to get the stain on the sides of the doors. Use the same stain to darken the puzzle frame and the back side of the box. Allow the stain to dry.



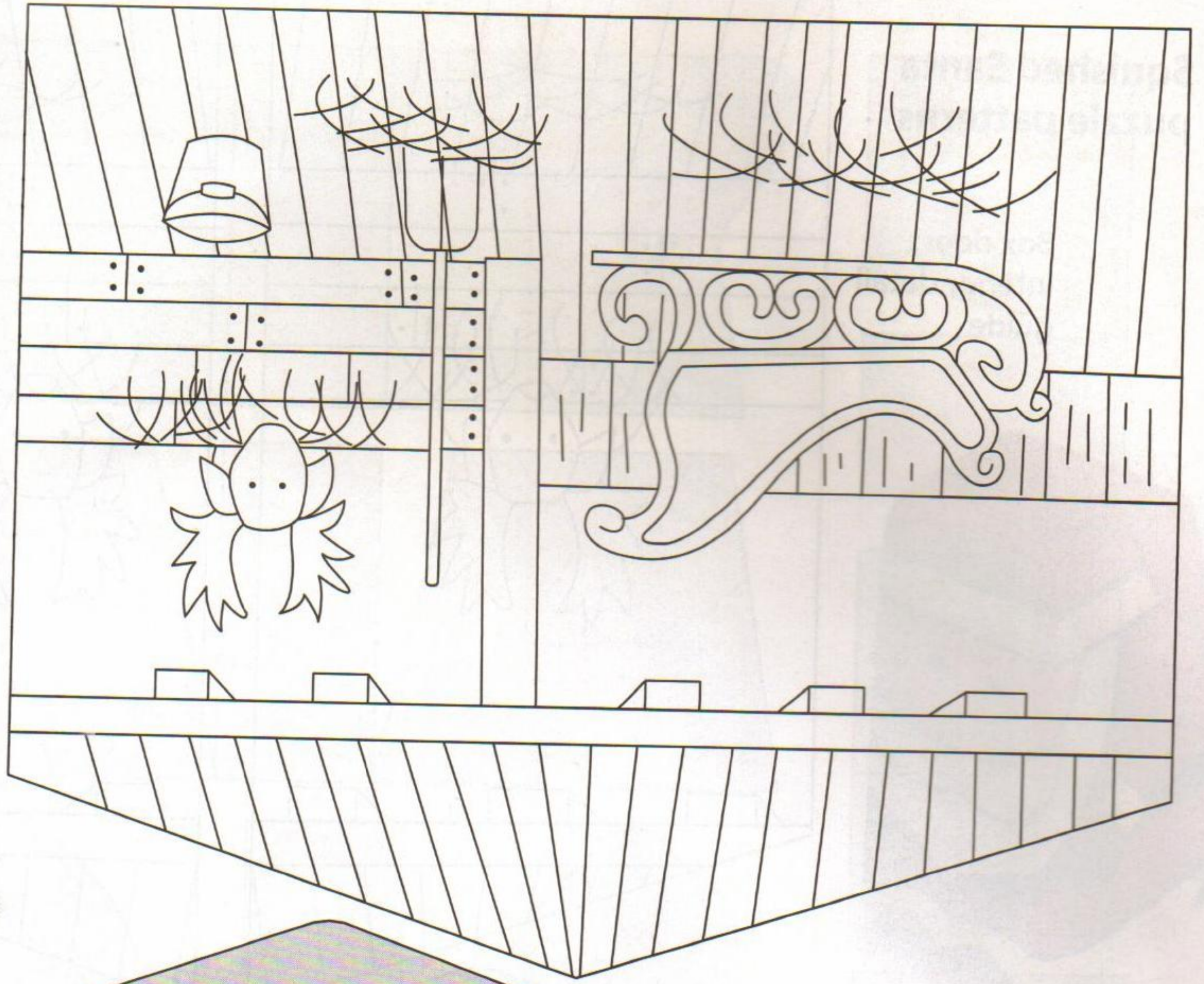
9 Paint the puzzle pieces. Use an eyedropper to add water to the acrylic paints to create washes of color. The intensity of the wash is up to you. I do not dilute the white paint. I use the end of a round toothpick to add dots of undiluted black paint to Santa's eyes.



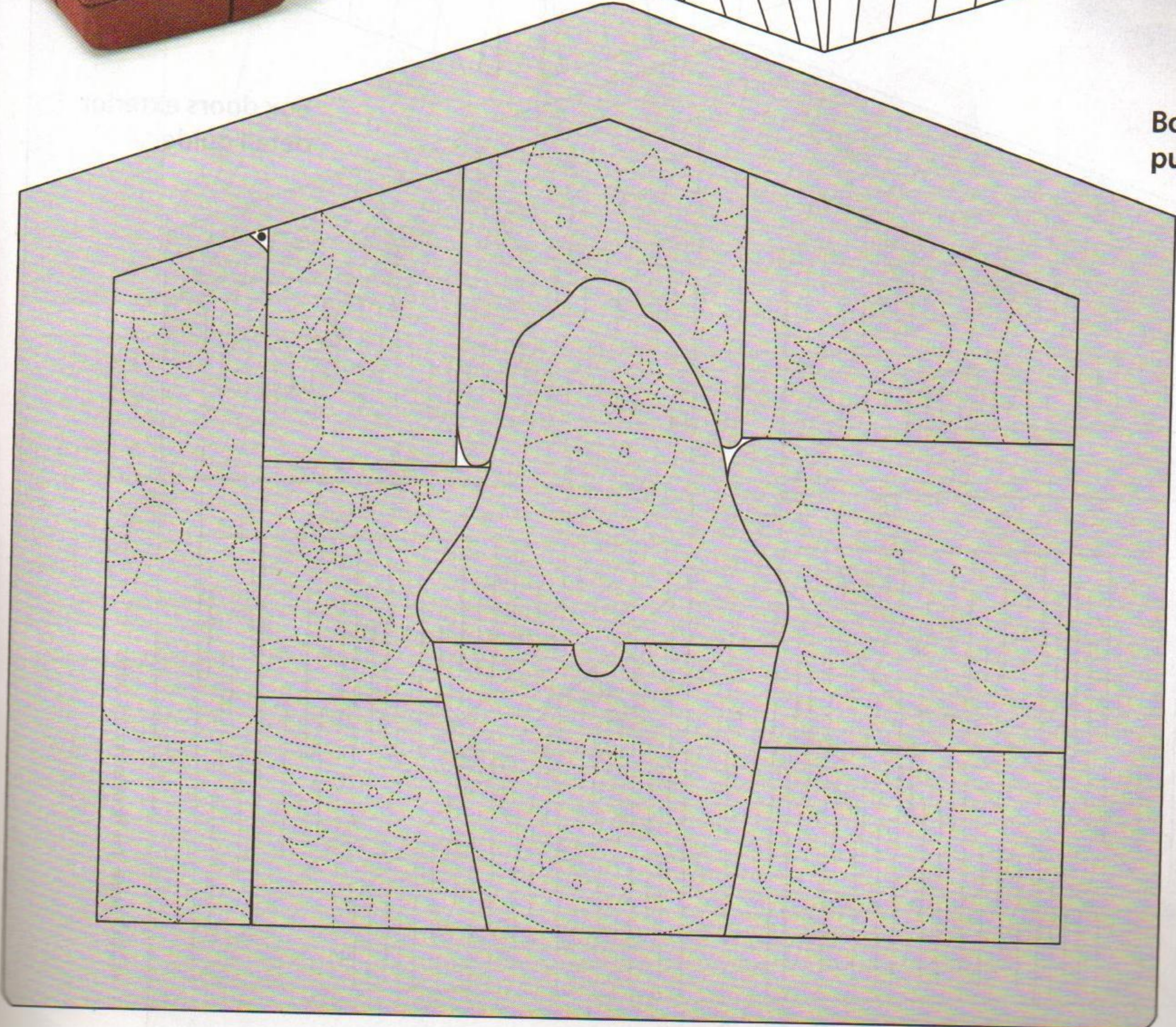
10 Finish the project. Reattach the doors to the hinges. Mark the location of the latch and attach it to the doors with small screws. Apply a coat of clear finish to seal the paint if desired.

Squished Santa puzzle patterns

Box interior detail guide



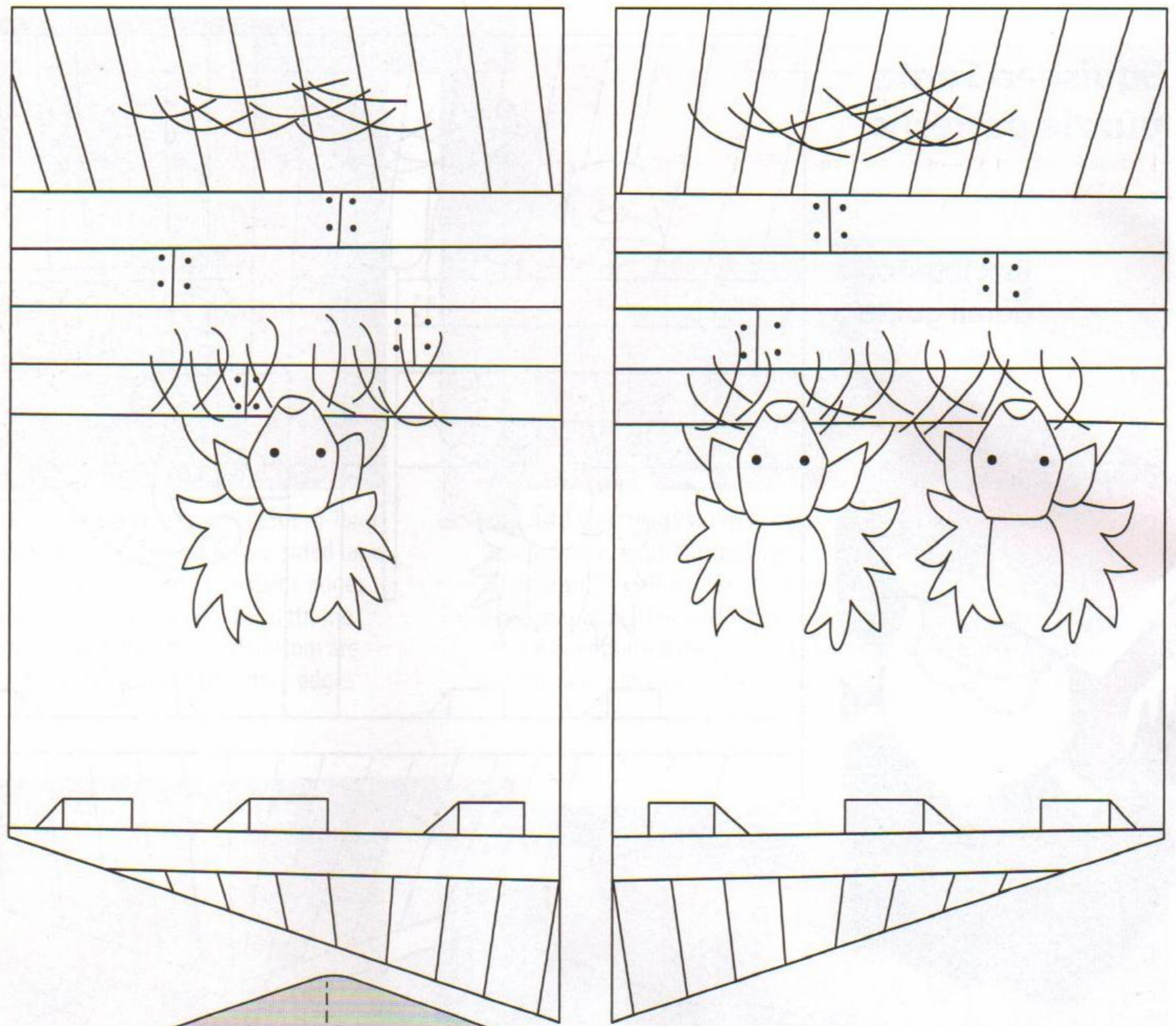
Box frame and puzzle pieces



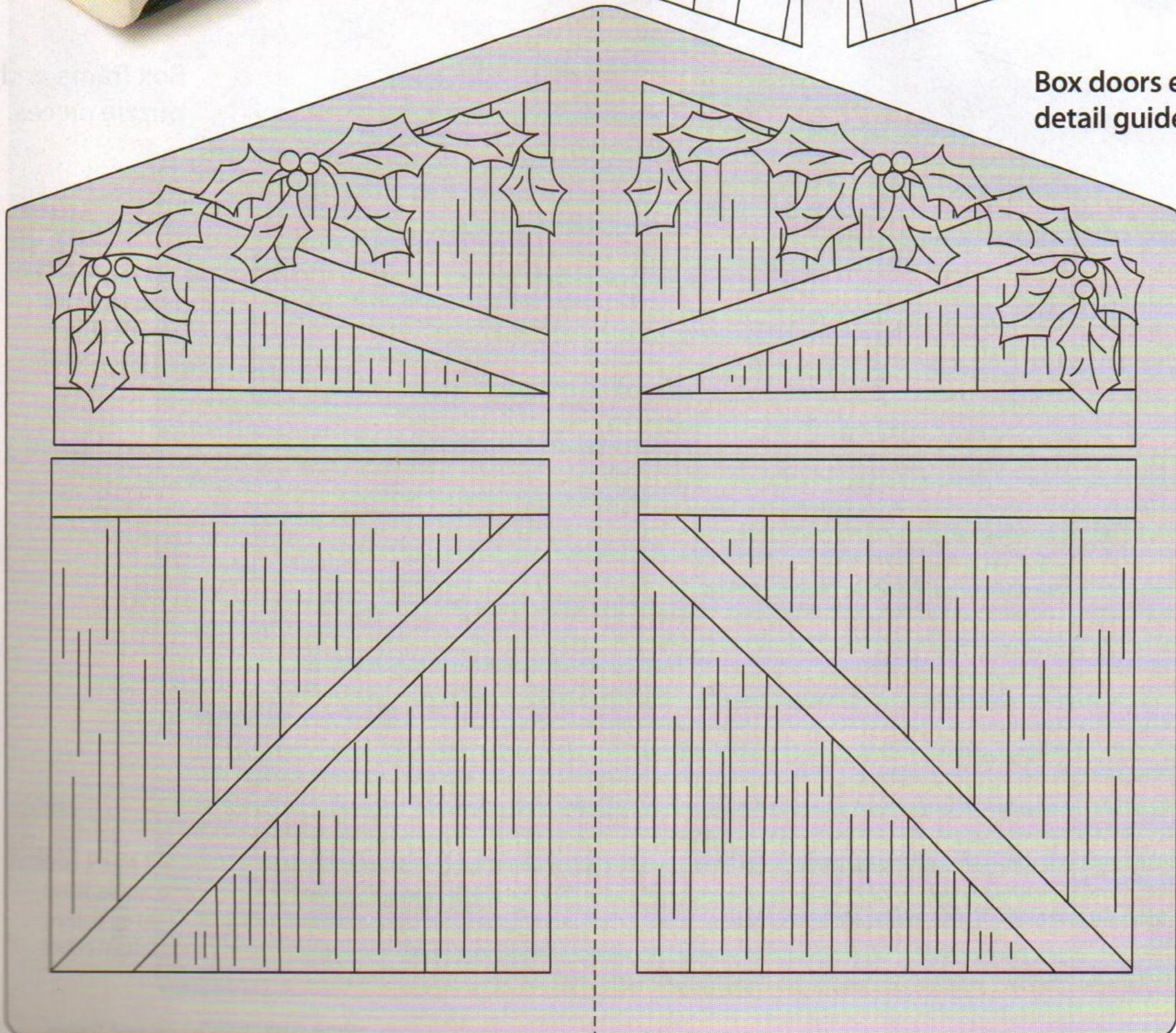
© 2012 Scroll Saw Woodworking & Crafts

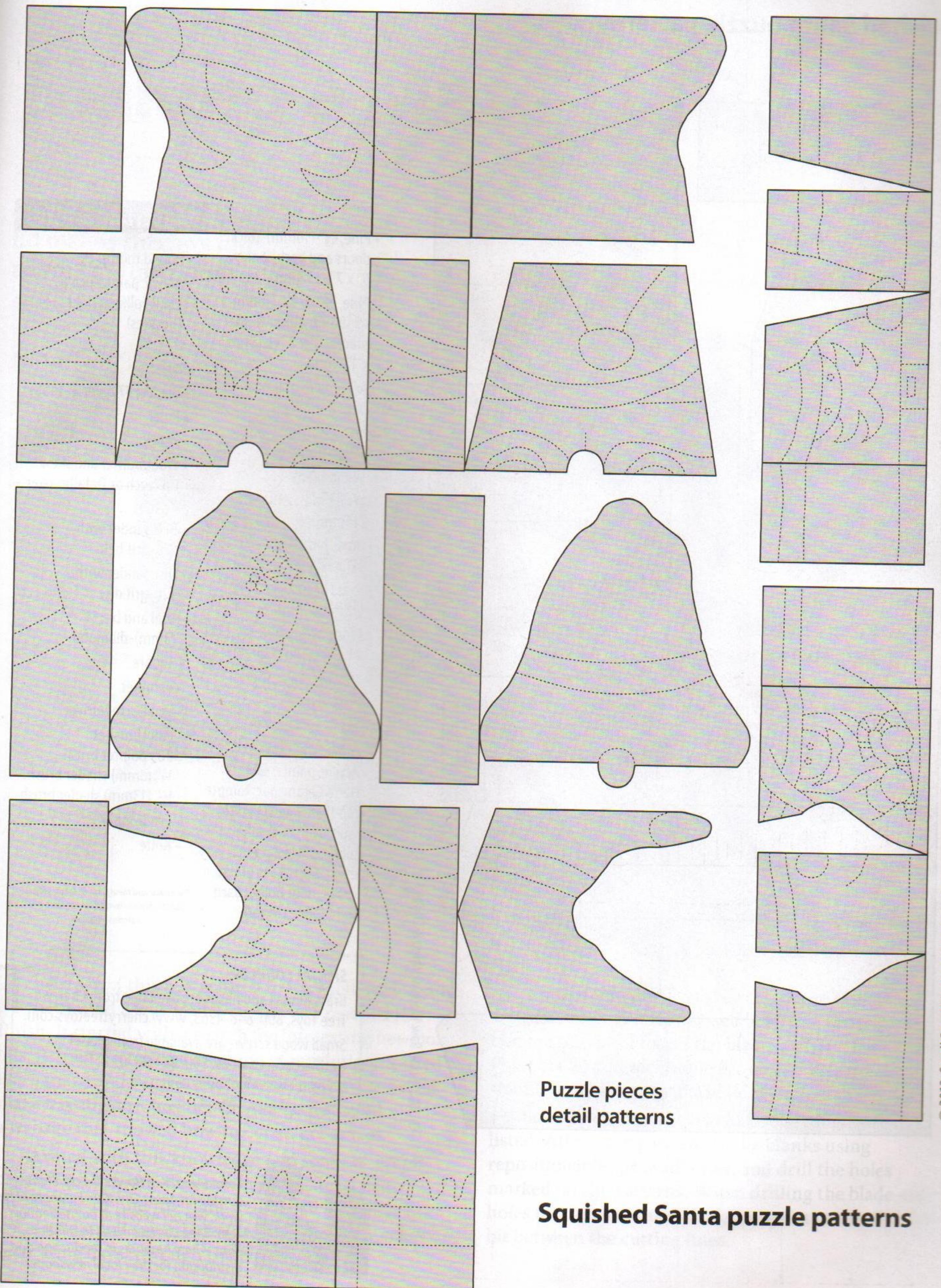
Squished Santa puzzle patterns

Box doors interior detail guide



Box doors exterior detail guide

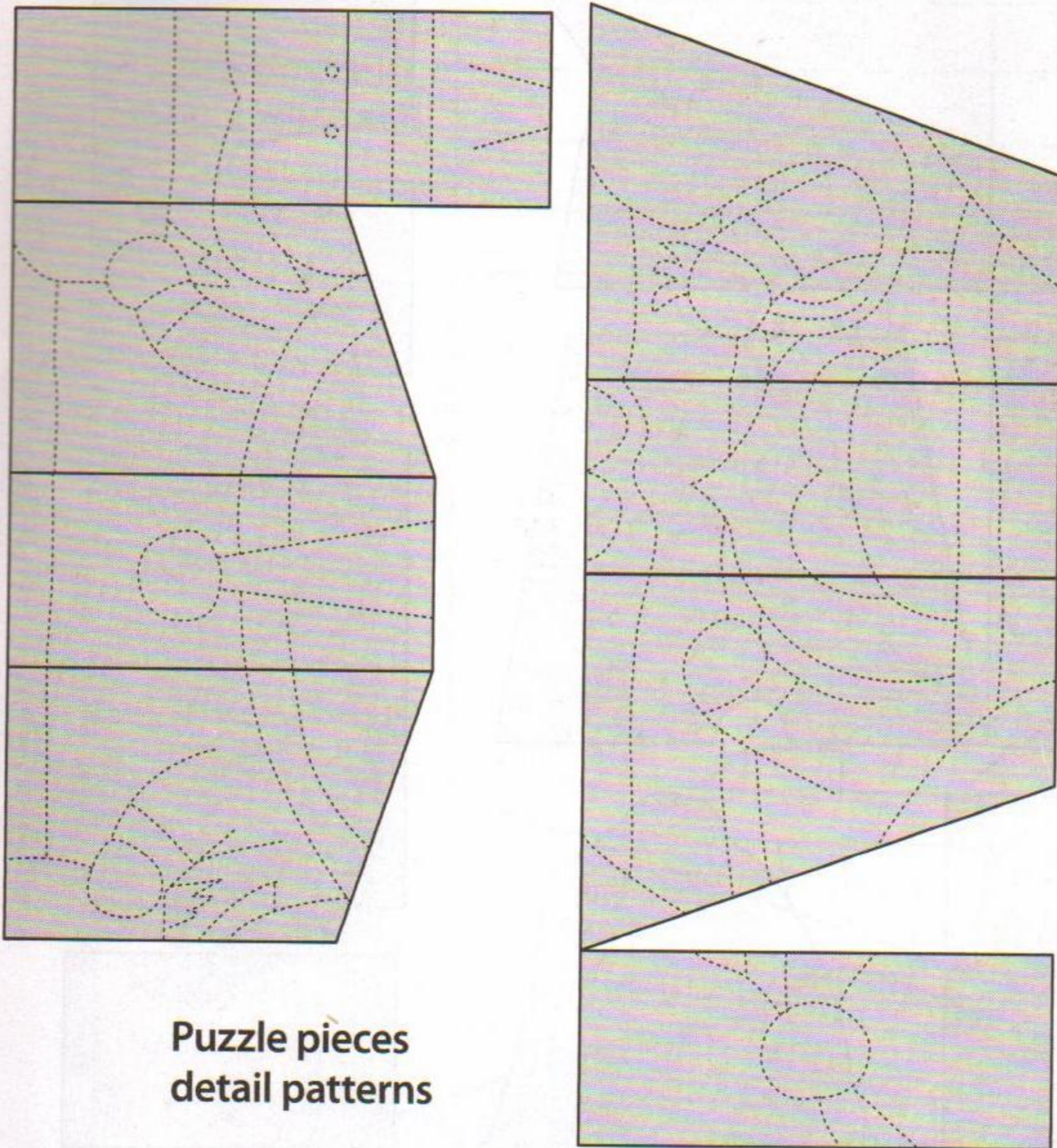




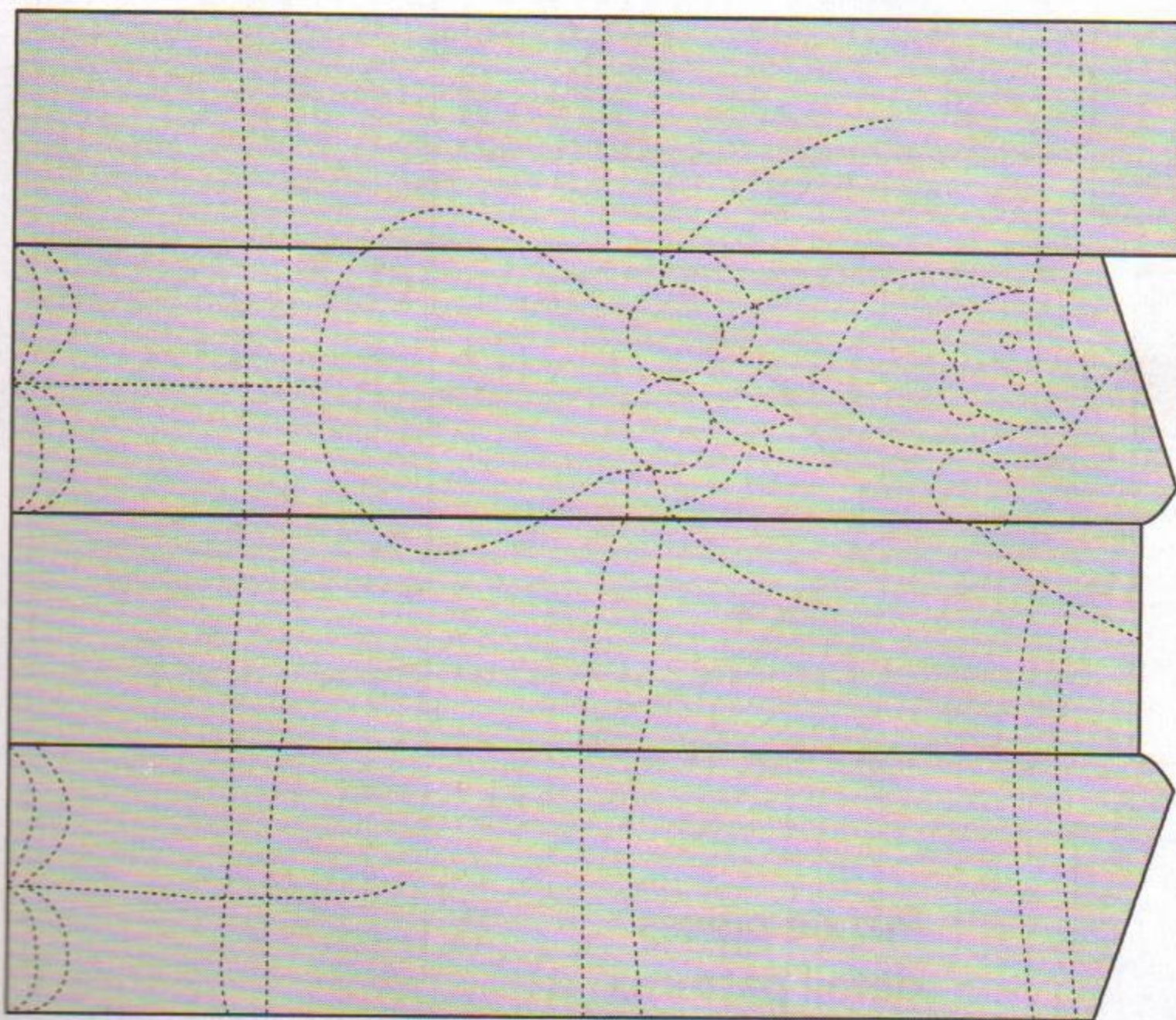
Puzzle pieces detail patterns

Squished Santa puzzle patterns

Squished Santa puzzle patterns



Puzzle pieces detail patterns



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Materials & Tools

- Pine, $\frac{3}{8}$ " (10mm)-thick: doors and back, 2 each 6" x 7" (152mm x 78mm)
- Pine, $\frac{5}{8}$ " to $\frac{3}{4}$ " (16mm to 19mm)-thick: frame/pieces, 6" x 7" (152mm x 178mm)
- Acetone or graphite paper
- Fresh laser copy of the patterns
- Wiping rags
- Wire brads: #19 x 1" (25mm)
- Brass hinges: 4 each $\frac{3}{4}$ " x $\frac{3}{4}$ " (19mm x 19mm)
- Brass hasp: $\frac{3}{4}$ " x $1\frac{7}{8}$ " (19mm x 48mm)
- Wood screws: 20 each #1 x $\frac{3}{8}$ " (10mm) long
- Minwax stain: special walnut
- Sandpaper: 120 grit
- Tape: clear double-sided
- Acrylic paints, such as Delta Ceramcoat: tompete red (Santa suit); white (suit trim, beard, hair); black (gloves, boots, eyes); Christmas green (bags, door holly); barn red (door exterior)

- Round toothpicks
- Acrylic paint, such as Plaid FolkArt: gold (buckles)

Tools:

- Blades: #7 reverse-tooth
- Ruler
- Pencil
- Woodburner and skew tip (such as Detailmaster #7 tip)
- Belt sander with 120-grit belt
- Disc sander with 120-grit disc
- Drill and bit: $\frac{1}{8}$ " (3mm)-diameter
- Square
- Hammer
- Small screwdriver
- Paintbrushes: #03 pointer brush, $\frac{1}{4}$ " (6mm) shader brush, $\frac{1}{2}$ " (13mm) shader brush
- Eyedropper
- Knife

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

SPECIAL SOURCES:

Brass hinges and hasps are available from Cherry Tree Toys, 800-848-4363, www.cherrytreetoys.com. Small wood screws are available from Meisel Hardware Specialties, 800-441-9870, www.meiselwoodhobby.com.

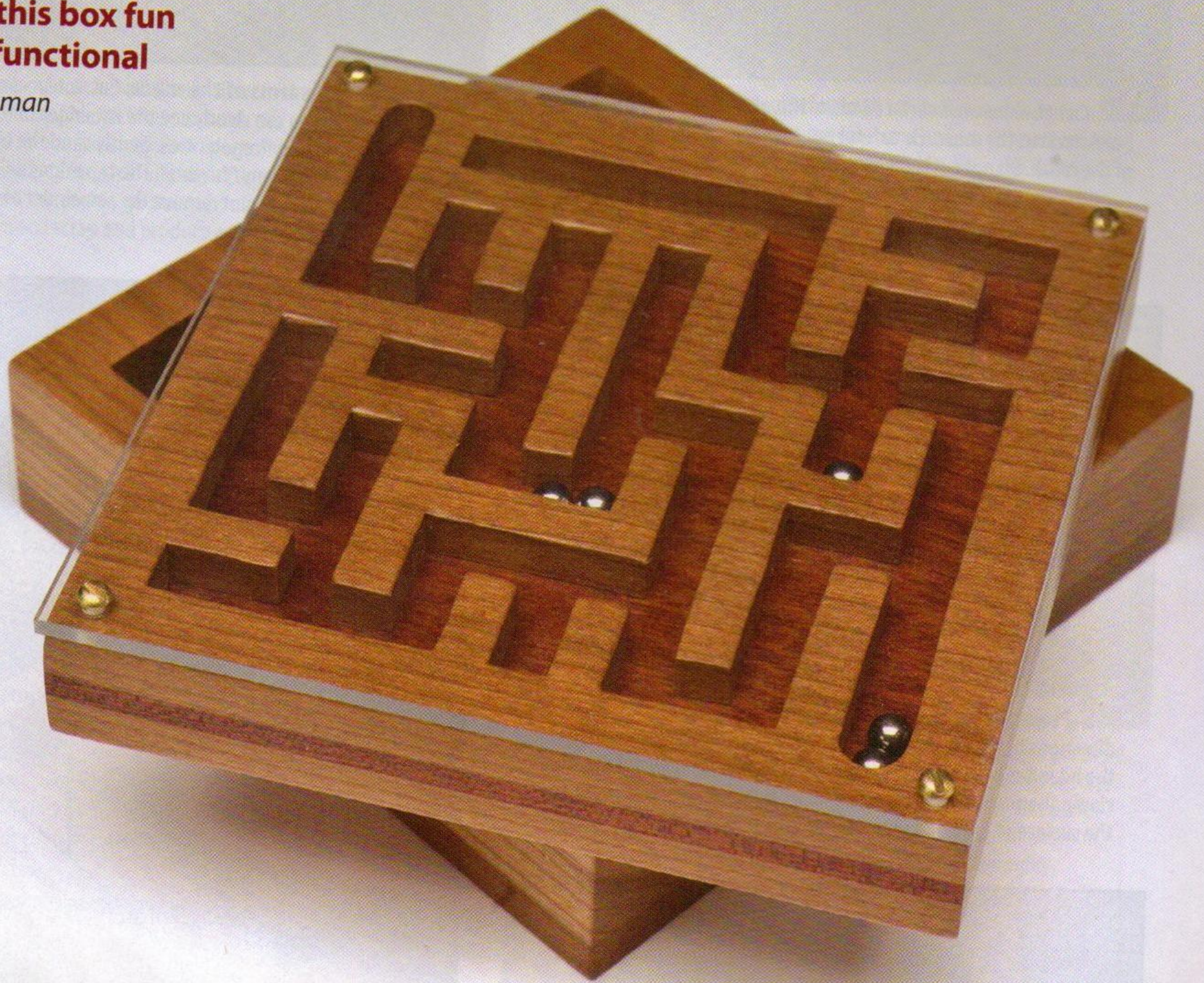


Carolea and Ken Hower live on a farm outside Arkansas City, Kan. For more of her work, visit her website at puzzlesinabox.com. Their son Kevin lives in Hillsboro, Kan., where he works in production and distribution for their local newspaper.

Making a Maze-Lid Box

Adding a game to the lid makes this box fun as well as functional

By Carole Rothman



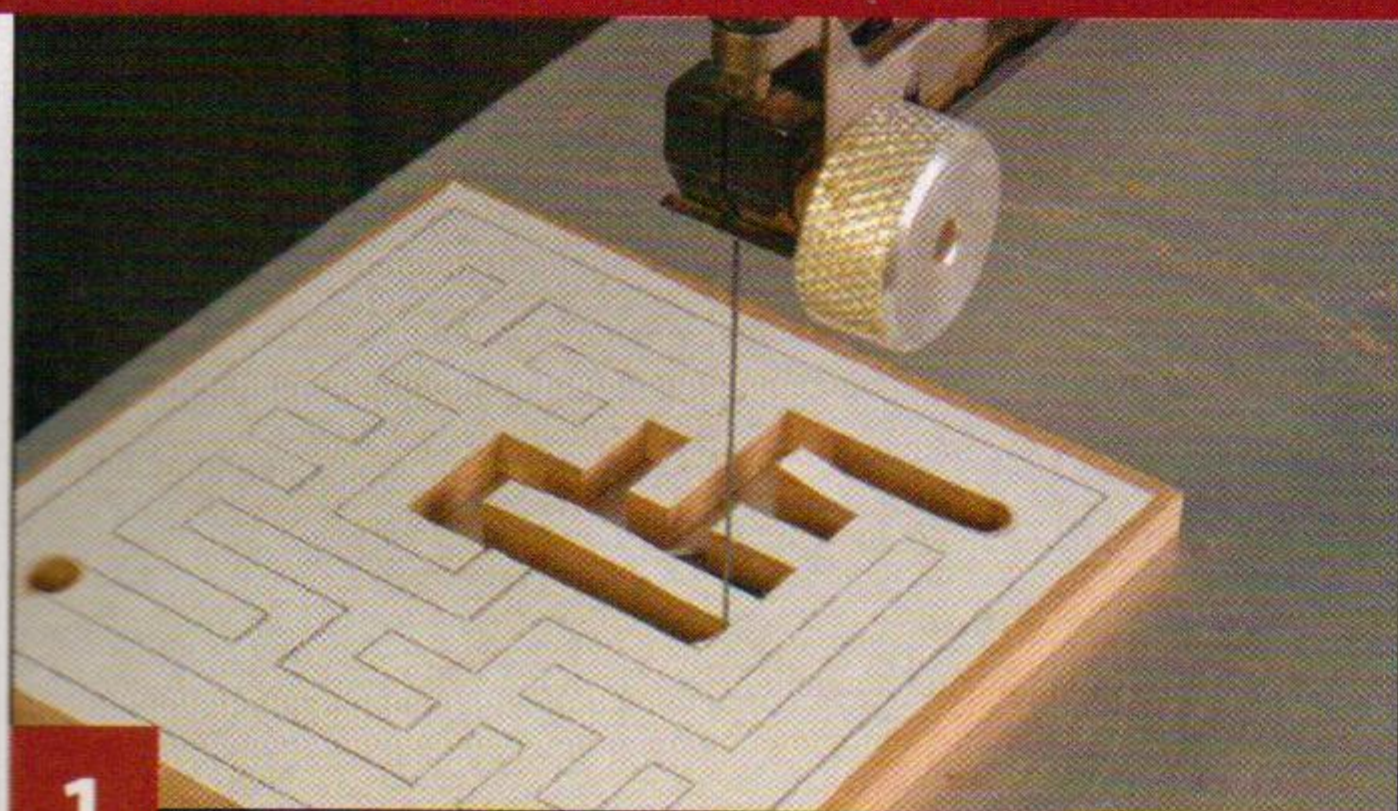
The story of this box is like a maze itself, with many paths and a few dead ends before I reached the finish. It started with a search for interesting new box lids. A friend remarked that one of my designs looked like a maze and suggested that an actual maze would make a really neat box lid. Challenged, I found a website that showed how to construct mazes.

Armed with this knowledge and some $\frac{1}{4}$ " graph paper, I got to work. Several versions later, I had my design. To find the right size of ball bearings, I test-drove small sugar balls (dragées, from my cake-decorating days) through the paths.

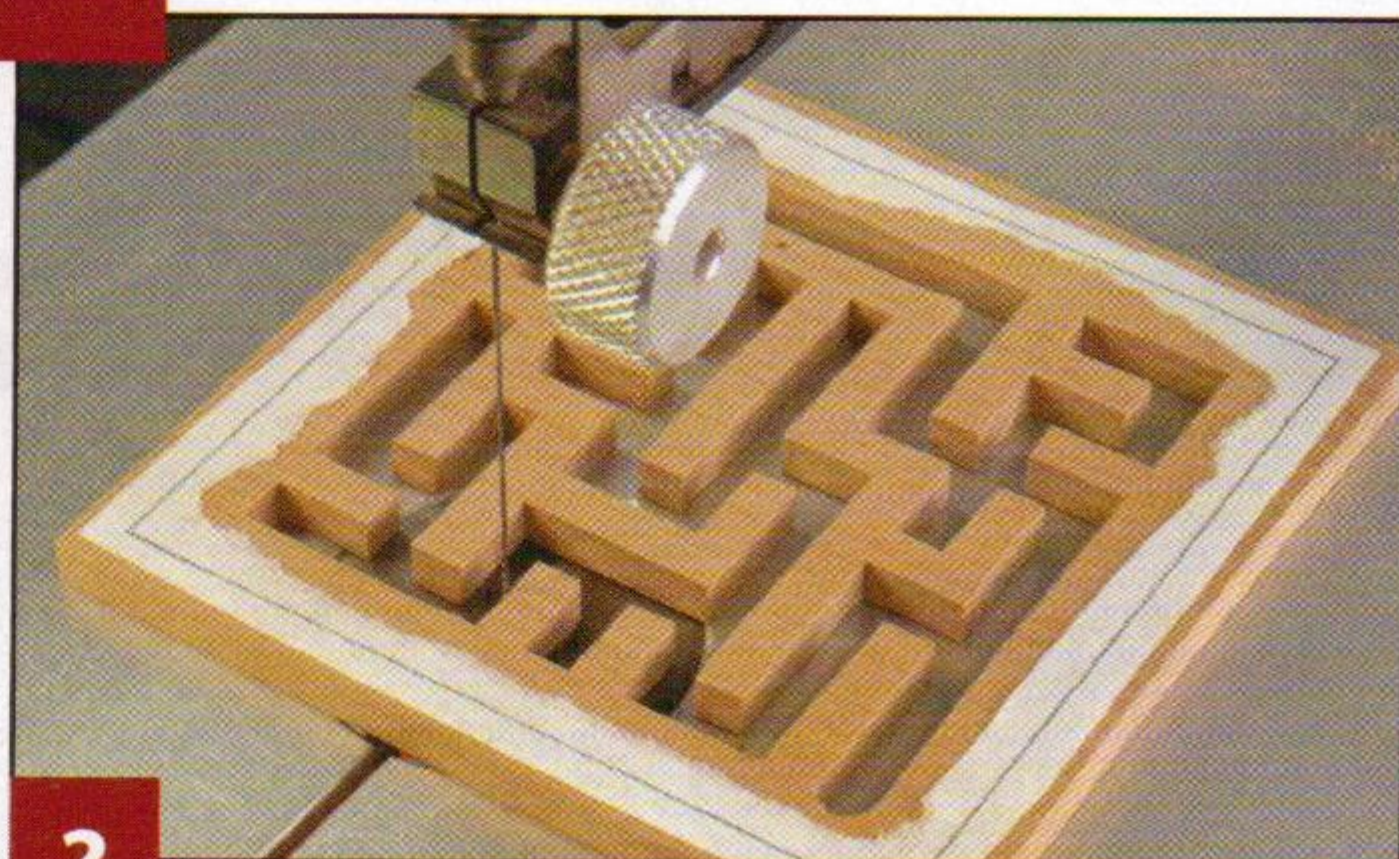
All that remained was the clear acrylic plastic cover, a material I hadn't used before. After one or two meltdowns, I found the blade (a Flying Dutchman Polar blade) and technique (slow speed) to use. Four small screws later, the maze lid was good to go.

Start by cutting the blanks to the rough sizes listed. Attach the patterns to the blanks using repositionable spray adhesive, and drill the holes marked on the patterns. When drilling the blade-entry holes for the maze area, make sure you center the drill bit between the cutting lines.

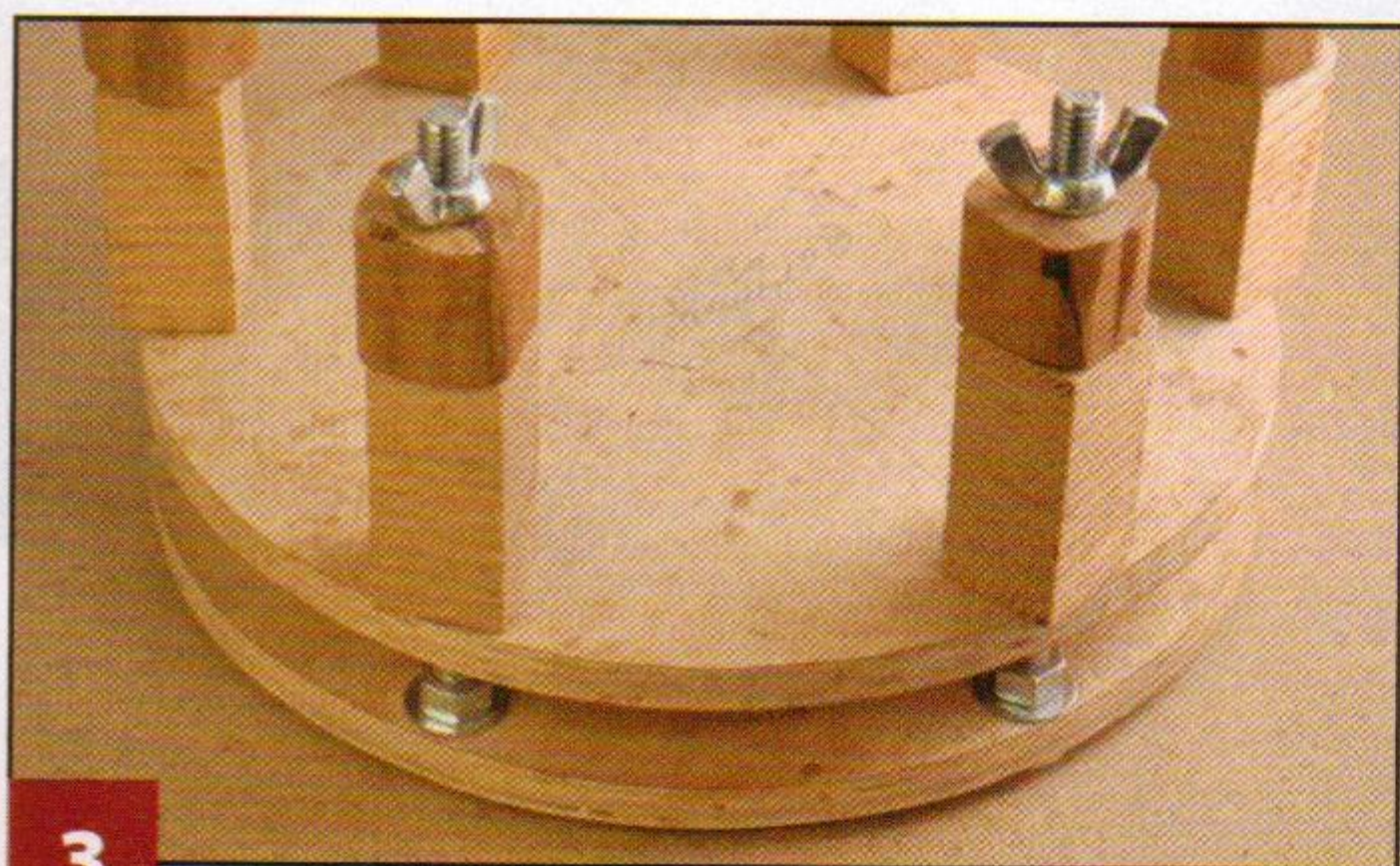
MAZE BOX: CUTTING THE MAZE



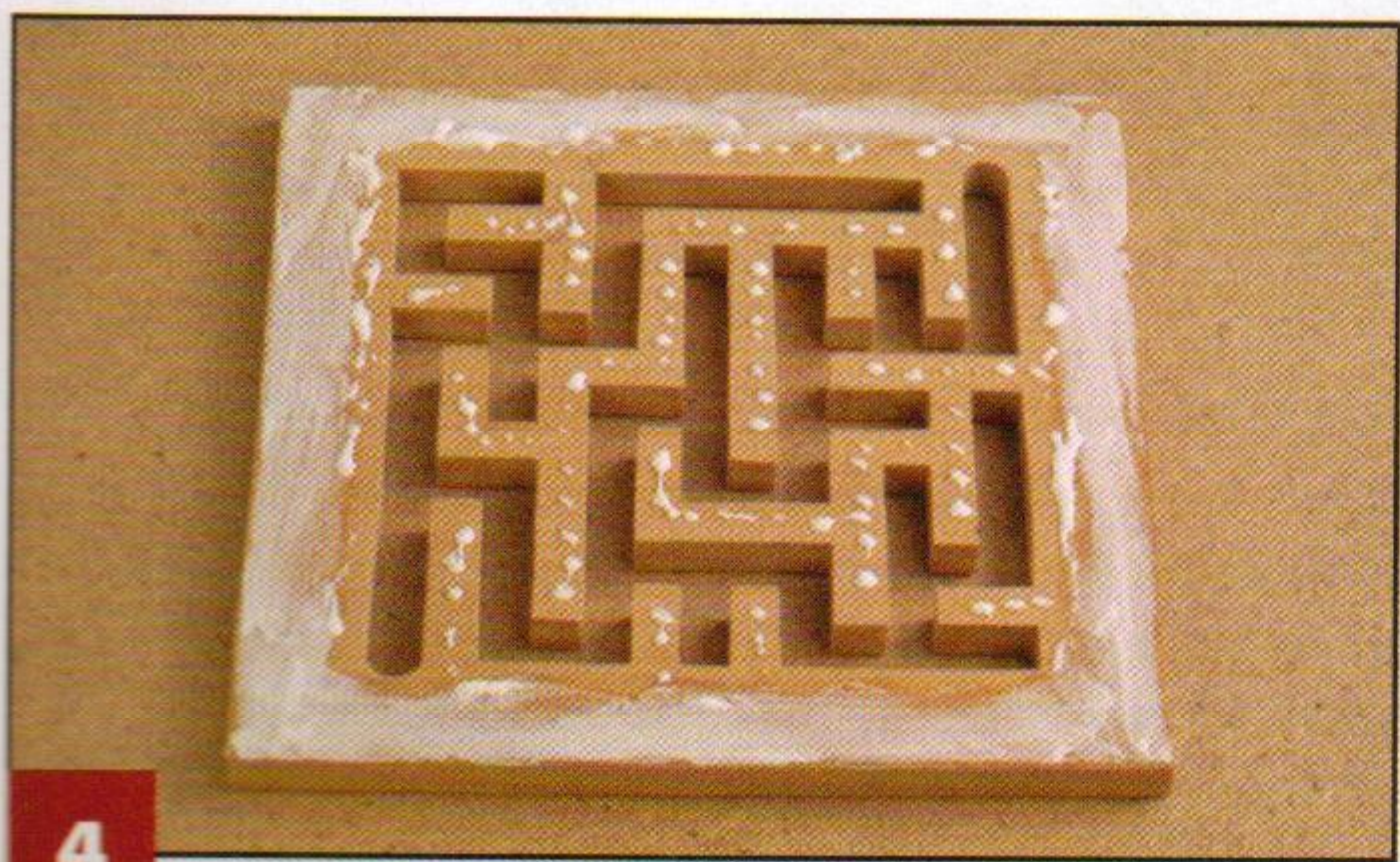
1 **Cut the maze.** Insert a #3 blade into one of the blade-entry holes and cut the maze. Be careful not to break off any of the arms of the maze. Do not cut the outer profile of the lid yet.



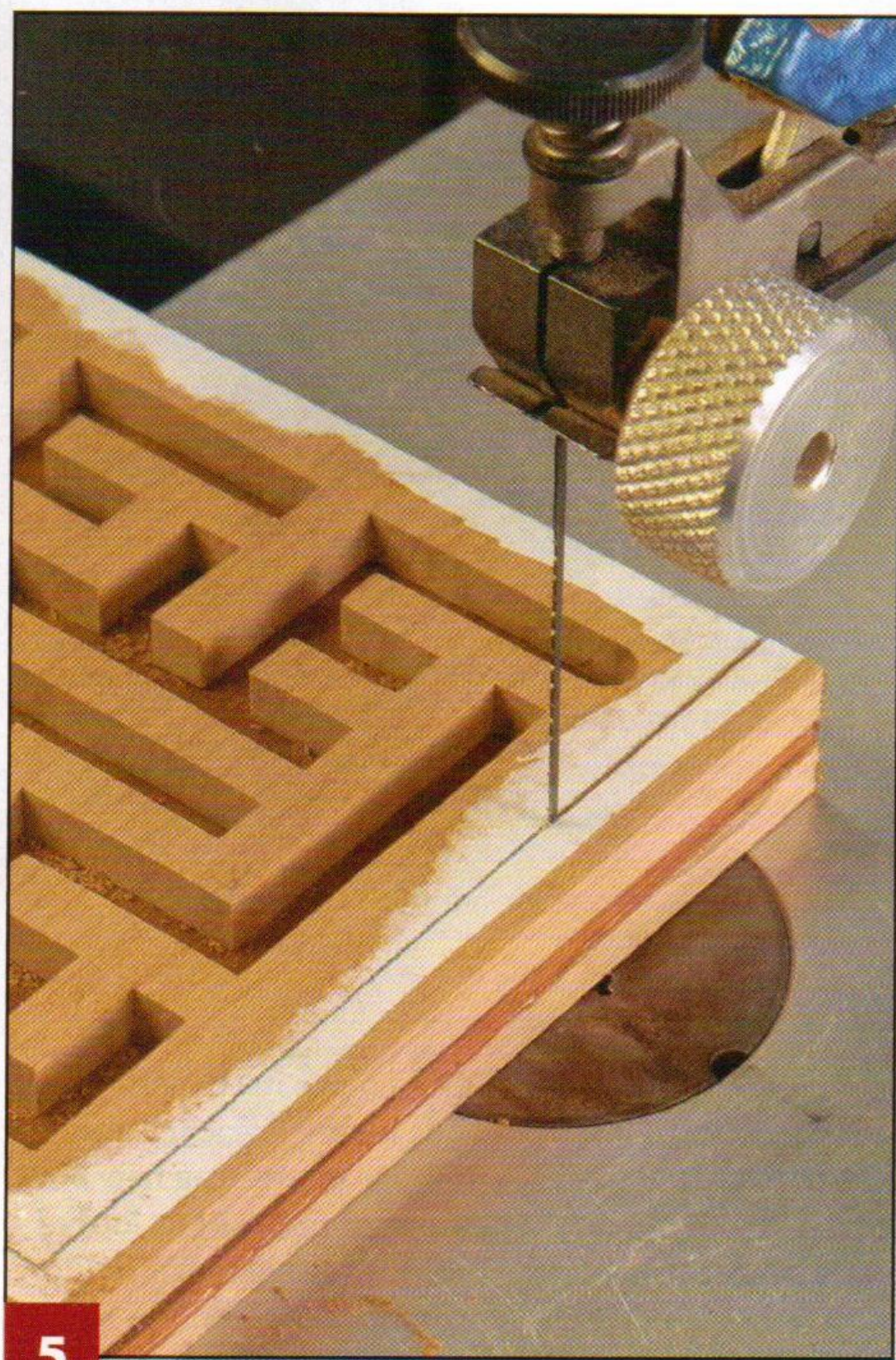
2 **Refine the arms of the maze.** Cut or tear away the center of the pattern so you can clearly see the cut edges of the maze. Carefully trim off any cutting irregularities. Gently sand the bottom edges of the arms to remove any "fuzzies." The top edges will be sanded and softened in Step 5. Do not remove the remainder of the pattern yet.



3 **Prepare the bottom of the maze.** Align the grain directions of the lid middle and lid bottom. Then, glue and clamp the lid middle to the lid bottom. I used a shop-made bowl press to clamp the small pieces together. Allow the glue to dry, and sand the surface of the lid middle smooth.

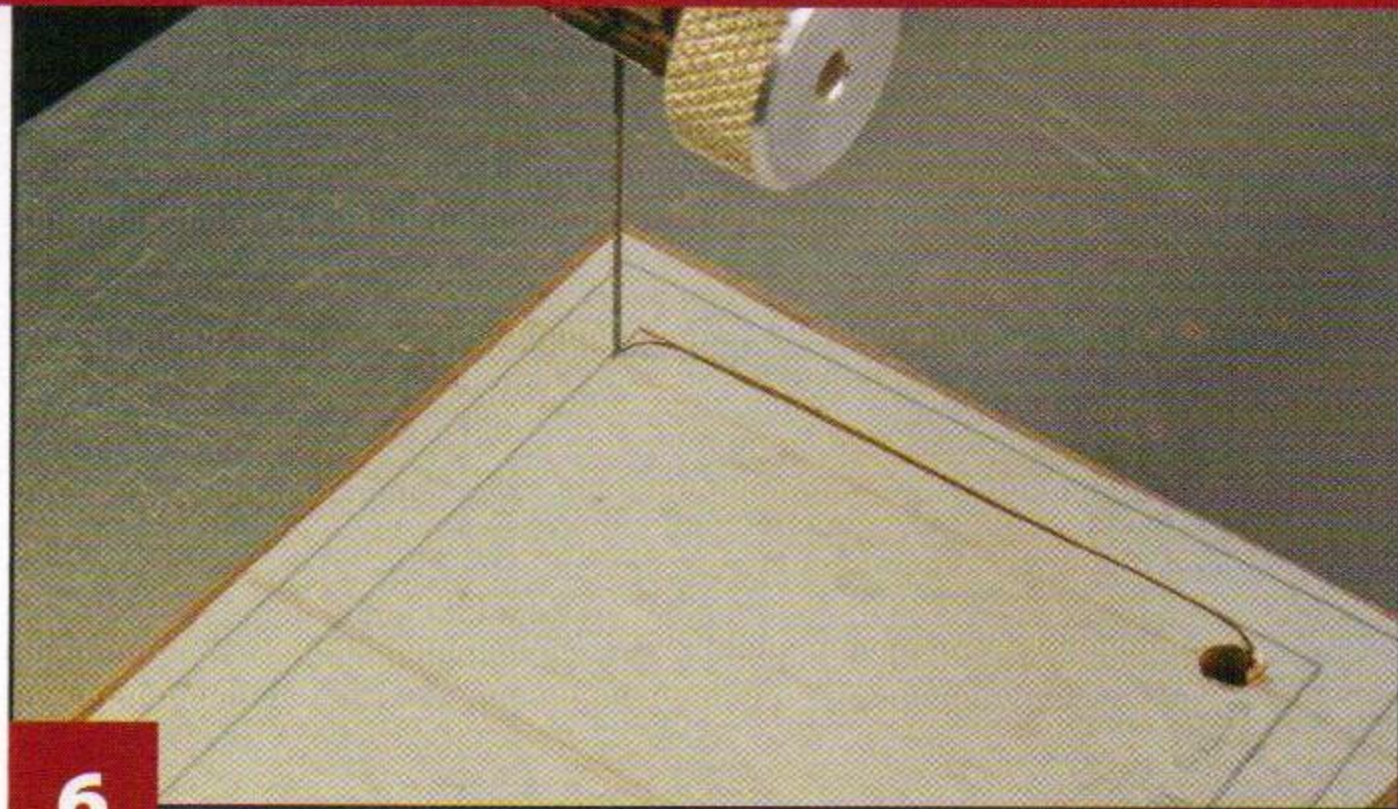


4 **Glue the maze elements together.** Align the grain direction of the maze with that of the assembled middle and bottom. Carefully apply dots of glue to the centers of the arms and perimeter using a toothpick. Clamp the pieces together for about five minutes, and then remove the clamps and clean any squeeze-out. Re-clamp the pieces until the glue is fully dry.

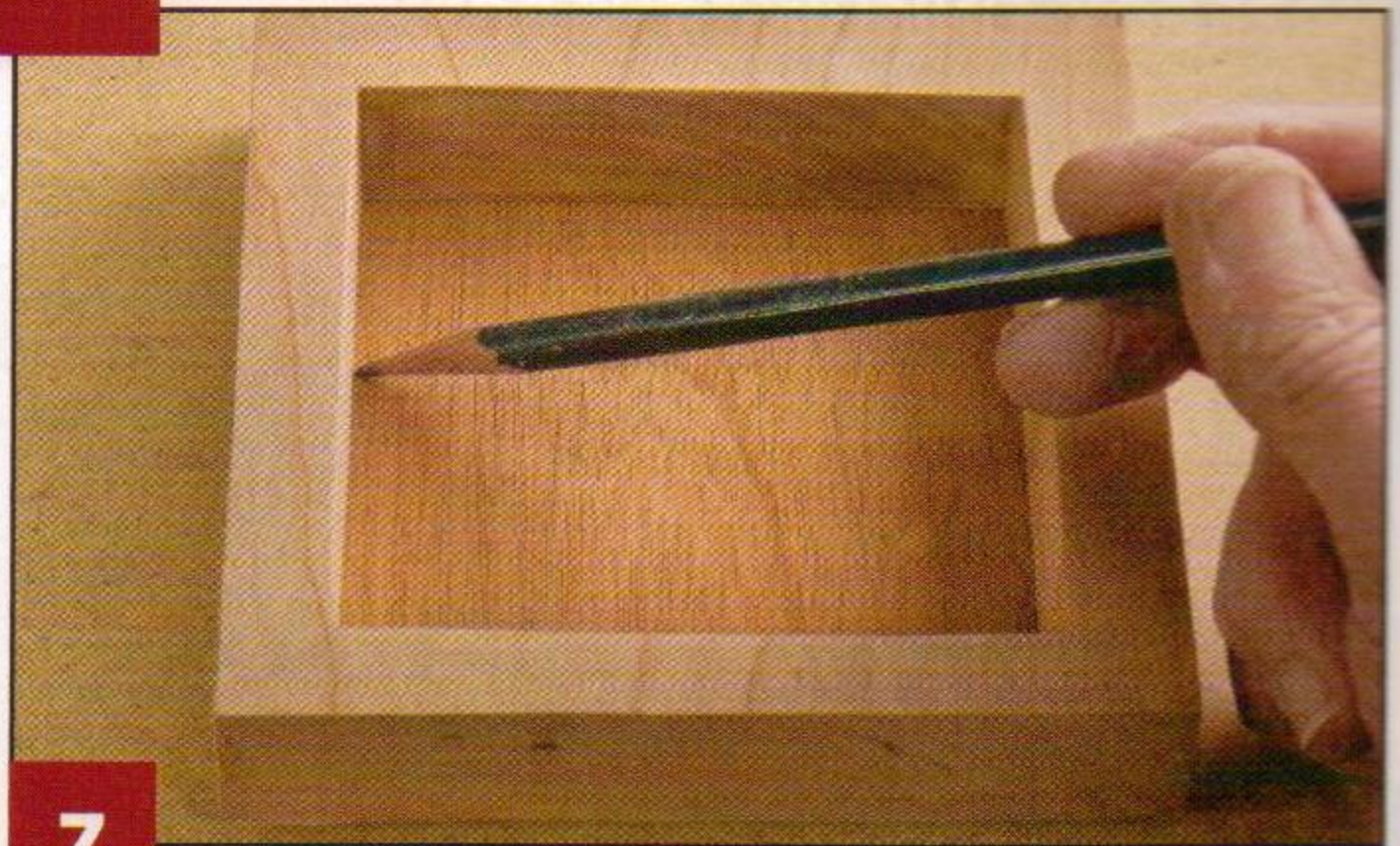


5 **Cut the outside profile of the lid.** Cut just outside the outer line on the maze pattern to complete the lid. Cutting the lid slightly large gives you a little extra wood for sanding the sides smooth. Remove the pattern. Carefully soften the edges of the arms of the maze by hand sanding or using a 240-grit mop sander. Sand the outside of the lid lightly to remove blade marks and irregularities; you will do a final sanding of the lid sides in Step 10.

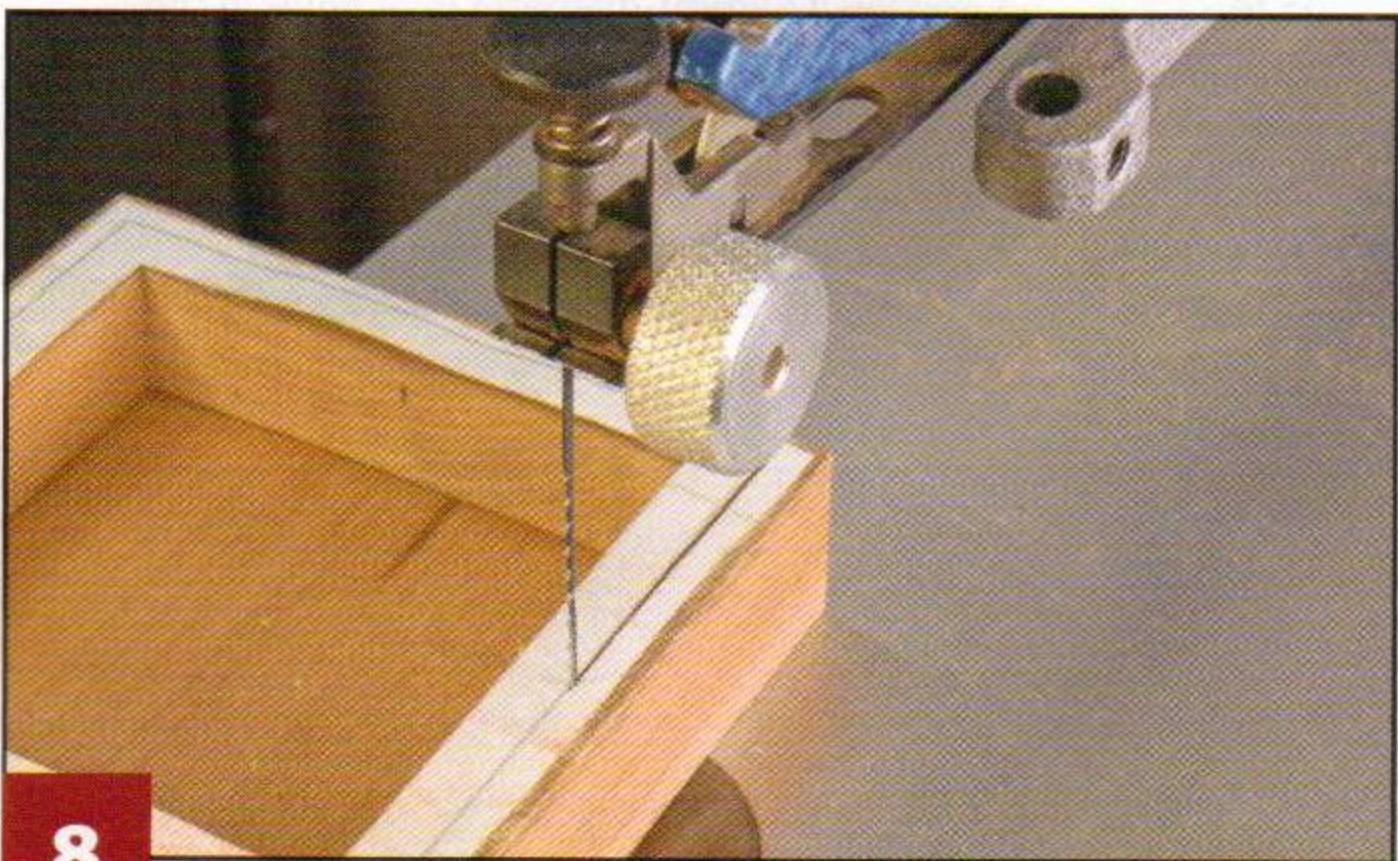
MAZE BOX: MAKING THE BOX



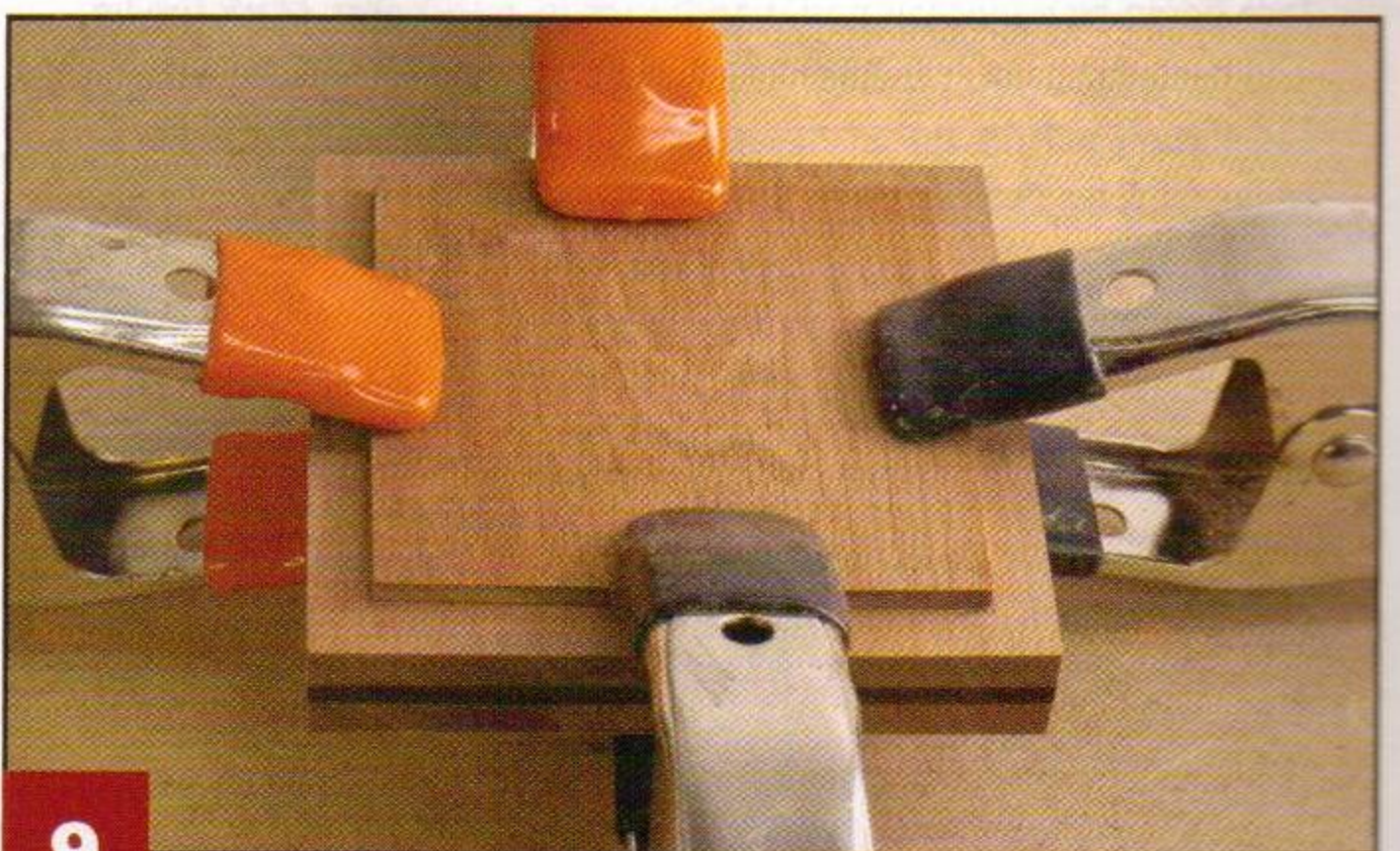
6 **Cut the box sides.** Attach the pattern to the blank and drill the blade-entry hole. Insert a #9 blade through the entry hole and cut along the inside line to cut away the center of the box. Cut to each corner, back the blade up a bit, and then cut a curve to the next line. Once you remove the center, go back and cut into each corner to free the remaining wood scrap and produce a sharp corner.



7 **Refine the inside of the box.** Sand the inner faces of the box until they are smooth, either by hand or with a detail sander. Do not remove the pattern. Invert the box body on the lid liner blank. Trace the inside of the box onto the blank. Cut along this line to form the lid liner. Sand the edges lightly.

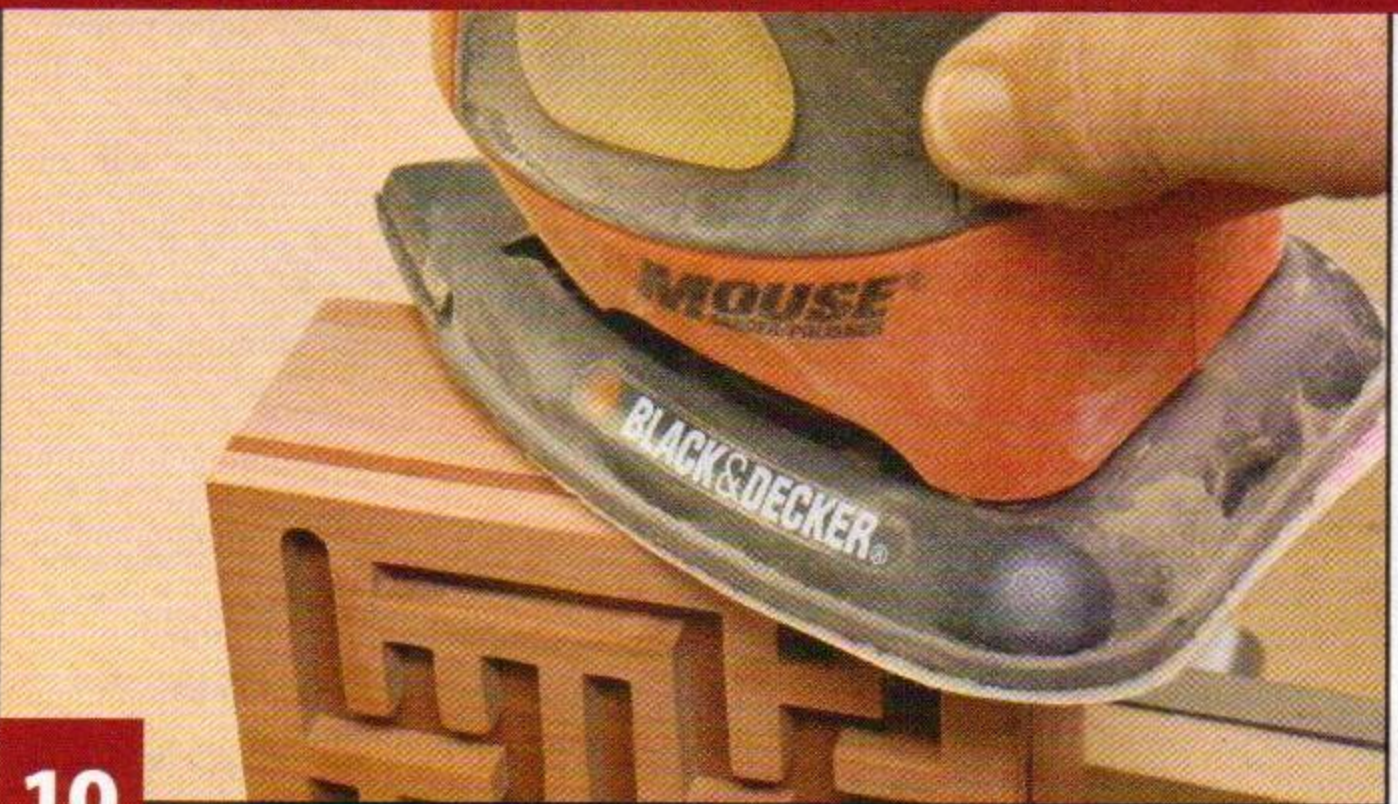


8 **Finish cutting the box.** Align the grain directions of the sides and bottom. Glue and clamp the box bottom to the box sides. Allow the glue to set for five minutes, and then remove the clamps to clean up any glue squeeze-out. Reclamp the box and let the glue dry. Then, cut along the outer perimeter of the box. Sand the sides to remove the blade marks and any large irregularities.



9 **Attach the lid liner.** Invert the lid. Center the lid liner on the lid, and invert the box on top of the lid to position the liner properly. Remove the box carefully and lightly mark the location of the liner with a pencil. Glue and clamp the liner to the lid, using the pencil marks as guides and being careful not to let it slip out of position. Clean up any glue squeeze-out. Let the glue dry thoroughly.

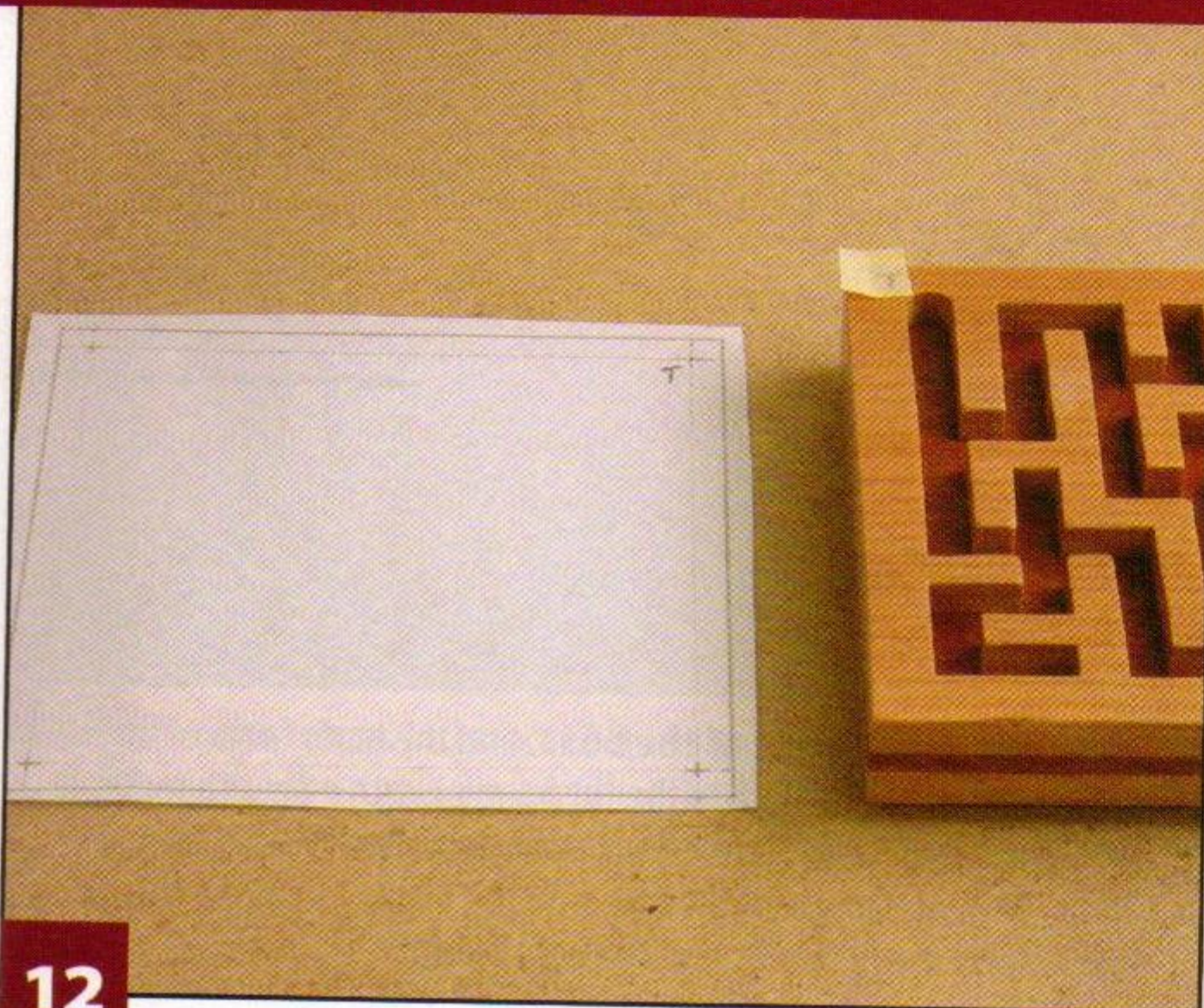
MAZE BOX: FINISHING THE BOX



10 **Finish the box.** Place the lid on the box, making sure the grains run in the same direction. Clamp the box carefully in a vise. Sand the box and lid to match, using progressively finer grits of sandpaper up to 320 grit.

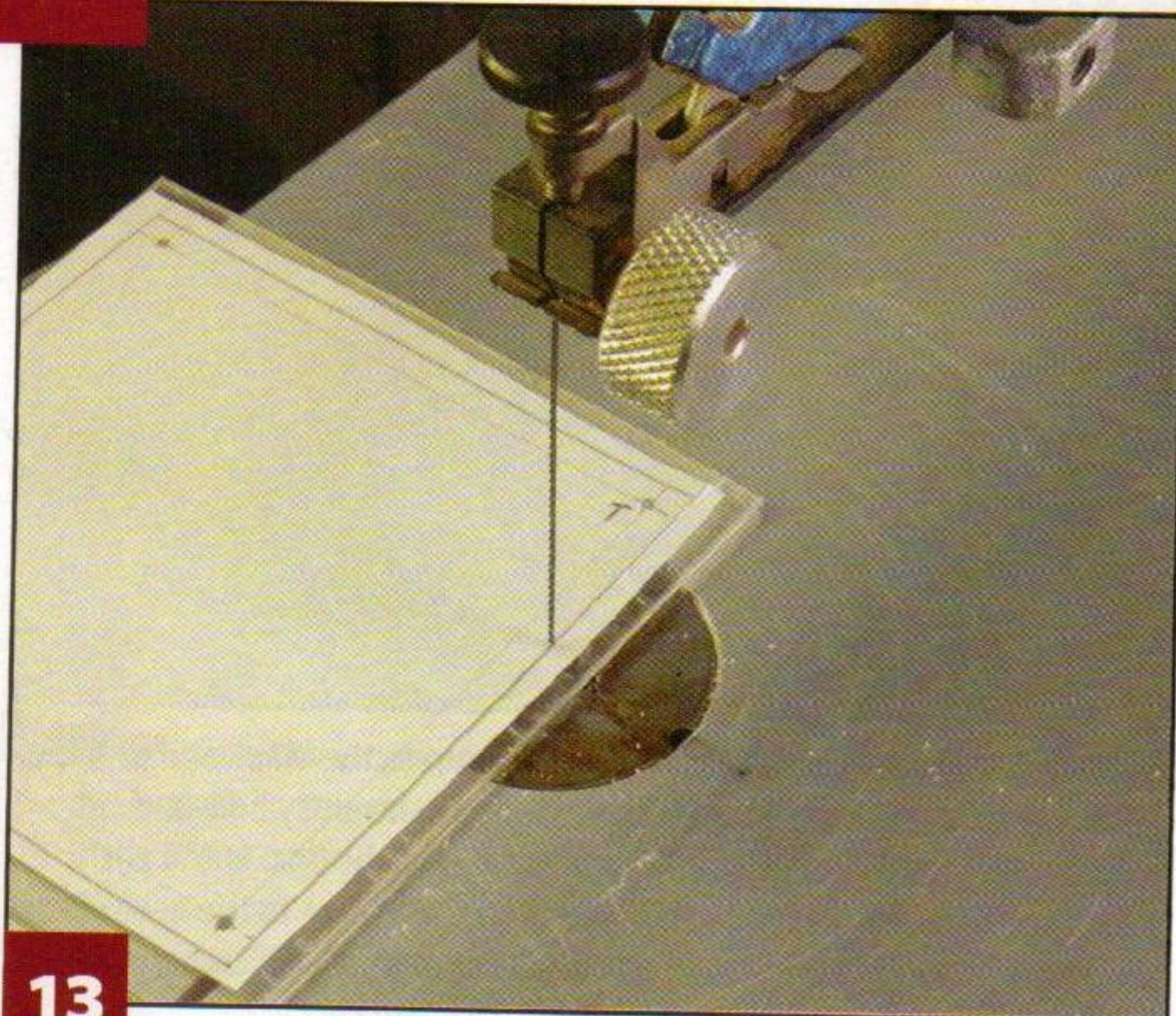


11 **Apply the finish.** Apply several coats of a clear finish, such as lacquer, to the box and the lid. Be careful to avoid sags or puddles in the maze area. Buff the finish between coats with 0000 steel wool as needed. Remove any dust or particles with a vacuum, moist cloth, or paper towel.



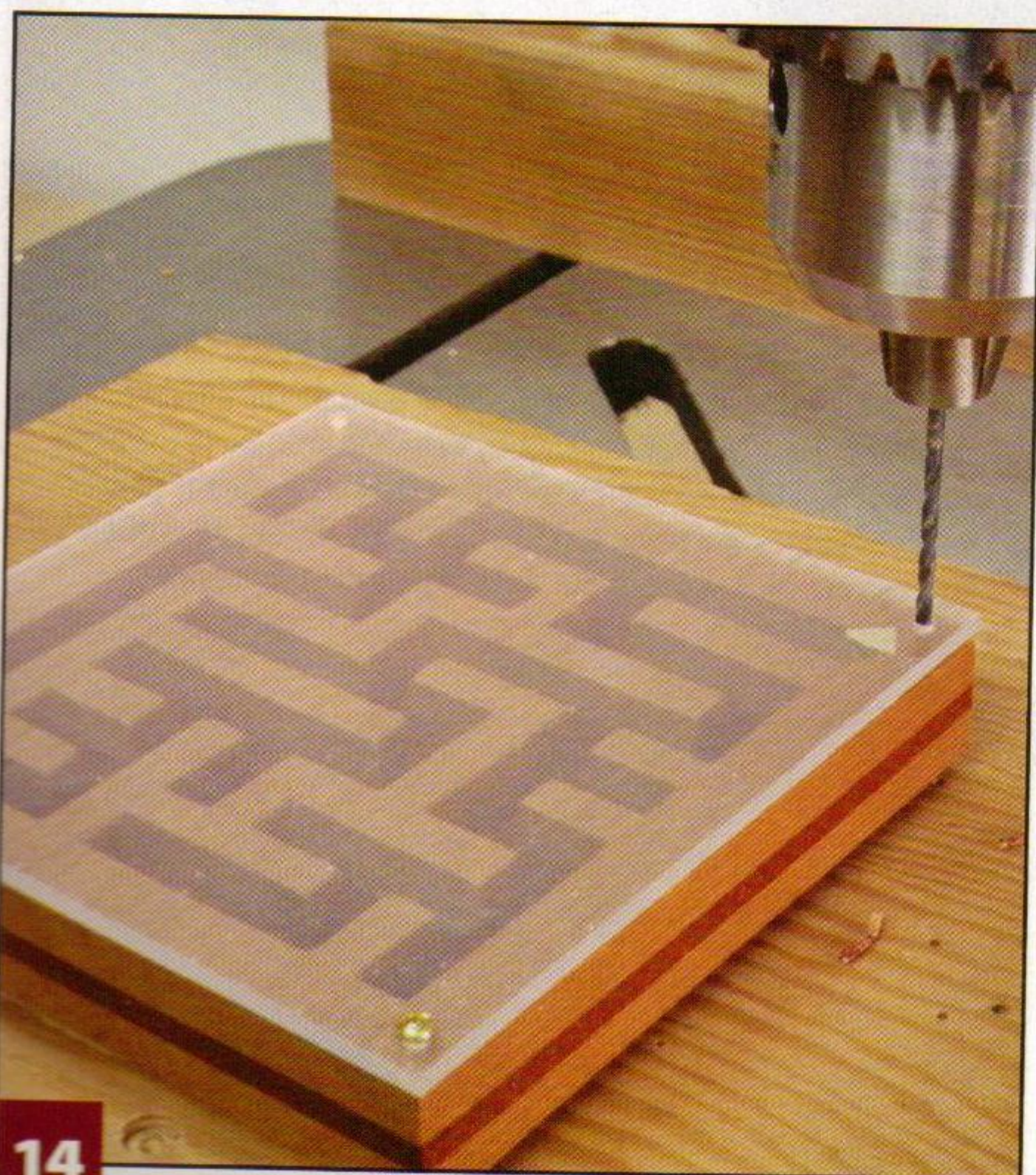
12

Make the pattern for the acrylic top piece. Place the lid face down on a piece of paper and trace its perimeter. Mark the lid and pattern so you can align the acrylic top properly. Make a mark $\frac{3}{16}$ " (5mm) in from both sides in each corner for the screw pilot holes. This method ensures the lid will fit the maze exactly.



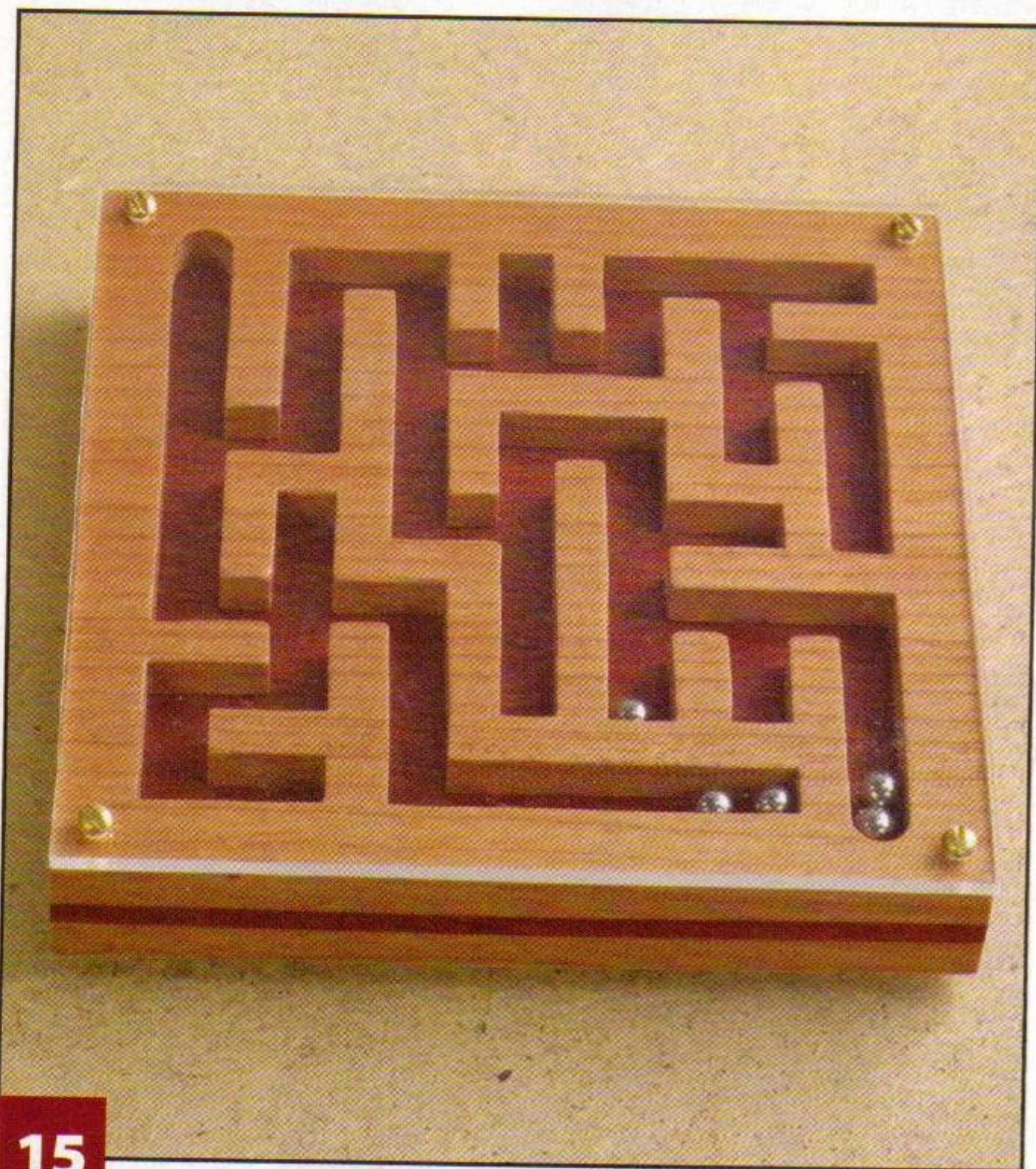
13

Cut the acrylic. Attach the pattern to the protective film on the acrylic and drill $\frac{3}{32}$ " (2.5mm)-diameter pilot holes in the corners. Then, use a #5 Flying Dutchman Polar blade to cut the perimeter of the acrylic lid. Use a slow cutting speed to keep the acrylic from melting back together. Remove the pattern and use a piece of tape to transfer the alignment mark to the acrylic.



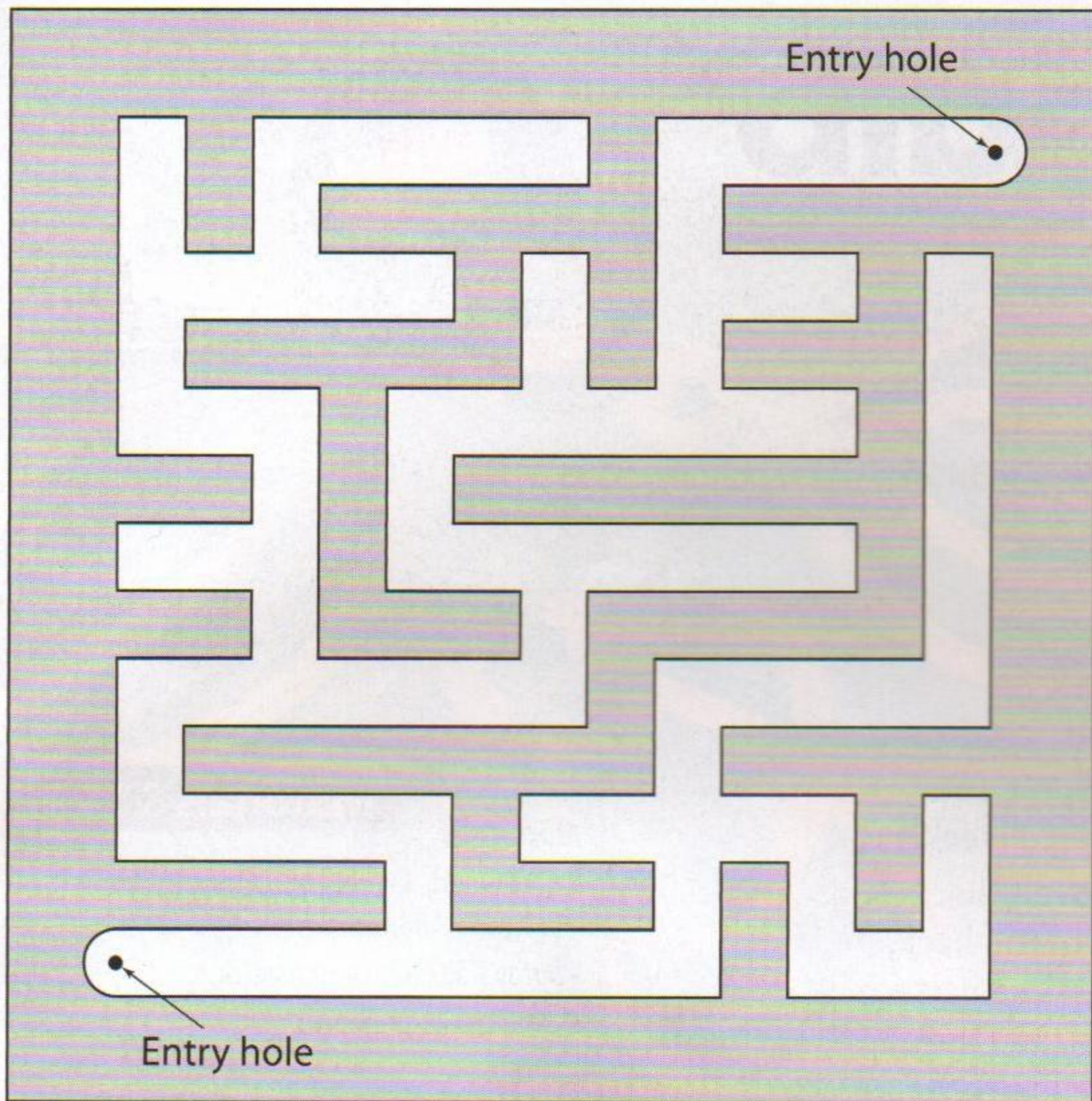
14

Drill the pilot holes in the lid. Insert a $\frac{5}{64}$ " (2mm)-diameter bit in a drill press. Place the acrylic lid on top of the maze and set the drill press to drill a $\frac{1}{2}$ " (13mm)-deep hole. If you use a hand drill, wrap a piece of masking tape around the bit $\frac{1}{2}$ " (13mm) from the end. Then, drill through the holes in the acrylic into the wooden lid. Use a #2 by $\frac{1}{2}$ " (13mm)-long round-head brass screw to hold the acrylic in place while you drill another hole and insert another screw. Then, drill the remaining holes and remove the screws and acrylic.



15

Complete the box. Vacuum any particles from the maze area of the lid. Place five 5mm-diameter ball bearings into the maze. Remove the protective film from the acrylic piece and screw it into place with the four brass screws.



Maze-lid box patterns

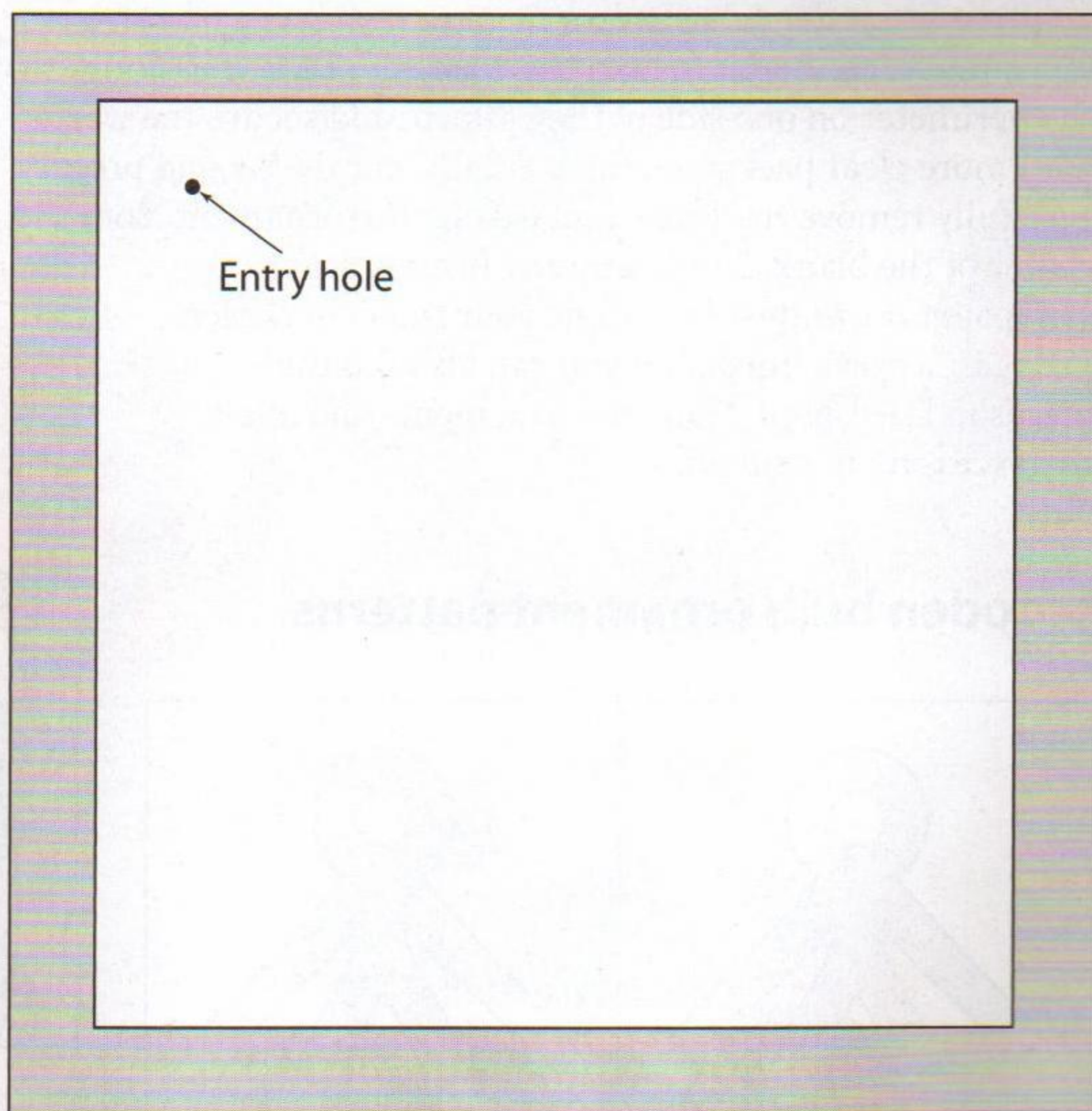
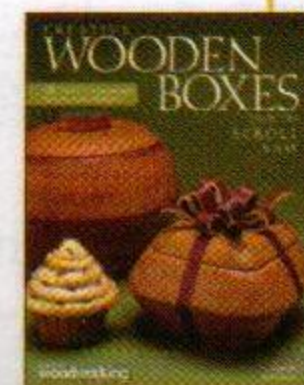
Further Reading

Creative Wooden Boxes from the Scroll Saw

By Carole Rothman

Searching for unique and interesting box projects for the scroll saw? Author Carole Rothman has created 28 beautiful designs for boxes you'll love to make and love to use. All of the projects are useful, surprisingly easy to make, and are great for gift giving.

Available for \$24.95 plus \$3.99 S&H from Fox Chapel Publishing, 1970 Broad St., East Petersburg, Pa., 17520, 800-457-9112, www.foxchapelpublishing.com, or check your local retailer.



Materials:

- Cherry, 3/4" (19mm)-thick: box body, 4 1/2" x 4 1/2" (114mm x 114mm)
- Cherry, 1/4" (6mm)-thick: maze, lid bottom, box bottom, 3 each 4 1/2" x 4 1/2" (114mm x 114mm)
- Cherry, 1/8" (3mm)-thick: lid liner, 4" x 4" (102mm x 102mm)
- Bloodwood, 1/8" (4mm)-thick: lid middle, 4 1/2" x 4 1/2" (114mm x 114mm)
- Clear acrylic plastic, 1/8" (3mm)-thick: 4 1/2" x 4 1/2" (114mm x 114mm)
- Repositionable adhesive
- Wood glue
- Sandpaper: assorted grits to 320

Materials & Tools

- Steel wool: 0000
- Lacquer: clear spray
- Packaging tape: clear
- Brass screws: 4 each #2 x 1/2" (13mm)
- Ball bearings: 5 each 5mm-diameter

Tools:

- Blades, such as Flying Dutchman: #9, #3, #5 Polar
- Drill or drill press and bits: 1/4" (6mm), 3/32" (2.5mm), 5/64" (2mm) diameters
- Awl
- Press or clamps
- Sanders

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



Carole Rothman of Somers, N.Y., is a retired psychologist and college professor. She is also an award-winning cake decorator. Visit Carole online at scrollsawbowls.blogspot.com.

Wooden Bulb Ornaments

Compound-cut designs resemble classic glass bulb ornaments

By Sue Mey

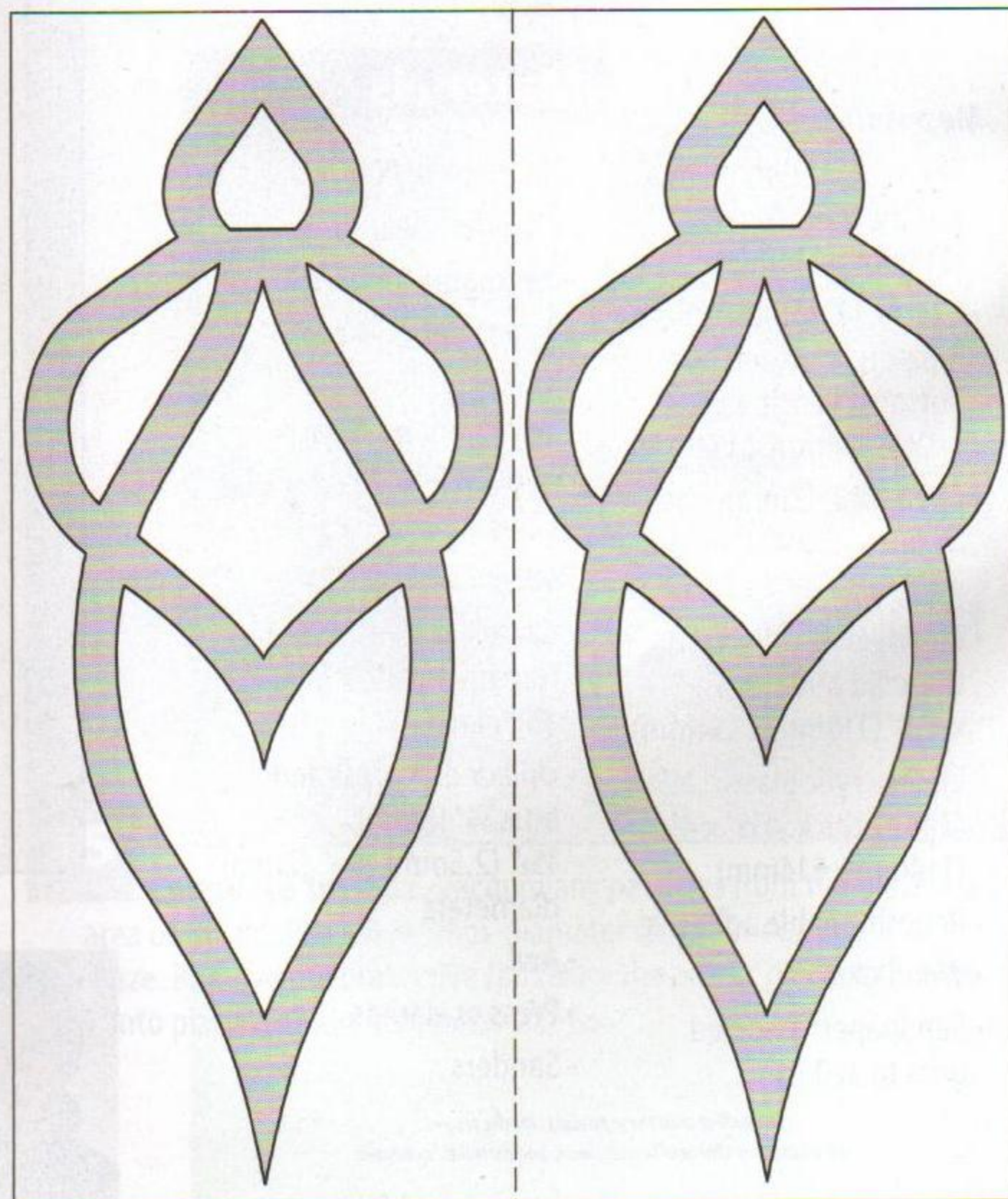
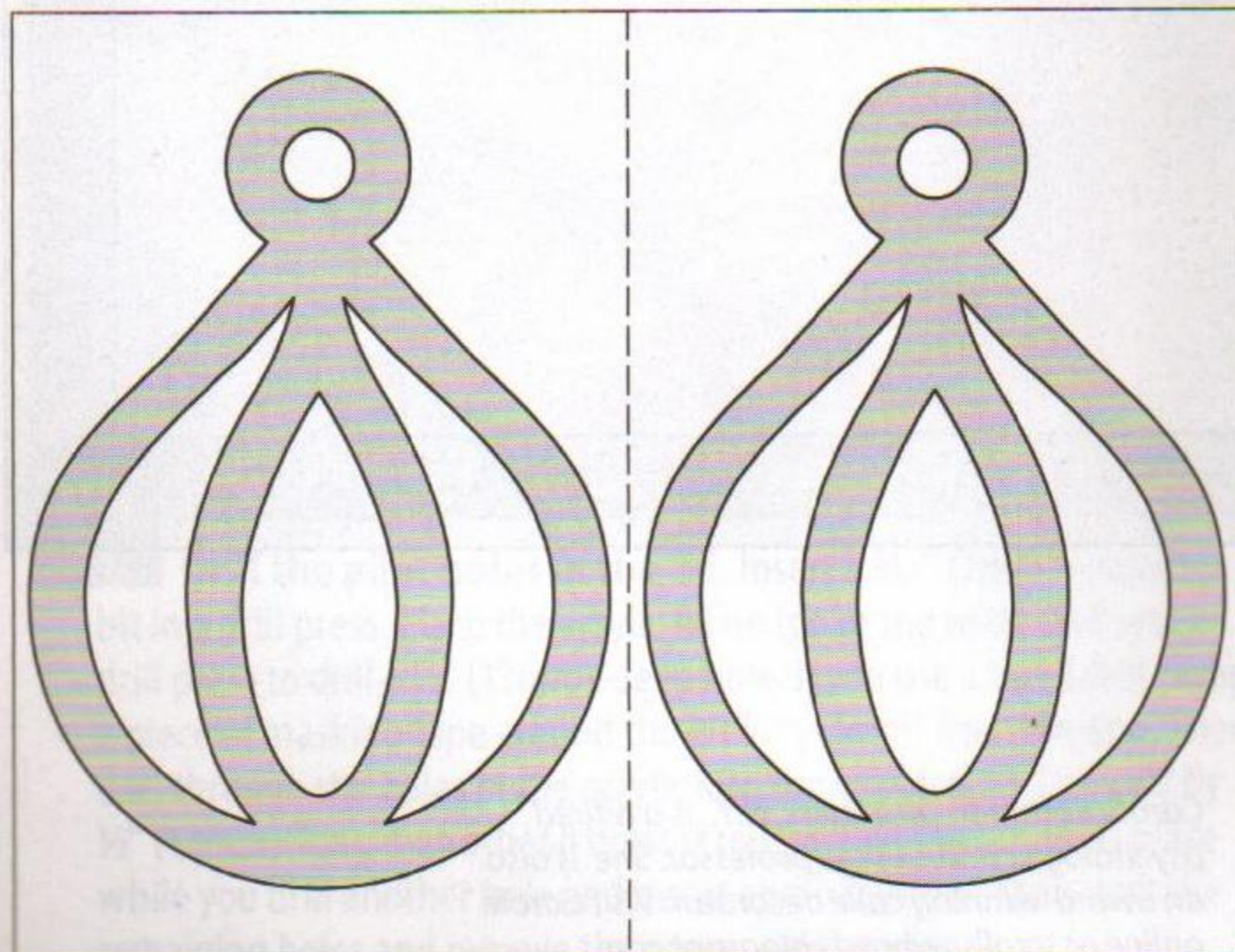
Cut by Dale Helgerson

Christmas ornaments are popular gifts, but many of the intricate fretwork designs take hours to cut. These compound ornaments can be completed with just a few cuts. You can make ornaments for everyone on your list in a weekend.

To start, cut the blanks to size. Fold a photocopy of the pattern along the dotted line, apply spray adhesive to the back, align the fold with the corner of the blank, and press the pattern onto the wood. Drill any required blade-entry holes, and cut along the frets in one side of the pattern. Rotate the blank 90° and cut the frets in the other side of the pattern.

To protect the delicate ornament, wrap clear packaging tape around the blank to hold the waste in place. Cut along the perimeter on one side of the pattern, and secure the waste with more clear packaging tape. Finally, cut the second profile. Carefully remove the waste and extract the ornament from the center of the blank. Sand away any fuzzies using sandpaper or needle files. Apply your finish of choice. I suggest a spray finish, but you can also dip the pieces in Danish oil. Hang the ornaments and allow the excess oil to drip off.

Wooden bulb ornament patterns



Materials & Tools

Materials:

- Hardwood, 1¾" (44mm)-thick: 1¾" x 4¼" (44mm x 108mm)
- Spray adhesive or glue stick
- Clear packaging tape
- Sandpaper
- Spray finish or Danish oil

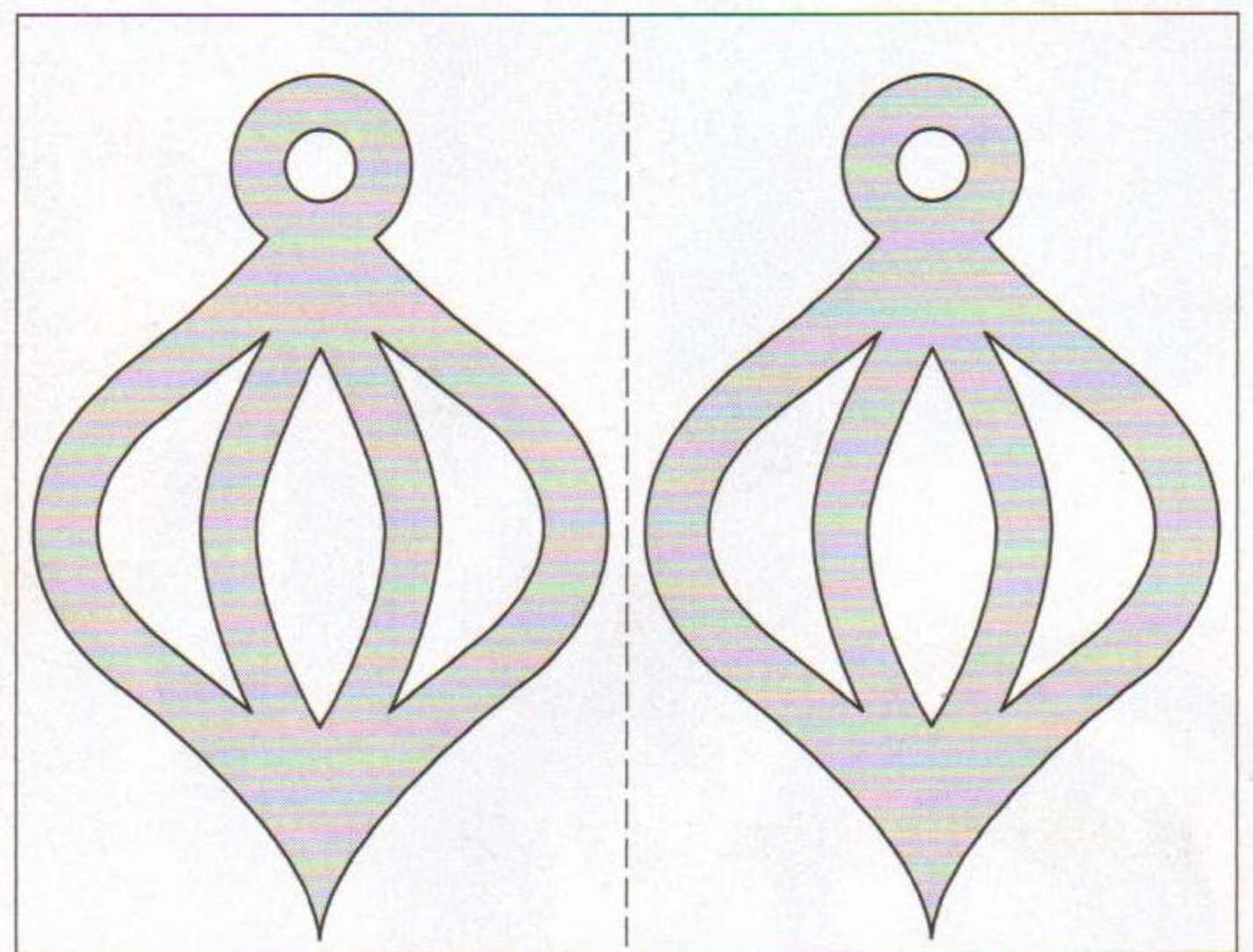
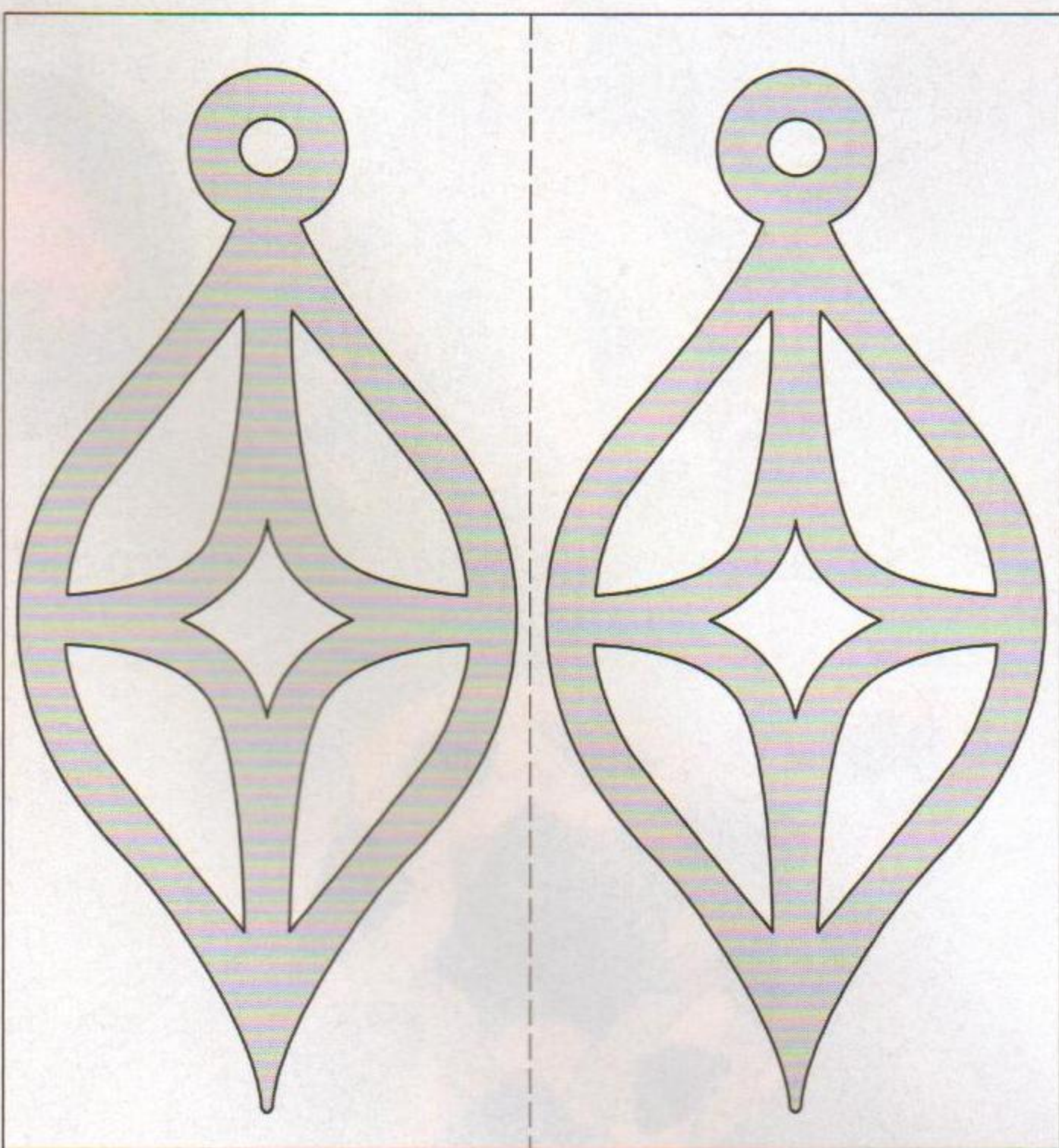
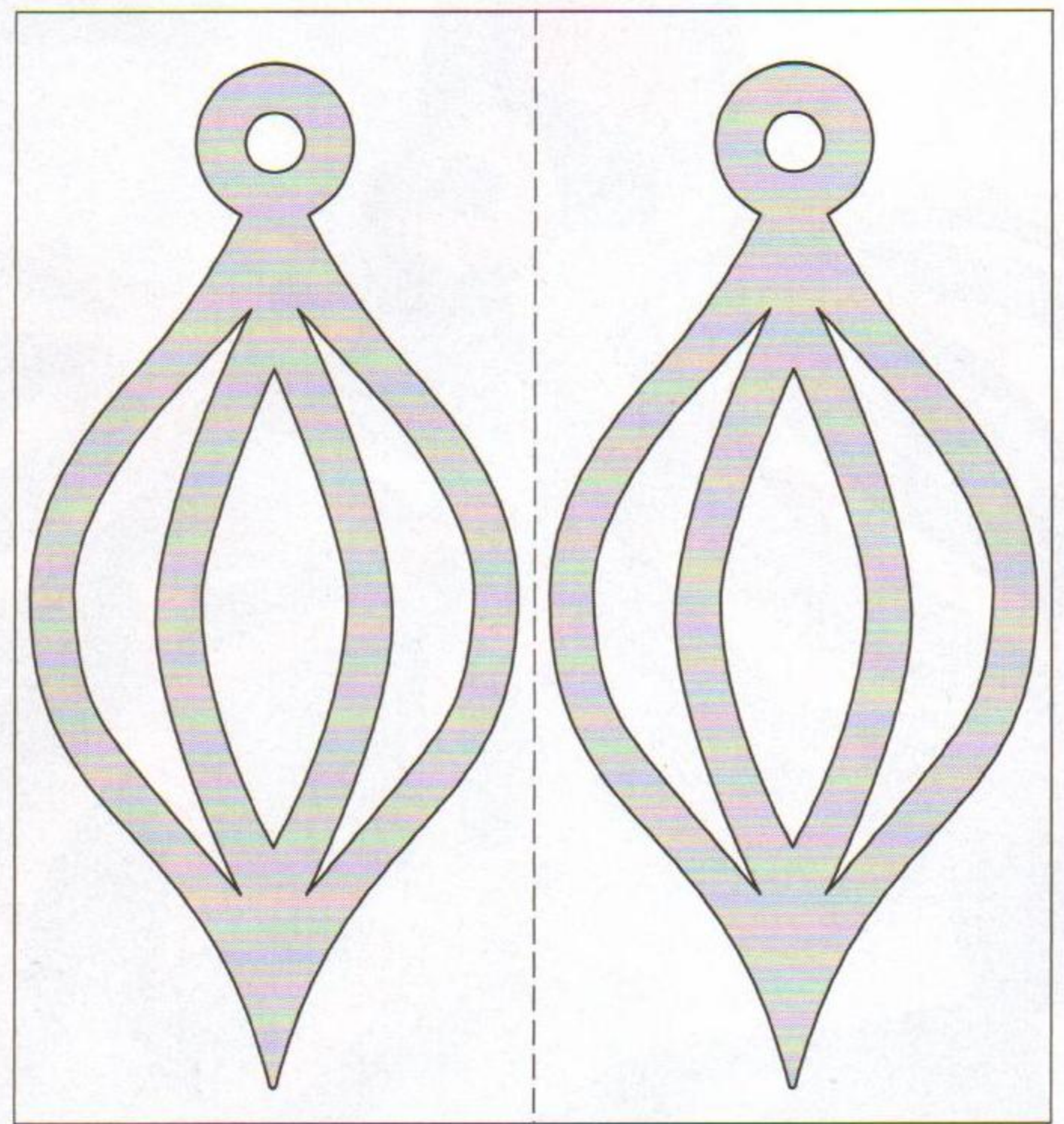
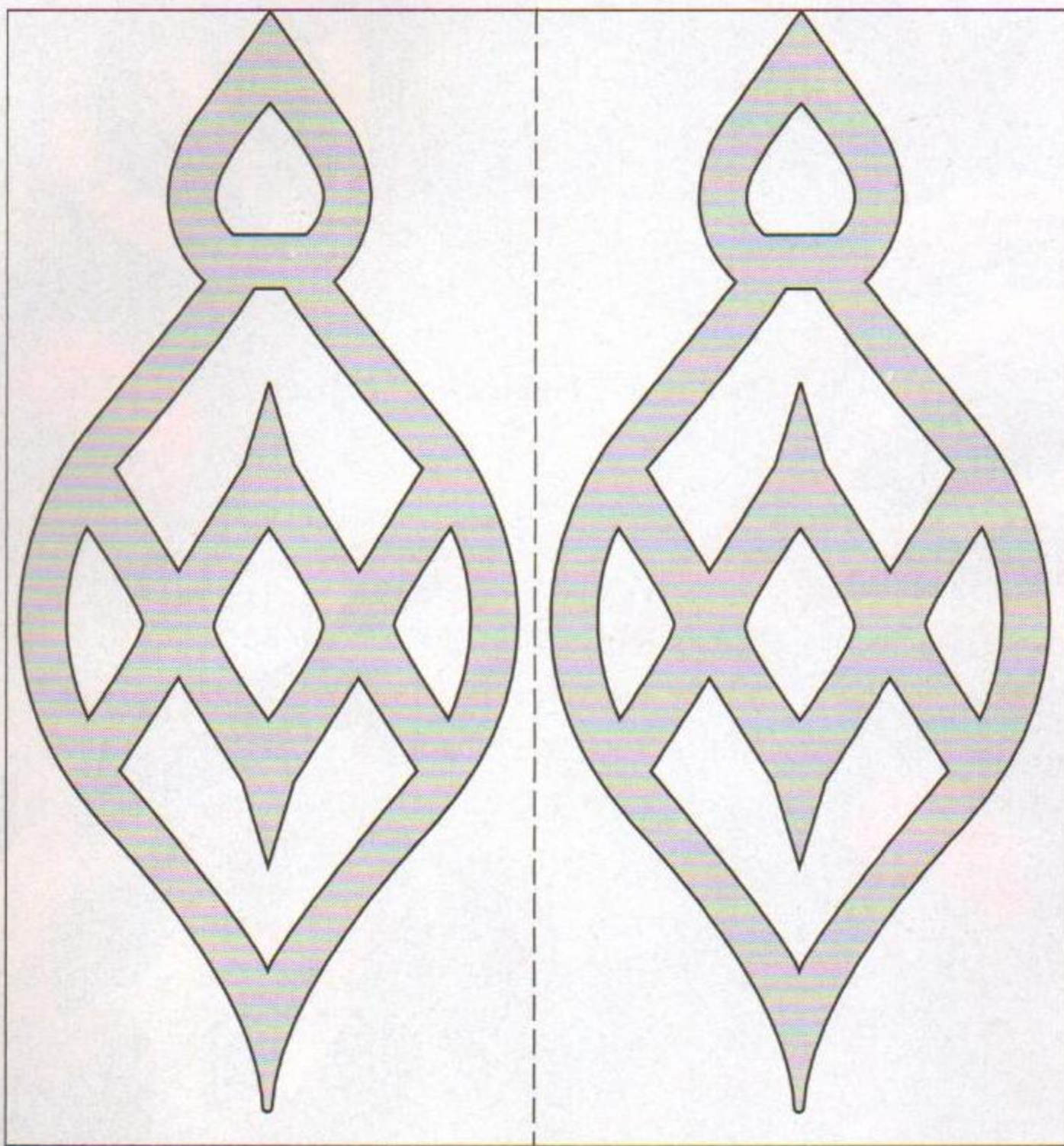
Tools:

- Blades: #7 skip-tooth
- Needle files (optional)

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



Wooden bulb ornament patterns



Additional patterns for the **WOODEN BULB ORNAMENTS** are in the pullout section.



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

Tiger Coin Bank

Children will enjoy saving money with this fun gift

By Paul Meisel



Kids love jungle animals, and this one will encourage them to save their coins. This bank is also a great way to get children involved in woodworking; they can help with the final assembly and the painting. Encourage them to personalize the bank by painting it to resemble their favorite cat—jungle or domestic.

You can easily convert the bank to a night-light. Simply

replace the coin bank plug with a snap-in wiring harness (see Special Sources).

The two center pieces are cut from $\frac{3}{4}$ "-thick lumber and glued together to create the required $1\frac{1}{2}$ " thickness. You could use standard 2x10 lumber, which is actually $1\frac{1}{2}$ " thick, but it is easier to cut two pieces of $\frac{3}{4}$ "-thick stock on your scroll saw and face-glue them together.

BANK: CUT THE PIECES

Step 1: Cut the pieces. Noting the grain direction, cut the center and side pieces from $\frac{3}{4}$ " (19mm)-thick lumber. Save the oval cut-outs to use as a plug when drilling the hole in Step 2. After cutting the parts, glue the two centers together. Then, glue a side piece to each side of the center assembly.

Step 2: Drill the hole for the plastic plug. Place the oval center scrap pieces inside the assembly to serve as backer blocks to reduce tear-out while you drill. Turn the assembly upside down and clamp it securely to a drill press table. Set the drill press to the slowest speed and use a $1\frac{7}{8}$ " (48mm)-diameter Forstner bit to drill a $\frac{1}{4}$ " (6mm)-deep counterbore hole as shown on the pattern. Next, drill a $1\frac{1}{4}$ " (32mm)-diameter hole through the center of the larger hole. Discard the oval center plugs.

Step 3: Finish shaping the pieces. Use a spindle sander or a sanding drum in a rotary tool to smooth the inside of the oval cavity.

Step 4: Cut the head and foot pieces. Use $\frac{1}{4}$ " (6mm)-thick Baltic birch plywood because of its closed grain and lack of interior voids. Cut two head, four front foot, and two back foot pieces. Glue these pieces as shown on the drawing of the tiger center and tiger sides.

BANK: FINISH THE PROJECT

Step 5: Apply a coat of primer. I used Delta Ceramcoat® wood sealer. Let the sealer dry and sand the project lightly with 220-grit sandpaper. Now paint the colors. Start by applying two coats of orange. Paint the stripes and the face details black. Extend the stripes around the back of the project. Paint the cheeks red. Because Delta paints have a flat finish, I finished with a coat of Delta clear satin varnish.

Step 6: Cut the acrylic side plates. If you purchased pre-cut and pre-drilled side plates, skip to Step 7. Stack the two pieces of acrylic, fastening them together with masking tape (do not remove the protective film). Cover the top piece with strips of masking tape, and then attach the side plate pattern to the tape. Drill $\frac{1}{8}$ " (3mm)-diameter screw holes as marked, and then cut the pieces. Remove the patterns, tape, and film.

Step 7: Attach the acrylic plates. Position the side plates on the project and use them to mark and drill $\frac{1}{16}$ " (2mm)-diameter screw pilot holes approximately $\frac{1}{2}$ " (13mm) deep. Attach the side plates with #4 by $\frac{1}{2}$ " (13mm)-long round-head screws.

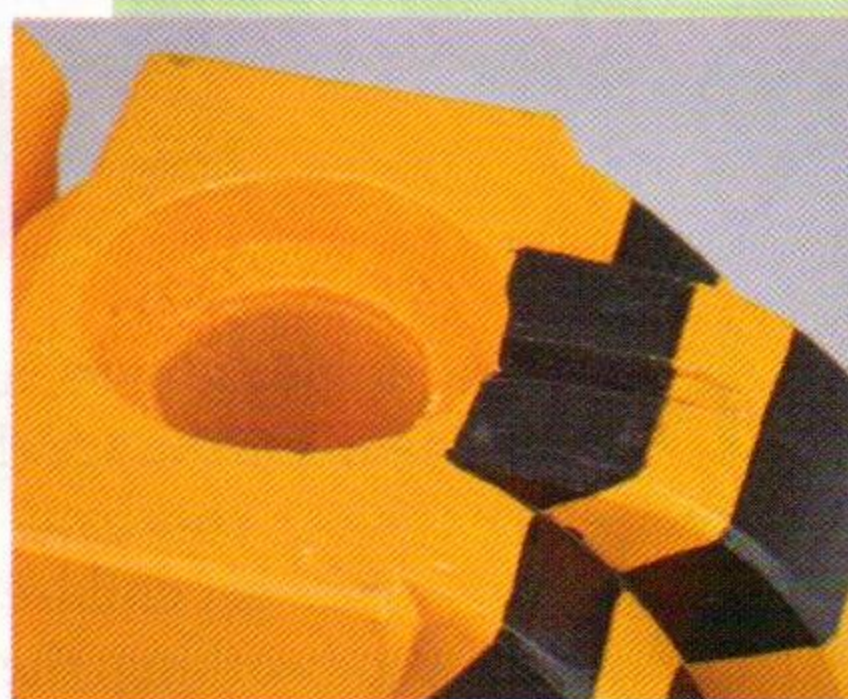
Step 8: Finish assembling the bank. Insert the plastic coin bank plug into the bottom.

Remove the coin bank plug and insert a wiring harness and frosted flame-tip bulb for a charming night-light.

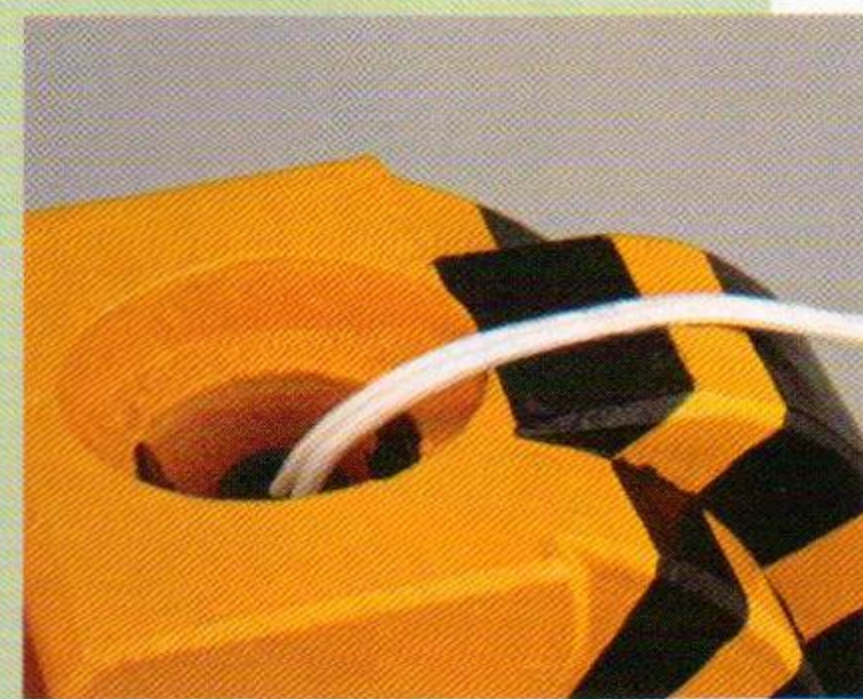


Making a Night-Light

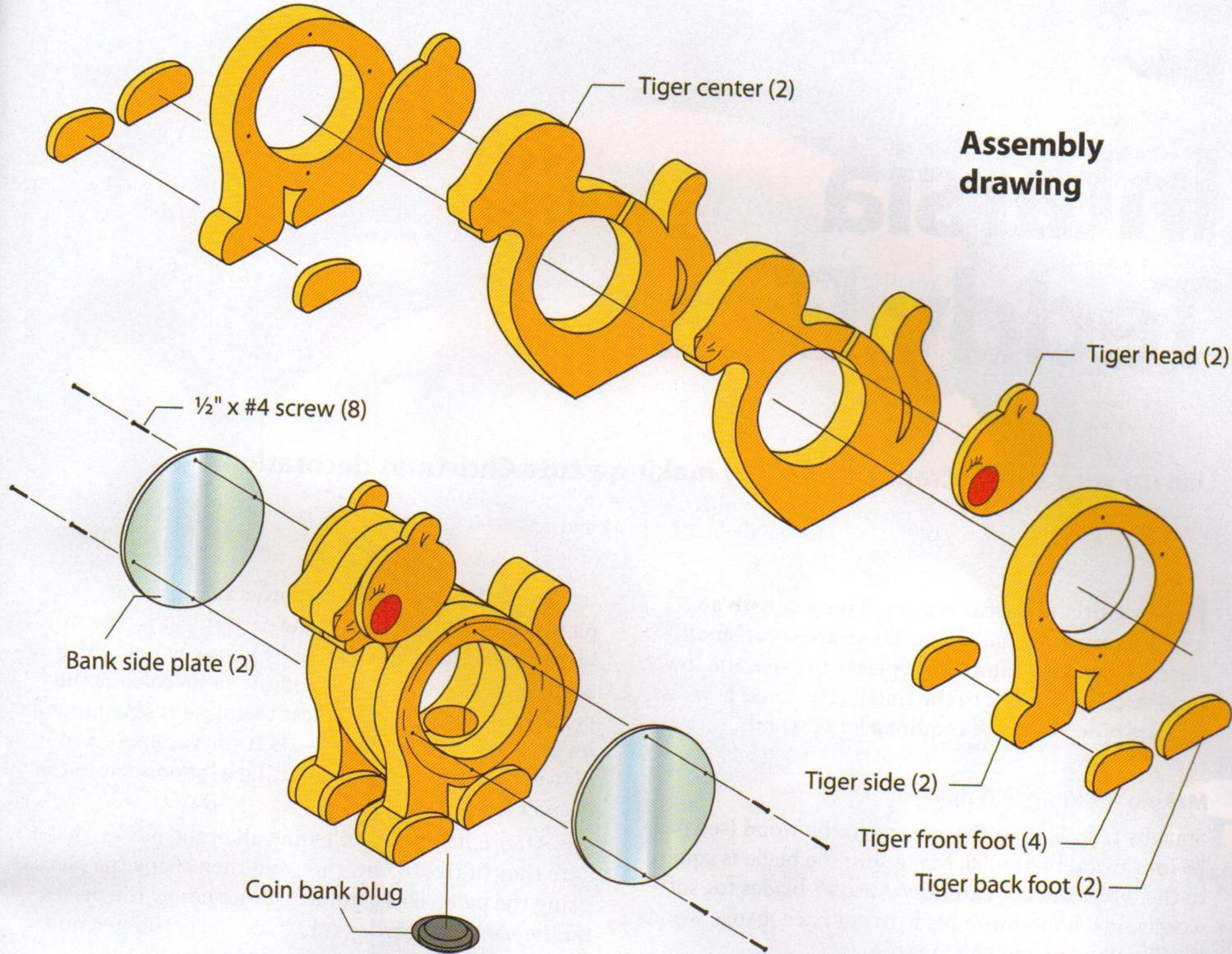
It's easy to convert the coin bank into a night-light. After you drill the holes in the bottom, check to make sure the night-light holder fits into the hole. Adjust the size of the holes using sandpaper until the harness fits in properly.



Then, cut a slot in the center of the back end area from the hole to the edge under the tail to accommodate the lamp cord.



Slide the night-light holder up into the hole until the springs catch, and glue the cord into the slot on the bottom.



Assembly drawing

Materials:

- Pine, 3/4" (19mm)-thick: 8" x 36" (203mm x 914mm)
- Baltic birch plywood, 1/4" (6mm)-thick: 12" x 12" (305mm x 305mm)*
- Sandpaper: 80, 220 grits
- Wood glue
- Wood sealer, such as Delta Ceramcoat (#07005)*
- Acrylic paints, such as Delta Ceramcoat: orange (#02042)*, black (#02506)*, red (#02507)*
- Varnish, such as Delta Ceramcoat: clear satin (#07003)*
- Acrylic, 1/8" (3mm)-thick: side plates, 2 each 3 3/4" x 5" (95mm x 127mm) (part of kit #3015)*

- Screws, #4 x 1/2" (13mm)-long round head: 8 each (part of kit #3015)*
- Masking tape
- Coin bank plug, 1 1/4" (32mm)-diameter (part of kit #3015)*
- Wiring harness with in-line cord switch (optional) (#8716)*
- Light bulb, frosted flame tip (optional) (#8955)*

Tools:

- Blades, such as Olson: #5 reverse-tooth (#446-R*)

SPECIAL SOURCES:

The items above marked with an asterisk (*) are available from Meisel Hardware Specialties. Call 1-800-441-9870 or visit their website, www.meiselwoodhobby.com.

Materials & Tools

- Drill press
- Twist drill bit: 1/16" (2mm) diameter
- Forstner bits: 1 1/4" (32mm) diameter (#30636)*, 1 7/8" (48mm) diameter (#30642)*
- Spindle sander or sanding drum in rotary tool
- Paintbrushes
- Clamps
- Screwdriver: Phillips size #1

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

Patterns for the **TIGER COIN BANK** are in the pattern pullout section.



Paul Meisel of Mound, Minn., has designed more than 3,000 woodworking plans.

For more ideas of what to build, to order parts, or to request a catalog, call 800-441-9870, or visit his website, www.meiselwoodhobby.com.

Intarsia Teddy Bear

Use up your small scraps of wood by making a cute Christmas decoration

By Garnet Hall

My Christmas bear is a small project with a number of challenges. There are some small pieces to cut and a number of pieces to raise and lower, and I've added a twist to the finish. The good news is that the project doesn't require a lot of wood.

Making the Intarsia Teddy

Start by transferring the pattern to the wood (see page 78 for several methods). Make sure the blade is square to the table, and cut carefully. I use #7 blades for soft wood and a hook-tooth blade to cut hard, dense woods like bloodwood and pau amarillo.

You will need to raise or lower a number of pieces; they are marked on the patterns in $\frac{1}{8}$ " (3mm) increments. Raise an element by gluing wood to the bottom of the piece. Use wood the same color as the piece you need to raise, unless the piece is surrounded on all sides by other pieces—then you can use scrap plywood. Lower a piece by cutting or sanding it to the correct thickness.

After cutting and adjusting all of the pieces, make sure they fit tightly together, and then shape the pieces using the pattern as a guide. Dry-assemble the pieces on the backing board blank, trace the perimeter, and then cut $\frac{1}{16}$ " (2mm) inside the line to create the backing board.

I applied the finish before I glued the pieces to the backing board. I use a low-gloss, water-based (latex) finish on the white wood and the aromatic cedar. The water-based finish is perfectly clear and does not change the wood color at all. I use an oil-based spray finish on the rest of the pieces; its amber color warms the pieces slightly. Allow the finish to dry and then glue the pieces onto the backing board. Attach a hanger to the back if desired.

Pattern for the **INTARSIA TEDDY BEAR** is in the pattern pullout section.

Materials:

- White wood, such as aspen, holly, spruce, or pine, $\frac{3}{4}$ " (19mm)-thick: 5" x 8" (127mm x 203mm)
- Dark wood, such as black walnut, $\frac{3}{4}$ " (19mm)-thick: 2" x 2" (51mm x 51mm)
- Yellow wood, such as pau amarillo, $\frac{3}{4}$ " (19mm)-thick: 3" x 6" (76mm x 152mm)
- Red wood, such as blood wood, $\frac{3}{4}$ " (19mm)-thick: 2" x 3" (51mm x 76mm)
- Medium reddish-brown wood, such as Western red cedar, $\frac{3}{4}$ " (19mm)-thick: 2" x 4" (51mm x 102mm)
- Dark reddish-brown wood, such as Western red cedar, $\frac{3}{4}$ " (19mm)-thick: 5" x 11" (127mm x 279mm)

Materials & Tools

- Light reddish-brown wood, such as aromatic cedar, $\frac{3}{4}$ " (19mm)-thick: 5" x 8" (127mm x 203mm)
- Plywood or tempered hardboard, $\frac{1}{4}$ " (6mm)-thick: 8" x 11" (203mm x 279mm)
- Scrap wood: assorted (risers)
- Sandpaper
- Finish: low-gloss water-based and low-gloss oil-based
- Wood glue

Tools:

- Blades: #7; hook-tooth
- Sanders

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



Garnet Hall lives with his wife, Barbara, near Estevan, Sask., Canada. He has always been interested in woodworking, including furniture, toys, intarsia, and scrolling. He has written three books on intarsia and various articles. Garnet now works with disabled adults and saves scrolling for evenings and weekends. Contact Garnet and see his patterns and scroll saw blades at www.sawbird.com.



Crystal Lace Ornaments



Intricate fretwork designs will have you dreaming of a white Christmas

*By Alison Tanner
Cut by Rolf Beuttenmuller*

The unique beauty of snowflakes as they sparkle in the sun inspired me to design these ornaments. Cut from light wood and given a glossy finish, they will shimmer on your tree like new-fallen snow.

These ornaments look best cut from thin wood; anything over $\frac{1}{4}$ " thick makes them look clunky. To keep from breaking the thin ornaments, stack-cut several blanks at a time. Stacks support the individual ornaments, as well as speed up your production. See page 78 for several stack-cutting methods.

Materials & Tools

Materials:

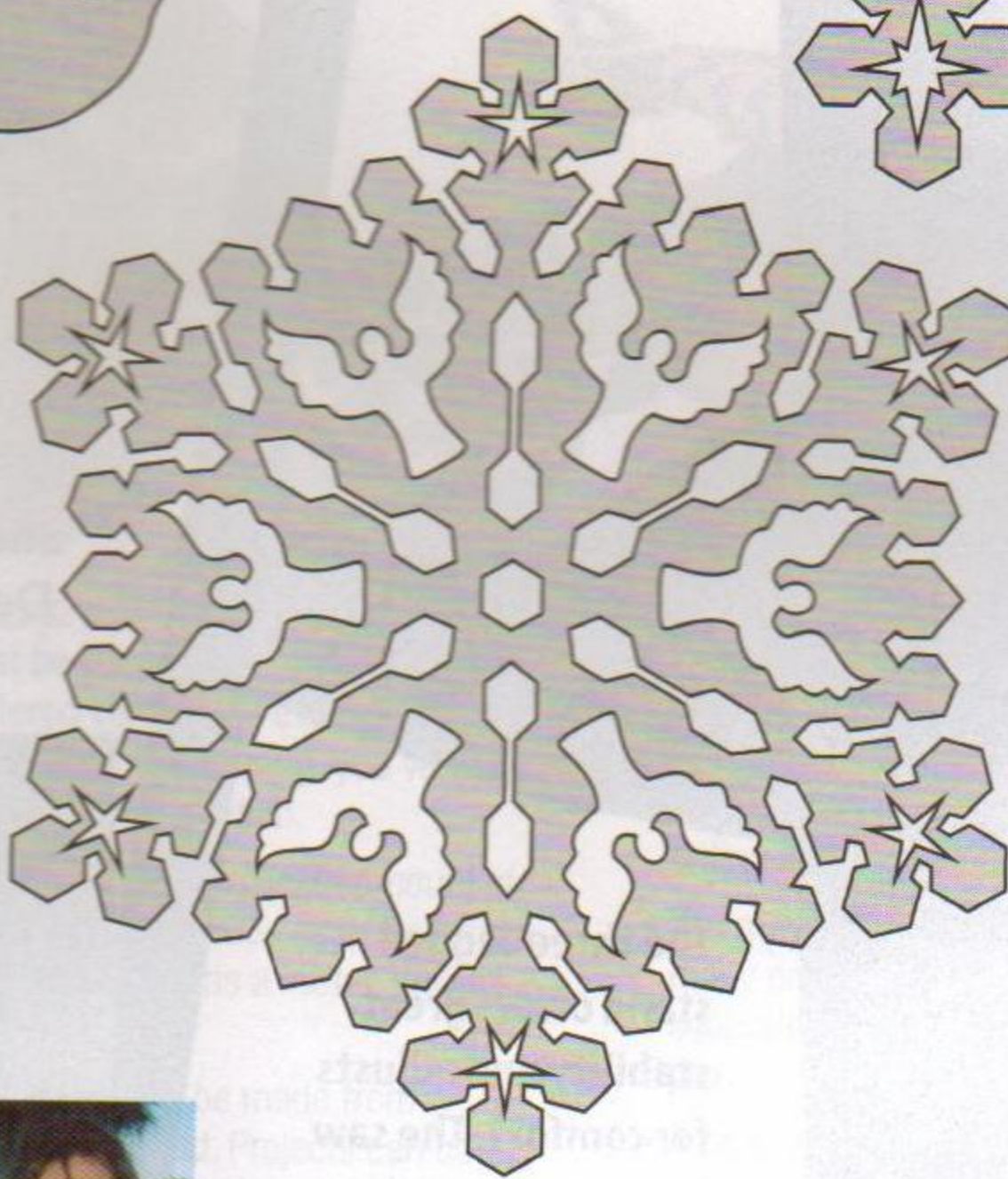
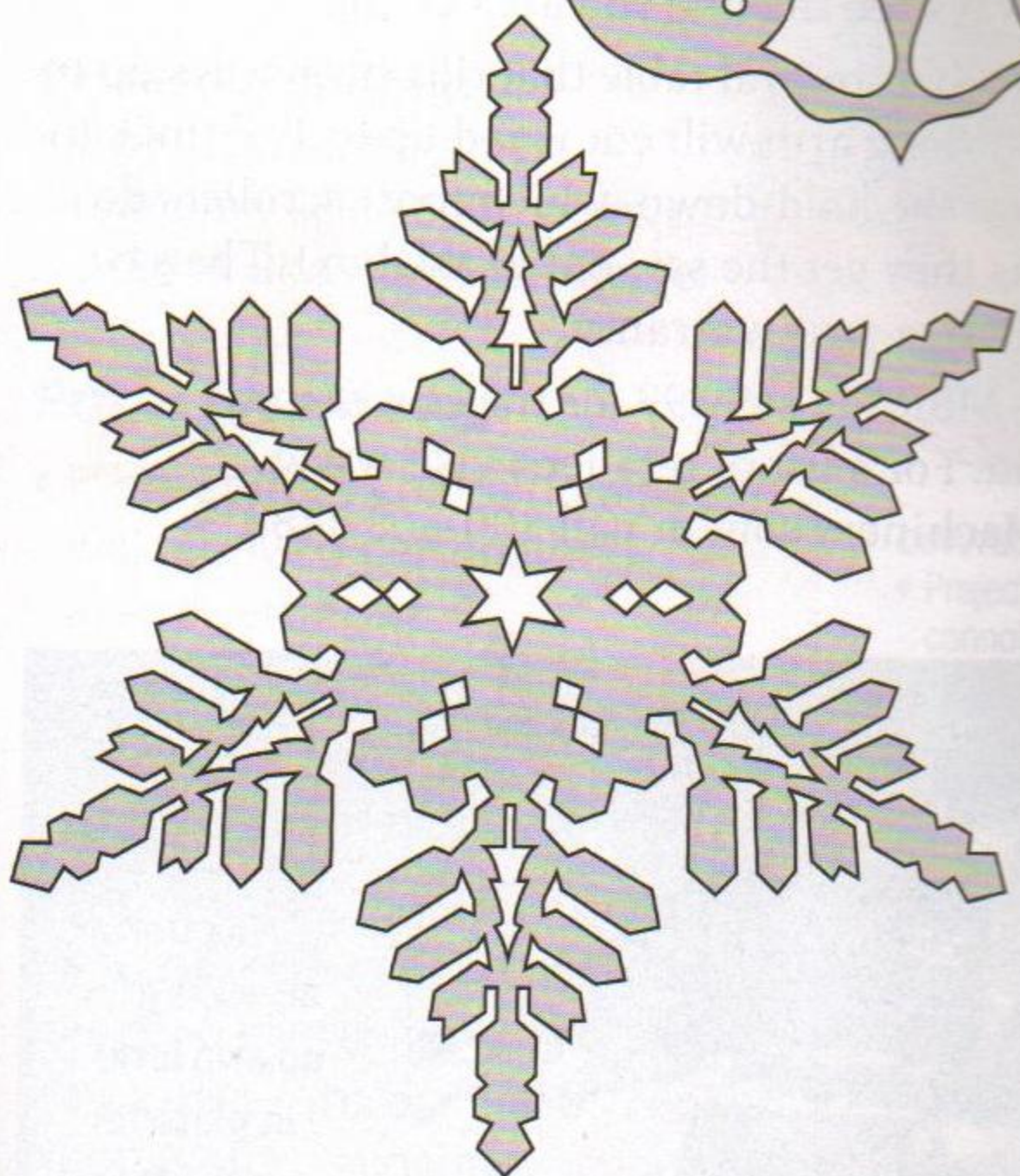
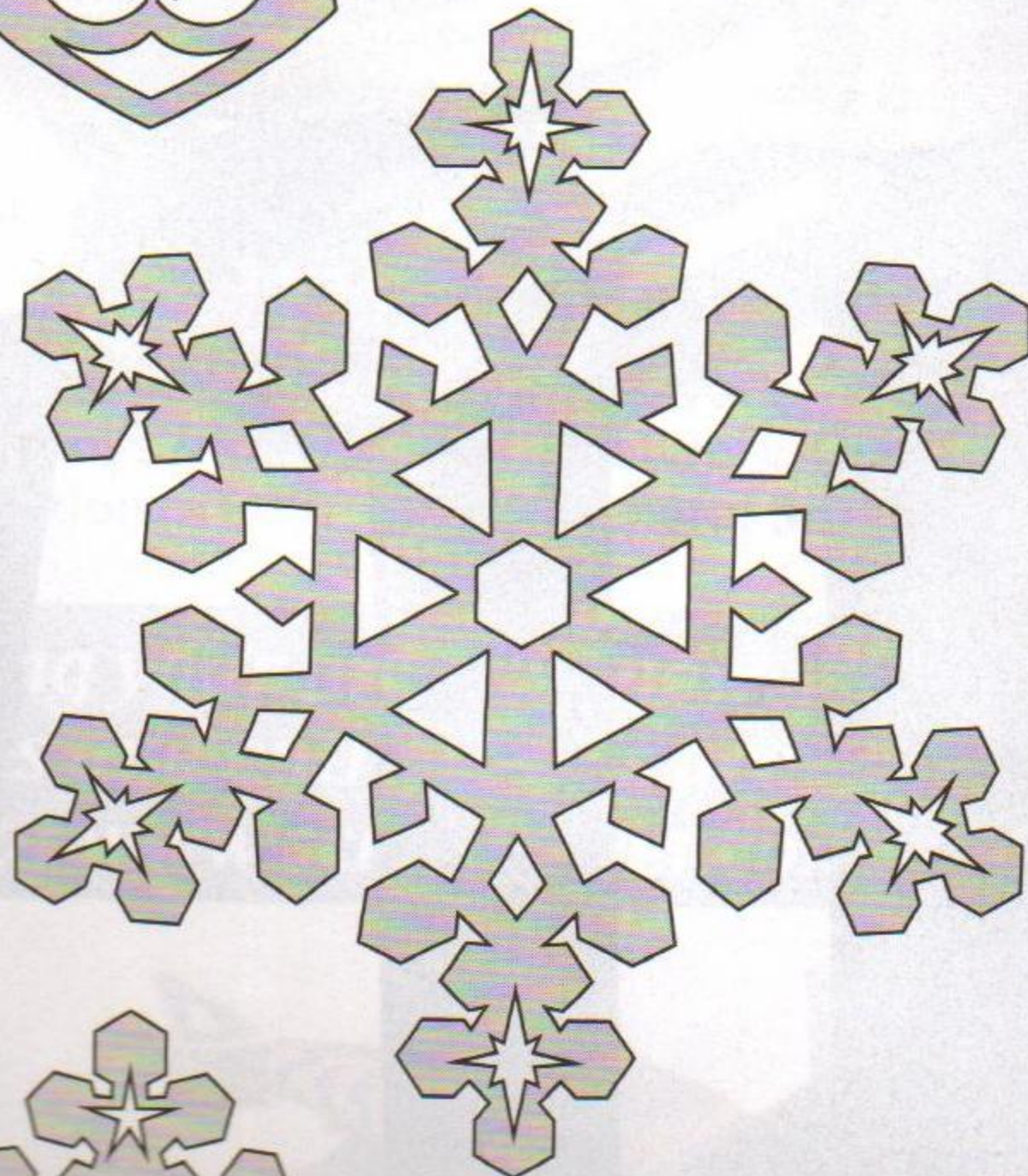
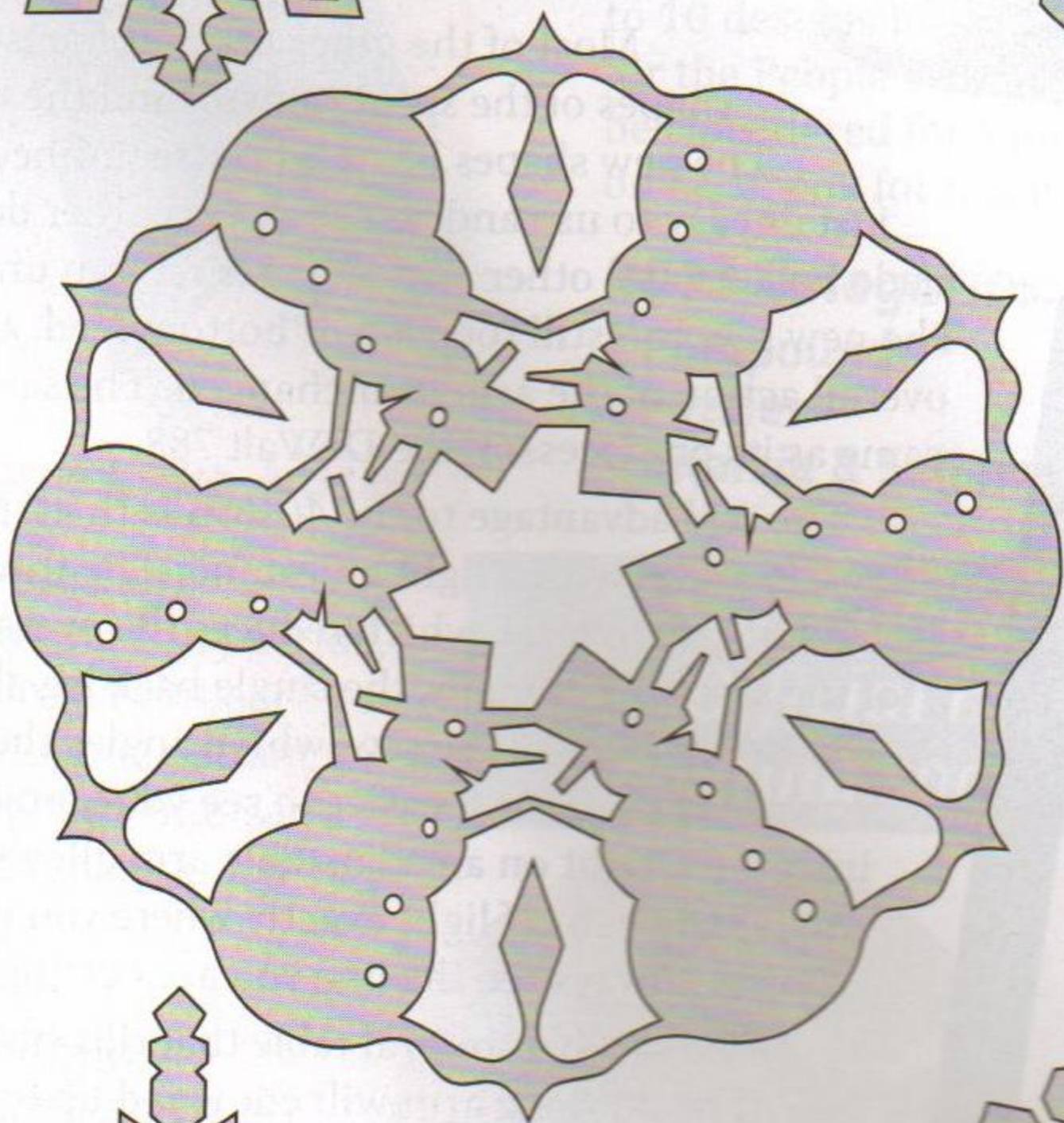
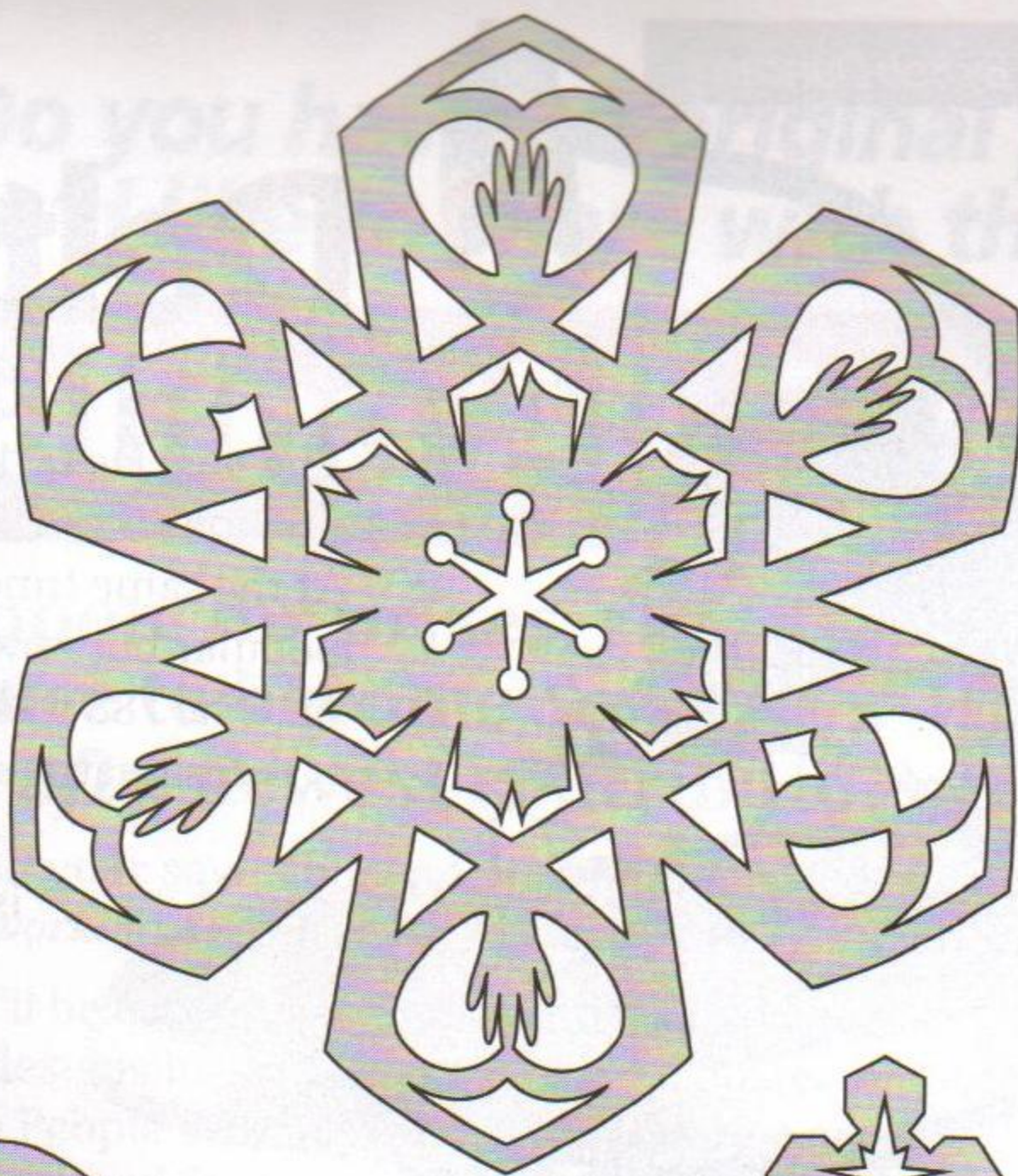
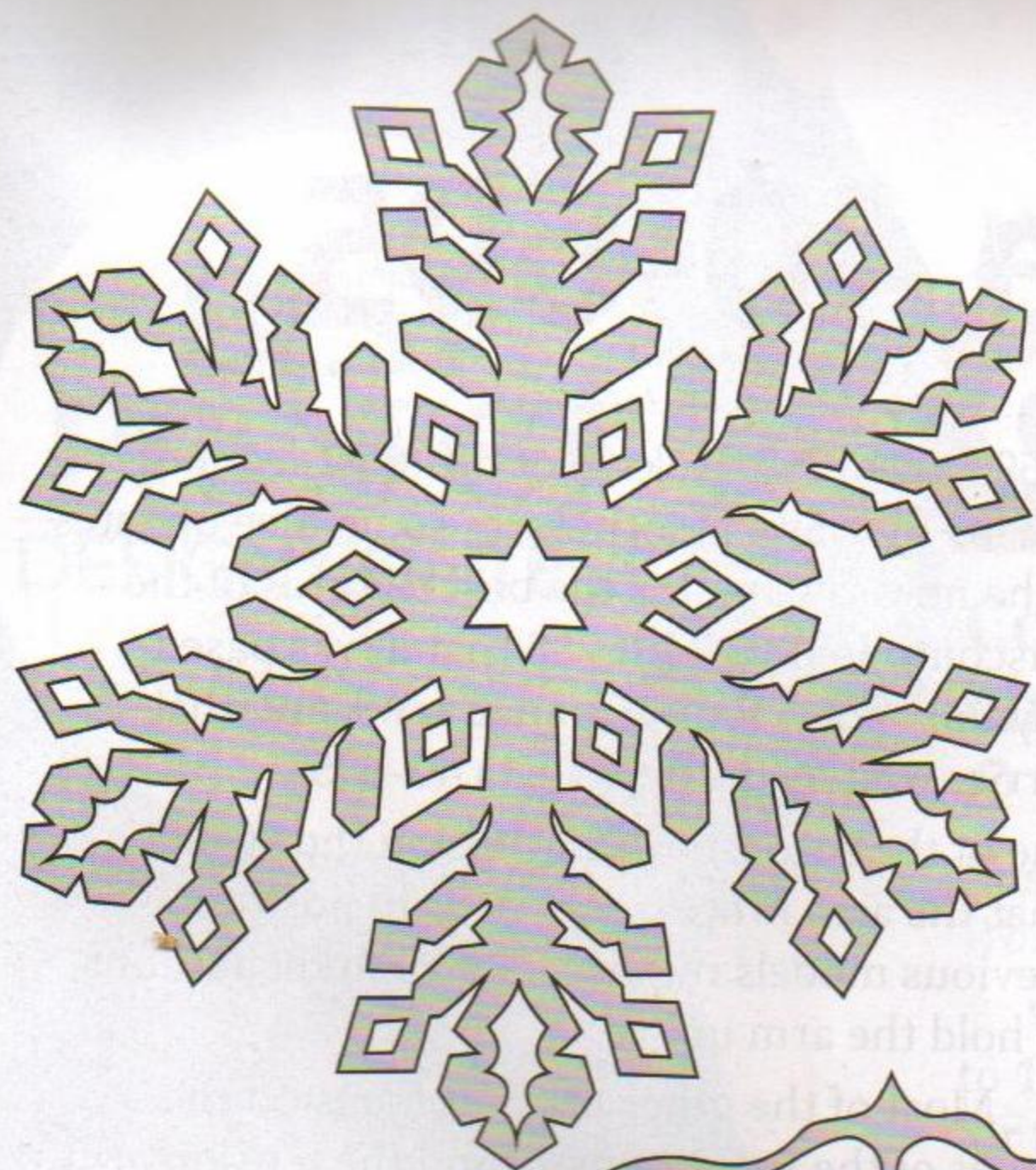
- Hardwood, $\frac{1}{8}$ " to $\frac{1}{4}$ " (3mm to 6mm)-thick: $3\frac{1}{2}$ " x $3\frac{1}{2}$ " (89mm x 89mm) per ornament
- Spray adhesive
- Masking tape (optional, stack cutting)
- Sandpaper
- Finish: clear gloss

Tools:

- Blades: #1 reverse-tooth
- Drill and assorted small bits

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

Crystal lace ornament patterns



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ONLINE BONUS

For larger versions of these patterns, visit our website.

www.scrollsawer.com



Alison Tanner began cutting paper at the age of 8, inspired by a visit to the home of fairy-tale writer Hans Christian Andersen in Denmark. 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.

Delta 40-695

The new Delta 40-695 scroll saw looks a lot different from the previous model, the 40-690, and incorporates some nice updates. At the same time, the new saw retains the best features of the popular but now discontinued DeWalt 788 that it was based on. The 788 was my top choice for mid-range saws, and that designation carries over to the new Delta 40-695.

One of the nicest new features on the 40-695 is that the arm lifts up and locks in position. Previous models required aftermarket add-ons to hold the arm up.

Most of the other updates focus on the shapes of the speed control and the tension arm. The new shapes look more streamlined but are just as easy to use and adjust as the earlier designs. The blade holders and other critical parts remain unchanged. The new saw can still top feed or bottom feed, and the overall action of the arm is unchanged. The saw cuts the same as its predecessor, the DeWalt 788.

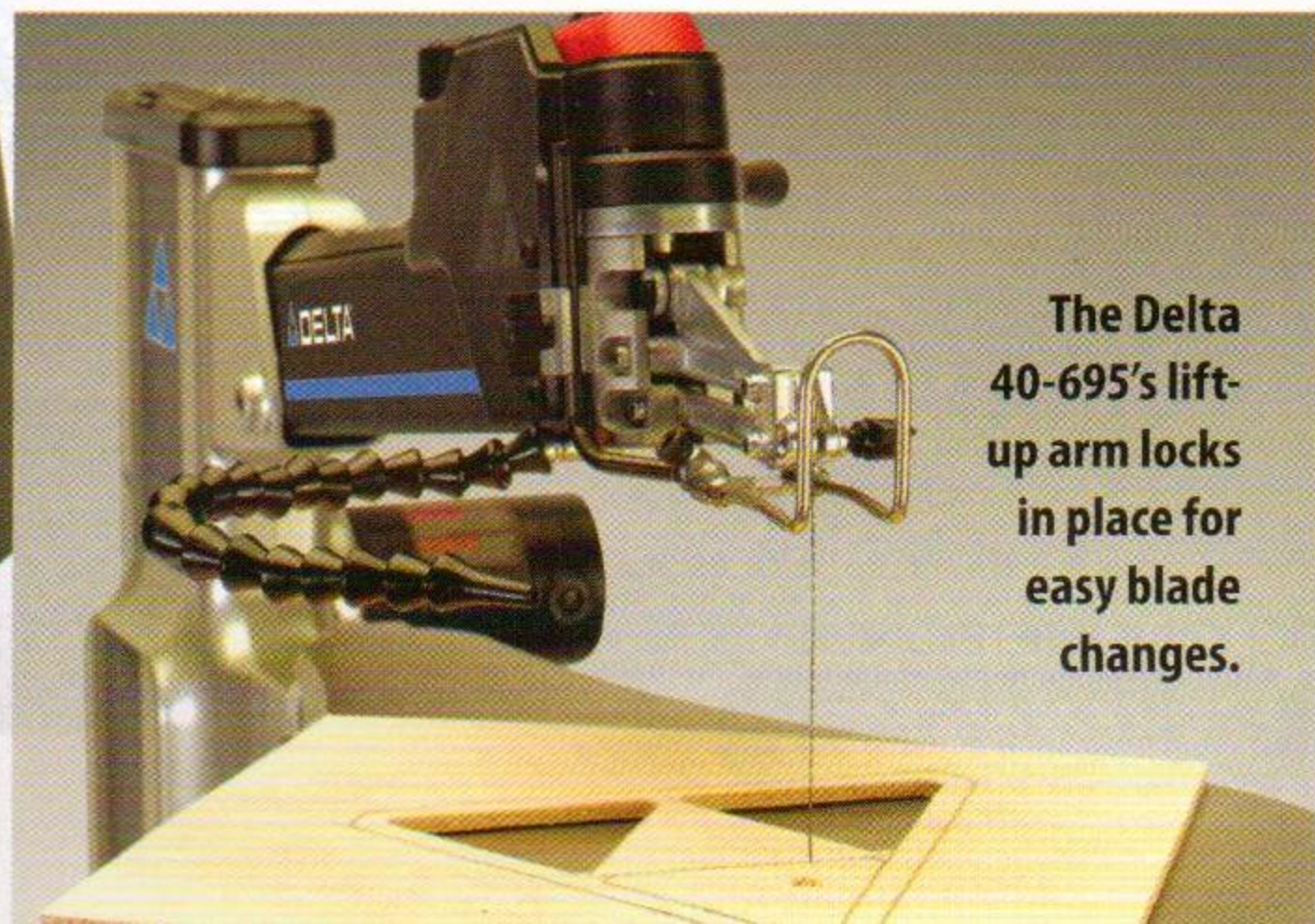
The real advantage to the 40-695 is that, unlike most saws, it comes with a light and stand. The three-legged stand is easy to level, which reduces the overall vibration of the saw. Additionally, the single back leg allows you to raise the back of the saw, which angles the saw table forward and makes it easier to see your project. The integrated light on an adjustable arm allows you to angle the beam of light exactly where you want it so you can always see the line you are cutting.

The saw has an oval table that tilts both ways up to 45°. The 20"-long arm will cut wood up to 1½" thick (if you remove the hold-down, which most scrollers do as soon as they get the saw out of the box). The saw also has a five-year warranty.

The MSRP is \$499.99 for the saw, stand, and light. For a list of retailers, visit www.DeltaMachinery.com or call 800-368-1487.

The three-legged stand offers great stability and adjusts for comfort. The saw is a complete unit with light and stand included.

The Delta 40-695's lift-up arm locks in place for easy blade changes.



Do you have an original pattern you'd like to share with the world?

Calling All Scrollers

Compete for prizes, recognition, and the chance to become *Scroll Saw Woodworking & Crafts'* newest contributor!

Dust off your saw table and dig up a pencil, because the 2013 *Scroll Saw Woodworking & Crafts* Best Project Design Contest is coming soon!

We'll be accepting original entries in eight categories (see below). Up to 10 designs in each category will be posted on our website to compete for the People's Choice and Best in Contest awards. And every entry will be considered for a publishing contract! Watch our website or follow us on Facebook for more information.

2013 Categories:

- Compound
- Jewelry
- Fretwork-Traditional
- Puzzles
- Toys & Gizmos
- Fretwork-Portrait
- Intarsia & Segmentation
- General Scrolling

Start planning your projects now...
Official rules and entry forms are
coming soon at www.scrollsawer.com



CONTEST RULES:

- Projects must be your original design and cannot be altered versions of existing patterns by another designer. By entering, you verify that your entry is your own creation.
- Projects must feature a significant amount of scrolling. Projects may include other common woodworking tools, such as a router, tablesaw, or band saw.
- Projects must be able to be made from commonly available wood. Projects can be finished naturally or with paint.
- Projects cannot have been previously entered in an SSWC Best Project Design Contest.
- Only the Editors' Choice nominees will be posted online for public voting.
- You may enter as many projects as you like in as many categories as you like. You must submit a separate entry form and photographs for each project.
- Artists retain all copyrights, but consent to have a pattern of their project published in SSWC.

SCROLLSAW
woodworking
& CRAFTS

**BEST
PROJECT**
DESIGN CONTEST
2013

More Ways to Win!

Prizes for entering!

- Each week of the entry period, which runs from February 1 to March 1, 2013, one entrant will be randomly chosen to win a free one-year subscription (or renewal).

Prizes for voting!

- One lucky voter will be randomly selected to receive a \$25 Fox Books gift certificate.

Prizes for winning!

- Every Editor's Choice nominee will receive a personalized award certificate.
- Honorable Mention winners will each receive a personalized award certificate and a ribbon.
- The People's Choice winners and Best in Contest runners-up will each receive an award ribbon, a contest T-shirt, and a \$50 Fox Books gift certificate.
- The Best in Contest winner will also receive \$100 cash!

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



Squaring Your Table

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

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

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

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



Stack Cutting

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

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

painter's tape, or clear packaging tape.

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

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



Attaching Patterns

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

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

Removing Patterns

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



Blade-entry Holes

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

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

Blade Tension

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

A blade that does not have enough tension will wander. It will also flex from side to side, making for irregular or angled cuts. If you press too hard on a loose blade, it will usually snap.

A blade that has too much tension is more susceptible to breaking and tends to pull out of the blade holders. In general, it is better to make the blade too tight rather than too loose.

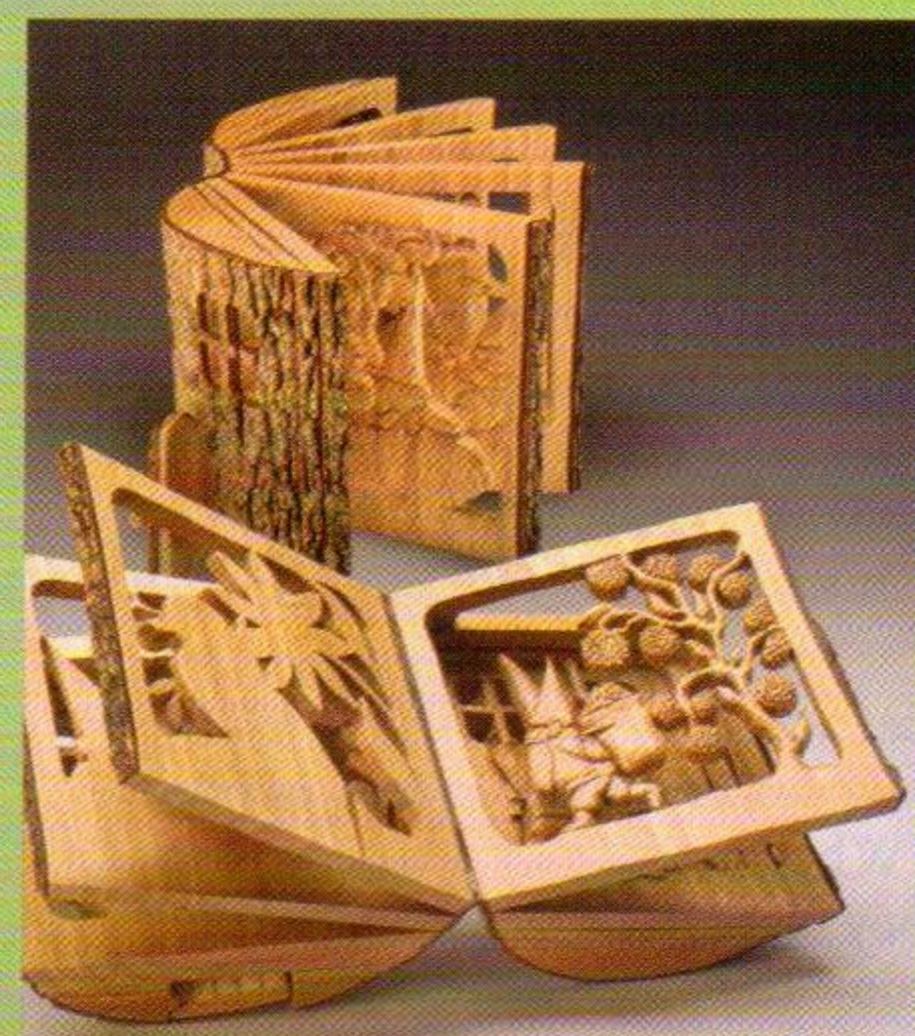
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Girls will love hiding their treasures in a bed-shaped box.



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Lighting Up the Holidays

Members of the Inland Empire Scroll Saw Association have been busy all year creating wooden toys for distribution to needy children in Fontana, Calif. The club has participated in the Fontana Santos Toy drive for the past seven years. Last year they donated 1,125 toys. "We have a goal of 2,500 toys for this year," said Chuck Petrovich, the club's president.

The wooden toys include trucks, cars, trains, planes, helicopters, puzzles, crayon caddies, and animals. "When we first started out it was all boy toys. Now we're doing toys for girls too—things like dolls, baby cradles, rocking horses, and carousels," said Tom Householder, the club's project coordinator.

This year a local dentist donated toothbrushes, so Tom made 300 toothbrush holders. "So many people are involved in helping in so many different ways," Tom said. "One club

member, David Santos, donates his workshop and all his tools for our members to use. We can't thank him enough for that."

Police officers distribute the gifts to low-income families with children ranging in age from babies to teenagers. "Last year we went with the police officers to help deliver the toys, and this one woman told us that if it weren't for us, there would have been no toys for any of her four children," Tom said. "It's all about the kids. You really have to see their faces light up with smiles to understand what this means to them."

See more of the club's work at saw-online.com/ChapterSites/inland/index.htm.

The Inland Empire Scroll Saw Association hopes to donate 2,500 toys to children in Southern California this holiday season.



Lots of Heart in Texas

Members of the Dallas-Fort Worth Scrollers Club have taken part in a holiday gift-giving project each year since the organization was formed six years ago.

"Christmas is for giving, and we are proud to be able to give to the less fortunate by scrolling and working with wonderful club members," said the club's secretary, Jo Ann Wiggs. Last year the club donated 345 toys to the Fort Worth, Tex., Cowboy Santa program, which is part of the Toys for Tots drive organized by the U.S. Marine Corps.

The Dallas-Fort Worth Scrollers Club will donate hundreds of handmade toys to Toys for Tots this year. Members include (left to right) Harmon Atkins Jr., Lavern Howell, Lyndal Hutcherson, Steven Storey, and Glenn Edwards.

In the past the club waited until autumn to start making toys, but because members were busy with craft shows, donations were limited. This year, club members started working on toys in February. Those unable to attend the monthly toy-cutting meetings made toys at home. Members like Glen Edwards of Round Rock, Tex., cut 101 small cars at home, and the group added the wheels later.

In addition to the usual cars, trucks, trains, planes, animal shapes, and pull toys, this year the club is making items for older children, such as jewelry boxes, whirling tops, tic-tac-toe games, and puzzles. According to club president Harmon Atkins Jr., members are happy to do what it takes to make the project a success. "It's all about giving something to children who might not get anything at all," he said.

For more information on the club, visit www.dfwscrollers.com.

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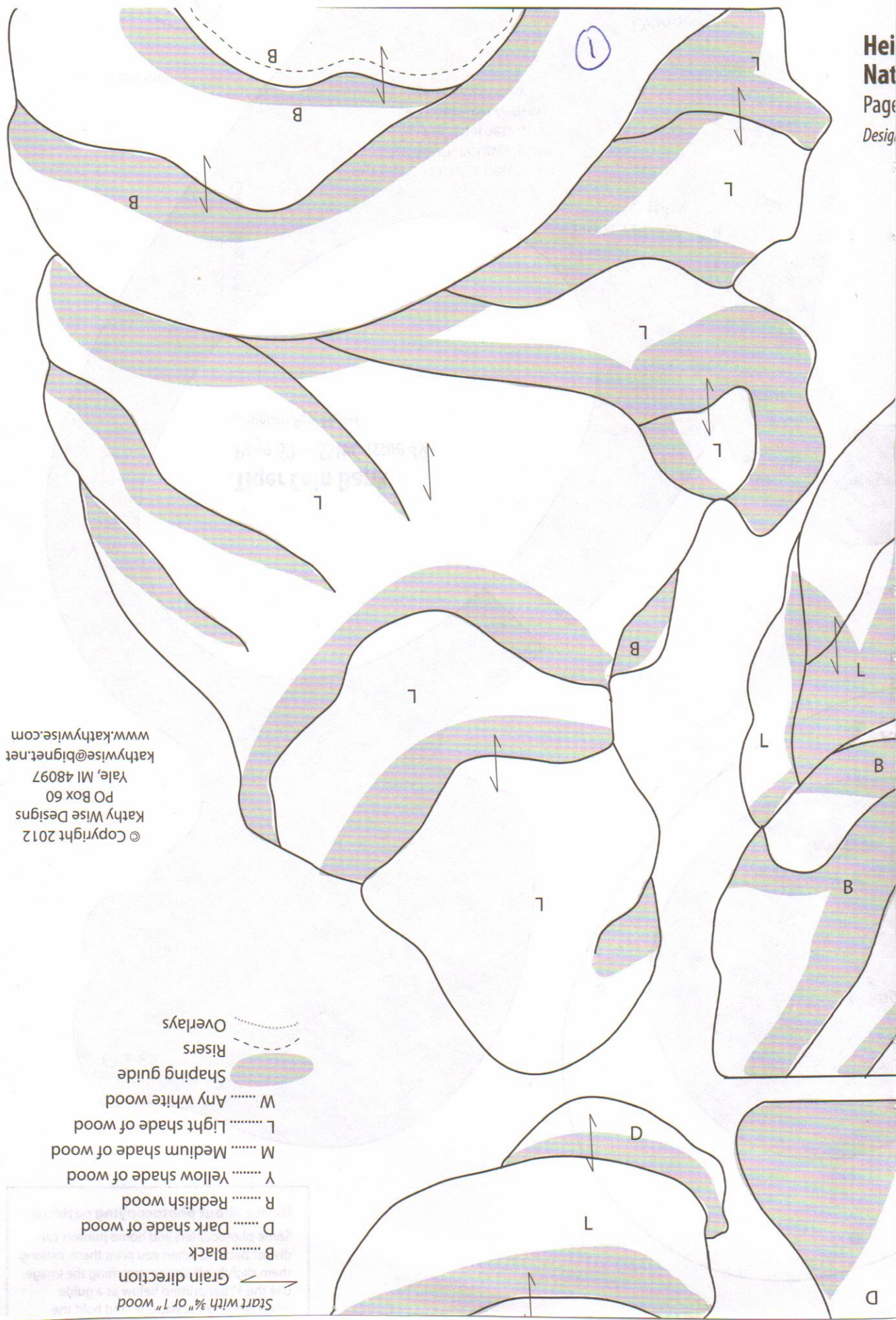
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- Start with 3/4" or 1" wood
- Grain direction
- B Black
- D Dark shade of wood
- R Reddish wood
- Y Yellow shade of wood
- M Medium shade of wood
- L Light shade of wood
- W Any white wood
- Shaping guide
- Risers
- Overlays

Room Intarsia

22 - SSWC Issue 49

Author: Kathy Wise

2



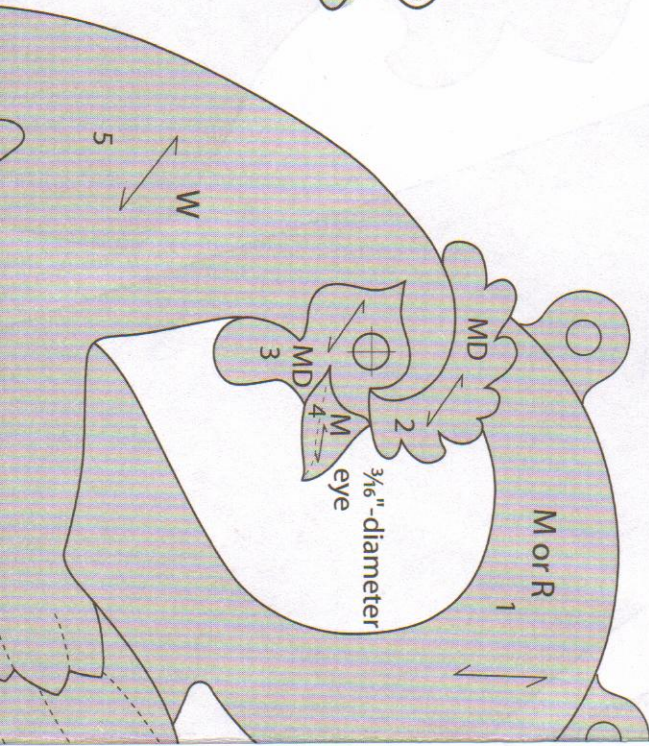
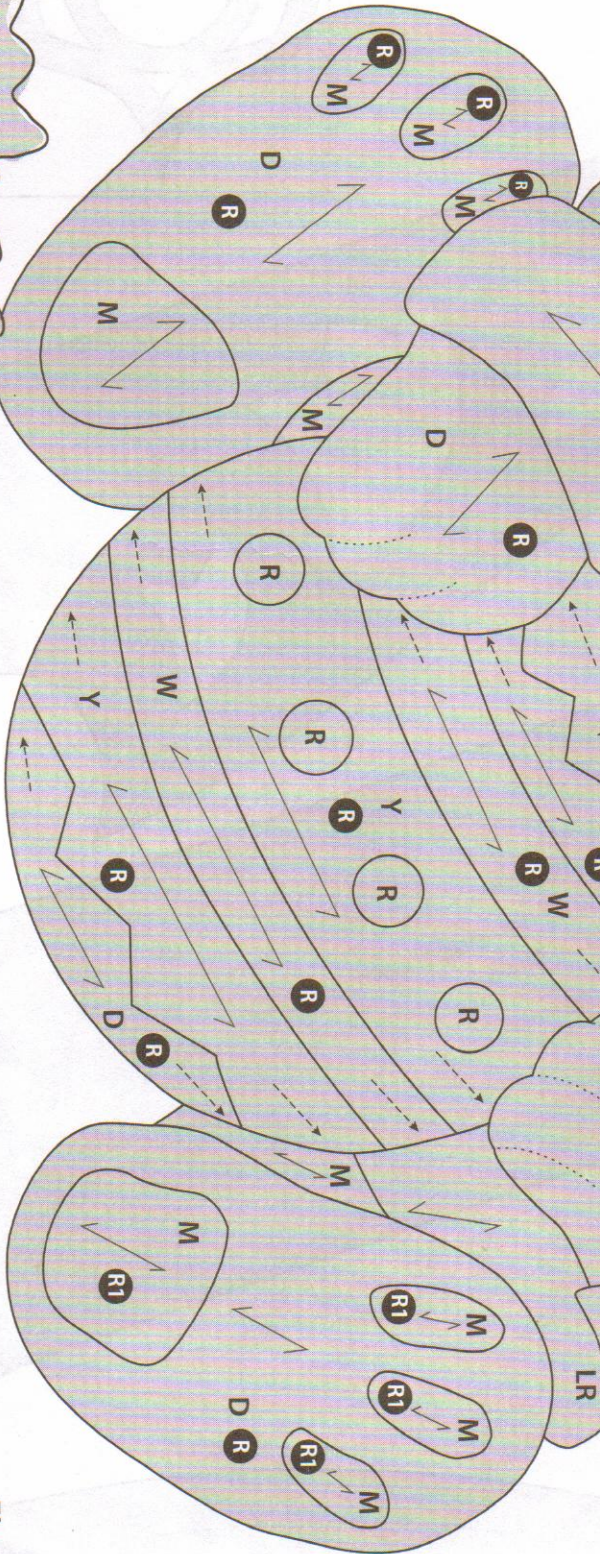
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any

Intarsia Teddy Bear

Page 72 - SSWC Issue 49

Designer: Garnet Hall

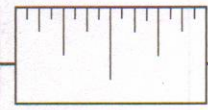
3



First Da
Orname
Page 36 -
Designer: Ju

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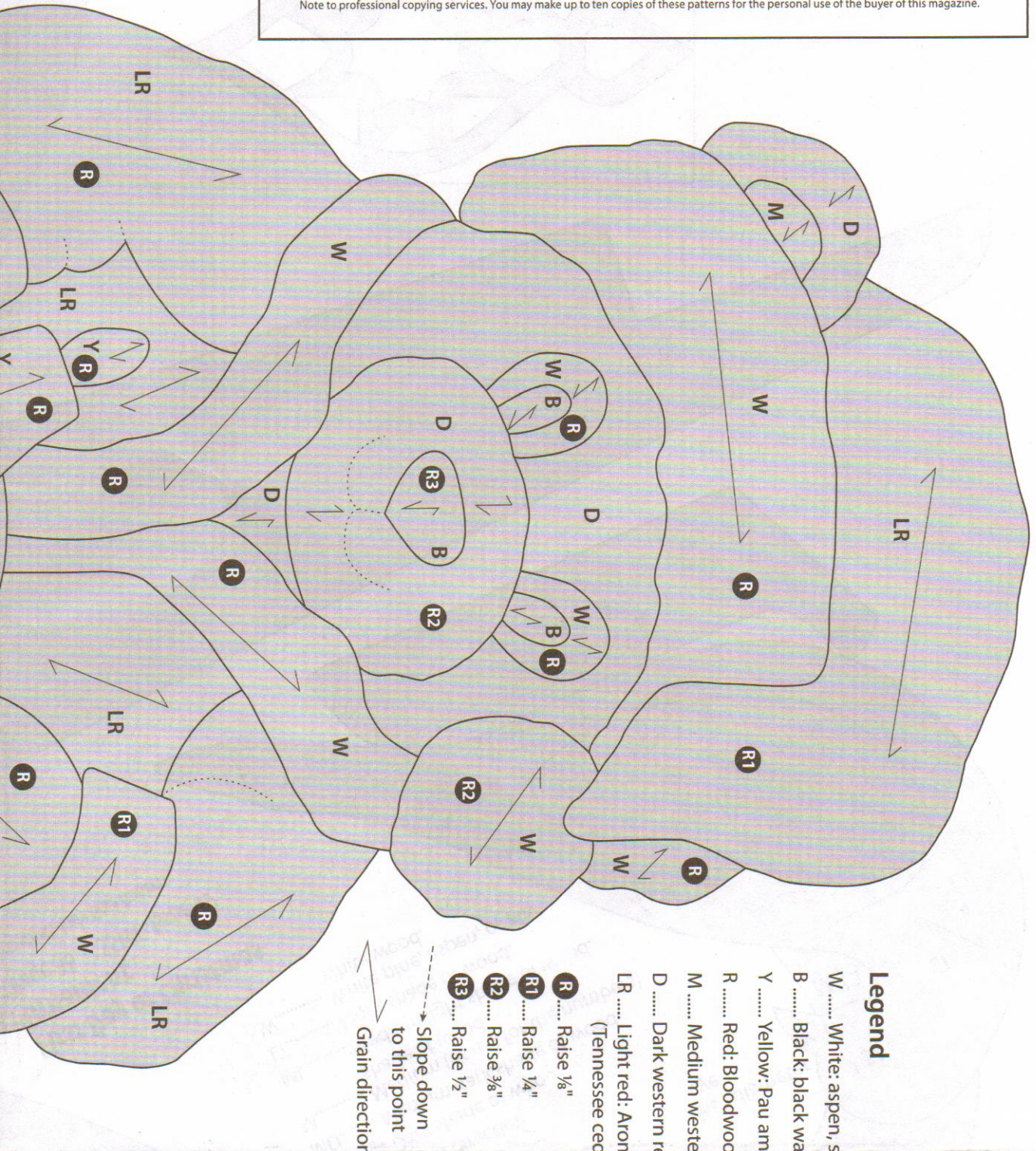
One inch

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| | | | |
|--------------------------------------|----|----------------------------|----|
| Heirloom Intarsia Nativity | 22 | Wooden Bulb Ornaments..... | 66 |
| Castle and Crossbow Play Set | 32 | Tiger Coin Bank | 69 |
| First Day of Christmas Ornament..... | 36 | Intarsia Teddy Bear..... | 72 |

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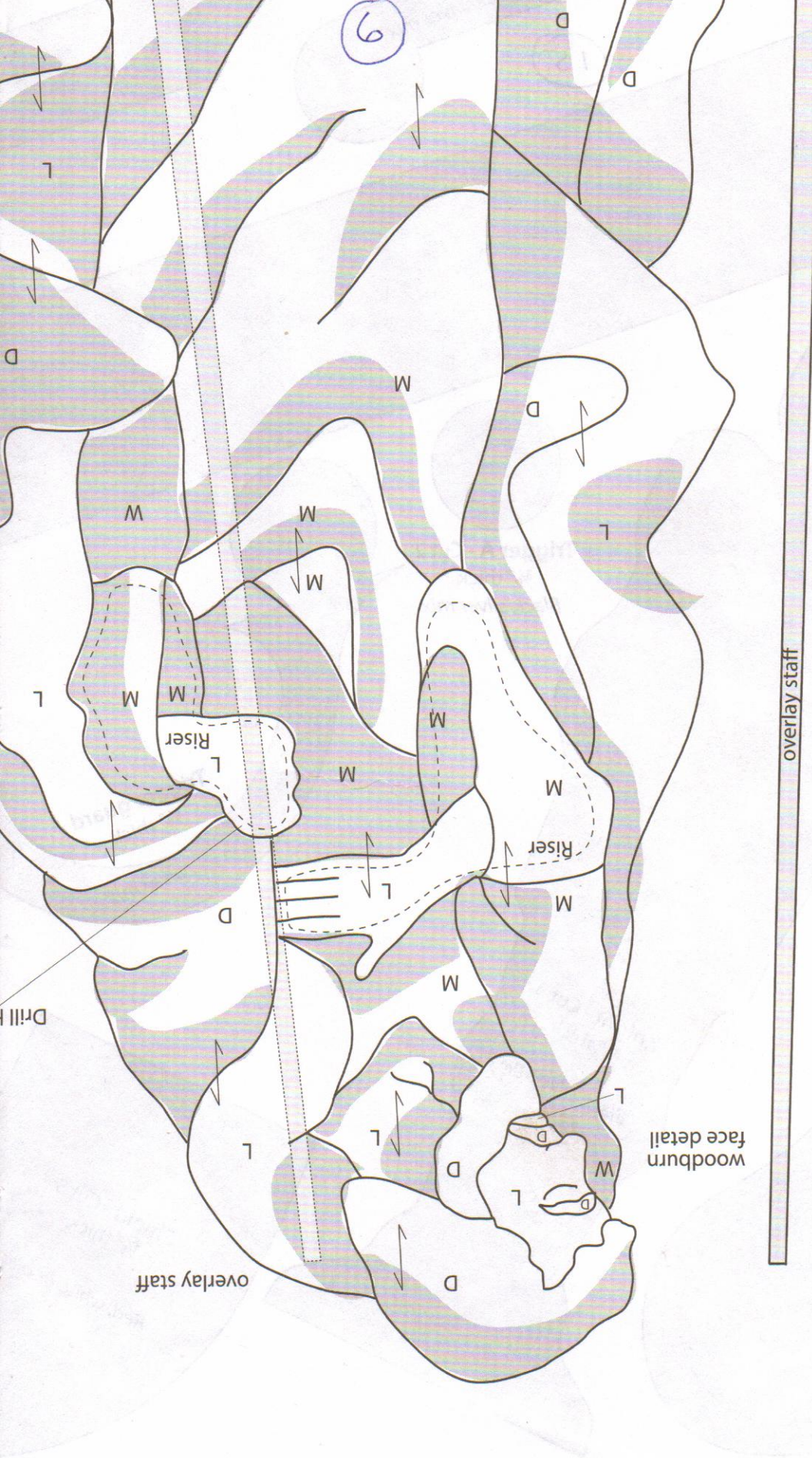
Legend

- W White: aspen, s
 - B Black: black wa
 - Y Yellow: Pau am
 - R Red: Bloodwoo
 - M Medium weste
 - D Dark western re
 - LR Light red: Aron
(Tennessee ced
 - R Raise 1/8"
 - R1 Raise 1/4"
 - R2 Raise 3/8"
 - R3 Raise 1/2"
- Slope down to this point
- ↗ Grain director

5



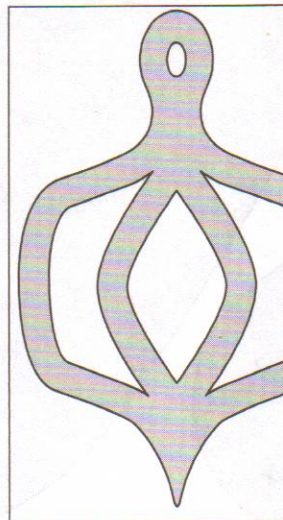
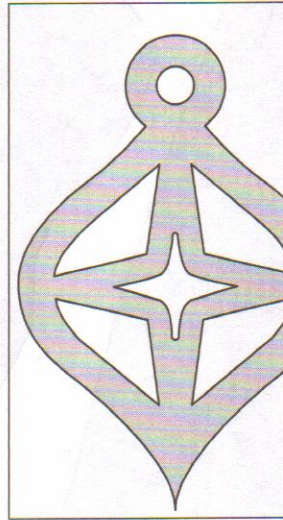
hole for staff



Wooden Bulb Ornan

Page 66 - SSWC Issue 49

Designer: Sue Mey

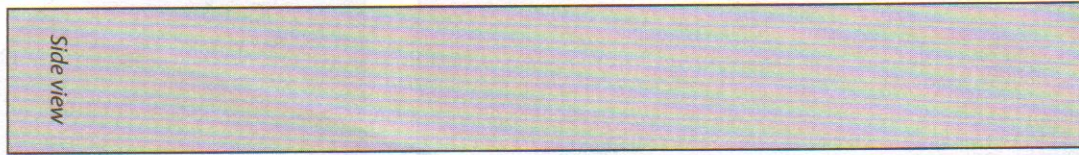
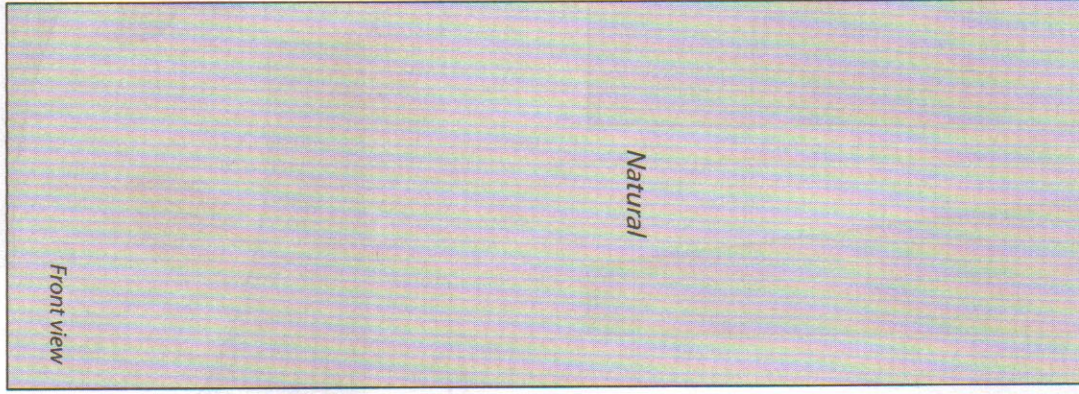
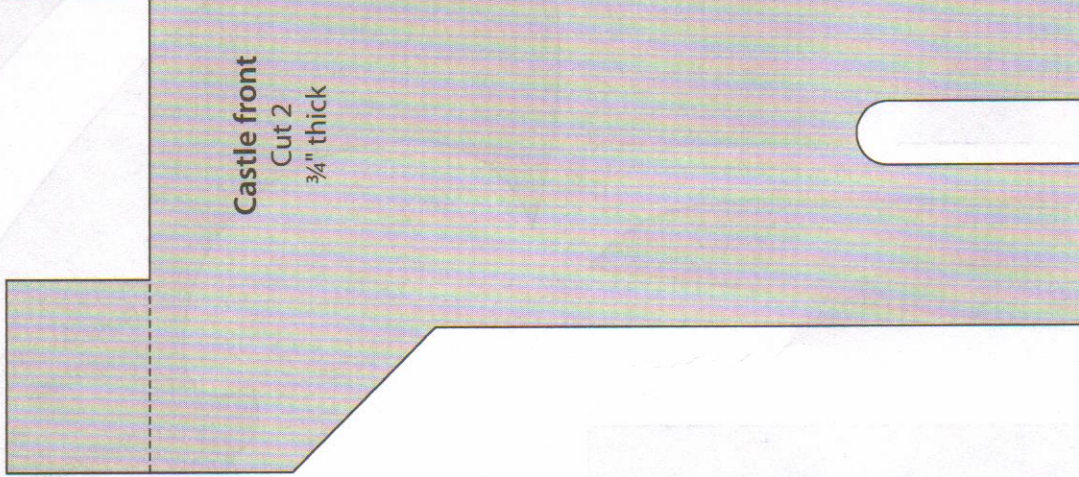
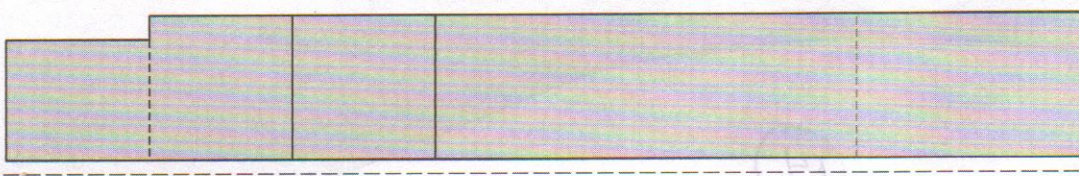


7

f Christmas

MC Issue 49

e Roberts



Legend

↔ Grain direction

D..... Dark shade of wood.

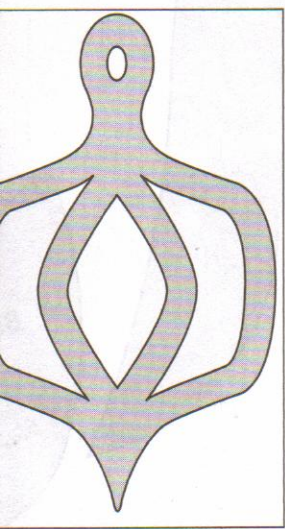
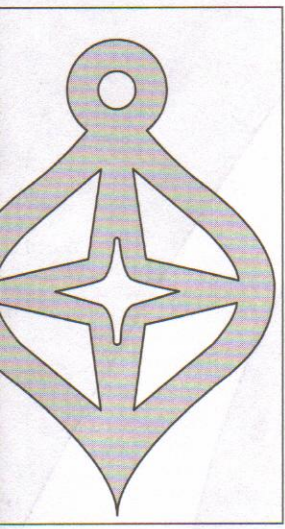
MD..... Medium dark shade of wood.

M..... Medium (or red for the numbers) shade of wood.

ML..... Medium light shade of wood.

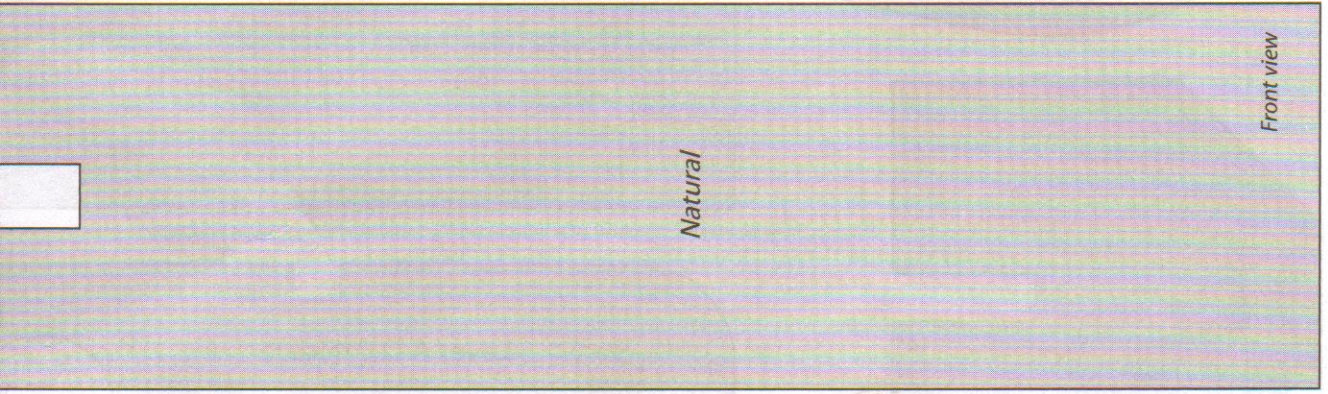
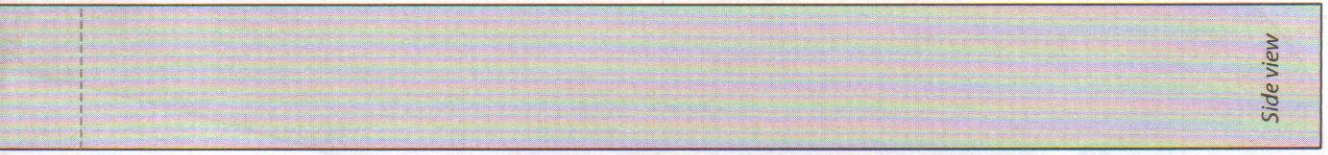
LT..... Light shade of wood.

W..... White pine, aspen, or any

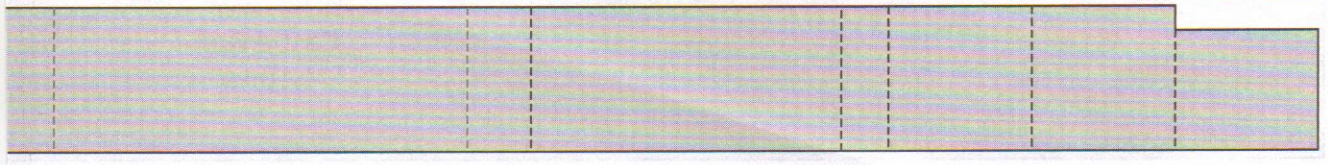
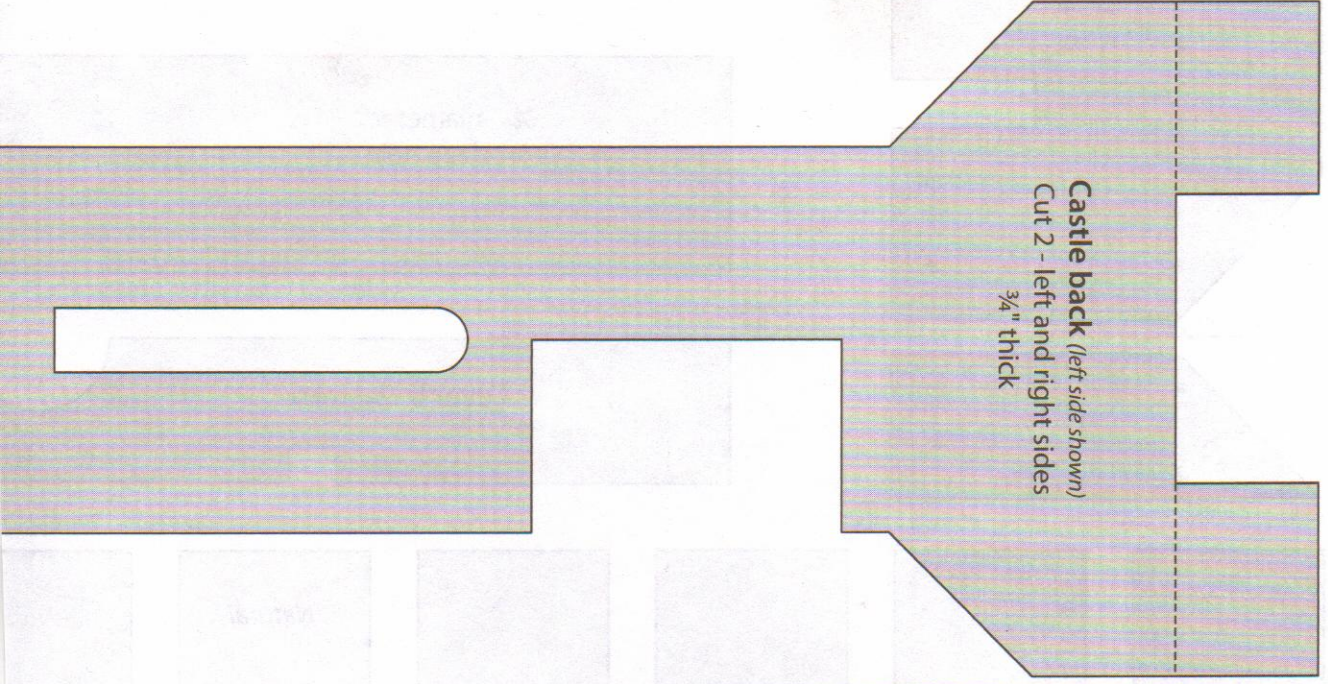


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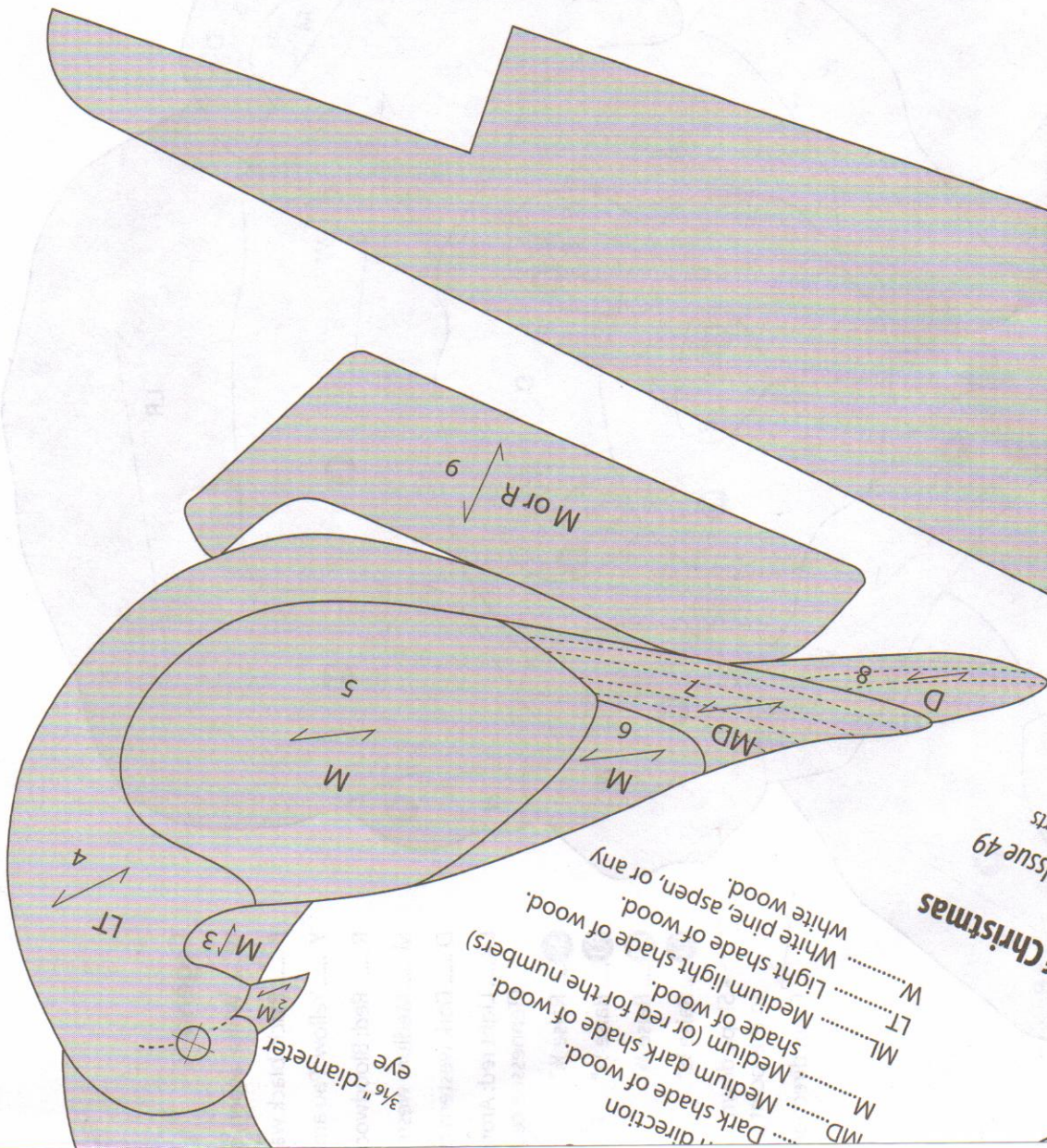
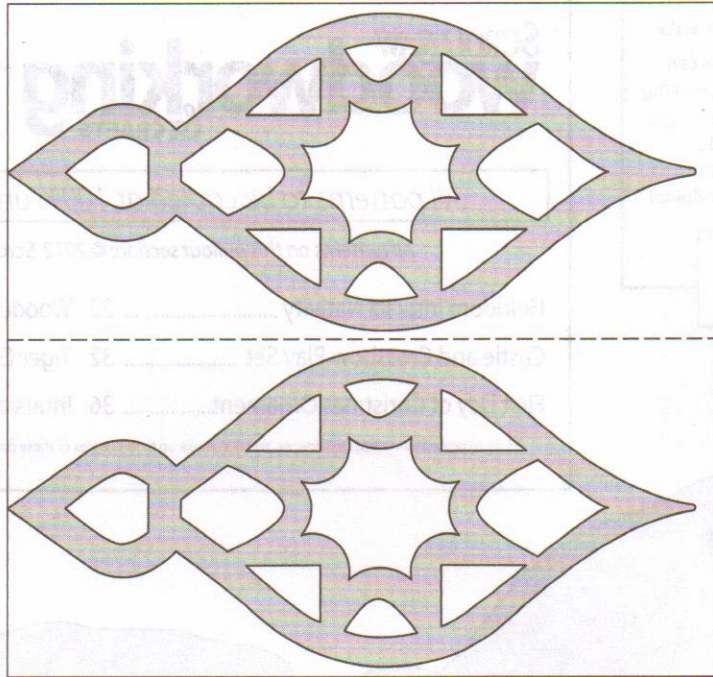
cedar
cedar
cedar
(canary wood)
e, holly or pine



Natural



9



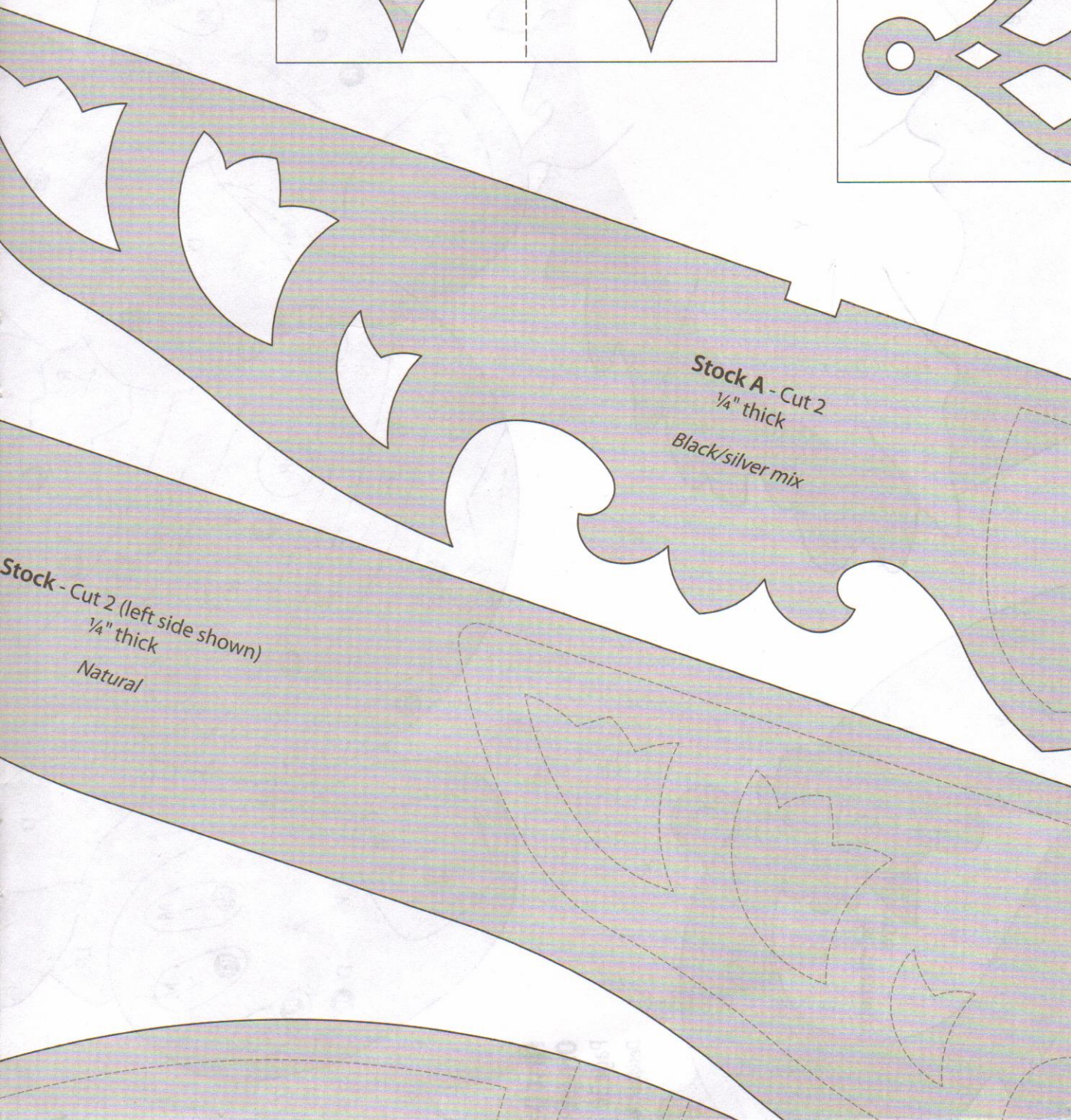
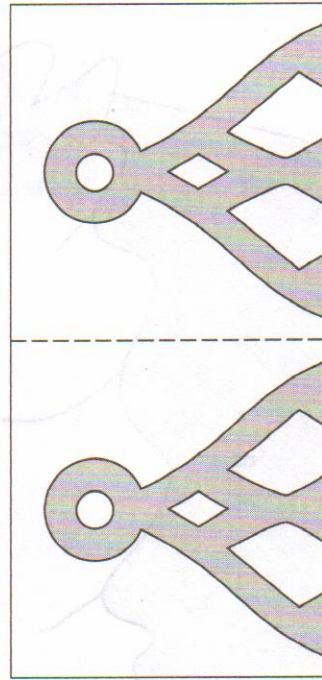
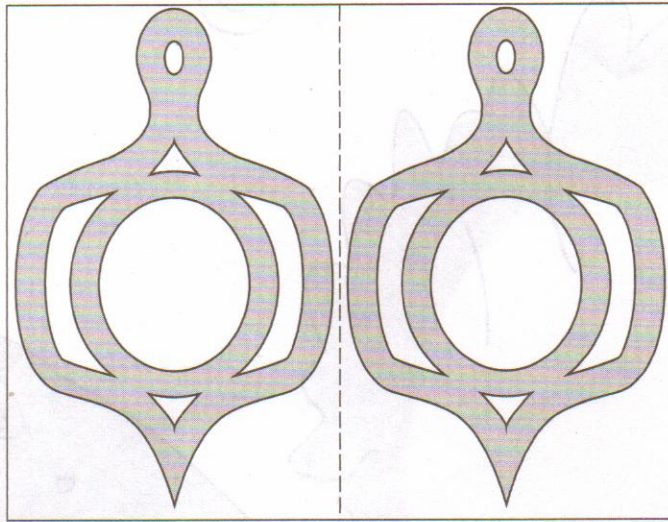
- W..... White wood.
- LT..... Light shade of wood.
- ML..... Medium light shade of wood.
- M..... Medium (or red for the numbers) shade of wood.
- MD..... Medium dark shade of wood.
- D..... Dark shade of wood.

First Day of Christmas
Ornament
Page 36 - SSWC Issue 49
Designer: Judy Gale Roberts

orn Bulb Ornaments

- SSWC Issue 49

ue Mey



Stock A - Cut 2
1/4" thick

Black/silver mix

Stock - Cut 2 (left side shown)
1/4" thick

Natural

Tiger side

Grain direction

1 1/4"-diameter through, counterbore 1 7/8"-diameter, 1/4"-deep (on center) Drill after assembly.

Tiger center - Cut 2 3/8" thick

Tiger Coin Bank
Page 69 - SSWC Issue 49
Designer: Paul Meisel

Orange

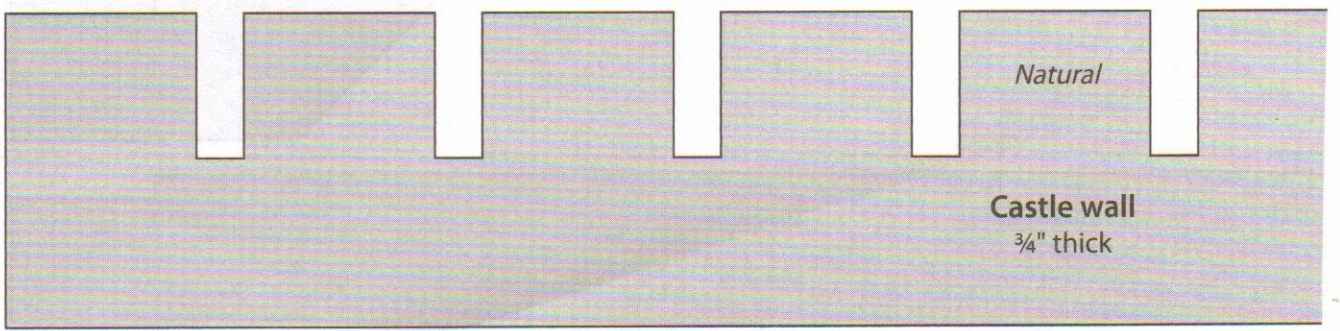
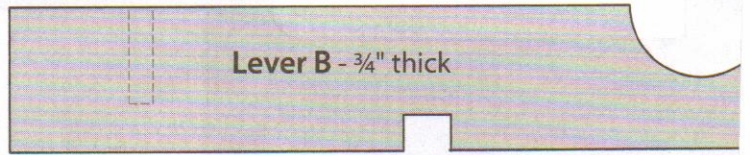
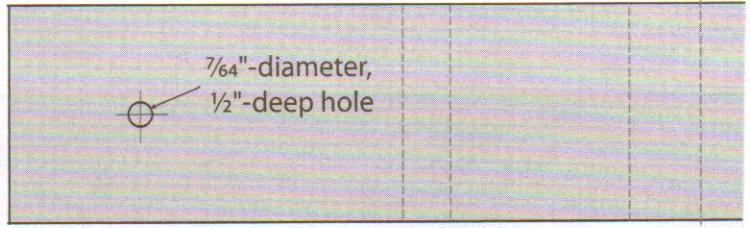
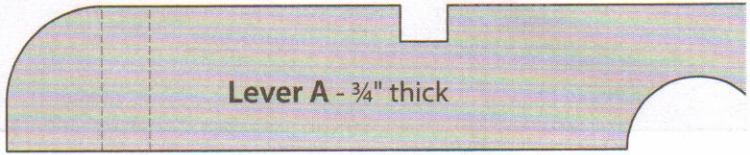
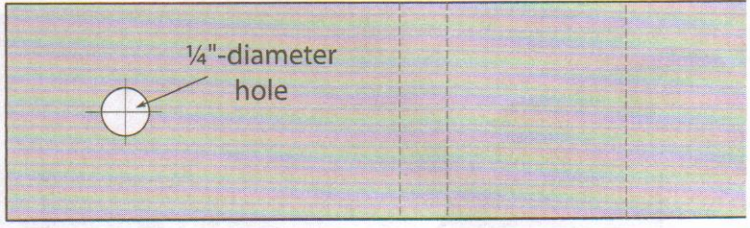
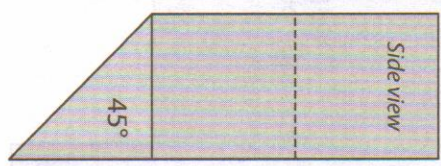
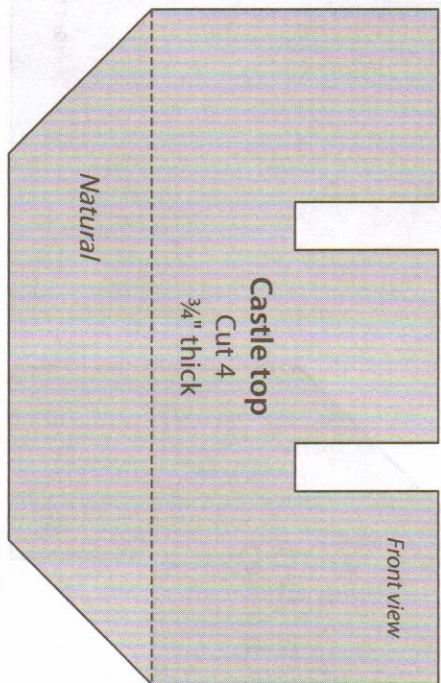
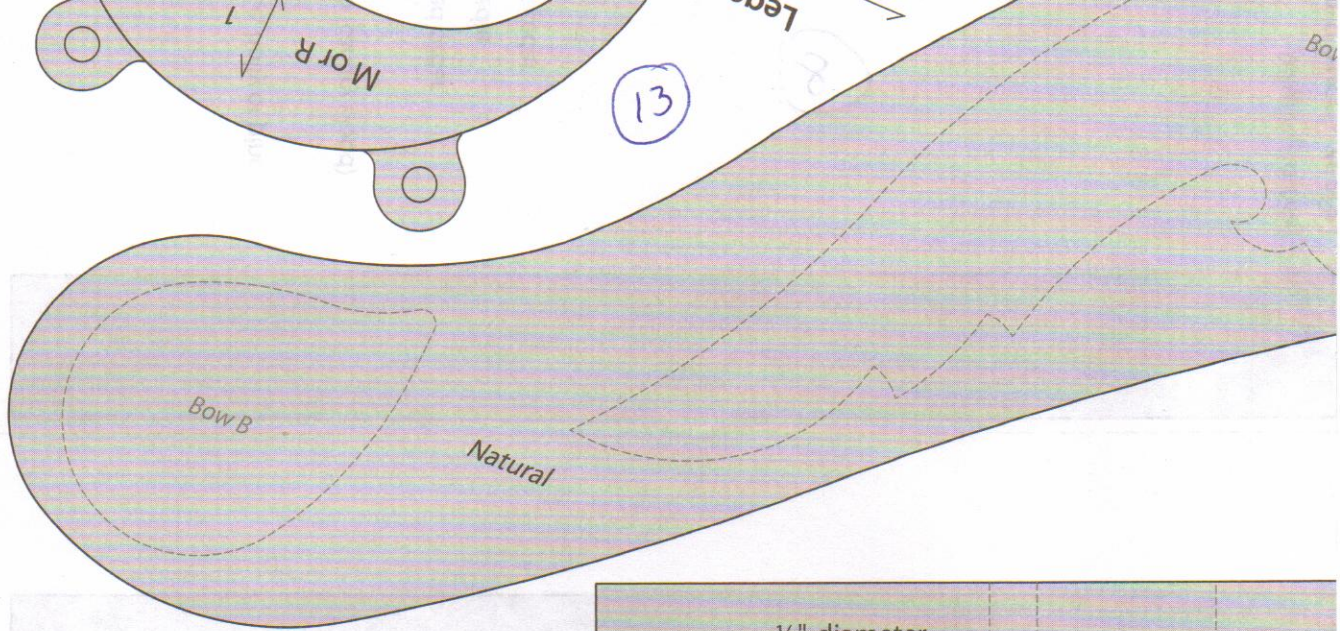
Tiger head

Orange

Tiger head - Cut 2 1/4" thick

Red

Notice about photocopying patterns
Some photocopiers and home printers can distort patterns when you print them, making them slightly off-size or stretching the image. Use the 1" bar printed below as a guide when copying the patterns and hold the



Bow - 3/4" thick

7/64"-diameter,
1 1/8"-deep hole (on center)

Position
of stock
(other side)

14

Natural

Bow B - Cut 2
1/4" thick

Black/silver mix

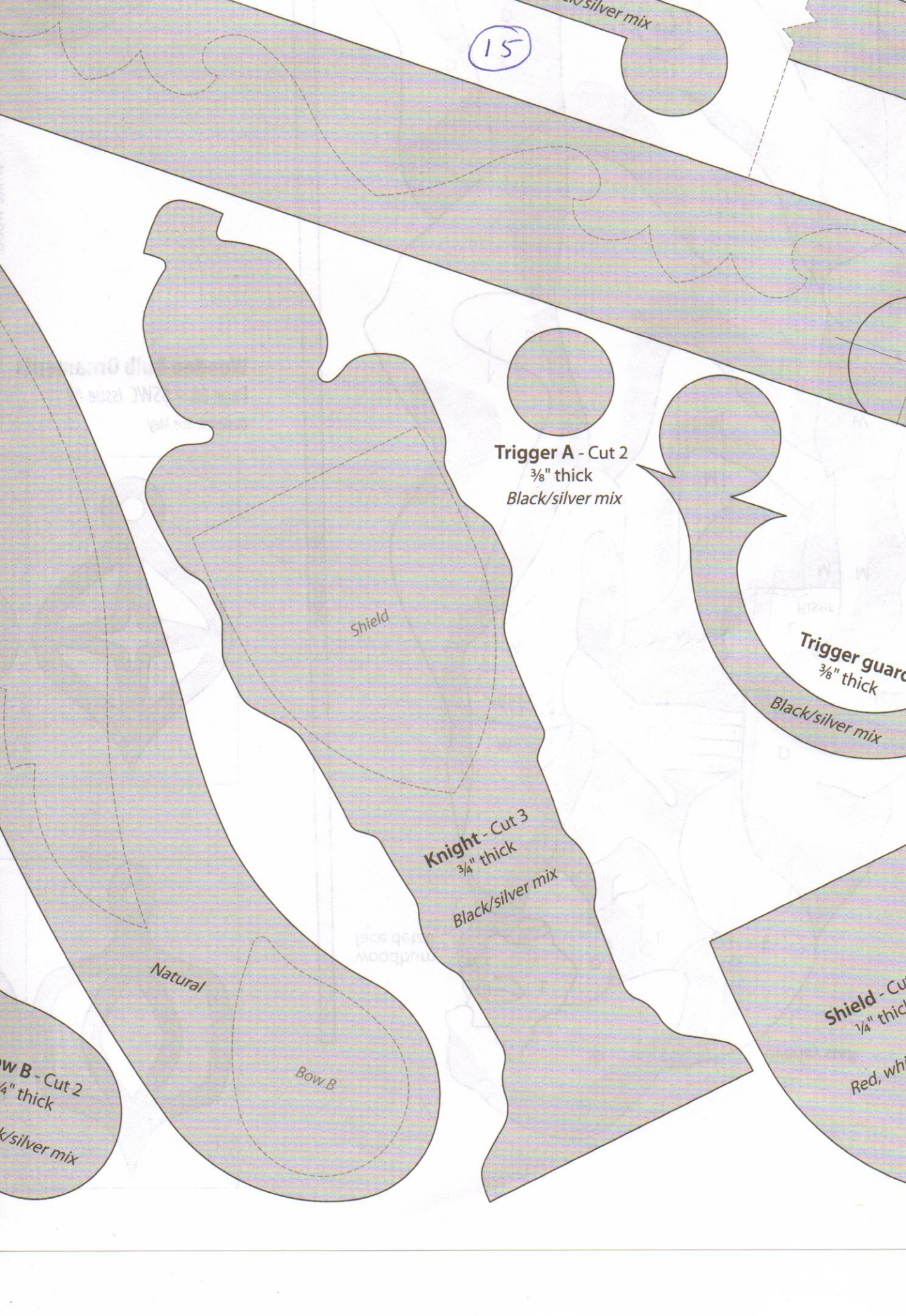
Natural

Castle support
Cut 6
3/4" thick

Natural

15

Black/silver mix



Trigger A - Cut 2
3/8" thick
Black/silver mix

Shield

Trigger guard
3/8" thick
Black/silver mix

Knight - Cut 3
3/4" thick
Black/silver mix

Natural

Bow B

Bow B - Cut 2
1/4" thick
Black/silver mix

Shield - Cut 2
1/4" thick
Red, white

any distortion.



One inch

