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SUMMER 2010
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36

Three-masted sailing ship makes an impressive display.

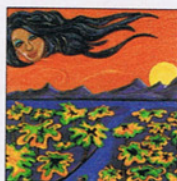


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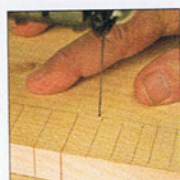


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Online version lets you share this young entrepreneur's story with family and friends.

➔ *Online Reference*

Cutting Sharp Corners, pg. 47
Keep this helpful technique at your fingertips with a handy web version.

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Welcome Home

We are pleased to announce subscriber services are once again being handled by the dedicated customer service team at Fox Chapel's home office in East Petersburg, Pa.

Two years ago, we outsourced subscription fulfillment to a company in California. This outsourcing caused us to lose a valuable resource—feedback from our readers. The team in California is good at what they do. They are capable of processing large volumes of work and they have systems in place to prepare reports and produce files for processing. Unfortunately, handling such large volumes, they were not able to provide the level of service we want for our readers.

After analyzing the pros and cons, we made the decision to handle subscriber services internally. Your magazine continues to be mailed directly from our printer, Fry Communications, in Mechanicsburg, Pa. We're thrilled to welcome them aboard as our vendor for mailing renewal notices as well.

We ramped up our customer service staff and are busy re-learning the software in order to provide you with top-notch customer service.

In addition to our current customer service team, Sandy Ertz (7 years) and Gail Larkin (8 years), we are pleased to introduce Roberta Van Ormer. Roberta joins us with a strong background in customer service and will be a valuable addition to the team. Please drop us a line with any questions, concerns, or just to say hello!

Reader correspondence should be directed to our physical address: 1970 Broad St., East Petersburg, Pa., 17520. Renewals and payments are routed to our local post office box: P.O. Box 4184, Lancaster, Pa., 17604.

U.S. and Canadian customers can reach us toll-free at 888-840-8590. International customers can contact us at 717-560-4703. Direct e-mails to subscriptionhelp@scrollsawer.com or you are welcome to contact me directly.

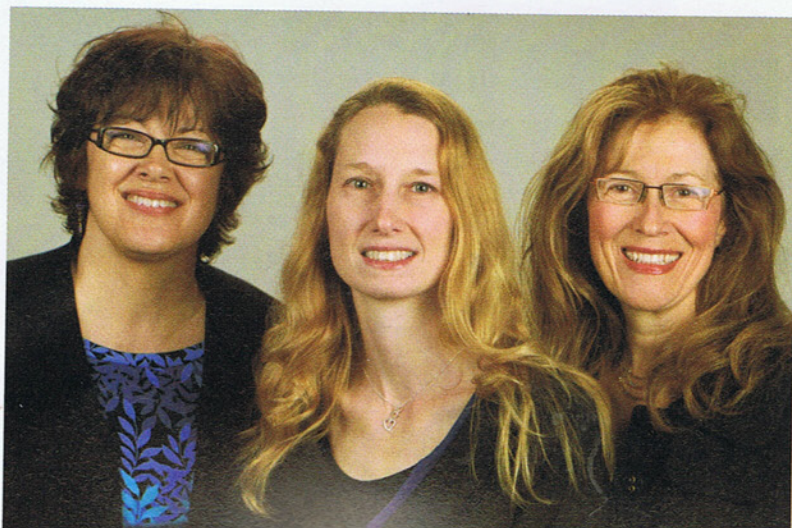
We are sure the decision to handle all aspects of subscriber services here in central Pennsylvania is the right move for our readers. And I'd like to extend a heart-felt welcome home!

Shannon Flowers

Shannon Flowers

Shannon@FoxChapelPublishing.com

Scroll Saw Woodworking & Crafts' customer service team:
(L to R) Gail Larkin, Sandy Ertz, and Roberta Van Ormer.



SCROLLSAW

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Wooden Dreidels



I thoroughly enjoyed the article on making wooden dreidels, which appeared in *Scroll Saw Woodworking & Crafts* Holiday 2009 (Issue 37). I've spun a lot of dreidels in my years, but I never thought to make one myself!

The large wooden bead glued to the dowel on the flat dreidel could compromise the dreidel's even weight distribution. Leaving the bead off might produce a less aesthetically pleasing dreidel, but in this case, I feel accuracy trumps aesthetics. I'm sure my rabbi would agree!

Rick Lax

Via e-mail

Dewalt Blade Holders

For the past few months, the scroll saw blades have been coming out of the top blade holder on my Dewalt 788 scroll saw. It even happens before I press the wood into the blade. I have sanded the thumb screw and used pliers to tighten the thumb screw, but it hasn't helped.

Dick Grotke
East Aurora, N.Y.

Remove the top thumbscrew and set it aside. Remove the bottom thumbscrew and insert it in the top blade holder. Replace the remaining thumbscrew in the bottom blade holder and see if the problem persists.

If the blade slips out of the bottom blade holder, remove the thumbscrew, and make sure the cap on the end of the thumbscrew turns. The cap turns similar to the end of a C-clamp. If that piece is missing or frozen, it can force the blade out of the holder. Make sure the blade is all the way back in the holder and it gets pinched between the thumbscrew and the setscrew. Also, make sure you are not over tensioning the blade. If you apply too much tension it can pull the blade out of the holder or break the blade.

Tightening the thumbscrews with pliers can strip the threads in the

blade holder. It's a good idea to order a few new thumbscrews and blade holders in case they need replaced.

Dale Helgerson

Scroll Saw Woodworking & Crafts author and test cutter

Mail Mix-up

I received a mailing telling me about *Scroll Saw Woodworking & Crafts*. I am already a subscriber to this magazine and have been for at least six years. You should make sure those who already subscribe do not receive these mailings. In today's economy, a business should do everything possible to avoid unnecessary postage expenses.

Darryl Tucker
Panama City, Fla.

Unfortunately, there was an error when processing this mailing and current subscriber names were not omitted from the list.

With the help of our dedicated readers, we were able to pinpoint the problem and implement procedures to ensure it does not happen in the future. We sincerely apologize for the error and any inconvenience the mailing caused.

Shannon Flowers, Editorial Manager

Scroll Saw Events

Mar 27-28: WISCONSIN. Northeastern Wisconsin Woodworkers Guild 28th Annual Show, Sale, and Raffle, GREEN BAY (Southwest High School, 1331 Packerland Dr.). 9:30am-5pm Sat. & Sun. Free parking and admission. Contact Jane B. Alesch, 920-468-0132, jbaesch@att.net.

Jun 11-12: TEXAS. 2010 Texas Scroll Saw Picnic, sponsored by DFW Scrollers and Lyndal's Backyard Workshop, DENTON (Denton Civic Center, 621 E. McKinney). Adm.: \$8 pre-registered, \$10 at the door; children 12 and under free. Contact Lyndal Hutcherson at 469-360-9938, www.DFWScrollers.com.

Visit the SSWC booth!

Jun 11-Jul 5: CALIFORNIA. San Diego Fine Woodworkers Association's Annual Design in Wood Exhibition, DEL MAR (San Diego County Fair, Del Mar Fairgrounds). Visit www.sdfair.com/entry/design for more details.

Jul 10-11: OHIO. Scroll Saw Association of the World Expo 2010, WILMINGTON (Roberts Center). Visit www.saw-online.com for details.

Visit the SSWC booth!

Aug 6-7: WISCONSIN. The Midwest Scroll Saw Trade Show, sponsored by Ocooch Hardwoods and The Art Factory, RICHLAND CENTER (Richland Center High School Commons Area, 23200 Hornet High Road). \$7 adm. Contact 888-322-2432, www.midwesttradeshow.com.

Visit the SSWC booth!

Aug 21-22: AUSTRALIA. The Albury-Wodonga Woodcrafters' annual scroll saw weekend. Contact J. Wyner kejuyv@gmail.com or Ed Lkio 60-24-24-82.



Fox Hunt

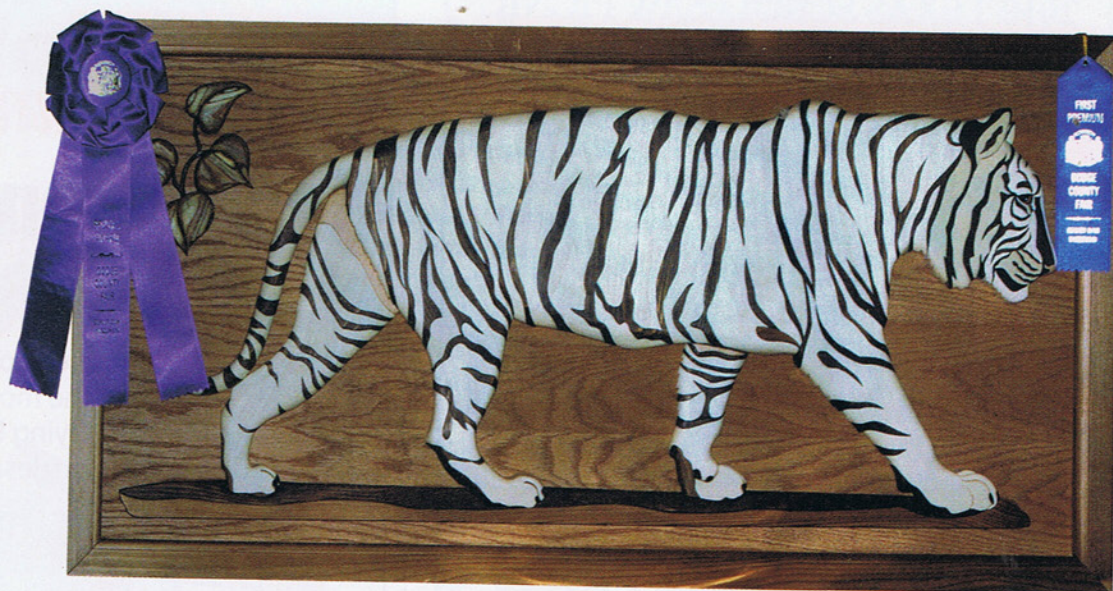
Donald Soley of Eckville, Alta., Canada, and Randall Riggs of West, Tex., were randomly drawn from the participants who located the fox in our last issue (Spring 2010, Issue 38). The fox appeared in the Intricate Fretwork Basket on page 41.

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 June 1, 2010 to be eligible. **NOTE:** The contest fox is an outline drawing that would face left if his feet were on the "ground" (other foxes appearing in SSW&C don't count).

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

Intarsia Tiger ▶

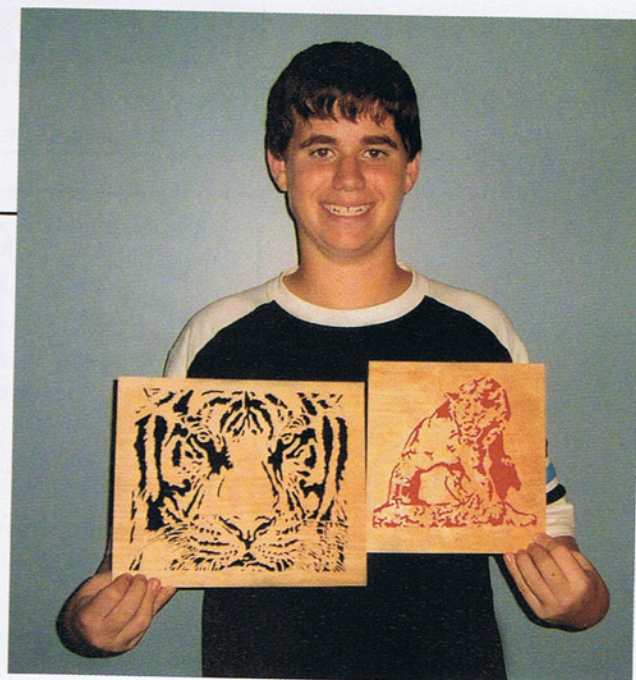
Ron Callies of Beaver Dam, Wis., created this white tiger intarsia using a Judy Gale Roberts pattern. The piece won a special award at his local county fair.

◀ **Custom Artwork**

Steve McLain, of Springhill, La., designed this intarsia project based on a Harley Davidson motor. The heirloom-quality wall hanging was a gift for a friend. Steve has been working with wood and scrolling for ten years.

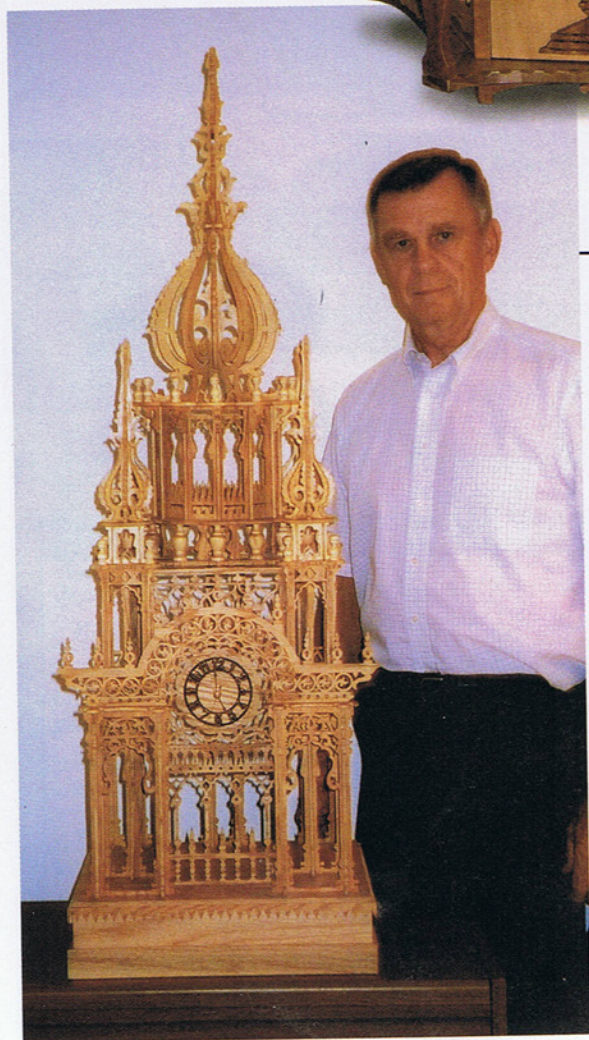
Teen Scroller ▶

Ryan Overmyer, age 16, of Jonesboro, Ind., cut these two animal portraits using patterns that appeared in *Scroll Saw Woodworking & Crafts*.



Tabernacle ►

Salvatore Ciurleo of Calabria, Italy, created this tabernacle a few years ago. Salvatore, who became a violin maker in 1998, made this piece out of locally available timber.



◄ Intricate Clock

Bob Gilhaus of Downs, Ill., created this Imperial Tower clock from patterns in *Advanced Scroll Saw Clocks* by John A. Nelson. The clock stands nearly 4' tall.

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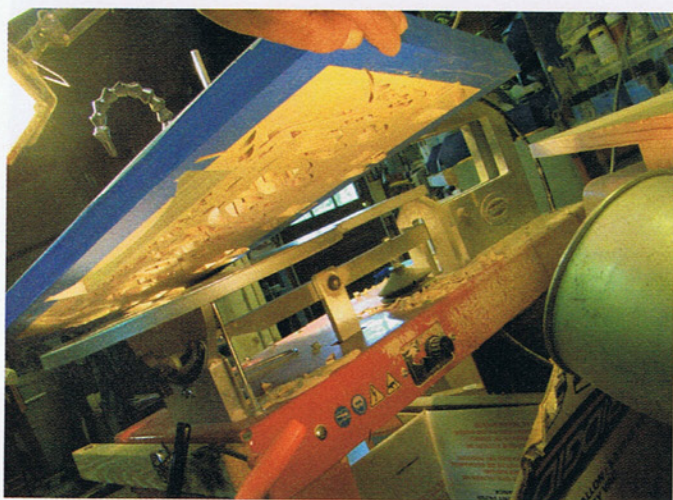
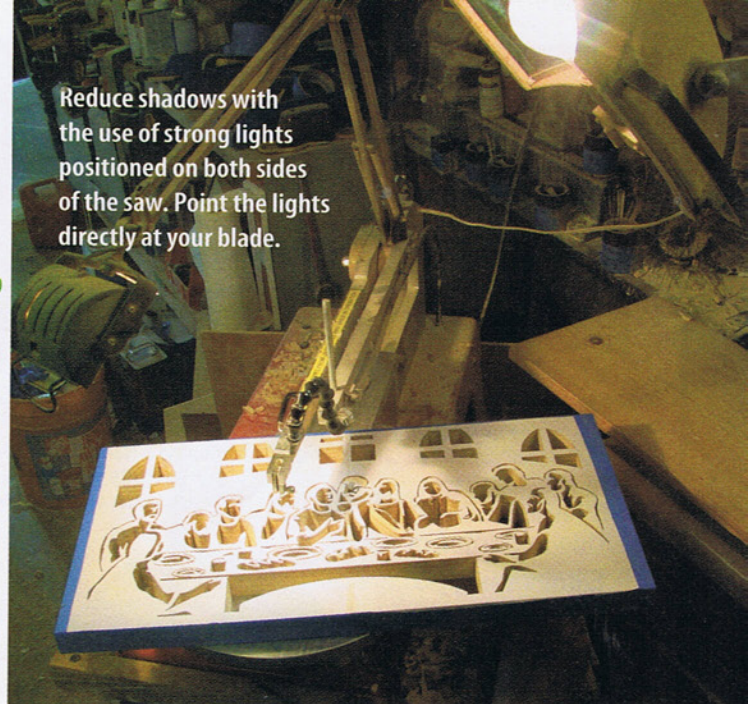
Easier Cutting

I commonly encounter two problems when cutting on my scroll saw. The first problem involves not being able to see the lines or the blade-entry holes on my work. A few auxiliary lights quickly take care of these issues. The second problem I deal with is having small bits of wood get caught under the blank. To combat this problem, I use a squirrel fan to blow the scraps off of my saw table. Use a large cardboard box with one of the flaps propped up to catch the scrap pieces.

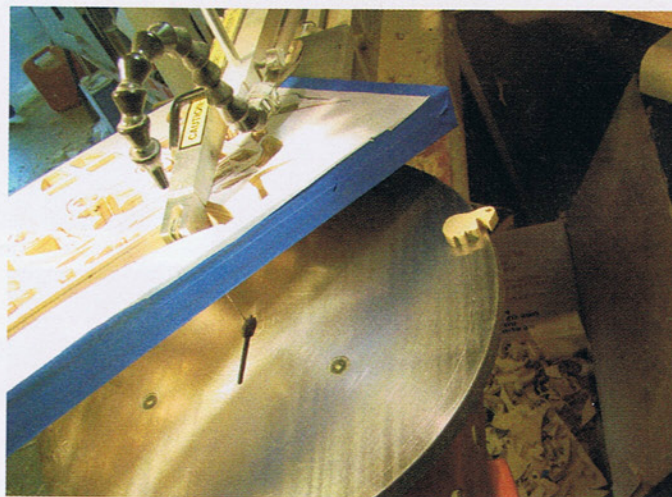
TOP TIP

Dan Burleson
Troy, Mo.

Reduce shadows with the use of strong lights positioned on both sides of the saw. Point the lights directly at your blade.



A light on an adjustable arm makes it easy to find blade-entry holes on the bottom of the blank.



Position a fan so it blows across the saw table without your body blocking the airflow. Slightly lift the project after cutting a fret so the piece falls on the table and blows into a box.

Quick and easy zero-clearance table

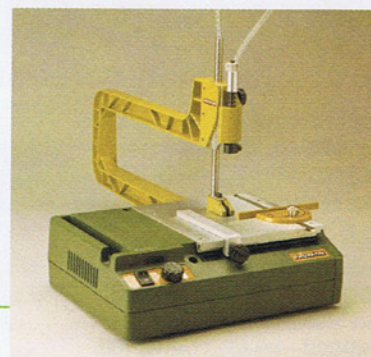
I was in the middle of a project when the zero-clearance plate on my scroll saw broke. I didn't have any acrylic to make a new one. Instead of delaying the project, I grabbed an inexpensive self-adhesive floor tile, drilled a hole for the blade, and stuck the tile on my table. It works well even after weeks of use.

Bonnie Ellibee,
Fruitland, Idaho

Time spent scrolling

I add a three-way plug to my scroll saw foot pedal and plug in both the scroll saw and an inexpensive non-digital clock. The clock runs only when I'm cutting a project. When I start a new project, I reset the time to 12 o'clock. It's an easy way to keep track of how long I spend cutting a project.

Neal Thompson
Benson, Minn.



TOP TIP in our fall issue wins a mini scroll saw by Proxxon. Send your tips or techniques to Bob Duncan, 1970 Broad Street, East Petersburg, PA 17520, or Duncan@FoxChapelPublishing.com

Attaching Patterns

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



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

Removing Patterns

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

Blade-entry Holes

Some patterns have blade-entry holes marked. If the pattern doesn't, place the holes near a line to be cut to prolong your blade life, but don't place



the hole on a curving line or inside corner (if possible). Drill the hole perpendicular to the blank. Use a drill press if you have one; otherwise the holes may interfere with delicate fretwork. Drill through your blank into scrap wood to prevent tear out on the back side of the blank.

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

Blade Tension

Before inserting a blade, the tension should be completely removed. Clamp both ends of the blade into the blade holders and adjust the tension. Push on the blade with your finger. It should flex no more than $\frac{1}{8}$ " forward, backward, or side to side.

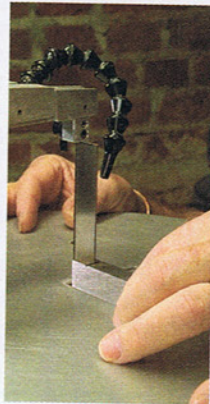
A blade that does not have enough tension will wander. It will also flex from side to side, making for irregular or angled cuts. If you press too hard on a loose blade, it will usually snap.

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

Squaring Your Table

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

The most common method for squaring your table is the small square method. Set the square flat on the saw table against a blade that has been inserted and tensioned. Adjust the table to form a 90°-angle to the blade.



The cutting-through method is also popular. Saw through a piece of scrap wood at least $\frac{3}{4}$ "-thick and check the angle of the cut using a square. Adjust the table until you get a perfectly square cut.

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



You can also use the kerf-test method. Take a $1\frac{3}{4}$ "-thick piece of scrap and cut about $\frac{1}{16}$ " into it. Stop the saw, and spin the wood around to the back of the blade. If the blade slips

easily into the kerf, the table is square. If it doesn't slide into the kerf, adjust the table and perform the test again until the blade slips in easily.

Stack Cutting

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



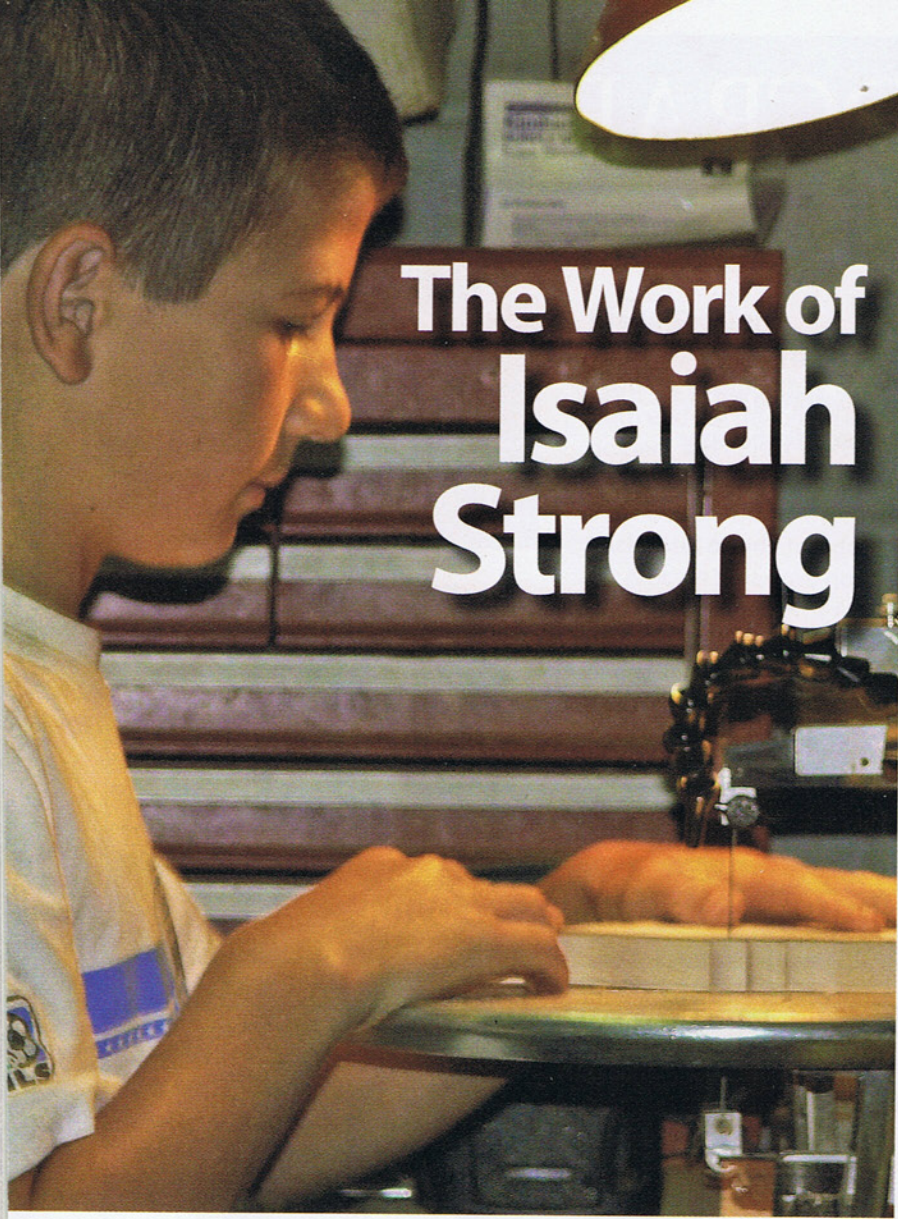
One way to attach blanks is with tape. Line all the layers up and wrap a layer of tape around the outside edge. You can also wrap the whole stack in tape for extra stability. Scrollers

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

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

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





The Work of Isaiah Strong

Vermont youth named artist of the month

By Kathleen Ryan

Twelve-year-old Isaiah Strong, of Saxtons River, Vt., has been creating quite a buzz in the local woodworking community. As the youngest member ever to join the Jelly Bean Tree artisans' cooperative, Isaiah works far beyond his years creating everything from intricate puzzles and decorative elements to detailed jewelry boxes.

It all began at the tender age of eight, when his father bought Isaiah a Delta Shopmaster scroll saw, and his grandfather purchased some pattern books for him from Fox Chapel Publishing. Together they showed the eager youngster how to glue patterns onto the wood and carefully cut along the lines with his saw.

Working under the tutelage of his father, Isaiah proved a quick study. Starting with simple toys, he soon moved on to more complicated projects and puzzles. Isaiah has also crafted decorative storage boxes for his

**“Isaiah’s progress
over the past five
years has really been
amazing.”**

Isaiah cuts a project on the Hawk
G4 scroll saw he bought with
his own money.

Whale is cut from oak. Isaiah used
a pattern from RBI Hawk that came
with his new scroll saw.



puzzles. After three years, the enterprising youth earned enough money from the sale of his woodworking, lawn mowing, and other odd jobs to purchase a new higher-end scroll saw. Now, Isaiah can create intricate work using thicker pieces of wood.

“I saved up enough to buy a professional Hawk G4 26-inch scroll saw,” Isaiah said. “It was the newest model Hawk had available. I don’t go off of the lines much anymore.”

For the past two years, Isaiah has been home schooled, which gives him more time to focus on his craft. He has developed his woodworking skills and now the wooden pieces of his puzzles fit together tighter than ever before.



Isaiah shows off his display at the Jelly Bean artisans' cooperative.

"Isaiah's progress over the past five years has really been amazing," said Don Strong, Isaiah's father. "I believe he definitely has a natural talent for this kind of work."

Coming from a long line of woodworkers on his father's side of the family, Isaiah has developed his own wood preferences.

"I mostly like working with oak, maple, cherry, and pine," Isaiah said. These woods are harvested from family property and processed at his uncle's sawmill.

Last June, Isaiah set out to market his work through the Jelly Bean Tree artisans' cooperative. Isaiah designed business cards on the computer and created a full-page flyer that showed photos of him working in his woodshop. Armed with samples of his work, Isaiah walked into the local shop and introduced himself to Mary Hepburn, one of the original founders of the cooperative, now celebrating its 30th anniversary.

"Isaiah impressed me as a very confident and capable 12-year-old," Mary said. "It so happened that I was about to choose an artist of the month for the cooperative and his work was of such fine quality I immediately offered the honor to him. The resulting publicity was good for both of us, as he presented us with the opportunity for a unique spin on our usual monthly press release."

Isaiah thinks it's great being a member of the cooperative, and it doesn't bother him one bit that he is their youngest member. Not only does he enjoy the association with other artists, but also the exposure it gives his work. Isaiah and his mother take turns helping out in the shop, where he has quickly learned the shop routine and even the bookkeeping system.

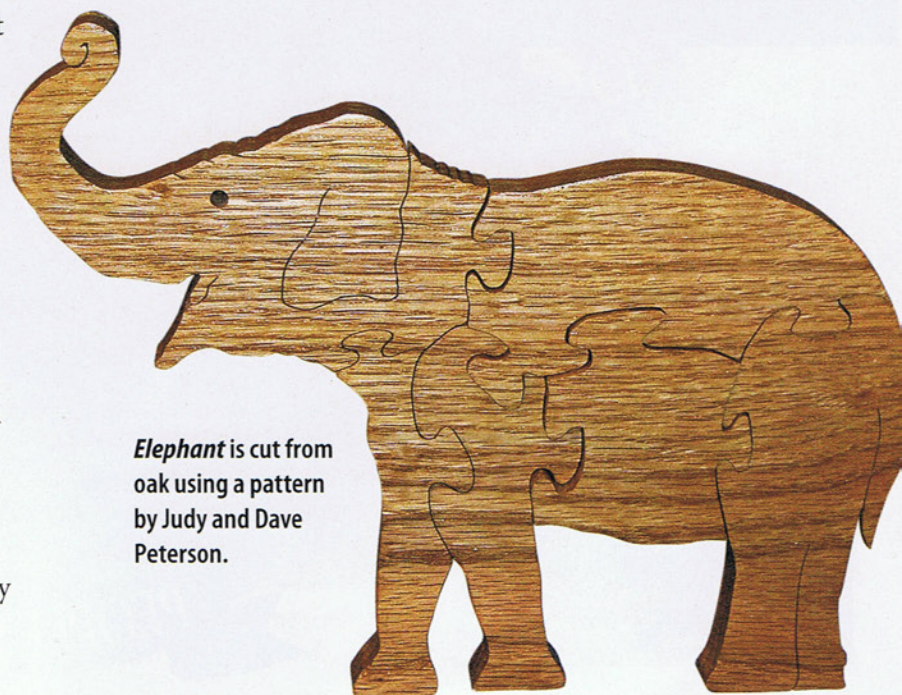
"I like being a member of the Jelly Bean Tree organization and having my work where people can see it and buy it," Isaiah said.

Ever trying to improve his craft, Isaiah enjoys the challenge of finding increasingly difficult patterns on the Internet as well as pulling patterns from *Scroll Saw Woodworking & Crafts* magazine. Isaiah has even tried to make a few patterns of his own.

In addition to woodworking, Isaiah is interested in mechanics, gardening, and yard work, and is always available for hire. You can reach Isaiah by e-mail at isaiahstrong96@yahoo.com. To contact the artisans' cooperative, e-mail info@mainstreetarts.org.



Koala Bears are cut from oak using a pattern by Judy and Dave Peterson.



Elephant is cut from oak using a pattern by Judy and Dave Peterson.

BEST PROJECT DESIGN CONTEST 2009

BEST IN CONTEST

Editor's Notes: We're pleased to present the 2009 winners along with some projects that deserve an honorable mention. More than 1,600 votes were cast online to determine the People's Choice winners.

WoodChuck Model Tug Boat

by Charles Bowman

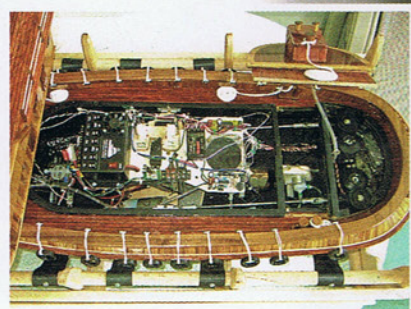
This model tug boat was a labor of love for Charles Bowman of Ocala, Fla. Online voters awarded the detailed model top prize in the contest as well as winner in the general scrolling category.

"This was a two-year project," Charles said. "It's scratch-built and made from hardwoods. The boat weighs 50 pounds and includes onboard electronics."

Charles learned to make model boats while stationed at a U.S. Air Force base in Italy. Charles learned the various techniques from Frenchy, a retired American living in Naples, Italy.

"This model tug is my own creation. It represents everything Frenchy taught me about scale model building," Charles said.

Onboard electronics simulate marine engine sounds and a fog horn.



The 44"-long boat has radio-controlled DC motors for propulsion and cannons on the upper deck squirt water when the boat is underway.

Charles cut each sweet gum plank on the hull to the proper curvature. The rub rail alongside the hull and nose blocks are bubinga and the top rail is cut from walnut. Each cabin wall was cut from sweet gum. The portholes, ladders, doors, and cabin trim were cut from walnut.



Lucy in the Sky with Diamonds

by Mike Seale

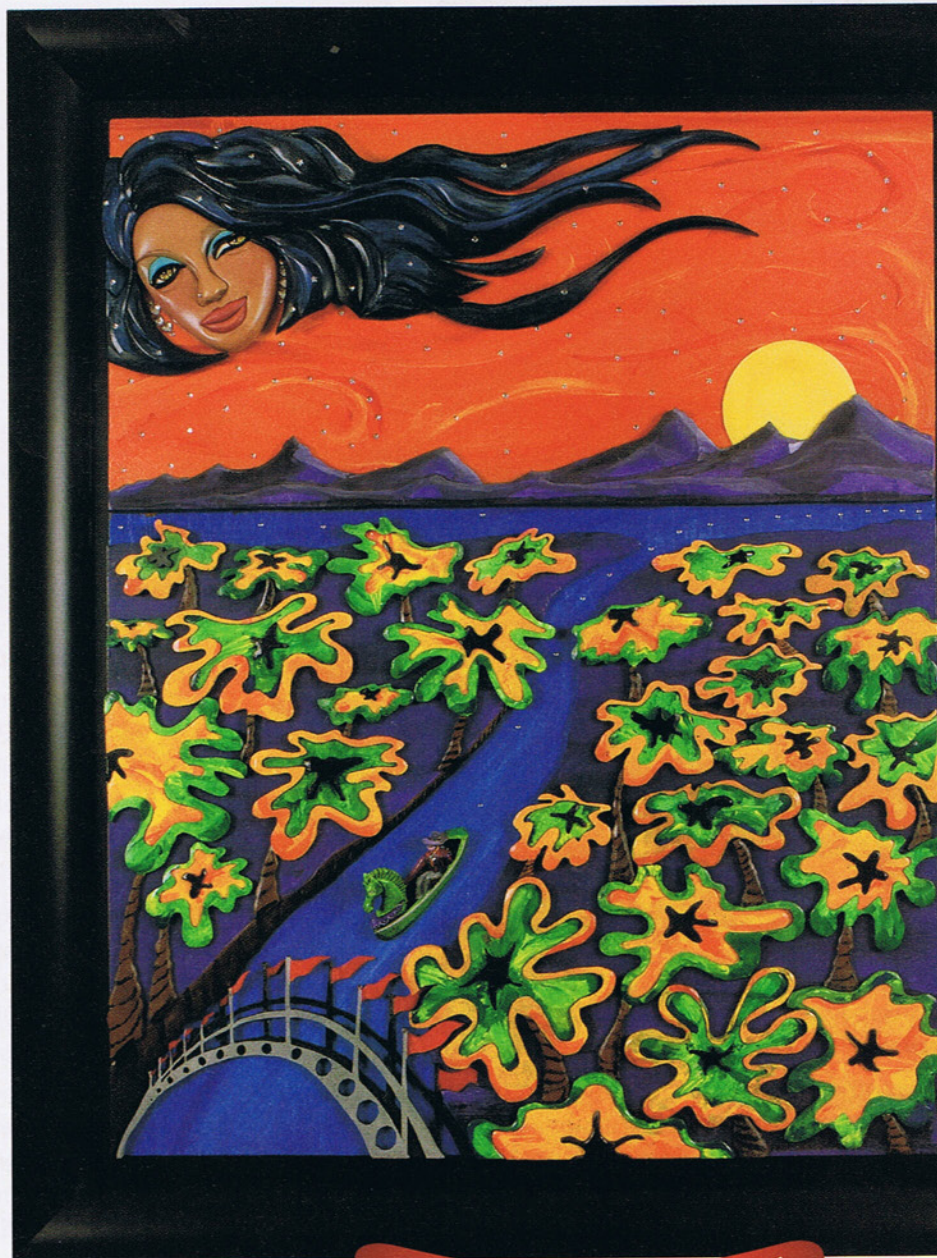
Mike Seale created this project as a gift for his son who is graduating from the United States Military Academy at West Point.

"My son, Evan, wanted me to make him something from the sixties to celebrate his May 2010 graduation. I designed this piece while listening to the Beatles song *Lucy in the Sky With Diamonds*," Mike explained.

"I sketched out the basic design based on the first verse of the song: 'Picture yourself on a boat on a river.' The giant flowers were inspired by the second verse: 'Cellophane flowers of yellow and green, towering above your head.' The pattern just appeared in my mind's eye as I listened to the song and read the lyrics.

The Sugarland, Tex., native used basswood for Lucy's face and hair, and for the man in the boat, which he carved and painted with acrylic paint. Mike used 1/4"-thick Baltic birch plywood for the background and flowers and rhinestones for the diamonds in the sky. Framed, the piece measures 43" by 36".

"Each piece was fashioned with love and pride for Evan's achievement," Mike added. "I spent more than 150 hours on the project."



EDITOR'S CHOICE

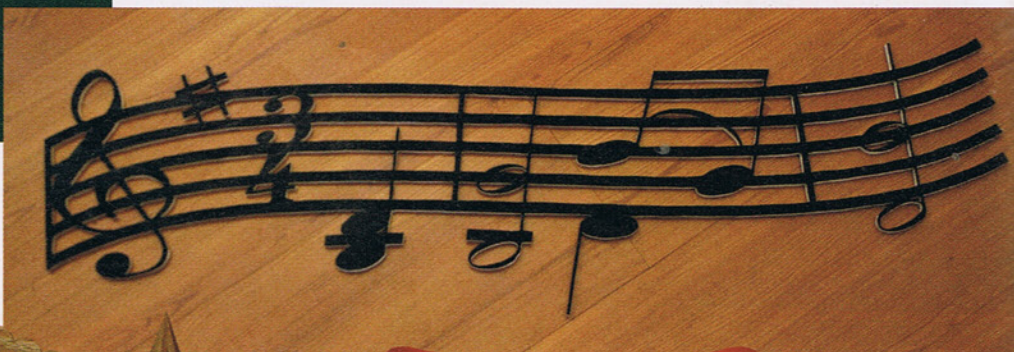


Each piece is cut on the scroll saw and then shaped by hand.



Mike's project comes to life with the use of vibrant colors of acrylic paint.

TRADITIONAL FRETWORK



EDITOR'S CHOICE

Amazing Grace

by Gloria Chandler

A family commission inspired Gloria Chandler to design and create this project based on the hymn *Amazing Grace*.

"My uncle and his family have a music room in their home," Gloria explained. "My aunt wanted a project to hang over the piano. It was her suggestion of music notes with wavy lines that inspired this piece."

The Philadelphia, Pa., resident used Baltic birch plywood to create the 36"-long wall-hanging. The piece represents the first few notes in *Amazing Grace*.

"The pattern took about a month and a half to create, but I was able to cut it in a few hours," Gloria said. "I could have cut it faster, but I had to keep moving my scroll saw to accommodate the length of the piece."



PEOPLE'S CHOICE

La Patience Clock

by Ray Baumbach

Ray Baumbach of Enderby, B.C., Canada, created this clock as a tribute.

"I wanted to design a clock in memory of a remarkable person," Ray explained. "She will always be remembered."

Ray used oak for most of the clock, but used juniper to make the attic door stand out. It took Ray quite some time to design the pattern, but once he started working on the clock, the project progressed quickly.

"The cutting, gluing, and oiling took about three weeks," Ray said. "But I only worked on it four or five hours a day."

HONORABLE MENTIONS



Jim McDonald

Muncie, Ind.



Ruth Chopp

St. Louis, Mo.



Bruce Millward

Chardon, Ohio

INTARSIA



PEOPLE'S CHOICE

Underwater Scene

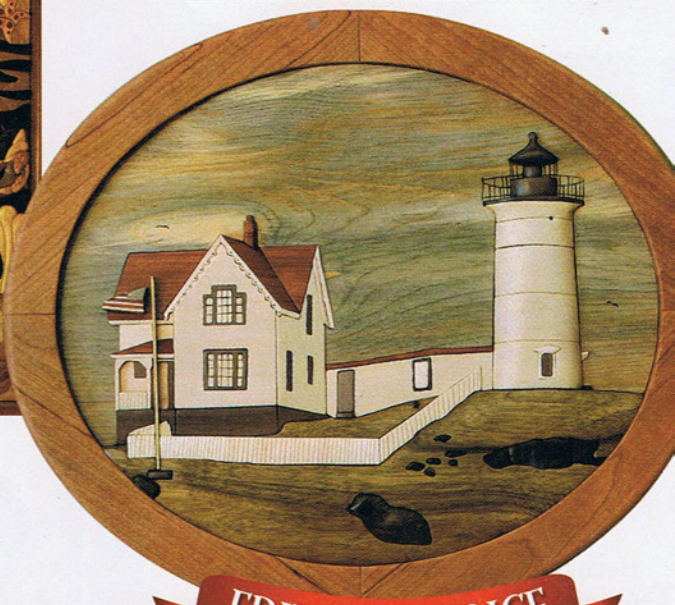
by Nick Berchtold

Nick Berchtold of Perkin, Ill., said this image was just swimming around in his head, so he decided to recreate it in wood.

"All of the ideas came out of my head, except for the fish, which I tried to make as close to the real thing as possible," Nick explained. "Measuring 65" by 42", it is the biggest piece I have made so far." Nick spent four months working on the project.

"It was like having a full-time job over my summer break," Nick said.

Nick did not use any stains on the project. He used more than 50 different woods, including everything from pink ivory to pine 2x4s. The piece was finished with polyurethane.



EDITOR'S CHOICE

Lighthouse Intarsia

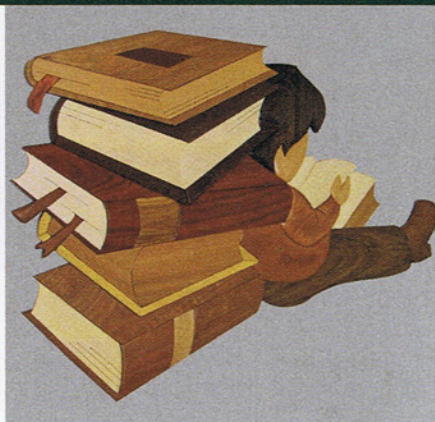
by Duane Martin

A local lighthouse inspired Duane Martin of Newfields, N.H., to create this striking scene.

"When I have out-of-town visitors I take them to the Cape Neddick (Nubble) lighthouse in York, Maine," Duane explained. "I have been inspired by the lighthouse for years and wanted to capture it in wood. The project is based on a photo I took while visiting the lighthouse."

From the time he started the pattern, it took Duane about three weeks to finish the project. In addition to the spalted pine Duane used for the sky and clouds, Duane used a variety of domestic and exotic hardwoods for this piece, but he did not stain any of the woods. All of the pieces are the natural colors of the various wood.

HONORABLE MENTIONS



John Kosinsky
Wirtz, Va.



Erik Holt
Freeport, Fla.



Dan Eklund
Tucson, Ariz.

GENERAL

Scrapwood Goat

by Deborah Nicholson

An overflowing scrap bin inspired Deborah Nicholson to create this wooden goat.

"I have a hard time throwing away wood," Deborah said. "After numerous projects, I have quite a collection of scraps too small to use for a new project. After studying these piles of wood, I knew I had to find a project to use them."

Deborah, who lives in Hernando, Fla., loves to study unique animals.

"When I started this project, I had no specific plans," Deborah explained. "I just started working on what I thought was going to be a llama. I love the texture of the llama's hair I saw in photos, but as I glued together the wood, I accidentally gave him a beard. That's when I realized he was a goat, so I gave him horns."

The project consists of a variety of wood scraps, including ash, pine, mahogany, walnut, and oak. It took Deborah about a month to complete this project.



WoodChuck Tugboat

by Charles Bowman

Charles' tug boat won people's choice in the general category as well as best in contest. See page 18 for more details.



Janice Smith

Albuquerque, N.M.

HONORABLE MENTIONS



Dennis Zongker

Omaha, Nebr.



Andy Chew

New Castle, Ind.



Kip Travis

Oak Island, N.C.



PEOPLE'S CHOICE

San Francisco Chess Set

by Jim Kape

Jim Kape's quest for a themed compound-cut chess set representing the United States took him to San Francisco.

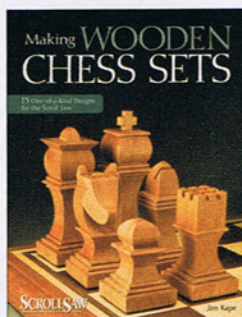
"There are so many places in the U.S. that are iconic," the Chandler, Ariz., resident said. "Mount Rushmore or the Statue of Liberty are both American icons, but there is no way to represent them with a compound cut on a scroll saw. It took some research, but I was able to find iconic San Francisco items to represent the various pieces."

Jim used the center of the Golden Gate Bridge for the king and the Transamerica Tower for the queen.

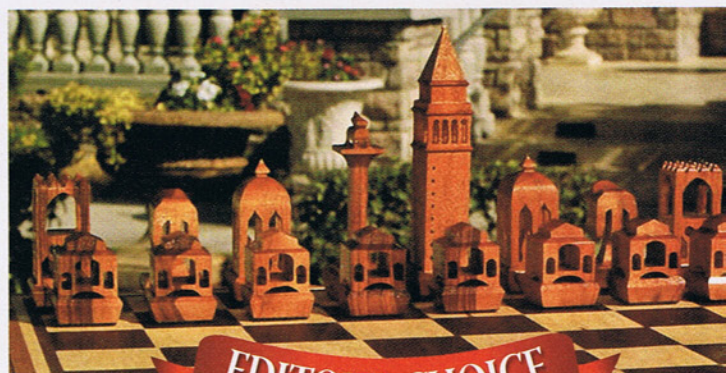
"The pawn, based on the San Francisco cable cars, was the most difficult to design and cut," Jim explained.

Jim cut the pieces from sapelle and finished them with a high-gloss polyurethane. The project took him about 30 hours to complete.

Editor's Note: Jim Kape is currently working with Fox Chapel on a book featuring 12 compound chess set designs. *Making Wooden Chess Sets* will be available in October 2010.



COMPOUND



EDITOR'S CHOICE

Venice Chess Set

by Jim Kape

A phrase in a movie inspired Jim Kape of Chandler, Ariz., to create the intricate Venice Chess Set.

"*Indiana Jones and the Last Crusade* inspired this chess set," Jim explained. "When Indiana Jones said 'Ah, Venice,' it had such a nice ring to it I started looking into Venice's architecture. I found the architecture to be absolutely fascinating."

Jim decided to make the tower at St. Mark's Square the king and he made the Lion of Venice the queen.

"It took some time to work out the patterns," Jim said. "The most challenging piece was the pawn, based on the Rialto Bridge. It took four tries to get it right."

Jim cut the pieces from gonalcalvo alves and finished them with high-gloss polyurethane. The project took Jim about 24 hours to complete.

JUNIOR CATEGORY

Because Nathan Krupp was the only junior scroller to enter the contest, his designs were moved to alternate categories. Both of Nathan's projects demonstrate excellent craftsmanship.



Nathan Krupp
Geneva, Ind.

FRETWORK PORTRAIT

PEOPLE'S CHOICE
EDITOR'S CHOICE

Battle Cry

by Kerry Hallam

Kerry Hallam of Sumter, S.C., used a photo of a medieval reenactor as a basis for this design.

"When I came across the photo, I immediately envisioned a commander leading his army into battle," Kerry explained. "So I wanted to give the Viking a fierce look. It actually turned out better than I anticipated."

The original photo was taken by Dan Landrom at the Washington Renaissance Festival. Kerry received permission from Dan to create a pattern based on the photo and enter the design in the contest.

"I changed the look of the beard three times until I was satisfied," Kerry said. "I also changed the focus of the eyes a little."

It took Kerry a week and a half to create the pattern and 20 to 25 hours to cut.

"The hardest part was cutting the chain mail," Kerry added. "There are 300 cuts in that area alone."

Kerry stack cut three blanks and finished this oak plywood version with two coats of semi-gloss polyurethane. Black felt is used to back the portrait.



**BEST
PROJECT**
DESIGN CONTEST
2010

Look for
details on
the 2010
contest in
the next
issue!

HONORABLE MENTIONS



Donna Baltz
Redgranite, Wis.



Kerry Hallam
Sumter, S.C.



Theresa Ekdorn
Roscommon, Mich.

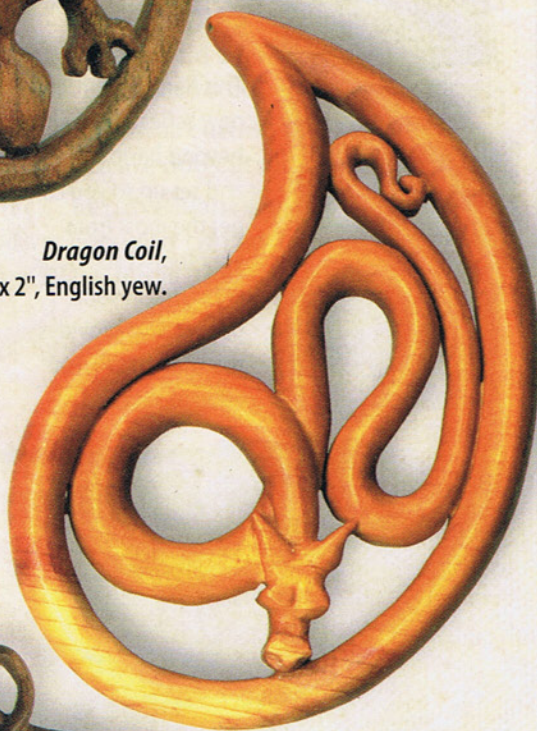
Scrolling Wooden Jewelry

Lizard,
1¼" x 2⅞",
English
walnut.



Slipknot,
1½" by 2",
English yew.

Dragon Coil,
3" x 2", English yew.



Curling Locks,
3¼" long,
English walnut.



Celtic woodworker Geoff King creates intricate scrolled jewelry

By Kathleen Ryan

Geoff King's unique designs feature intricate detailing with a distinct Celtic flare. Geoff creates his jewelry, which includes brooches, earrings, and necklaces, using local wood harvested from his personal garden.

Geoff started his woodworking career in 1985, introducing a line of bears and animals that evolved into jigsaw puzzles and Noah's Arks. That's when Geoff taught himself how to use a scroll saw. For the next six years he racked up awards in many aspects of woodworking, including furniture making and carving, but major health issues forced him to think in smaller terms.

"I started experimenting with jewelry and found I loved the work," Geoff said. "It was very exciting because with the scroll saw, I discovered I could cut any intricate design I could imagine. When the jewelry actually began selling, I expanded the line and I've been at it ever since."

A native of England, Geoff moved to Scotland with his wife, Fiona, and their son, Robert. They purchased a 150-year-old Scottish farmhouse nestled at the edge of the Scottish moor. Here, Geoff planted and maintains a lush garden.

"I am a passionate tree lover, so I never use new rainforest or tropical timbers. My wood comes from the off-cuts from furniture or musical instrument makers or from my garden trees that are thinned in maintenance," Geoff explained.

To date, the family has planted over two acres of lush garden. Geoff prunes the trees to obtain the timber used in his jewelry making. Geoff visits his garden often to gain inspiration for new creations.



Green Marble Trees,
1½" by 2½",
English walnut.



Penticoil,
2"-diameter,
English walnut.

Geoff also uses bog oak for special pieces. Bog oak comes from ancient trees that have been buried for thousands of years in bogs and moors. After a good kiln drying, the wood cuts nicely and offers unique characteristics. Each of Geoff's bogwood pieces comes with a certificate of authenticity, dating the wood used for that particular piece.

**"With the scroll saw,
I discovered I could cut
any intricate design
I could imagine."**

"My supply of this precious bog oak is shrinking and people are very protective of their sources," Geoff said. "I plan to spend some time exploring later this year in an effort to unearth more of this rare wood."

To add interest and excitement to his work, Geoff experiments with combinations of colors and textures. He frequently incorporates gemstones as well as amber and green marble. "For me, jewelry making is a fulfilling way to satisfy my creative urges," Geoff explained. "I truly enjoy making beautiful things that bring happiness to other people, whether they buy the pieces for themselves or give them as a gift. I simply love wood and love working with it."

What is Bogwood?

Geoff King often uses bogwood for his special jewelry pieces. Bogwood is cut from trees that once grew in the moist soil of a bog or wetland.

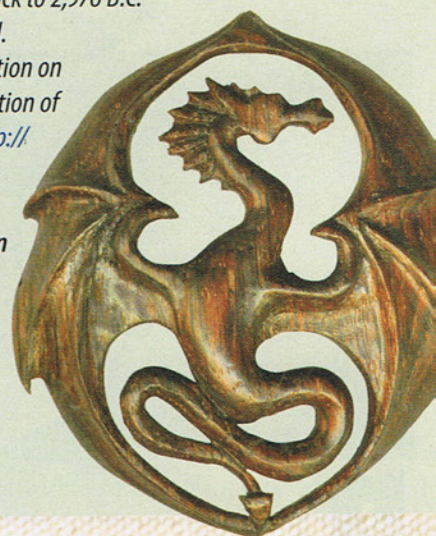
When a tree dies and falls into a bog, the highly acidic soil and water, caused by decaying plant life, soften and preserve the wood for hundreds, even thousands of years. The distinctive tan color of bogwood results from high amounts of organic matter in the bog. The tree's submersion also leads to deposit of tiny grains of silica, which can be seen as white flecks.

Over the past 500 years, the bogs have slowly been drained away. As the land dries up and shrinks, it forces buried bogwood to the surface. Geoff's bogwood was discovered this way.

Geoff sent a sample to The Queen's University School of Geosciences in Belfast, Ireland, for analysis. They dated the tree back to 2,976 B.C.—nearly 5,000 years old.

For more information on the history and formation of natural bogs, visit <http://tinyurl.com/7acuc>.

This bogwood **Dragon Brooch** comes with a letter from the Queen's University of Geosciences, verifying the age of the wood.



SCROLL SAW TIPS FROM GEOFF KING

- Be aware of the direction of the grain when orientating your design.
- Always keep in mind that short grain breaks easily.
- Avoid timber with knots—these are weak points.
- Don't push too hard—this causes the blades to break more often.
- Select the right blade for the thickness and hardness of wood.
- Be sure to use adequate lighting.
- Relax your shoulders and neck. Don't clench your jaw with concentration.



About the Artist

Geoff King's finely-carved jewelry and accessories also come as one-of-a-kind, custom made pieces. His finished jewelry ranges between \$30 and \$400. For more samples of his work, visit his website at www.woodlandtreasures.co.uk/.

Making Inlay Jewelry

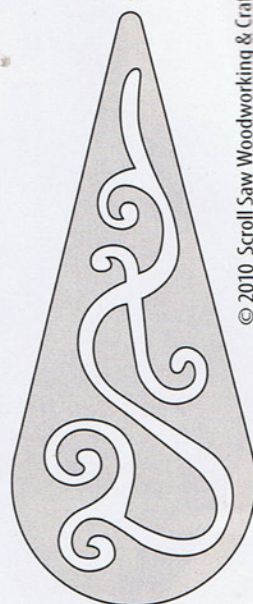
Highlight this fun, fashionable design with contrasting woods

By Geoff King

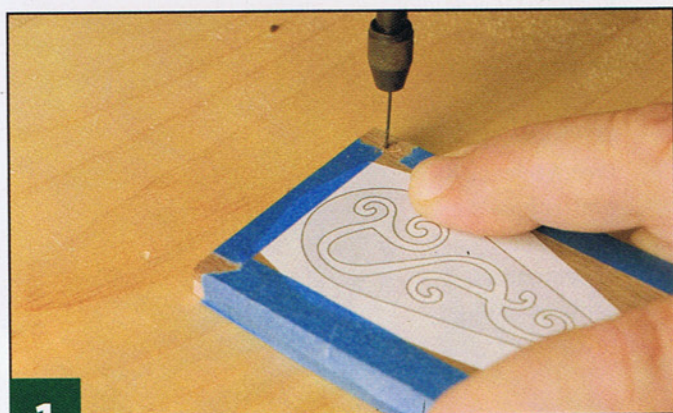


These beautiful inlay designs are easy to make and can be used as a pendant or earrings. Handmade jewelry makes a thoughtful gift.

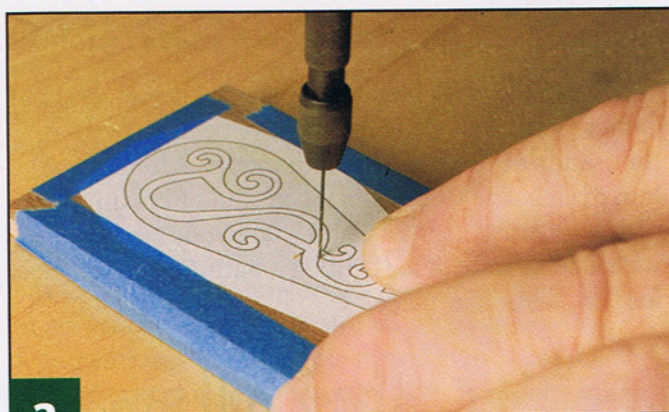
Chose sharply contrasting colors of wood for best results. I prefer to trace the design directly onto my blank, but you can also attach a copy of the pattern with spray adhesive.



© 2010 Scroll Saw Woodworking & Crafts



1 Prepare the blank. Stack together two pieces of 1/4"-thick contrasting wood. Drill holes in the waste area on all four corners of the blank with a #67 drill bit. Drive four small nails or brass pins through the holes.



2 Drill the blade-entry hole. Drill a blade-entry hole with a #76 drill bit. Position the hole on an inside pattern line in one of the corners. Use a drill press to make sure the hole is perpendicular to the blank.



3 Cut the inlay. Thread a #2/0 reverse-tooth blade through the blade-entry hole and cut along the inside lines. Carefully remove the inlay segments from the wood.



4 Cut the perimeter pattern line. Use a #4 reverse-tooth blade to follow along the outside pattern line. You will now have two teardrop shapes with contrasting inlay designs.



5

Insert the inlay. Dilute wood glue slightly with water and apply it to all of the sides of the inlay pieces with a small brush. Apply diluted glue to the inside edges of the teardrop shapes. Insert the contrasting inlays, making sure the inlay is flush with the main piece.



6

Fill any gaps. Spread glue on the top of the piece to fill in any tiny gaps. Wipe away any excess glue and let the glue dry. You can leave the pieces $\frac{1}{4}$ " thick if you are using them as pendants. To make matching earrings, cut the stock in half.



7

Resaw the earring in half. Use a marking gauge or ruler to draw a centerline on the outside edge. Clamp the stock in a vise and cut along the mark with a razor saw to create two identical earrings. Smooth the cut surfaces with 150-grit sandpaper and apply a thin coat of diluted glue to fill in any tiny cracks.



8

Finish the jewelry. Mark the location of the hardware hole with an ice pick, brad, or awl. Carefully drill a hole through the wood with a #67 drill bit. Sand the sides and edges with 220-grit sandpaper followed by extra-fine synthetic steel wool. Apply a waterproof oil finish and allow the oil to dry for two days.



9

Attach the hardware. Open the jump ring with round nose pliers. Insert the ring through the hole in the top of the earring. Thread a chain through the ring or attach the ear hook to the ring and bend the jump ring closed.

Materials & Tools

Materials:

- $\frac{1}{4}$ " x $1\frac{1}{2}$ " x $3\frac{1}{4}$ " (6mm x 40mm x 85mm) dark-colored close-grained hardwood
- $\frac{1}{4}$ " x $1\frac{1}{2}$ " x $3\frac{1}{4}$ " (6mm x 40mm x 85mm) light-colored close-grained hardwood
- Wood glue diluted slightly with water
- Sandpaper: 150 and 220 grits
- Extra-fine synthetic steel wool
- 4 each ear hooks and jump rings
- 4 each small brass pins or brads
- Waterproof furniture oil finish or finish of choice

Tools:

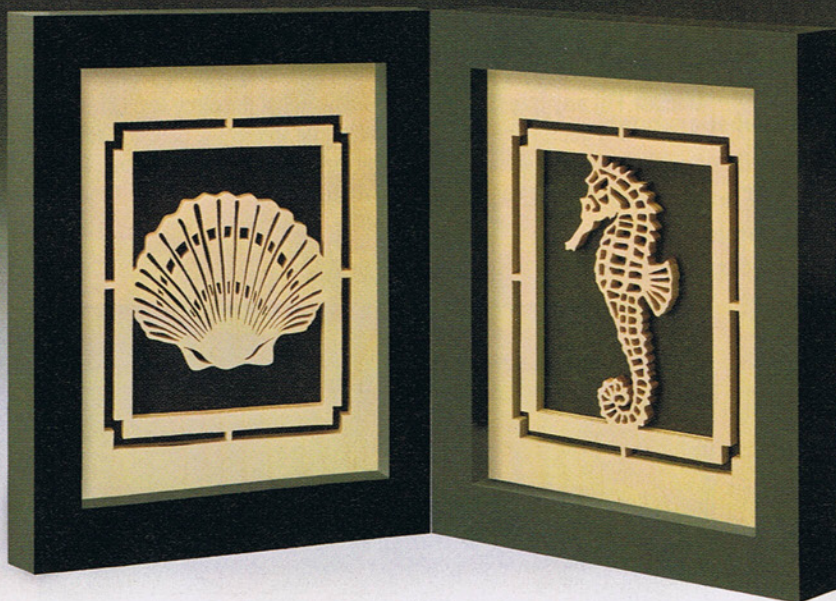
- #2/0 and #4 reverse-tooth blades or blades of choice
- Drill with #67 and #76 drill bits
- Hammer
- Pencil
- Small paintbrushes (applying glue and furniture oil)
- Round nosed pliers
- Brad, awl, or ice pick
- Marking gauge or ruler
- Vise
- Razor saw

Treasures of the Sea

Mix and match six elegant designs
for a variety of display options

By Gloria Cosgrove

Cut by Linda Helgersen



I have always been fascinated with the flowing shapes and alien look of creatures that live underwater. The simple yet elegant images are perfect for adding a touch of the seashore to your home décor.

The projects were originally designed as paper cuttings. Many paper cutting patterns are easily cut on the scroll saw with little or no adjustments to the design.

Each of these six designs have their own integrated matte, so you can display them any number of ways. Frame each panel individually and use them to create an accent wall. Mount several cuttings in the same frame for a polished look. Individual patterns can be used to decorate a box lid or can be cut from paper to make an overlay for custom note cards.

For best results, cut the blanks to size with a table saw or circular saw to ensure straight edges. Create stacks if desired and attach the patterns to the blanks with spray adhesive. Drill the required blade-entry holes. Cut the frets with a #3 reverse-tooth blade, remove the patterns, and sand away any fuzzies. Apply your finish of choice.



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



Materials:

- 1/8" to 1/4" x 5" x 7" (3mm to 6mm x 130mm x 180mm) Baltic birch plywood or wood of choice (per design)
- 1/8" x 5" x 7" (3mm x 130mm x 180mm) Baltic birch plywood (backing board)
- Spray adhesive

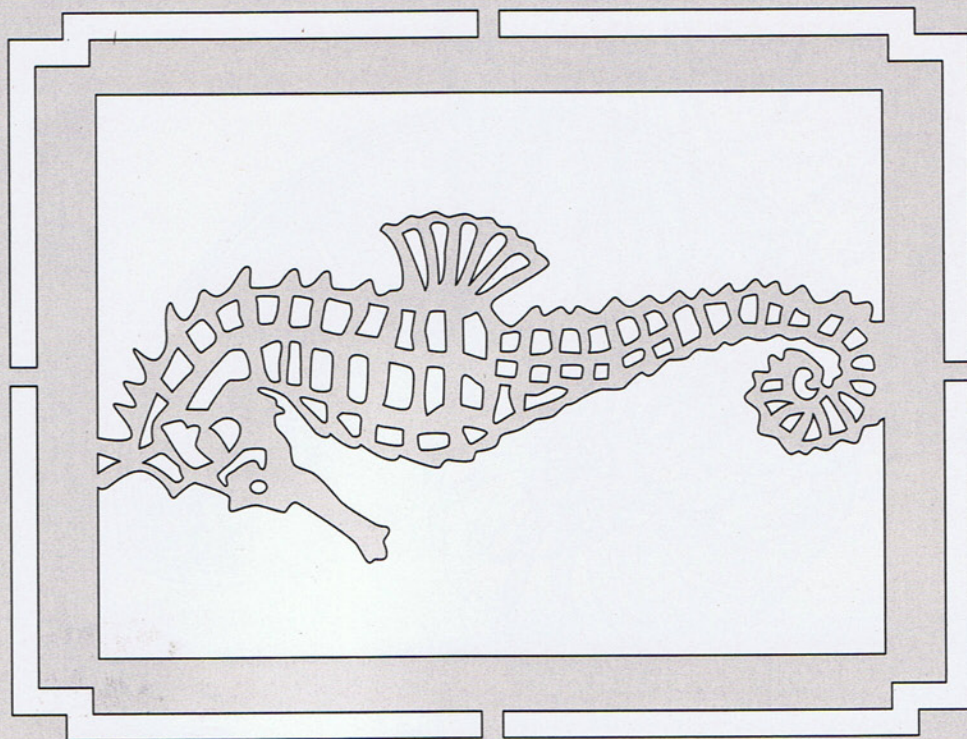
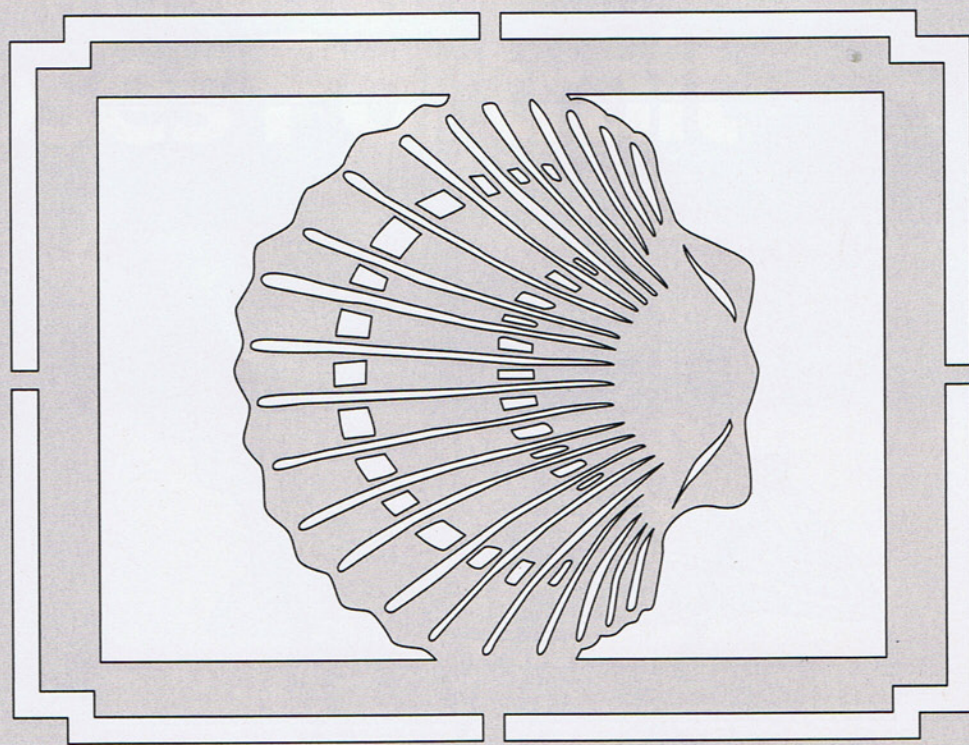
Materials & Tools

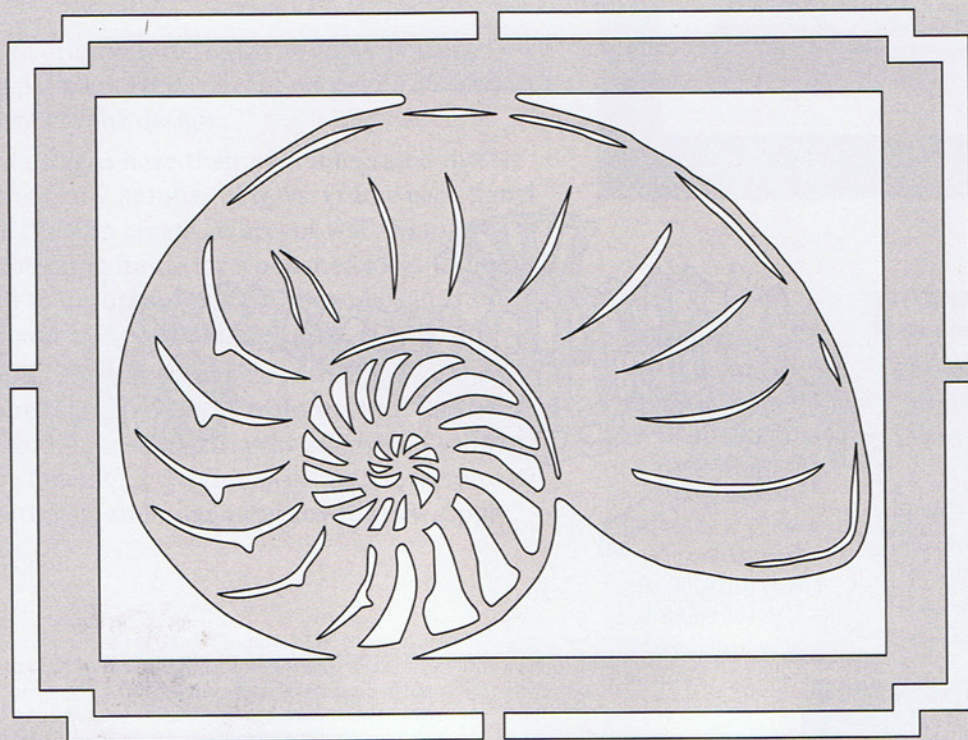
- Assorted grits of sandpaper
- Finish of choice

Tools:

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

Additional patterns for
TREASURES OF THE SEA are
in the pullout section.





Custom-Framed Moses Portrait



Build your own frame to showcase this stunning depiction of Moses with the Ten Commandments

By Michael Fehring

I cut a lot of religious fretwork portraits. In the late 1990s, I attempted to make my own patterns, but the process was time intensive and I wasn't satisfied with the quality.

After years of cutting other artists' patterns, I found Chris Messman's online tutorial that makes using Photoshop to create patterns much easier (see www.bit.ly/9Src6K). I use Chris' technique of applying the photocopy filter and making a few adjustments to get the basic image for my patterns. I also use a Bamboo graphics tablet to aid in my creations.

I discovered this image of Moses on a public domain website. The image had just the right level of detail for a scroll saw pattern.

I use $\frac{1}{8}$ "-thick solid-core hardwood plywood for this project. To make it easier to cut, I size the pattern for an 11" by 14" blank. Sand both sides of the blank with 320-grit sandpaper and attach the pattern with spray adhesive. Drill a handful of blade-entry holes. I start cutting from one of the corners. With this project, start in the upper-left corner of the pattern. If you start in the center, you lose the support of uncut wood. Place the blade-entry holes so your first cut is

along the side of the previous cut. This ensures support from the uncut portion of the design as you finish the individual fret and prevents broken parts due to weak areas.

Once all of the cutting is complete, spray the face of the pattern lightly with mineral spirits and let it sit for a few minutes. Then gently remove the pattern and glue residue. Turn the blank over and remove any fuzzies. I move a small torch quickly across the back side of the project to remove the majority of the fuzzies. Cut off the stubborn ones with a hobby knife.



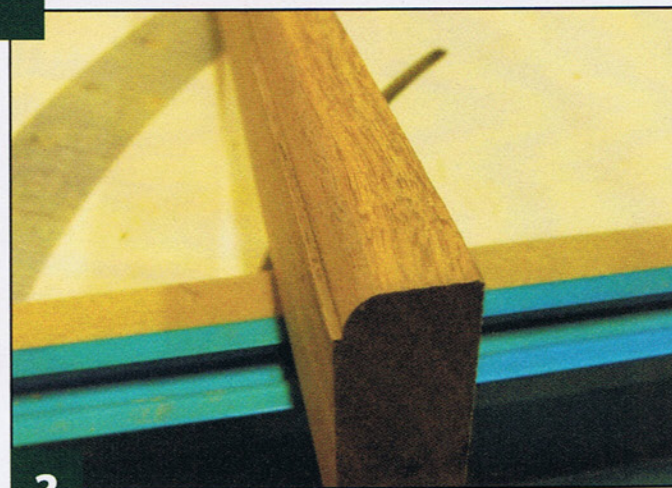
Making a Custom Frame

Use a simple formula to create a custom frame for any size portrait. Add the dimensions of the portrait with the width of the frame pieces and subtract the width of the rabbet. For this project, the portrait is 11" by 14", and the width of each of the frame pieces is 2" with a $\frac{1}{4}$ "-wide rabbet.

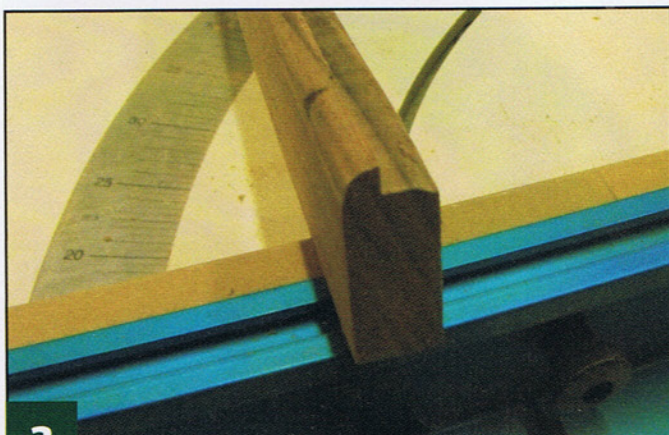
CUSTOM FRAME: CUTTING THE SIDES



1 Cut the stock to size. Use the formula to determine the dimensions: 11" (portrait) plus 4" (frame) minus $\frac{1}{2}$ " (rabbet) equals 14 $\frac{1}{2}$ " (367mm). For an 11" by 14" portrait, our frame pieces should be 14 $\frac{1}{2}$ " (367mm) by 17 $\frac{1}{2}$ " (445mm). Cut the pieces slightly oversized.

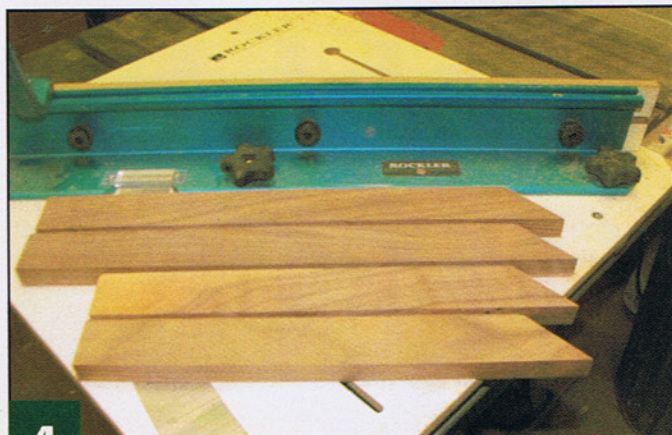


2 Shape the inside of the frame. Round over one edge of the blanks with a router and a $\frac{1}{4}$ " (6mm)-radius round-over bit. This creates a slightly rounded edge on the side bordering the portrait.



3

Cut the rabbet for the artwork and glass. Use the router and a $\frac{1}{4}$ " (6mm)-radius rabbet bit to cut the $\frac{1}{4}$ " (6mm)-wide by $\frac{1}{4}$ " (6mm)-deep rabbet. The rabbet is on the opposite face of the rounded edge.



4

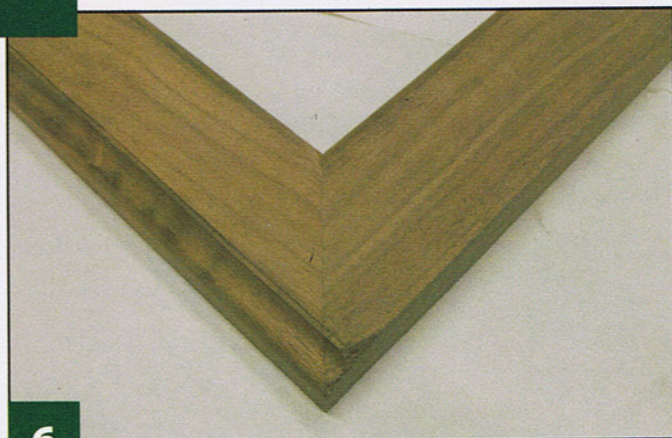
Cut the corner miters. You can use a miter saw, but I use a table saw. Cut the first 45° miter on each blank. To cut perfectly matched sides, clamp the long sides together and make the second 45° miter cut. Repeat the process on the short sides.

CUSTOM FRAME: ASSEMBLING THE FRAME



5

Assemble the frame. Dry fit the pieces. Apply glue to each miter cut and reassemble the frame. Use a strap clamp or a frame clamp to apply firm even pressure. Allow the glue to dry. Reinforce the end-grain joints with finishing nails. Keep the nails toward the back of the frame so they don't interfere with the decorative edges. Drive the nails from the edge across the miter. Both nails can come from one side or drive one from each direction. Drill pilot holes to avoid splitting the wood and sink the heads.



6

Cut the decorative edges. Sand the front, back, and sides of the assembled frame. Use a router with a $\frac{3}{16}$ " (5mm)-radius ogee bit to cut a decorative edge around the perimeter of the frame. Cut the outer edge after assembling the frame to produce a cleaner look on the outside corners. Sand the edges as needed and apply Danish oil or your finish of choice. Secure the glass and portrait in the frame with picture clips.

Materials:

- 2 each $\frac{1}{8}$ " x 11" x 14" (3mm x 280mm x 355mm) hardwood plywood or wood of choice (portrait, backing)
- $\frac{3}{4}$ " x 2" x 14 $\frac{1}{2}$ " (20mm x 50mm x 370mm) hardwood of choice (short frame sides)
- $\frac{3}{4}$ " x 2" x 17 $\frac{1}{2}$ " (20mm x 50mm x 445mm) hardwood of choice (long frame sides)
- Spray adhesive
- Mineral spirits
- Black spray paint and finish of choice
- Assorted grits of sandpaper up to 320 grit
- Wood glue
- Finishing nails and picture clips

Tools:

- #2/0 and #1 FD new spiral blades or blades of choice
- Drill with #68 drill bit and bit holder
- Small torch
- Hobby knife
- Router
- Router bits: $\frac{1}{4}$ " (6mm)-radius rabbet bit with bearing, $\frac{1}{4}$ " (6mm)-radius round-over bit with bearing, $\frac{3}{16}$ " (5mm)-radius ogee with fillet bit with bearing
- Strap clamp

Materials & Tools

Pattern for the **MOSES PORTRAIT** is in the pattern pullout section.



Michael Fehring retired from the United States Marine Corps after 20 years of service. Michael, now a system engineer, lives in Ridgecrest, Calif., with his wife and three children. He has been scroll sawing since the mid 1990s and has been creating patterns for a little over a year.

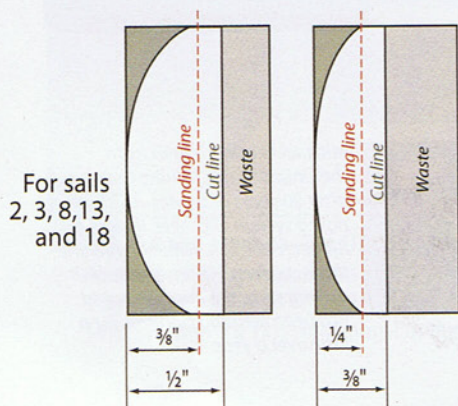
Building an Elegant Sailing Ship



Cut the sails individually and use minimal shaping to add motion to this design

By Carol and Homer Bishop

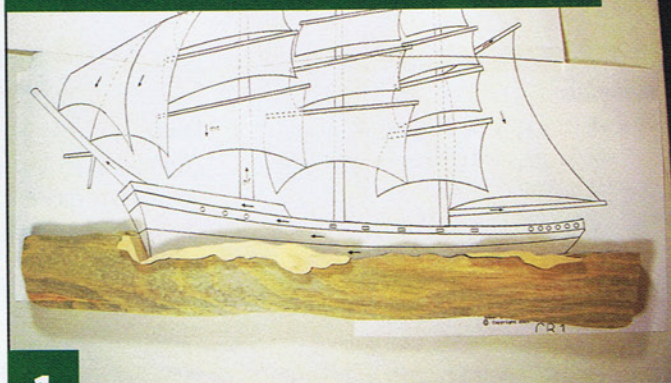
The three-masted sailing ship is the first pattern we developed. The project combines standard scrolling with intarsia techniques to produce the effect of wind-filled sails. The ship makes a beautiful addition to a nautical décor and is the perfect gift for sea-faring friends.



Sail sanding profiles

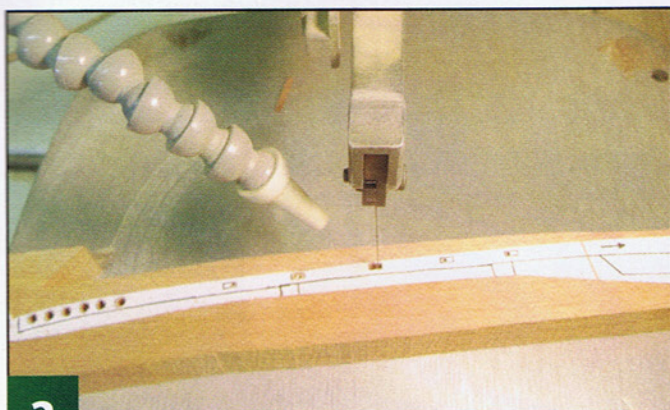
For all other sails

SHIP: CUTTING THE INTARSIA



1

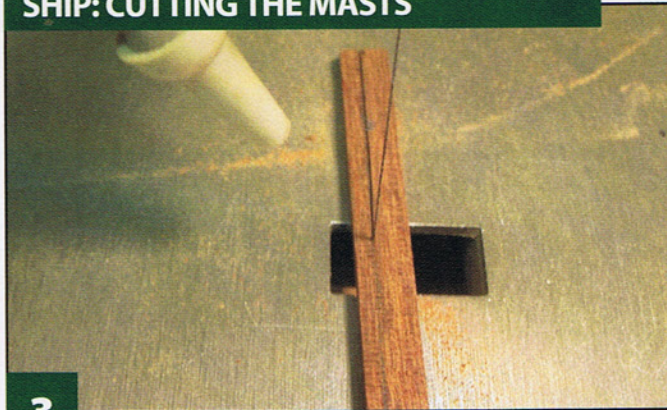
Cut the ocean. Make several copies of the pattern and transfer the ocean and boat pattern pieces to the appropriate blanks. Orient the pattern to take advantage of the wood's grain. Cut the ocean swells from a light wood, such as cottonwood.



2

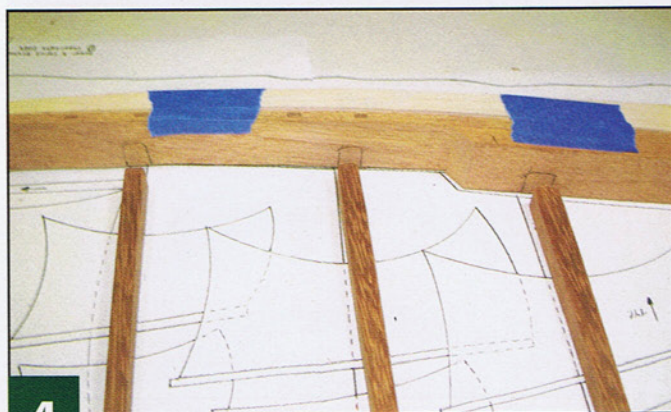
Cut the ship. Before cutting the boat pieces, drill $\frac{1}{8}$ " (3mm)-diameter holes for the round holes on the gun deck. Drill $\frac{1}{16}$ " (2mm)-diameter blade-entry holes and cut the square holes. Then cut the perimeter of the boat pieces.

SHIP: CUTTING THE MASTS



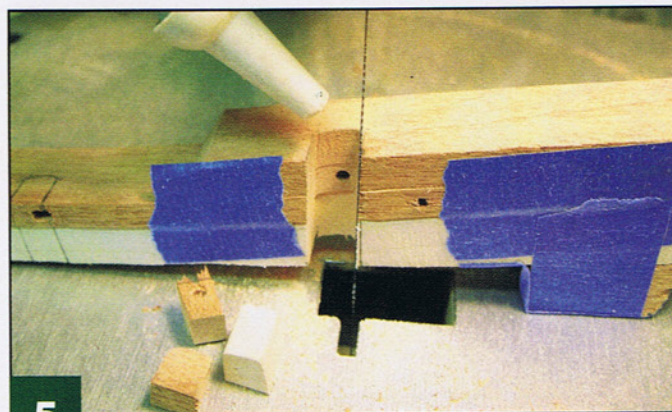
3

Cut and shape the masts, spars, and bowsprit. Transfer the pattern for the masts, bowsprit, and spars to the appropriate blanks. Cut and sand the masts, spars, and bowsprit. Taper the ends of the masts and round the front of all of the pieces.



4

Mark the mast slots. Position the masts on a copy of the pattern. Tape the hull pieces together and place them on top of the masts. Mark the position of the masts on the top and bottom of the hull. Draw a line between the marks on the back of the hull pieces. Trace around the masts on the top of the hull.



5

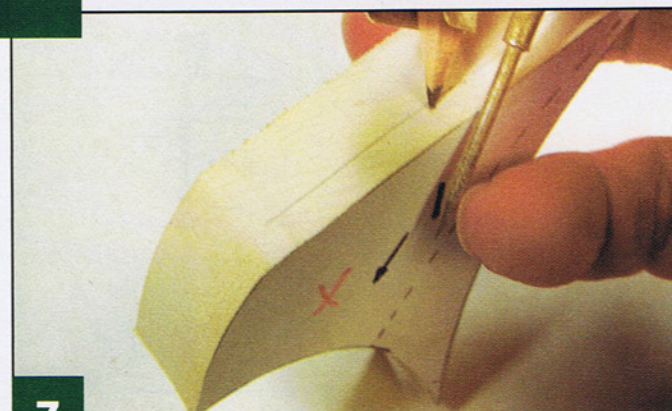
Cut the slots for the masts. Place the taped-together hull pieces behind the blade and add shims to the front and back of the ship until the blade is aligned with the drawn lines. We use a $\frac{1}{2}$ " (12mm)-thick shim for the front and a $\frac{1}{4}$ " (6mm)-thick shim for the back. Tape the shims to the hull and cut the slots.

SHIP: MAKING THE SAILS



6

Cut the sails. Transfer the individual sail patterns to the blank. We use $\frac{3}{4}$ " (20mm)-thick stock to make sanding easier and then trim the sanded pieces to the appropriate thickness. Cut the perimeter of each sail.



7

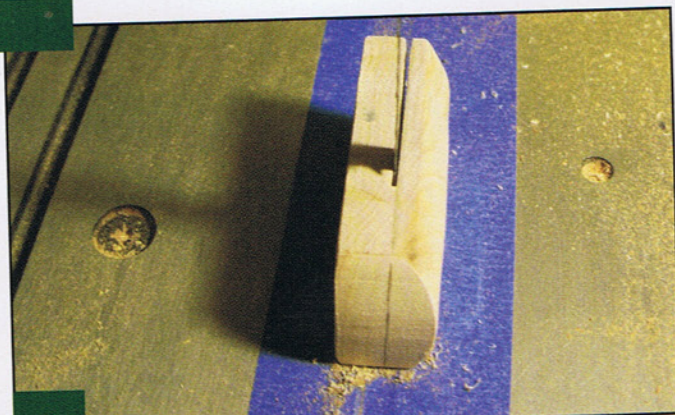
Mark the sanding depth. Mark the depth of the sanding lines as indicated on the sanding profiles on page 36. Use a compass to mark the top and bottom edges of each sail. Number the back of each sail and remove the patterns.

SHIP: SHAPING THE SAILS



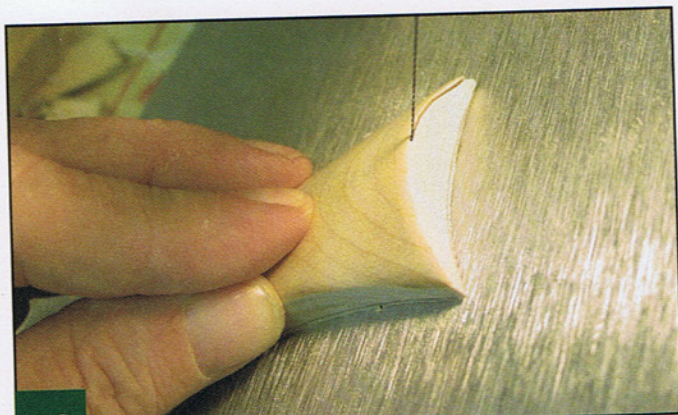
8

Shape the sails. The sails are thickest in the center and taper down to the lines on the top and bottom edges. Use a belt sander to round the sails down to the lines. Finish sanding the rounded front with a flexible sander.



9

Cut the waste from the sails. Measure from the highest point on the front of the sail and mark the cut lines as indicated on the sanding profiles on page 36. Cut the waste from the back of the sail with the scroll saw and renumber the sails.



10

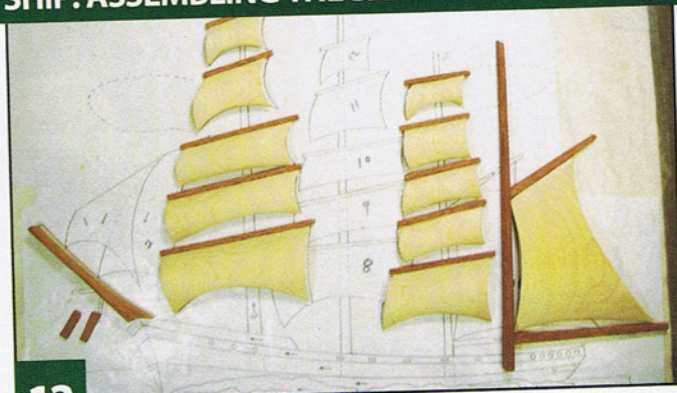
Begin undercutting the sails. Set the saw to cut at a 45° angle. Follow the shape of the sail and cut along the bottom and right side on sails 1, 2, and 18. Practice this technique on scrap wood first.



11

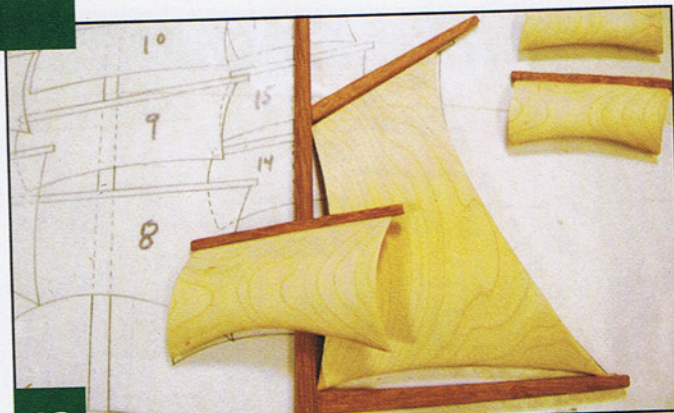
Undercut the remaining sails. Cut along the bottom, right, and left sides on all of the other sails. This creates a scalloped cut which makes the sails look thinner without making them too fragile.

SHIP: ASSEMBLING THE SAILS



12

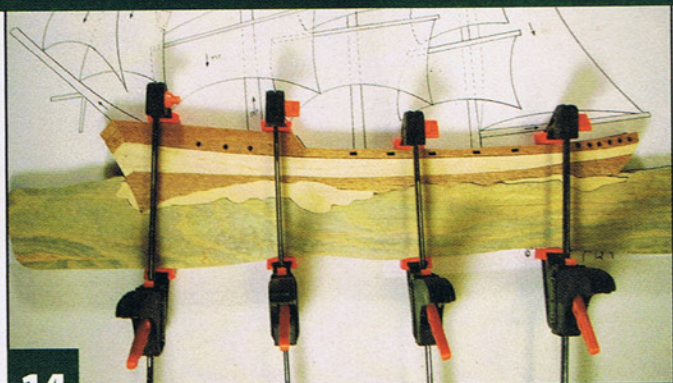
Attach the spars to the sails. Finish sand the front and back of each sail. Sand the underside of sail 1 to allow it to fit over sail 2. Use the pattern as a guide and cut the spars to length. Make sure the top of each sail is flat and glue the spars to the top of each sail. Glue the top and bottom spar on sail 18 at the same time you glue that sail to the mast.



13

Attach the sails to the masts. Apply glue on the front of the masts where the sails join. Tip the left side of the sail down against the pattern as you glue the sails to the masts. Use spacers to support the sails and weigh the sails down with sand bags or use clamps while the glue dries. Flip the masts over and run a bead of glue down the sides of the mast to reinforce the joints.

SHIP: ASSEMBLING THE SHIP



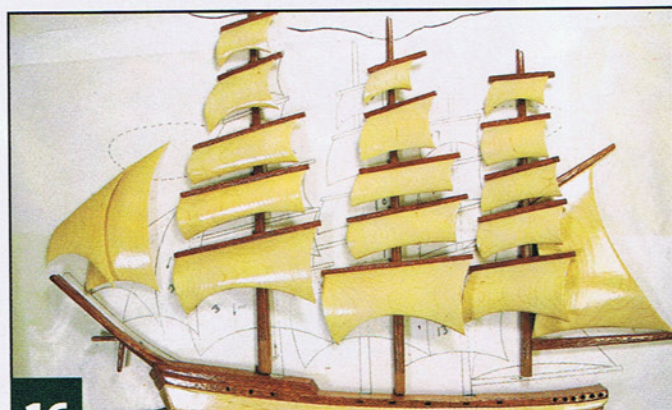
14

Assemble the ship and water. Sand and shape the ship and water. Use small sections of the mast material to keep the mast slots aligned when you glue the ship together. Glue the bowsprit to the front of the ship. After the glue dries, apply a clear sealer to the pieces.



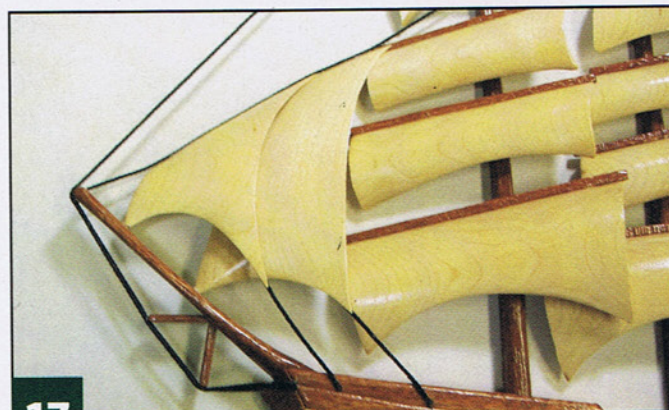
15

Finish the sails. Mask off the bottom of the masts where they will be glued to the hull. Spray the sails with a clear sealer. Apply the sealer to the back of the sails, allow it to dry, and then apply the sealer to the front. Glue the jib sails together and finish the front and back of the assembly.



16

Glue the masts and jib sails to the ship. Use the pattern covered with wax paper to help you glue the masts in place. Flatten the points of the jib sails slightly to make it easier to glue the sails to the bowsprit. Scrape away a little sealer on the bowsprit where the jib sails attach. Use shims to hold the jib sails in place until the glue dries. The jib sails are also glued to the sail at the top for extra support.



17

Add the riggings. Use 4mm black cord. You can add as much rigging detail to the project as you want. We added just a few riggings on the bowsprit, the jib sails, and around the outside of the masts, but you can run rigging from each sail to the spar or to the deck below. Add two hangers to the back of the ship.

Materials:

- $\frac{3}{4}$ " x 3" x 18" (20mm x 75mm x 460mm) blue pine or figured wood of choice (ocean)
- $\frac{3}{4}$ " x 3" x 14" (20mm x 75mm x 355mm) mahogany or red wood of choice (hull)
- $\frac{3}{8}$ " x 2" x 12" (10mm x 50mm x 305mm) mahogany or red wood of choice (masts, bowsprit, etc.)
- $\frac{1}{8}$ " x 1" x 10" (3mm x 25mm x 255mm) mahogany or red wood of choice (spars)
- $\frac{3}{4}$ " x 2" x 6" (20mm x 50mm x 155mm) cottonwood or light wood of choice (ocean swells)
- $\frac{3}{4}$ " x 2" x 14" (20mm x 50mm x 355mm) soft maple or medium-tone wood of choice (middle of hull)
- $\frac{3}{4}$ " x 6" x 21" (20mm x 155mm x 535mm) hard maple or medium-light wood of choice (sails)
- Assorted scrap blocks (support while cutting slots and gluing sails)
- 4mm black crochet thread or cord (riggings)
- Spray adhesive
- Masking tape

Materials & Tools

- Wood glue
- Sealant or varnish

Tools:

- #4 skip-tooth blades
- Belt sander
- Drill press
- $\frac{1}{16}$ " (2mm)- and $\frac{1}{8}$ " (3mm)-diameter drill bits
- Wood clamps
- Flap sander

Patterns for the **ELEGANT SAILING SHIP** are in the pattern pullout section.



Carol and Homer Bishop have been cutting and designing intarsia patterns for several years. Some of their patterns can be found through Scroller Ltd. and the Wooden Teddy Bear. Carol and Homer can be contacted at hcbishop2005@yahoo.com.

Making an Inlay Jewelry Box



Build this attractive box with easy-to-cut layers

By Gary MacKay



This simple jewelry box is easy to build and makes a lovely gift. Create the box by gluing together layers of stock cut individually on the scroll saw. Use the simple floral inlay pattern to decorate the lid or customize the box with a design of your own.

I recommend cherry for the main box. Use contrasting woods for the inlay design. I use

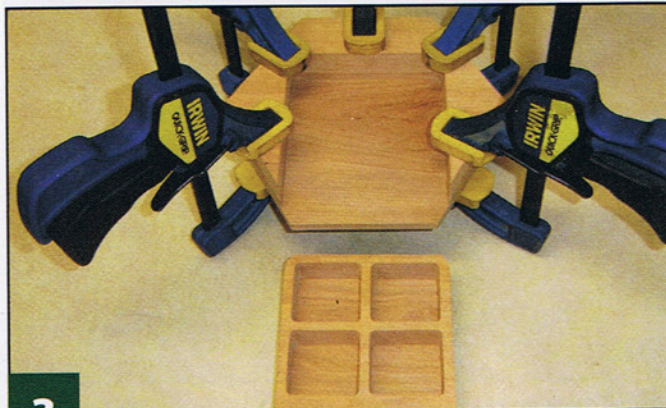
purpleheart, aspen, and walnut for the inlay flower. Sand both sides of your stock and remove any sawdust before cutting the pieces. I attach the stock with double-sided tape for stack cutting and cover the pattern with clear packaging tape to help lubricate the blade and prevent the wood from burning.

JEWELRY BOX: CREATING THE MAIN BOX



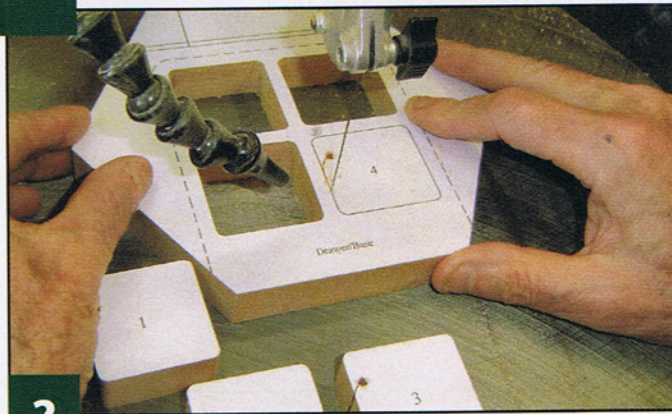
1

Cut the bottom two layers. Attach two $\frac{1}{4}$ " (6mm)-thick blanks together. Attach a drawer/base pattern to the stack and cover the pattern with tape. Cut the perimeter with a #5 blade. Separate the stack and cut the dashed line on the single blank. Remove the patterns. Set the rectangular inside piece aside. Align the perimeters and glue and clamp the remaining pieces together.



3

Assemble the bottom drawer layer. Glue and clamp the $\frac{3}{4}$ " (20mm)-thick hexagonal piece from step 2 to the bottom two layers which were assembled in step 1. Align the perimeter and the inner drawer opening. Glue and clamp the rectangular piece cut in step 1 to the bottom of the compartment section.



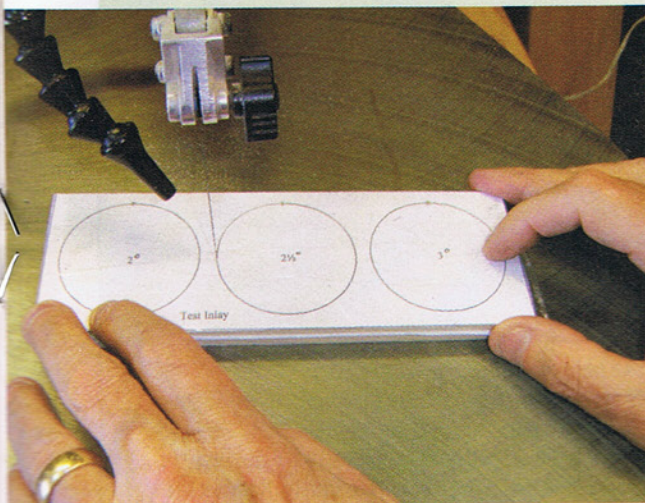
2

Cut the bottom drawer. Attach a drawer/base pattern to a $\frac{3}{4}$ " (20mm)-thick blank. Cover the pattern with tape. Drill blade-entry holes in the four compartments. Use a #9 blade to cut the perimeter and the four compartments. If you plan to line the compartments with felt, save the compartment cut outs with the patterns attached. Cut the dashed line and remove the pattern.



4

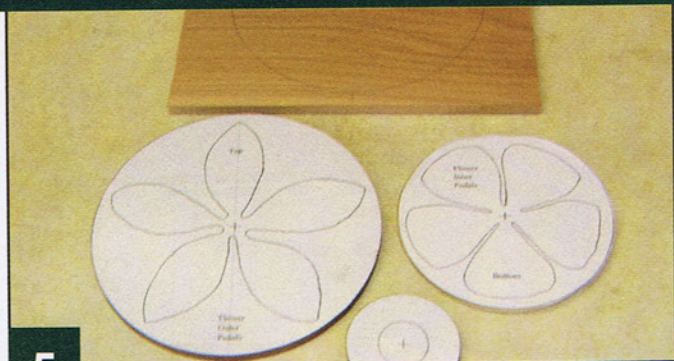
Make the second drawer. Repeat steps 1 through 3, gluing and clamping the second drawer layer to the assembly created in the first three steps. Adhere a drawer/base pattern to a $\frac{1}{4}$ " (6mm)-thick blank. Cut only the outside perimeter and remove the pattern. Glue and clamp this piece to the top of the box assembly.



Determining the Inlay Cutting Angle

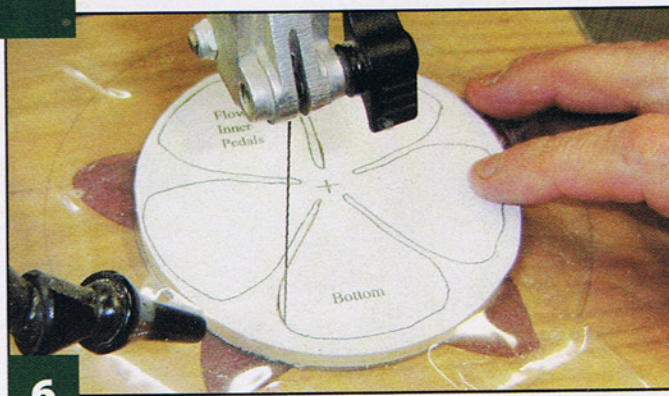
To produce a tight-fitting inlay you need to determine the exact angle for your saw table. Use several strips of double-sided tape to attach two $\frac{1}{4}$ " by $2\frac{1}{2}$ " by $2\frac{1}{2}$ " (6mm by 64mm by 64mm) scraps of wood together. Attach the test inlay pattern to the top of the stacked blank. Drill a $\frac{1}{16}$ " (2mm)-diameter blade-entry hole where indicated. Tilt the scroll saw table down $2\frac{1}{2}^\circ$ to the right. Thread a #5 blade through the hole and cut the circle in a counterclockwise direction (rotate the wood clockwise so the blade follows the pattern line counterclockwise). The bottom piece should fall out and the top piece should fit snugly into its place. If the top piece doesn't fit completely into the bottom piece, decrease the angle of the scroll saw table to 2° and cut another circle. If the top piece fits loosely into the bottom piece, increase the angle of the scroll saw table to 3° and cut another circle. Continue adjusting the angle of the table and cutting test inlays until the top piece fits flush in the bottom piece.

JEWELRY BOX: MAKING THE INLAY



5

Prepare the inlay. Use a pencil and a straight edge to mark diagonals, locating the center on the $\frac{1}{4}$ " (6mm)-thick lid blank. Use a compass to draw a circle with a $2\frac{3}{4}$ " (70mm) radius. Adhere the patterns to the inlay stock. Cut the inlay stock into circles. Align the grain and stack the outer petals stock over the circle on the lid blank. Cover the stack with tape to keep the stack secure.



6

Cut the inlay. Drill a $\frac{1}{16}$ " (2mm)-diameter blade-entry hole along a line near the center of the pattern. Set the table to the correct angle (See "Determining the Inlay Cutting Angle") and cut counterclockwise along the lines with a #5 blade. Glue the outer petals into the lid stock. Redraw the diagonals and repeat the steps to inlay the inner petals and then the flower center in the lid.

JEWELRY BOX: MAKING THE LID AND HINGE



7

Cut the compartment and lid. Attach a compartment/lid pattern to a $\frac{3}{4}$ " (20mm)-thick blank. Drill a blade-entry hole and cut both the dashed and solid lines with a #9 blade. Remove the pattern. Sand the back of the inlay. Glue and clamp the inlay to a $\frac{1}{4}$ " (6mm)-thick blank. Use a pin through the compartment/lid pattern to center the pattern on the inlay lid. Cut the solid line and remove the pattern.



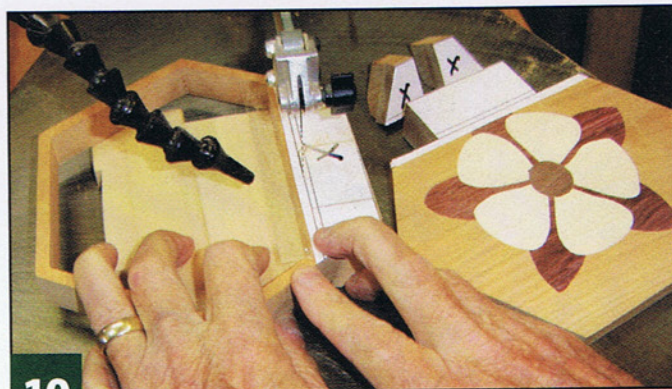
8

Prepare the hinge blank. Use a U.S. quarter or the hinge template to draw rounded corners on the ends of the $\frac{1}{2}$ " x 3" x 6" (13mm x 80mm x 155mm) stock. Mark both sides of each end. Use a belt sander to round the corners to these marks. On the flat side of the blank, make a mark 1" (25mm) in from each rounded edge and draw a line the length of the blank. Cut the hinge blank into two $\frac{1}{2}$ " by 1" by 6" (13mm by 25mm by 155mm) pieces.



9

Attach the hinges. With the flat side of the hinge against the stock, align the flat edge with the top of the blank. Glue and clamp one hinge piece to the bottom of the lid and one hinge piece to the top of the top compartment. When dry, trim off the overhanging wood on the hinge pieces.



10

Cut the hinges. Adhere the hinge patterns to the appropriate stock on the side opposite the hinge pieces. Support the pieces with a scrap piece of $\frac{1}{2}$ " (13mm)-thick wood when cutting. Cut along the dashed lines on each pattern, leaving the shaded area. Make sure the corners are square. Remove the patterns. Glue and clamp the top compartment to the box.

JEWELRY BOX: FINISHING THE BOX



11

Attach the lid. Clamp the lid to the box. Drill a $\frac{1}{8}$ "-diameter by $1\frac{1}{4}$ "-deep (3mm by 32mm) hole $\frac{1}{2}$ " (13mm) in from the top of the compartment section and $\frac{1}{2}$ " (13mm) down from the top of the hinge on both sides. Unclamp the lid and enlarge the holes in the lid hinge with a $\frac{3}{64}$ " (3.5mm)-diameter bit. Test the fit of the dowels. Then add a small drop of glue to each hole in the lid hinge and insert the dowels.



12

Finish the box. Cut the hinge dowels even with the edges of the box. Sand the drawers until they slide smoothly in the openings. Tape the drawers in place from the front and sand the other sides of the box. Remove the tape from the drawers and tape them in place from the sides. Sand the front of the box and remove the tape. Cut and sand the feet and pulls. Glue the feet and drawer pulls in place and apply your clear finish of choice.

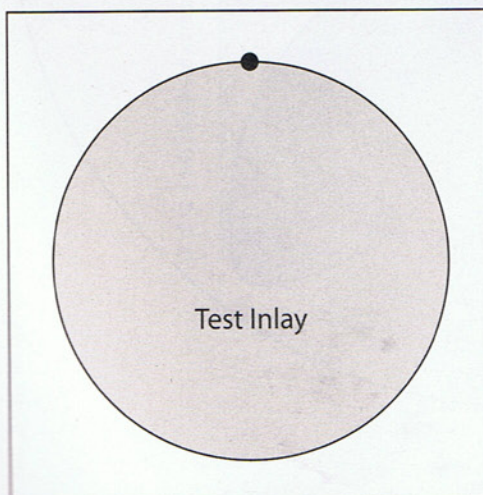
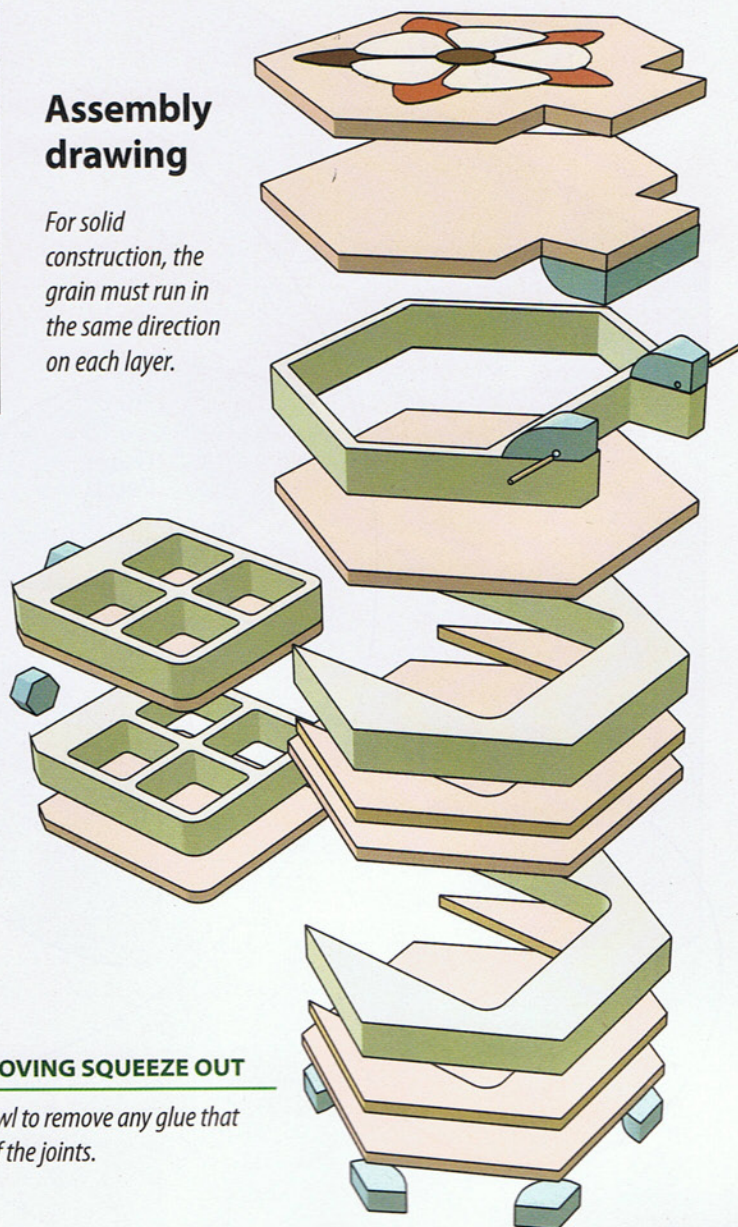


13

Line the compartments with felt. (optional) Apply wood glue to the poster board and place the felt on the posterboard. Place several books on the felt to hold it in place while the glue dries. Place the saved compartment cutouts on the posterboard side with the pattern side down. Trace around the compartment cutouts and cut the felt with scissors. Apply tacky glue to the back of the posterboard and place the felt liners in the compartments.

Assembly drawing

For solid construction, the grain must run in the same direction on each layer.



TIP REMOVING SQUEEZE OUT

Use a scratch awl to remove any glue that squeezes out of the joints.

Materials:

- 7 each $\frac{1}{4}$ " x $6\frac{1}{4}$ " x $7\frac{1}{2}$ " (6mm x 160mm x 190mm) cherry (bases, drawer/compartments bottoms, lid)
- 3 each $\frac{3}{4}$ " x $6\frac{1}{4}$ " x $7\frac{1}{2}$ " (19mm x 160mm x 190mm) cherry (drawers and top compartment)
- $\frac{1}{2}$ " x 3" x 6" (13mm x 80mm x 155mm) cherry (hinge)
- $\frac{1}{4}$ " x $5\frac{1}{2}$ " x $5\frac{1}{2}$ " (6mm x 140mm x 140mm) purpleheart (outer petals)
- $\frac{1}{4}$ " x 4" x 4" (6mm x 105mm x 105mm) aspen (inner petals)
- $\frac{1}{4}$ " x 2" x 2" (6mm x 50mm x 50mm) walnut (flower center)
- $\frac{1}{2}$ " x 1" x $8\frac{1}{2}$ " (13mm x 25mm x 215mm) cherry (box feet)

- $\frac{1}{2}$ " x 1" x 2" (13mm x 25mm x 50mm) cherry (drawer pulls)
- 2 each $\frac{1}{4}$ " x $2\frac{1}{2}$ " x $2\frac{1}{2}$ " (6mm x 65mm x 65mm) scrap wood (test inlay)
- 2 each $\frac{1}{8}$ " (3mm)-diameter x 2" (50mm)-long wooden dowels (hinge)
- Temporary-bond spray adhesive
- Double-sided tape
- Clear packaging tape
- Compass with lead
- Masking tape
- Wood glue
- Sandpaper, assorted grits
- U.S. Quarter (or use template)
- Clear finish of choice
- 9" x 12" (230mm x 305mm) felt*

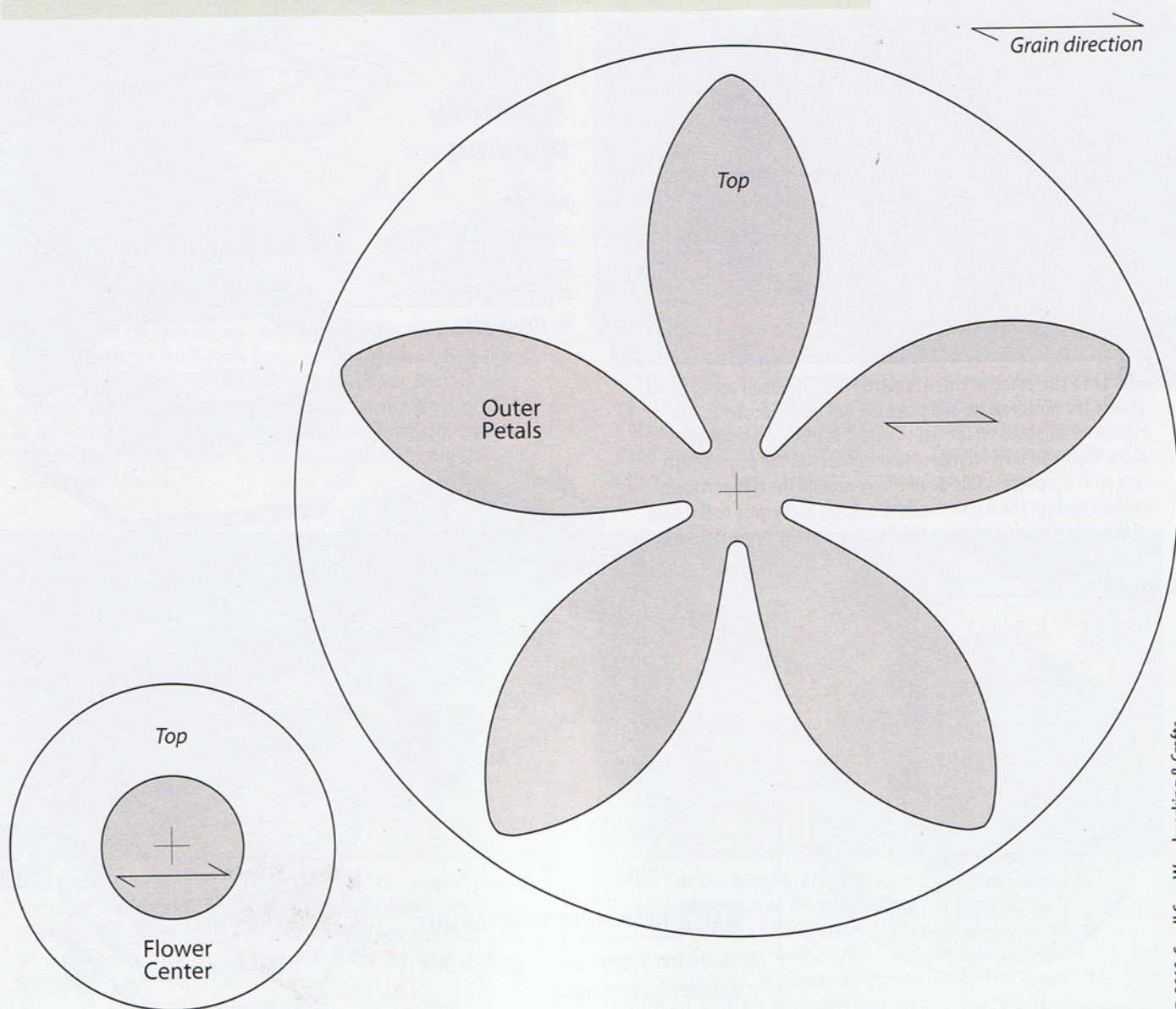
Materials & Tools

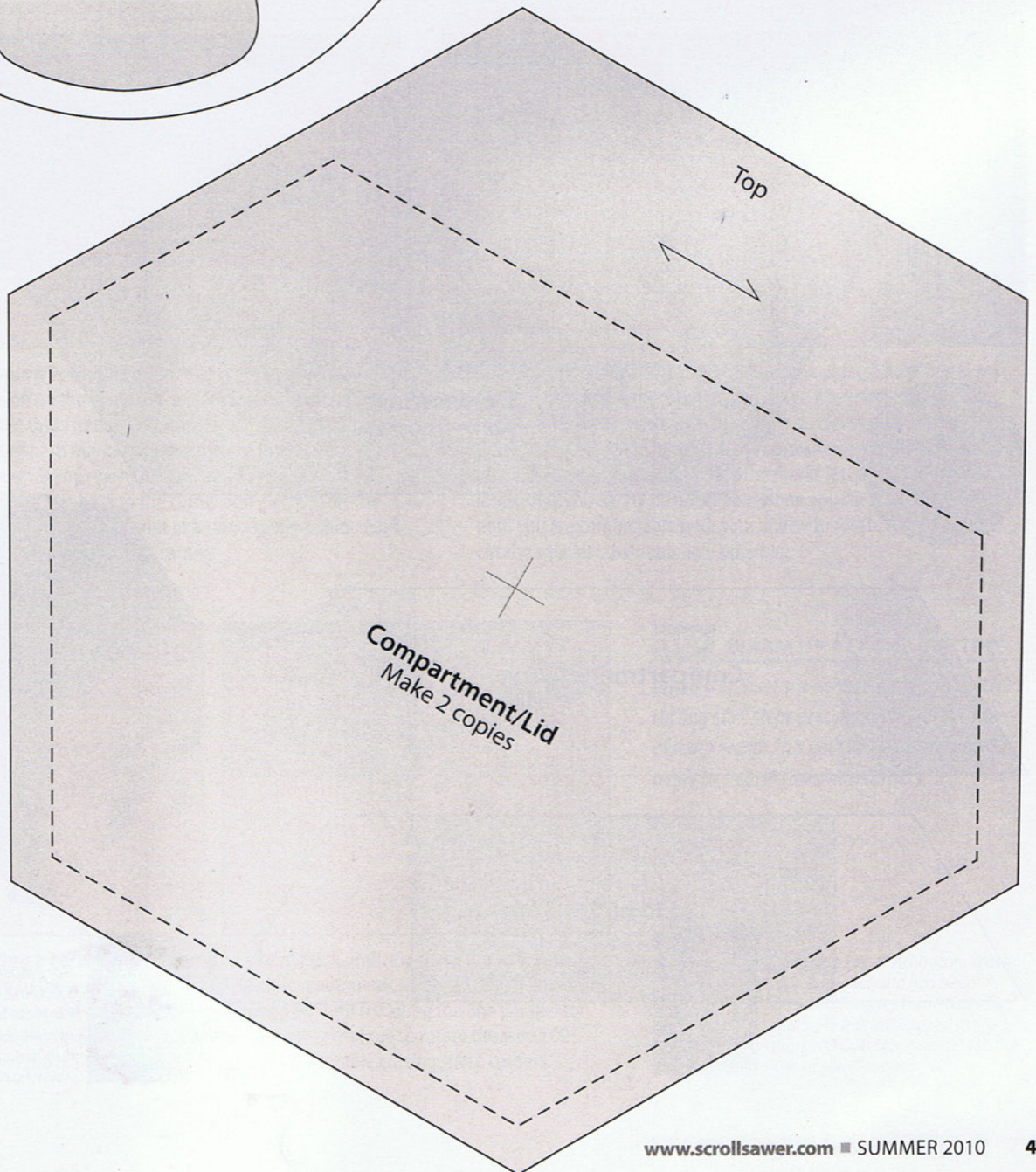
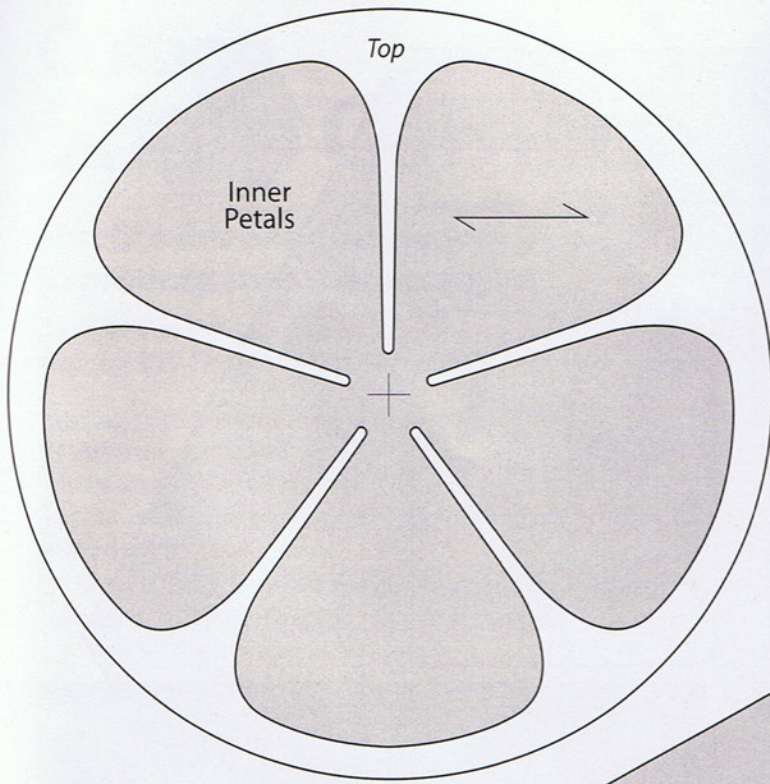
- 9" x 12" (230mm x 305mm) poster board*
- Tacky craft glue*

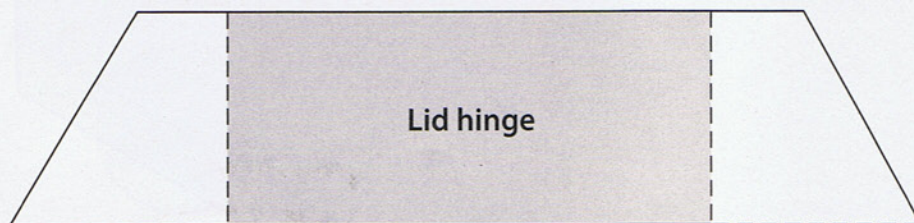
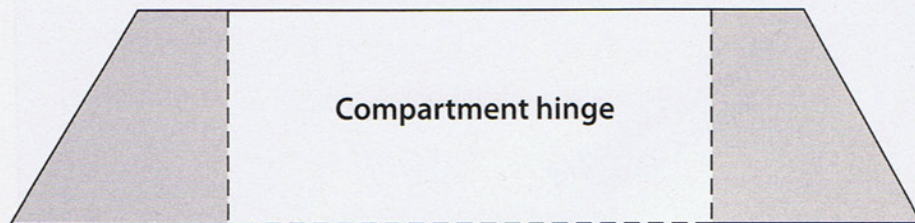
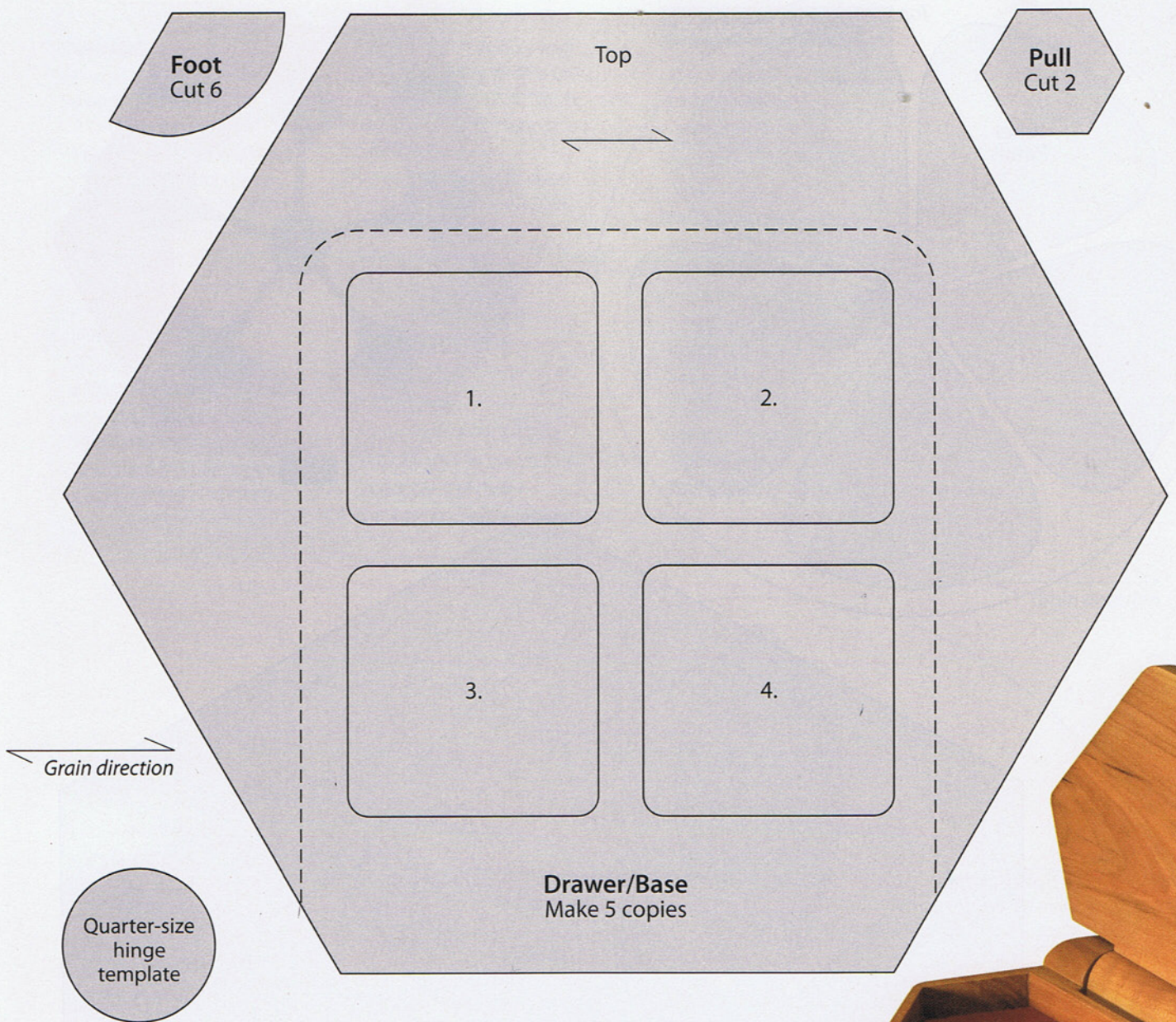
*Optional for compartment liners.

Tools:

- #5 and #9 skip-tooth blades or blades of choice
- Drill with $\frac{1}{16}$ " (2mm), $\frac{1}{8}$ " (3mm), and $\frac{3}{64}$ " (3.5mm)-diameter drill bits
- Belt sander
- Clamps
- Awl (to remove glue squeeze out)
- Pin (for pattern placement)







Gary MacKay of Myrtle Beach, S.C. is the author of *Box-Making Projects for the Scroll Saw*, available from Fox Chapel Publishing, www.FoxChapelPublishing.com.

Cutting Sharp Corners

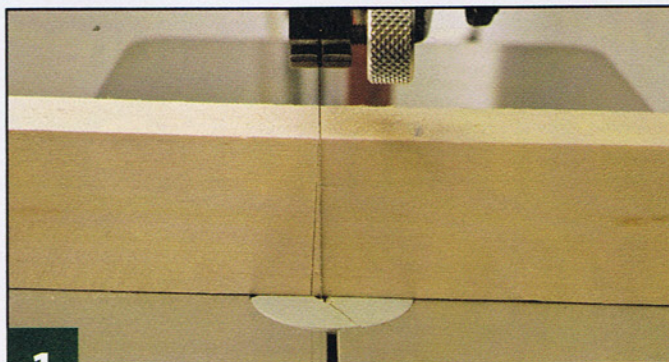
Practice this basic technique to produce crisp sharp corners

By Dave Van Ess

Step-by-Step Photos by Ben Fink and Scott Kriner

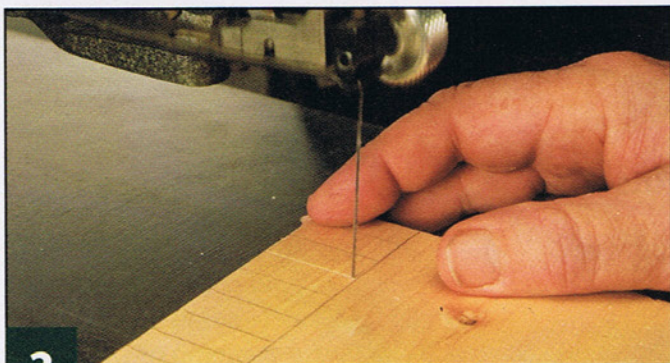
Cutting tight corners is an acquired skill and it intimidates many new scrollers. Some scrollers turn in the waste area or approach the corner from multiple directions. However, these techniques will not work with some designs.

With a little practice, you can master cutting sharp corners without cutting into the waste wood.



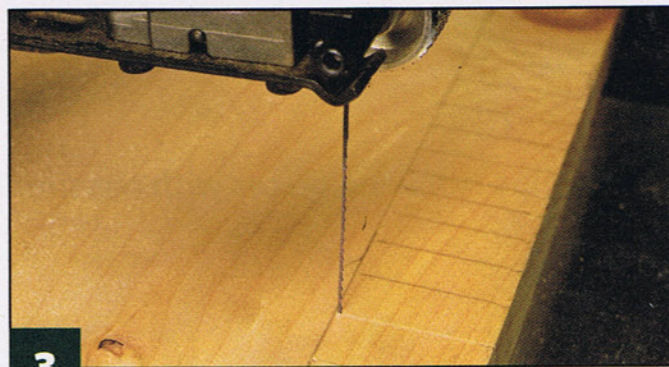
1

Square your blade. It's impossible to cut sharp corners if your saw table and blade are not perfectly square. Make a shallow cut in the thickest wood block that fits on your saw. Back the blade out of the cut and spin the block so the cut you just made is aligned with the back of the blade. If the cut doesn't line up with the blade, adjust the tilt of the table by half the difference of the angle between the blade and the cut. Continue testing the angle until the blade and cut line up perfectly.



2

Practice stopping your cuts. You must come to a full stop before turning. Tension on the blade will make a sloppy corner. Draw a line parallel with the grain about 1" (25mm) from the edge of a pine blank. Make a series of hash marks perpendicular to the line. Cut in along the hash mark until you reach the line. Pull the blade back $\frac{1}{8}$ " (3mm). Then move the blade back to the corner and pause to let the blade catch up. This gets you in the habit of automatically pulling back the small amount needed to cut a tight corner.



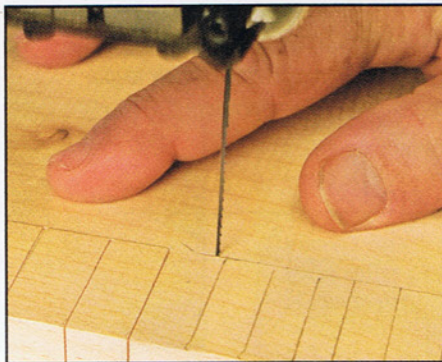
3

Practice spinning the blank. Cut in along a hash mark, pull back slightly, and move back to the corner. Apply light pressure on the blank near the blade with one finger to create a pivot point. Quickly spin the wood 180° with the opposite hand and cut back down the same hash mark. While the marks left by the spin look large, they will barely be noticeable when you cut a corner. Practice until you are comfortable with your ability to rotate the wood and cut the smallest diameter hole possible.



4

Practice cutting a corner. Start cutting on a hash mark until you reach the line. Pull back and then return to the corner—this should be almost automatic by now. Using a finger to apply pressure and create a pivot point, rotate the wood 90° and cut along the line parallel to the edge of the blank. At the next hash mark, use the same technique to rotate the wood 90° and cut to the edge of the blank. Practice until you are comfortable cutting sharp corners.



TIP WARM UP BEFORE CUTTING

When you first turn on your scroll saw, practice cutting stair steps or a city skyline in a piece of scrap wood. This gets you warmed up and ready to create crisp sharp corners.



Dave Van Ess of Arlington, Wash., is an engineer and has been woodworking for more than 30 years. He has introduced more than 200 Cub Scout leaders to the joys of scroll sawing.

Making a Miniature Furniture Puzzle



Create nine furniture pieces with ten simple cuts

By Dave Van Ess
Step-by-step photos by Christin Van Ess

This unusual project makes a great gift for puzzle fans and doll furniture collectors. One small block of wood produces nine pieces of furniture including a table, side table, coffee table, two end tables, two chairs, and two ottomans. The project is a great way to use up scraps of expensive wood.

I build a small crate to store the nested furniture. I affix penny stamps on the ends of the crate and call the set penny-stamp furniture. The set contains small pieces and is not appropriate for young children. The furniture pieces are delicate and are not intended as toys.

Start with a piece of wood $1\frac{1}{8}$ " by $1\frac{5}{16}$ " by $2\frac{1}{16}$ " (30mm by 35mm by 55mm). I use walnut scraps, but almost any knot-free wood will work. Cut the blank to size on a table saw or scroll saw. The cuts are made in a series and

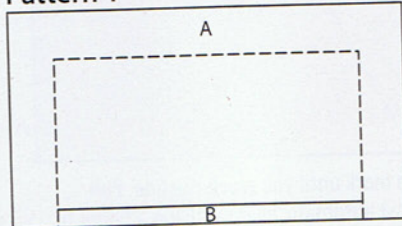
a new pattern is attached to the blank before each stage of cuts. I recommend covering the patterns with packaging tape before cutting. All cuts are made with Olson #5 skip-tooth blades. For each pattern, cut the dotted line before cutting the solid line.

TIP FURNITURE REPAIR

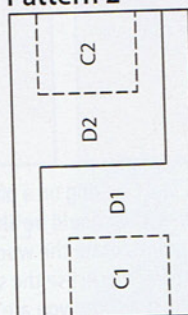
If the pieces break, they do so along the grain, which makes them simple to glue back together with cyanoacrylate (CA) glue.

I gave a set of penny-stamp furniture to some friends as a house-warming gift. I told them they were furniture seeds and they should plant the set in the yard, keep it watered, and in no time they would have a furniture tree. A few days later, I got a phone call saying their four year old planted the set in the backyard. I made them another set, but the poor kid is still waiting for his furniture tree.

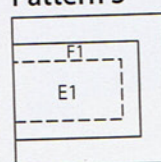
Pattern 1



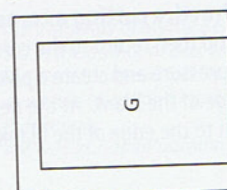
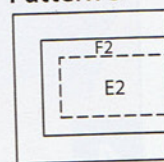
Pattern 2



Pattern 3



Pattern 3

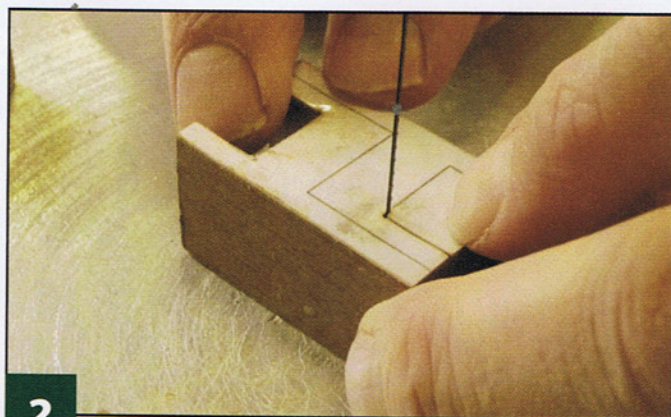


Pattern 4



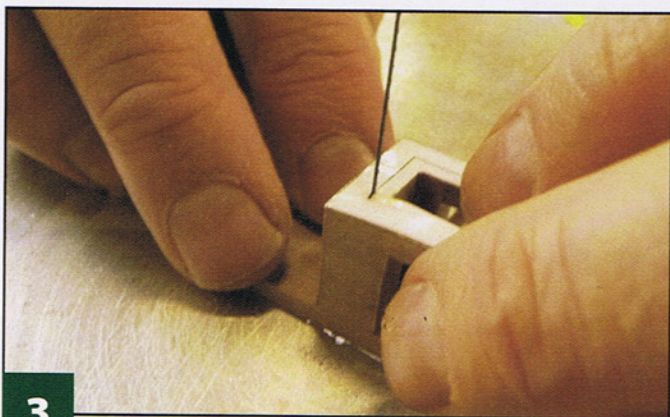
1

Cut the main table and coffee table top. Glue pattern 1 to the side of the block. Cut along the dotted line and set the big table (A) aside. Make the second cut and set the coffee table top (B) aside.



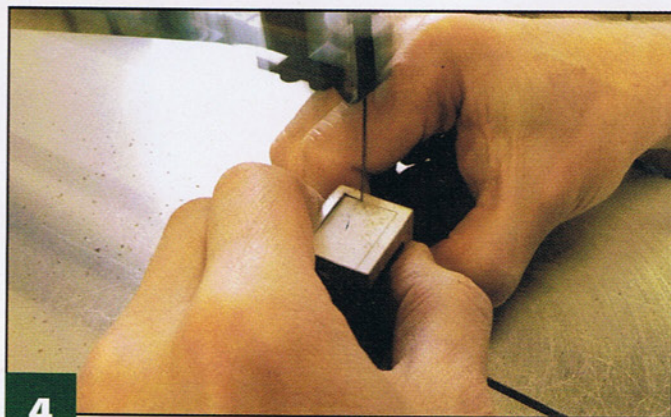
2

Cut the ottomans and chairs. Glue pattern 2 onto the remaining block from step 1. Cut the ottomans (C) and set them aside. Cut along the solid line to separate the chairs (D).



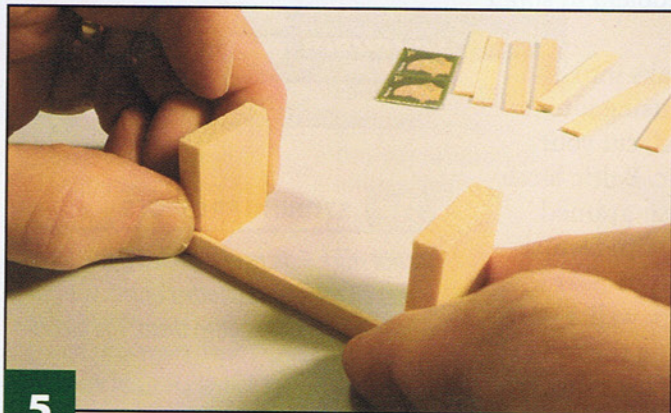
3

Cut the end tables and coffee table legs. Place each chair on its back and attach pattern 3 to the front leg portion of each chair. Cut the dotted lines to free the coffee table legs (E). Then cut the end tables (F).



4

Cut the side table. This optional step creates the ninth piece of furniture. Your saw must be capable of cutting $2\frac{1}{16}$ " (53mm)-thick material. Attach pattern 4 to the side of the main table (A) and cut the side table (G) free. Lightly sand all of the pieces. Apply tung oil finish if desired.



5

Build the packing crate. Cut the ends and slats to the sizes listed in the materials list. Use cyanoacrylate (CA) glue and accelerator to attach three slats, evenly spaced, to the long side of the ends. Repeat on the opposite side and then glue two slats to the bottom. Add the one-cent stamps to the ends and place the nested furniture inside the crate.

Materials & Tools

Materials:

- $1\frac{1}{8}$ " x $1\frac{5}{16}$ " x $2\frac{1}{16}$ " (30mm x 35mm x 55mm) walnut or wood of choice (furniture)
- 2 each $\frac{1}{4}$ " x 1" x $1\frac{1}{8}$ " (6mm x 25mm x 30mm) pine or wood of choice (crate ends)
- 8 each $\frac{1}{16}$ " x $\frac{1}{4}$ " x $2\frac{5}{8}$ " (2mm x 6mm x 70mm) pine, craft sticks, coffee stirrers, or wood of choice (slats)

- Temporary bond spray adhesive
- Clear packaging tape
- Cyanoacrylate (CA) glue and accelerator
- Sandpaper, 220 grit

Tools:

- #5 skip-tooth blades or blades of choice



Dave Van Ess of Arlington, Wash., is an engineer and has been woodworking for more than 30 years. He has introduced more than 200 Cub Scout leaders to the joys of scroll sawing.

Creating Stained-Glass Suncatchers



Use Gallery Glass® to turn fretwork into colorful art

By Dale Helgerson

Pattern designed by John A. Nelson

Adding special effects to fretwork pieces can dramatically change the final appearance and produce a unique work of art. Gallery Glass by Plaid is an excellent way to add vibrant color to your fretwork. Use this technique to create beautiful suncatchers and ornaments.

Gallery Glass is a water-based glass paint that dries to a glass-like appearance. Gallery Glass is available in more than 50 colors including shades with glitter highlights. Gallery Glass is intended to be used directly on glass, acrylic, mirrors, and similar surfaces and can be applied vertically to an existing window with good results. When used to accent fretwork, it takes your scrolled project to another level.

Gallery Glass works best on pieces where the frets to be filled are no smaller than the size of a pencil eraser and no larger than 1½" in diameter. In large frets, Gallery Glass sags if the ornament is hung in full sunlight. Air bubbles become a problem in small tight areas.

Gallery Glass soaks into unfinished wood, causing it to warp. For best results, cut your fretwork from acrylic. Baltic birch plywood or tight close-grained hardwoods finished with Danish oil and multiple coats of clear wood finish also work well. Finish the wood before filling the frets with Gallery Glass. Cover the acrylic with blue painters tape to keep the Gallery Glass from sticking to the surface of the acrylic. Open-grained wood, such as red oak, warps when it absorbs paint during drying.



TIP STORING PROJECTS

Do not stack Gallery Glass-filled fretwork pieces on top of one another unless you put a layer of plastic between them. The pieces will stick together.



Dale Helgerson lives in Kansasville, Wis., and is a woodworking leader for the local 4-H club. Contact him at luckyscroller788@yahoo.com.

SUNCATCHERS: USING GALLERY GLASS



1

Set up your work station. Choose a piece of wood slightly larger than your project and cover the wood with plastic wrap or a resealable plastic bag. Smooth all of the air out from between the wood and the plastic for a smooth flat surface. Clamp the fretwork to the wood. The more clamps the better. The fretwork must be held tightly against the wood to prevent the paint from flowing out of the frets. Multiple clamps also inhibit warping or twisting.



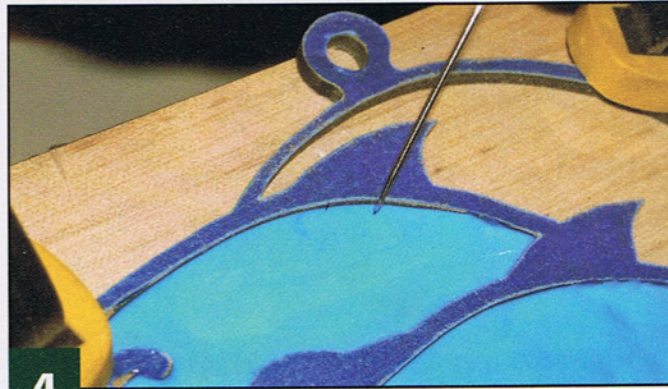
2

Prepare your paint. Choose the colors of Gallery Glass. It is best to practice the technique on a few frets cut in scrap wood first. Start with the colors in the small tight sections. Put the tip of the spout in the fret and squeeze until the section is filled to the top. Use a pin or toothpick to push the thick paint into any tiny crevices. Take your time as you push the paint into the crevices to prevent voids.



3

Fill the frets. Work from the smaller frets to the larger frets. The bigger the fret, the easier it is to fill. If the fret does not have a tight crevice, just squeeze in enough Gallery Glass to cover the section. You do not need to fill the area completely. Make sure the Gallery Glass is touching the entire inside of the fret. If any gaps are left, it will result in voids in the Gallery Glass.



4

Remove the air bubbles. Try to prevent air bubbles when you apply the Gallery Glass. Check the project periodically for the first hour after filling the frets and use a pin to pop any air bubbles as they form. Allow the ornament to dry for 48 hours before unclamping it. Carefully peel the project off of the plastic-covered board and hang the piece to finish drying.

Materials:

- $\frac{1}{8}$ " x $3\frac{3}{4}$ " x $4\frac{3}{4}$ " (3mm x 95mm x 120mm) acrylic, Baltic birch plywood, or tight-grained hardwood of choice
- Gallery Glass, colors of choice
- Danish oil
- Deft clear wood finish
- Plastic wrap or plastic bags

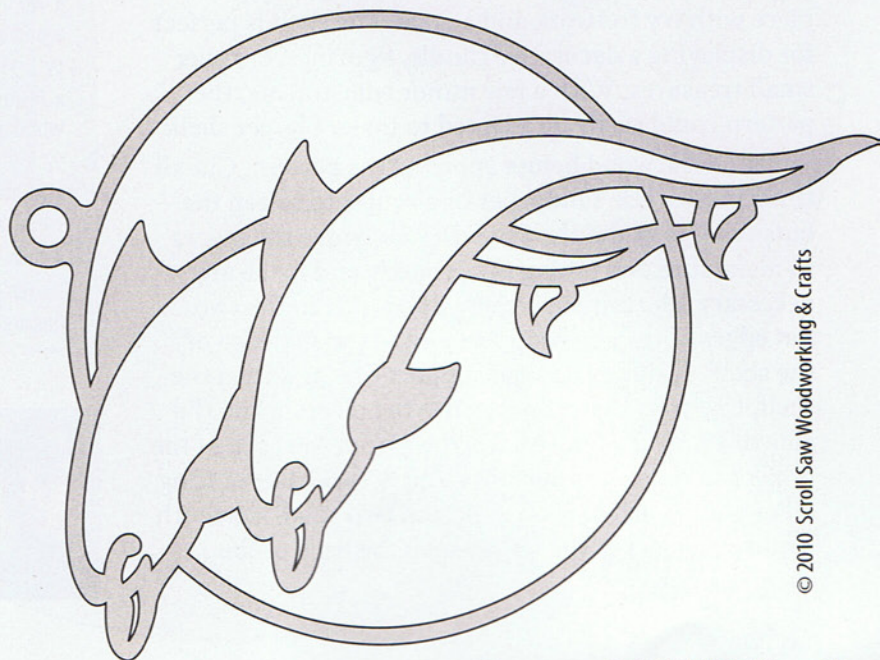
Materials & Tools

Tools:

- #3 Flying Dutchman two-way cut blades or blades of choice
- Clamps
- Pin or toothpick

SPECIAL SOURCES:

Gallery Glass window color paints are available at craft stores like Michaels or Hobby Lobby, or through Plaid's Website at www.plaidonline.com.



Decorative Vine Shelf

Simple fretwork design is easy to cut and assemble

By Matthew Dickson



I love projects that don't require a large investment of time or money, but still have eye-catching end results. This simple yet elegant fretwork shelf uses only a few small pieces of wood and can easily be made in one afternoon. The shelf makes a great gift.

This project was inspired by my fiancée, Tracy. Tracy loves birds and nature, so I designed the piece with ivy fretwork and a dove. The shelf is perfect for displaying a decorative candle, figurines, or other small treasures. With a few minor adjustments, the pattern could easily be adapted to make a larger shelf.

Sand the wood before applying the pattern. Cut all three pieces. Use sandpaper or a router to soften the outside edge of the shelf top. Dry assemble the pieces to make sure everything fits properly and make any necessary adjustments. Apply wood glue to the two flat edges of the shelf support and to the flat edge of the shelf. Position the shelf support first and then the shelf. Use strap clamps to secure the pieces while the glue dries. Add a few small screws from the back of the project to reinforce the joints. Apply two coats of tung oil or your finish of choice. Attach two small sawtooth picture hangers to the flat area on the back of the backing board.

materials & tools

MATERIALS:

- $\frac{1}{2}$ " x $3\frac{1}{2}$ " x $6\frac{3}{4}$ " (15mm x 90mm x 170mm) pine or wood of choice (shelf)
- $\frac{1}{2}$ " x $2\frac{3}{4}$ " x $3\frac{1}{2}$ " (15mm x 70mm x 90mm) pine or wood of choice (shelf support)
- $\frac{1}{2}$ " x $5\frac{1}{2}$ " x $7\frac{1}{2}$ " (15mm x 140mm x 190mm) pine or wood of choice (backing board)
- 4 each small screws
- 2 each small sawtooth picture hangers

- Wood glue
- Assorted grits of sandpaper

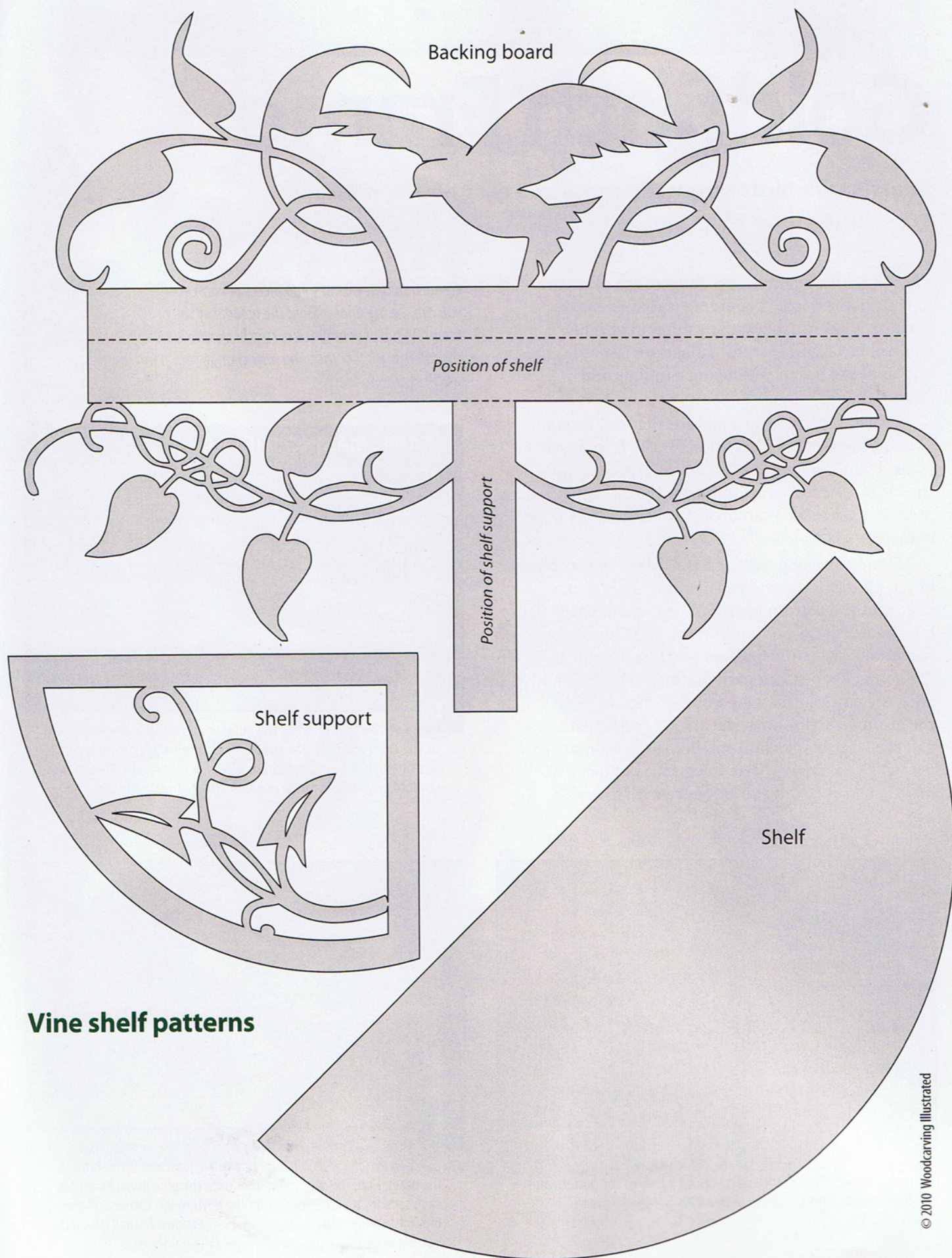
TOOLS:

- #5 reverse-tooth blades or blades of choice
- Strap clamps
- Router with decorative edging bit (optional)
- Tung oil or finish of choice



About the Author

Matthew Dickson lives in Jackson, Tenn., with his fiancée, Tracy, and daughter, Caitlin. Matthew works on a towboat on the upper Mississippi River and works with wood as a hobby between hitches. Matthew has been creating scroll saw projects since 1996.



Make a Goldfinch Frame

Intarsia songbirds accent this quick and easy photo frame

By Kathy Wise

These beautiful goldfinches add a touch of nature to your home décor. The frame is easy to make because it doesn't require any miter cuts. The colorful birds and graceful foliage are layered on top of the frame, producing a unique and interesting 3-D effect.

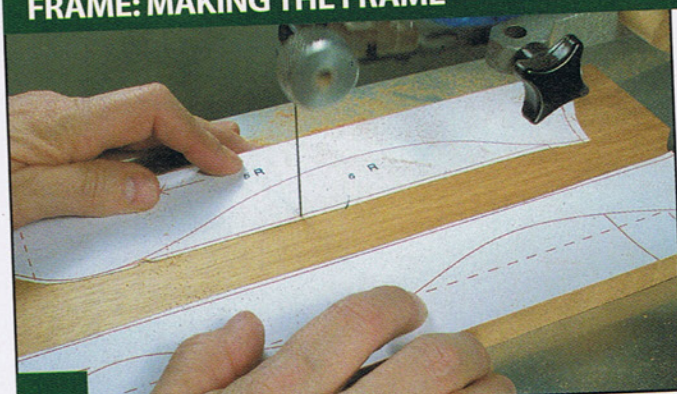
This is a fairly simple pattern that can be cut in a few hours. I use tigerwood for the frame and black walnut, wengé, poplar, and yellowheart for the birds. The leaves are cut from the light and dark areas in a piece of sycamore. Tiny black ebony eyes complete the project.

Plane any wood that isn't flat. Make four copies of the pattern. Always keep a master copy to use later. Cut the pattern pieces. Tape contact paper flat on a board. Spray adhesive on the pattern pieces and attach the pattern pieces to the shiny side of the contact paper. Cut each pattern piece. Peel and stick the patterns on your wood of choice. Align the grain direction with the arrows on the patterns. Cut the large blanks into smaller easier-to-manage pieces. Use a small square to check a cut piece to make sure the saw blade is square with the table.

TIP WOOD SELECTION

Create a sample box of small pieces of varnished wood so you can see the final color of the wood. Lay the finished scraps on top of your pattern, step back, and see how the colors work together. You may change your mind on which species to use.

FRAME: MAKING THE FRAME



1 **Cut the frame.** Mark the number on the back of each piece as you cut it and place the cut pieces on a full-size pattern taped to a board. Use a portable drum sander or belt sander to sand the straight outside and inside edges. Sand the front surface flat.

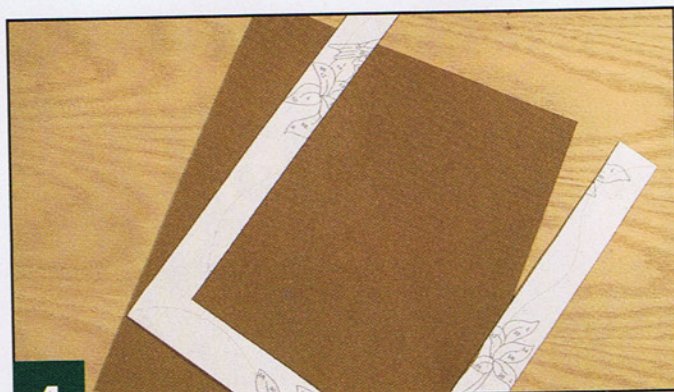


2 **Finish the frame pieces.** Round the edges of the frame pieces with an oscillating spindle sander or with a sanding drum in a rotary power carver. Place the frame pieces on a copy of the pattern and check the fit. Buff the pieces with a 220-grit sanding mop.



3 **Glue the frame together.** Work on a flat surface. Apply cyanoacrylate (CA) glue to one side of the joint and accelerator to the other. Hold the pieces together until the glue dries. Assemble each section. Join the sections at the bottom left corner and then the top right corner. Join the two L-shaped sections. A small gap in the bottom right corner can be covered by the goldfinch.





4

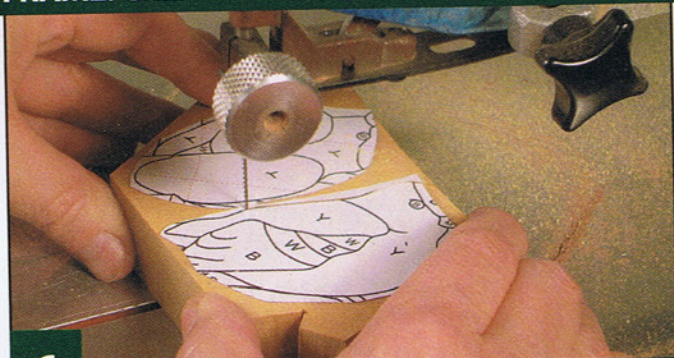
Cut the backing board and spacer. Use double-sided tape to stack cut two pieces of hardboard or plywood. Attach a pattern to the blank and cut around the perimeter. Separate the stack and cut the U-shaped spacer. Attach the spacer to the backing board. Use wood glue on the back of the spacer and add a few dots of CA glue between the wood glue to hold the pieces together until the wood glue dries.



5

Attach the frame to the spacer. Apply CA glue accelerator to the back of the frame and apply wood glue and CA glue to the spacer. Align the top of the frame with the opening in the spacer. Glue the frame to the spacer. The spacer supports the frame and prevents separation at the cross-grain joints. Bevel the edges of the backing board so they are not visible from the front.

FRAME: CREATING THE INTARSIA



6

Cut the goldfinches and leaves. Cut the smaller pieces from larger sections of wood so you have more wood to hold as you make the cuts. Place the cut pieces on a pattern taped to a board and check the fit and color of the pieces.



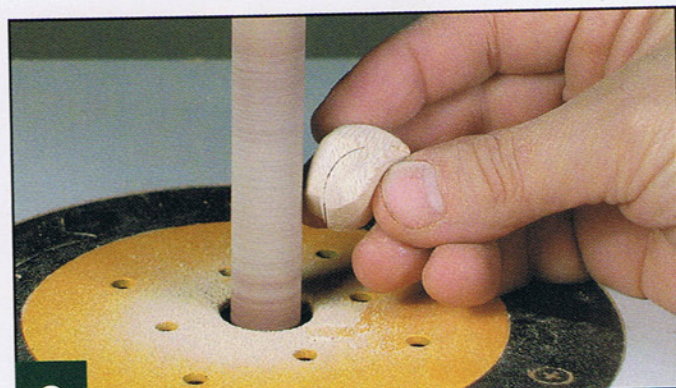
7

Assemble the wings and heads. Use CA glue to attach the black and white pieces to the yellow sections on the wings. Use CA glue to attach the black crowns to the heads. These sections will be shaped as one section.



8

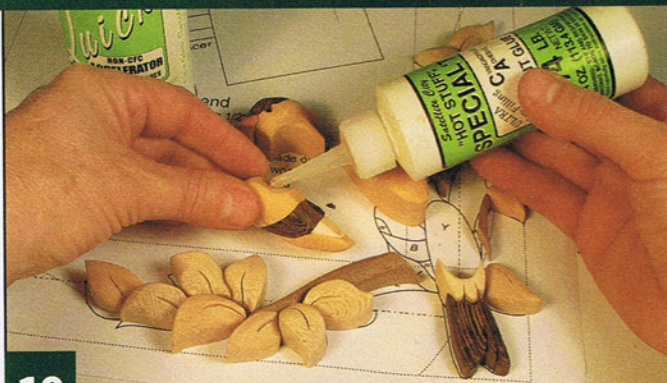
Shape the birds. Round the wing sections slightly with a pneumatic sanding drum. Then round the head sections. You could also round the pieces with an oscillating spindle sander or a rotary power carver equipped with a sanding drum. Mark the areas to sand with a pencil. Work slowly and replace the piece back on the pattern often. Position each piece next to the other pieces to check the flow and overall shape of the birds.



9

Shape the leaves and branches. Mark the areas to shape on the leaves. Use an oscillating spindle sander or a sanding drum in a rotary power carver to sand a slight concave groove on the inside of the leaves. This gives the leaves a more natural look. Sand the branches lower than the leaves and birds.

FRAME: FINISHING AND ASSEMBLY



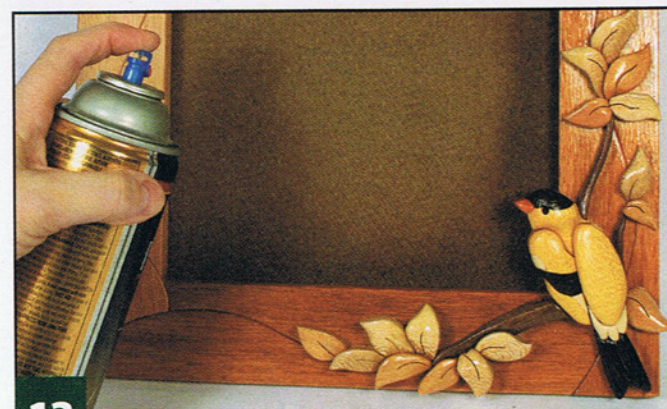
10

Tack the intarsia together. Use CA glue to assemble the two birds and three sections of branches and leaves. Spray accelerator on one side of the joint and apply glue to the other side. Quickly assemble the pieces on a flat paper-covered surface. Sand the back of the pieces with a belt sander or portable drum sander to remove any glue or paper.



12

Glue the intarsia to the frame. Place the intarsia sections in position on the frame. Remove and attach one section at a time. Apply dots of wood glue and CA glue to the back of the intarsia. Spray the frame with accelerator and press the piece firmly in place. Use the glue sparingly to avoid glue squeeze out. Clean up any glue squeeze out with a cotton swab.



13

Apply the finish. Apply clear spray satin varnish or your finish of choice to the project. Attach a picture hanger to the back or attach two screw eyes to the sides of the frame and string picture-hanging wire between the screw eyes.



11

Finish the birds and leaves. Apply clear spray satin polyurethane according to the manufacturer's instructions. Let the finish dry.

Materials & Tools

Materials:

- ¾" x 3" x 10" (20mm x 75mm x 255mm) medium wood, such as sycamore (leaves)
- ¾" x 3" x 10" (20mm x 75mm x 255mm) medium-light wood, such as sycamore (leaves)
- 1" x 4" x 5" (25mm x 100mm x 130mm) yellow wood, such as yellowheart (birds)
- 1" x 4" x 6" (25mm x 100mm x 150mm) dark wood, such as wengé or black walnut (tail, head)
- 1" x 1" x 1" (25mm x 25mm x 25mm) black wood, such as ebony (eyes)
- 1" x 2" x 2" (25mm x 50mm x 50mm) white wood, such as aspen (bird)
- ½" x 6" x 8" (15mm x 150mm x 205mm) dark wood such as walnut (branches)
- ½" x 8" x 30" (15mm x 200mm x 765mm) red wood, such as tigerwood (frame)

- 2 each ¼" x 13" x 16" (6mm x 330mm x 405mm) plywood or hardboard (spacer, backing board)
- Roll of clear shelf contact paper
- Spray adhesive
- Titebond glue
- Cyanoacrylate (CA) glue and accelerator
- Spray varnish
- Cotton swabs
- Mirror-style hanger or hanger of choice

Tools:

- #3 or #5 skip-tooth blades or blades of choice
- Pneumatic drum sander or drum sander of choice
- Portable drum sander or belt sander (optional to flatten edges of frame)
- Die grinder or rotary power carver with carving bit or sanding drum

Patterns for the **GOLDFINCH FRAME** are in the pattern pullout section.



#736
Cardinal



Nationally acclaimed intarsia artist Kathy Wise has authored two books and more than 28 articles. Kathy's award-winning intarsia mural work has set a new standard for the art of intarsia. Check out the 30 new patterns of intarsia birds. For a free catalog of 450 patterns, contact: Kathy Wise Designs Inc., P.O. Box 60, Yale, Mich. 48097, fax 810-387-9044, www.kathywise.com, kathywise@bignet.net.

Easy-to-Make Luminaries

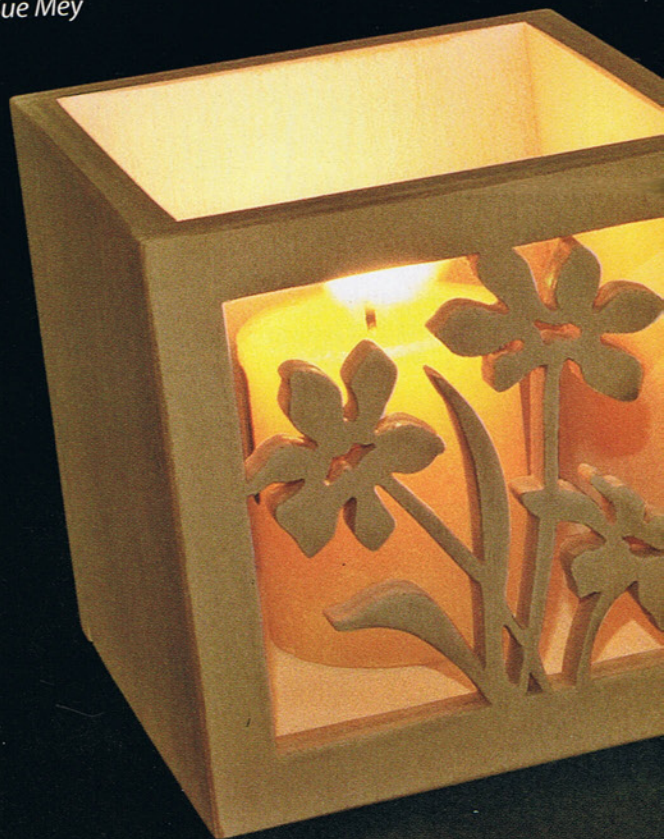
Traditionally, luminaries consist of candles placed inside paper bags with sand in the bottom of the bag. These sturdier luminaries are made from a simple box structure which can be cut from hardwood, plywood, medium-density fiberboard (MDF), or colored acrylic.

Tea light or votive candles can be used with these luminaries if you use a glass candle holder inside the box. Do not place the luminaries in a draft and never leave burning candles unattended. I recommend battery-operated tea lights and votive lights as a safe and easy alternative. The battery-operated lights are available in various shapes and sizes.

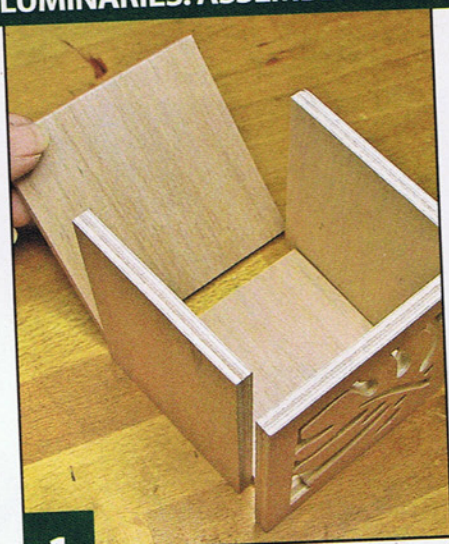
It can be difficult to cut perfectly straight lines on the scroll saw. The easiest way to cut the pieces is on a table saw. However, I cut the pieces on a scroll saw and use a disc sander to sand the edges up to the pattern lines. Use thin double-sided tape to stack cut the bases and side pieces. The size of the back piece is identical to the front piece and can be made with or without the frets. Drill blade-entry holes and cut the frets.

Simple botanical theme makes this a great project for all skill levels

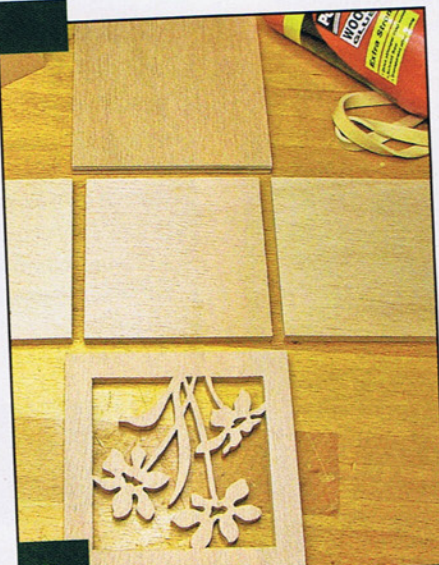
By Sue Mey



LUMINARIES: ASSEMBLY



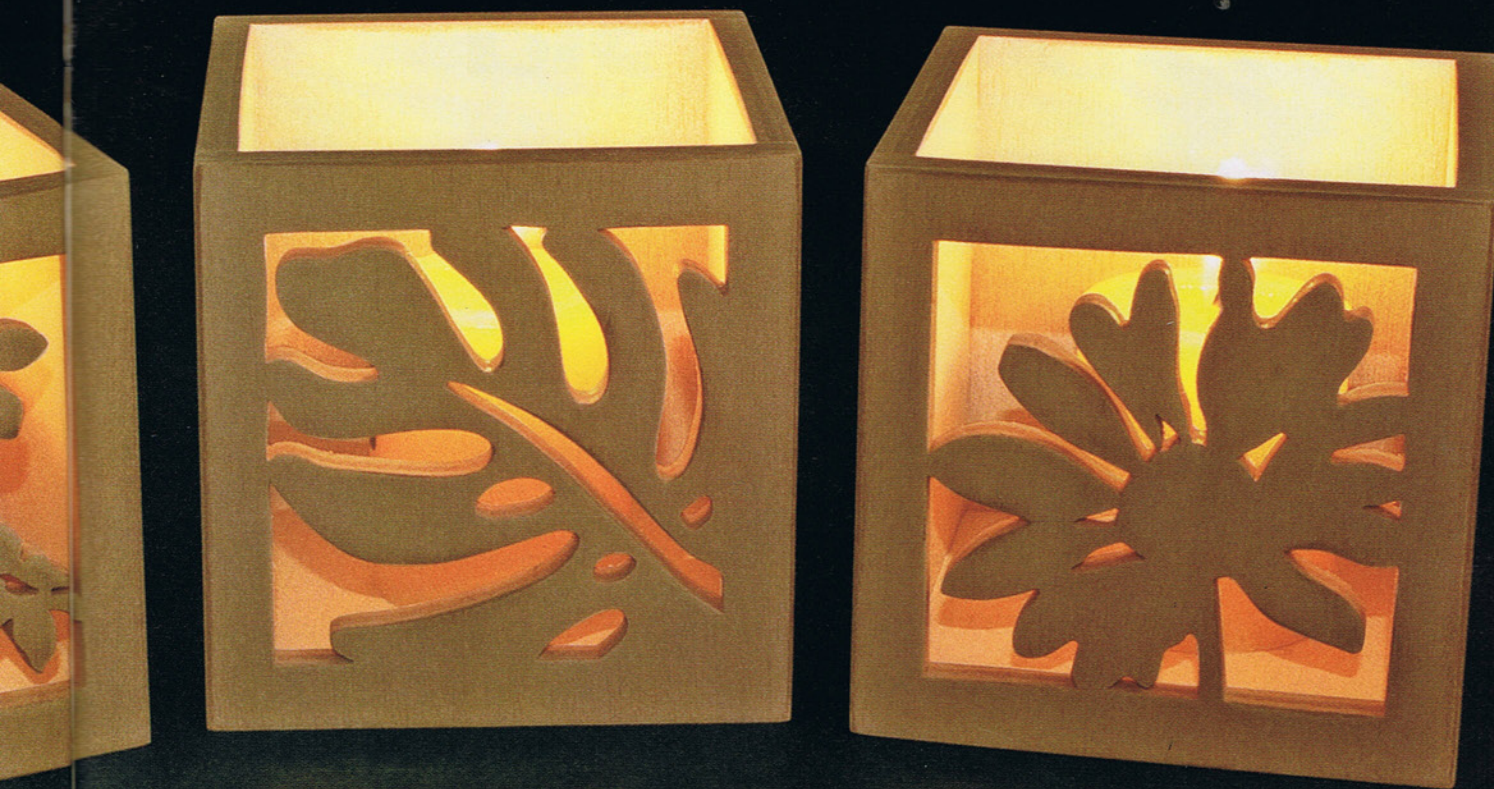
1 Dry-fit the pieces. Remove the tape and patterns. Hand sand the pieces and remove the sanding dust. Make sure the pieces fit properly and make adjustments as needed. The front and back overlap the sides and all four pieces overlap the base.



2 Glue the pieces. Orient the four sides around the base. Apply small beads of wood glue to the areas where the front and back meet the sides and where all four sides meet the base.



3 Clamp the pieces. Bring the pieces of the box together and clamp them until the glue dries. You can use clamps or rubber bands. Apply your finish of choice.



Luminaries: Finishing

The boxes can be stained, painted, or left natural. Always test new finishing techniques on scrap wood using the same type of wood used for the project. For contrast, paint the inside of the luminary a different color from the outside. If you plan to stain your project, glue the pieces together first and scrape off any areas where the glue squeezed out. Sand these areas to remove any glue residue, which will make the stain blotchy. Then apply the stain and seal the project with clear spray varnish.

Materials:

- 2 each $\frac{1}{4}$ " x $3\frac{1}{8}$ " x $3\frac{1}{8}$ " (6mm x 80mm x 80mm) hardwood, plywood, or MDF (front and back)
- 2 each $\frac{1}{4}$ " x $2\frac{1}{16}$ " x $3\frac{1}{8}$ " (6mm x 70mm x 80mm) hardwood, plywood, or MDF (sides)
- $\frac{1}{4}$ " x $2\frac{1}{16}$ " x $2\frac{1}{16}$ " (6mm x 70mm x 70mm) hardwood, plywood, or MDF (base)
- Masking tape
- Temporary-bond spray adhesive
- Thin double-sided tape
- Wood glue

Materials & Tools

- Sandpaper, assorted grits
- Paint or finish of choice
- Clear spray varnish

Tools:

- #3 and #7 reverse-tooth blades or blades of choice
- Drill press with $\frac{1}{16}$ " (2mm)-diameter bit
- Clamps or rubber bands
- Utility knife blade

Further Reading



Lighted Scroll Saw Projects by Sue Mey

Step-by-step directions are provided for 24 lighted scroll saw projects ranging from easy-to-make luminaries to the intricate fretwork of a night light.

Available for \$24.99 +s&h from Schiffer Books, 610-593-1777, www.schifferbooks.com.



Sue Mey lives in Pretoria, South Africa. To see more of her work or for pattern-making tutorials and a variety of patterns for sale, visit www.scrollsawartist.com.

Patterns for **EASY-TO-MAKE LUMINARIES** are in the pattern pullout section.

Create a Toucan Intarsia

Capture the feel of this colorful tropical bird with natural woods

By Tim Rogers



As I designed the piece, I envisioned a South American rainforest, where the rumbles of the forest creatures are penetrated by a deep frog-like croak. Perched high on the limb of a huito fruit tree is the largest member of the toucan family—the toco. In my mind, I see this colorful bird hopping from limb to limb, finally finding the perfect branch to roost.

This project is created from 24 individual pieces and is shaped in three main sections, making it ideal for beginner intarsia enthusiasts.

Drill the hole for the eyeball before cutting the outline of the piece. Cut directly down the center of the pattern lines using a #5 reverse skip-tooth blade. Use a #1 reverse skip-tooth blade to cut the accent lines and to separate pieces cut from the same section of wood.

Divide the toucan into three sections for sanding: the tail, body, and bill. Trace each section onto ¼" (6mm)-thick scrap plywood. Cut just inside the line to create a sanding shim. Attach the sections to the sanding shims using light-traffic double-sided carpet tape. Gently pry the pieces off of the sanding shims with a thin metal putty knife to add the final details.

Hand sand each piece with the grain of the wood using 220-grit sandpaper. Cut the oak dowel for the eyeball ⅛" (2mm) longer than the thickness of the surrounding piece. Round the edges of the dowel until it meets the surrounding piece and woodburn the visible area until the eyeball is black.

Assemble the toucan on a piece of ¼" (6mm)-thick plywood and trace around the perimeter with a pencil. Cut just inside the traced line. Sand and paint the edges of the plywood with black acrylic paint. Attach the intarsia pieces to the plywood using wood glue.

Remove any dust and spray the entire project, front and back, with clear semi-gloss lacquer and let it dry overnight. Sand the lacquer on the front and sides using a 320-grit foam sanding pad. Remove the dust again and apply three light coats of polycrylic on the front and sides of the project according to the manufacturer's instructions. Polycrylic is self-leveling, so do not sand between coats. Attach a hanger to the back of the piece.

Materials:

- 5 copies of the pattern
- Repositionable glue stick
- Clear packaging tape (cover the pattern to help lubricate the blade)
- Light-traffic double-sided carpet tape (attaching to sanding shims)
- ¾" x 6" x 48" (20mm x 150mm x 1220mm) dark wood, such as dark western red cedar or walnut
- ¾" x 6" x 24" (20mm x 150mm x 610mm) medium-colored wood, such as western red cedar, red oak, or pecan
- ¾" x 6" x 6" (20mm x 150mm x 150mm) medium-light wood, such as western red cedar or white oak
- ¾" x 6" x 12" (20mm x 150mm x 305mm) light wood, such as western red cedar, maple, or birch
- ¾" x 6" x 6" (20mm x 150mm x 150mm) white wood, such as aspen, holly, or white pine
- ½" (13mm)-diameter x 1" (25mm)-long oak or hardwood dowel
- ¼" x 24" x 24" (6mm x 610mm x 610mm) lauan or birch plywood (backing board)

Materials & Tools

- Assorted scraps of ¼" (6mm)-thick plywood (sanding shims)
- Wood glue of choice
- Black acrylic paint
- Pencil
- 220-grit sandpaper
- 320-grit foam sanding pad
- Spray lacquer and polycrylic or finish of choice
- Hanger
- Tack-free cloth or paper towels

Tools:

- #1 and #5 reverse skip-tooth blades or blades of choice
- Metal putty knife
- Scissors
- Air compressor
- Drum sander or rotary sanding tool of choice
- Woodburner



Pattern for the
TOUCAN INTARSIA is in the
pattern pullout section.



Tim Rogers lives on Oak Grove Island in Brunswick, Ga., with his wife, Natalie. Tim works full time as a curriculum designer for the federal government. He has been designing intarsia projects since 2007 and occasionally teaches scroll saw and intarsia classes. Tim's sea turtle intarsia was a finalist in the 2007 Best Project Design Contest. To view more of his work, visit www.intarsiaconcepts.com.

Creating Colorful Butterflies



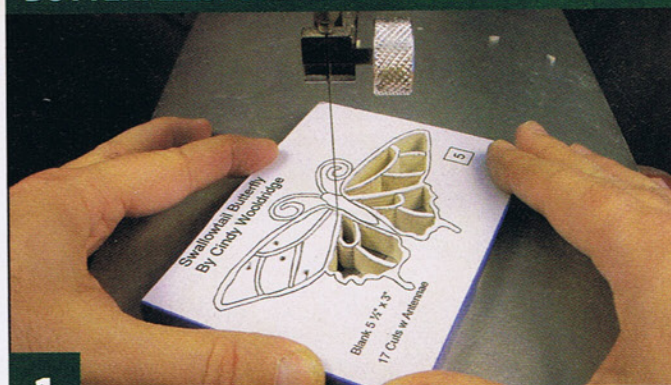
Add vibrant paper to fretwork designs for a splash of summertime fun

By Don and Cindy Wooldridge

Japanese and Chinese paper lanterns have added illumination and color to parties for centuries. This project borrows those special qualities for a creative butterfly ornament. Experiment with different paper and use food coloring to dye the paper with vivid colors.

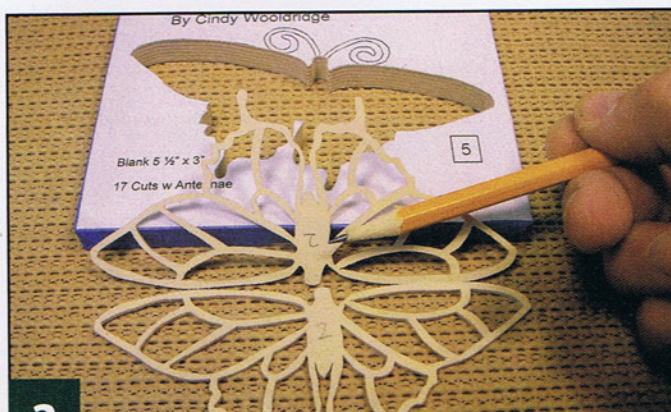
To display the butterflies simply wrap the chenille legs around the branch of a Christmas tree or a sturdy flower stem. Use caution if displaying the butterflies on a Christmas tree. The paper is flammable. Create a T stand out of dowels to display the butterflies in more delicate potted plants. To mount the butterfly in a window, wrap the legs around a small suction cup hook.

BUTTERFLIES: CUTTING THE FRETWORK

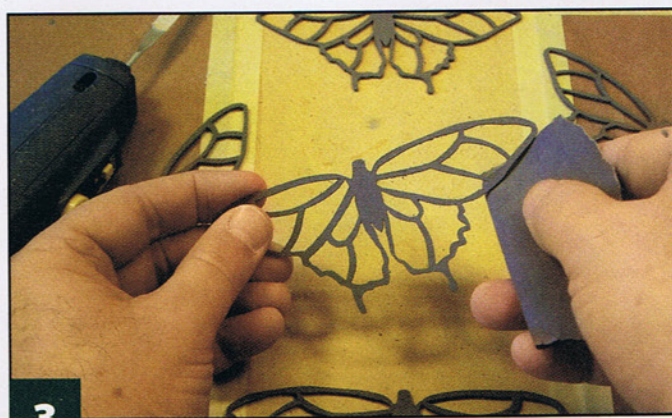


1

Stack cut the butterflies. Cut an even number of butterflies out of $\frac{1}{8}$ " (3mm)-thick or $\frac{1}{16}$ " (2mm)-thick plywood. Thin stock enhances the delicate wing effect. The patterns include optional antennae. Cut off the antennae if you plan to make them out of chenille. Drill blade-entry holes for the frets, but do not drill the holes in the body.



- 2** **Keep the butterfly pairs in order.** As you separate the stack, keep the butterflies in pairs. Open each pair like a book and number the inside of both pieces. The numbers indicate the inside surfaces and keep the matching butterflies together as a pair and oriented correctly. The inside is not painted for better glue adhesion.

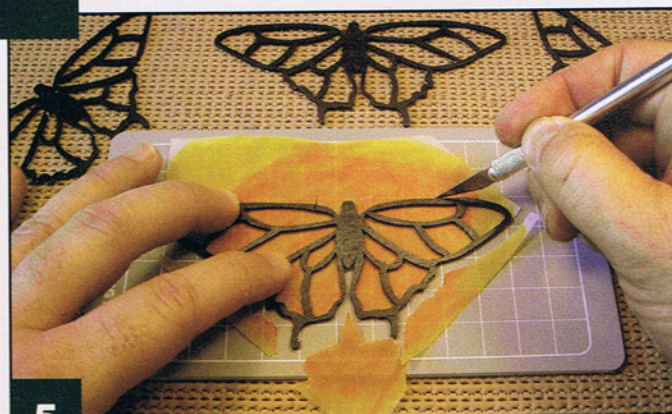


- 3** **Sand and paint the butterflies.** Place 220-grit sandpaper flat on a bench and rub the butterflies back and forth on the sandpaper to remove the fibers. Apply a spray primer to the outside surface and edges of both butterflies. Then sand the pieces with 400-grit sandpaper to smooth the primer. Apply black spray paint to the outer surface and edges of each butterfly. Do not paint the inside surface.

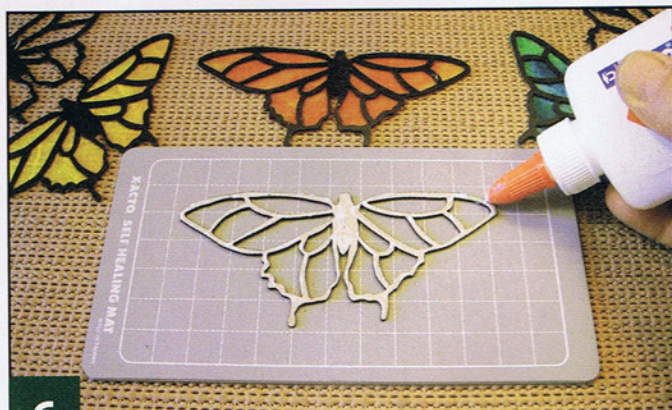
BUTTERFLIES: ASSEMBLING THE PROJECT



- 4** **Color the paper.** Use food coloring, water, and a cotton swab to apply vibrant colors to the paper. Experiment with different paper textures and commercial paper colors. You can use watercolor paint, but it requires multiple coats to get vibrant colors. Uneven colors look more natural and add interest to the wings (See Paper Preferences sidebar).



- 5** **Glue one butterfly to the paper.** Apply glue sparingly to the inside of one butterfly and affix it to the paper. Clean up any glue squeeze out with a scrap piece of vellum cut to a point. Let the glue dry. Trim off the excess paper with a hobby knife.



- 6** **Glue the second butterfly to the paper.** Apply glue sparingly to the inside of the matching butterfly. Attach this butterfly to the other side of the paper. Make sure the two butterflies line up correctly. Glue the edges to seal the paper. Remove any glue squeeze out and let the glue dry.



- 7** **Paint the edges, and drill the holes.** Touch up the edges of the butterfly with a small brush. Drill $\frac{1}{16}$ " (2mm)-diameter holes for the chenille where indicated on pattern 1 and $\frac{3}{32}$ " (2.5mm)-diameter holes on pattern 2. Two pieces of chenille pass through each hole in pattern 2, which requires a larger hole.



BUTTERFLIES: ADDING THE CHENILLE



8 **Add the chenille legs.** Push one end of a 12" (305mm)-long chenille through one of the middle holes from the top until about 1" (25mm) protrudes from the back. Use a second 12" (305mm)-long chenille for the second middle hole. These protrusions form the legs.

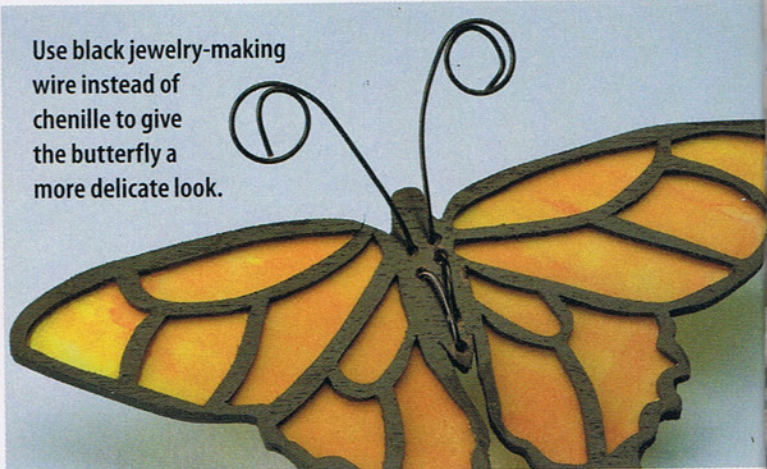


9 **Make the body.** Take the long ends of the chenille and push them through the holes in the tail of the butterfly from the top. Carefully support the butterfly's body while you push and pull the chenille the whole way through the holes until the chenille rests flat against the top of the butterfly.



10 **Make the antennae.** Pass the long ends up from the bottom through the holes in the head of the butterfly. The chenille sticking out from the head of the butterfly will become the antennae. Cut the antennae to the same length with wire cutters. Curl the ends and bend them as desired.

Use black jewelry-making wire instead of chenille to give the butterfly a more delicate look.



Paper Preferences

Vellum: Readily available, most durable

Rice/mulberry paper: May be difficult to find, less durable, great texture

Tracing paper: Readily available, fragile

Tissue Paper: Readily available, very fragile, comes in colors

Fabric: Great colors and patterns, durable, more difficult to cut accurately



Don is a native of Charleston, W.Va., who lives and works in sunny St. Petersburg, Fla. with his wife of 30 years, Linda; 23-year-old son, DJ; and his 16-year-old daughter, Cindy. Cindy provides many of the creative ideas and much of the artwork behind their creations. You can reach Don and Cindy at DonsWoodworking@tampabay.rr.com.

Materials & Tools

Materials:

- Blue painters' tape (for stack cutting)
- Spray adhesive
- 2 each 1/16" to 1/8" x 3" x 5 1/4" (2mm to 3mm x 75mm x 135mm) Baltic birch plywood (pattern 1)
- 2 each 1/16" to 1/8" x 3 1/2" x 3 3/4" (2mm to 3mm x 90mm x 95mm) Baltic birch plywood (pattern 2)
- 2 each 12" (305mm)-long chenille (pipe cleaners, per butterfly)
- Spray paint: grey primer and black or color of choice
- Acrylic paint (to touch up edges)
- Food colors, watercolors, dye of choice (to color paper)

- Cotton swabs
- Paper plates or wax paper
- Paper: vellum (recommended) or paper of choice (see Paper Preferences)
- Latex or plastic gloves
- Glue: clear-drying school glue
- Assorted grits of sandpaper

Tools:

- #5 reverse-tooth blades
- Wire cutters
- Hobby knife and blades
- Paintbrush
- Drill
- Drill bits: 1/16" (2mm), 3/32" (2.5mm), 1/8" (3mm) diameters

Patterns for the **COLORFUL BUTTERFLIES** are in the pattern pullout section.

Building a Mason Jar Lantern

**Nostalgic lantern is easy
to cut and assemble**

By Paul Meisel

This lantern is simple to make from $\frac{3}{4}$ " (20mm)-thick lumber. It uses a canning jar, wire from old coat hangers, and a pre-wired electrical harness with a flame-tip bulb. There are no special tools required—only a scroll saw and a drill. Because the project is painted, you can use an inexpensive wood such as pine.

Canning jars, also called Mason or Ball jars, come in several sizes. This pattern uses a regular-mouth, one-pint size jar. Enlarge or adjust the pattern accordingly to accommodate a wide-mouth jar.



Cutting the Pieces

Transfer the patterns for all of the wooden pieces to $\frac{3}{4}$ " (20mm)-thick stock. Align the grain direction with the arrow on the pattern for the lantern bottom A.

Cut the pieces using a #7 skip-tooth blade, such as an Olson #448-F. The lantern side pieces fit into notches on the top and bottom. These notches must match the thickness of your stock. If the notches are too wide, it will be difficult to get a strong glue joint.

The screw-on metal rim from the canning jar lid fits upside down in the hole in lantern bottom A. The flat lid seal is not used. Glue the rim in place with epoxy or silicon glue. The $1\frac{1}{8}$ " (30mm)-diameter hole in the socket mount pieces accommodates the spring clip on the candelabra light socket.

Drill the holes for the handle and wire jar retainers in lantern top B and lantern bottom A. Most coat-hanger wire is $\frac{3}{32}$ " (2.5mm) in diameter. Measure the diameter of your wire before drilling the holes. Use the heaviest wire hangers you can find. Drill test holes in scrap wood to find the drill bit size closest to the wire diameter you will be using.

Assembling and Painting the Parts

Face-glue the lantern top A and B together. Make sure the holes in lantern top B are turned 90° from the notches in the lantern top A piece. Then glue the lantern top C piece in place.

Glue lantern bottom A, B, and C together. Glue the socket mounts together and glue the socket mount assembly to lantern bottom B.

Glue the lantern sides into the notches to connect the upper and lower assemblies. Position the lantern sides with the wider part toward the lantern bottom.

Prime the project with white interior acrylic latex primer. Then sand the primed wood with 220-grit sandpaper and apply two coats of Delta Ceramcoat opaque red acrylic craft paint.

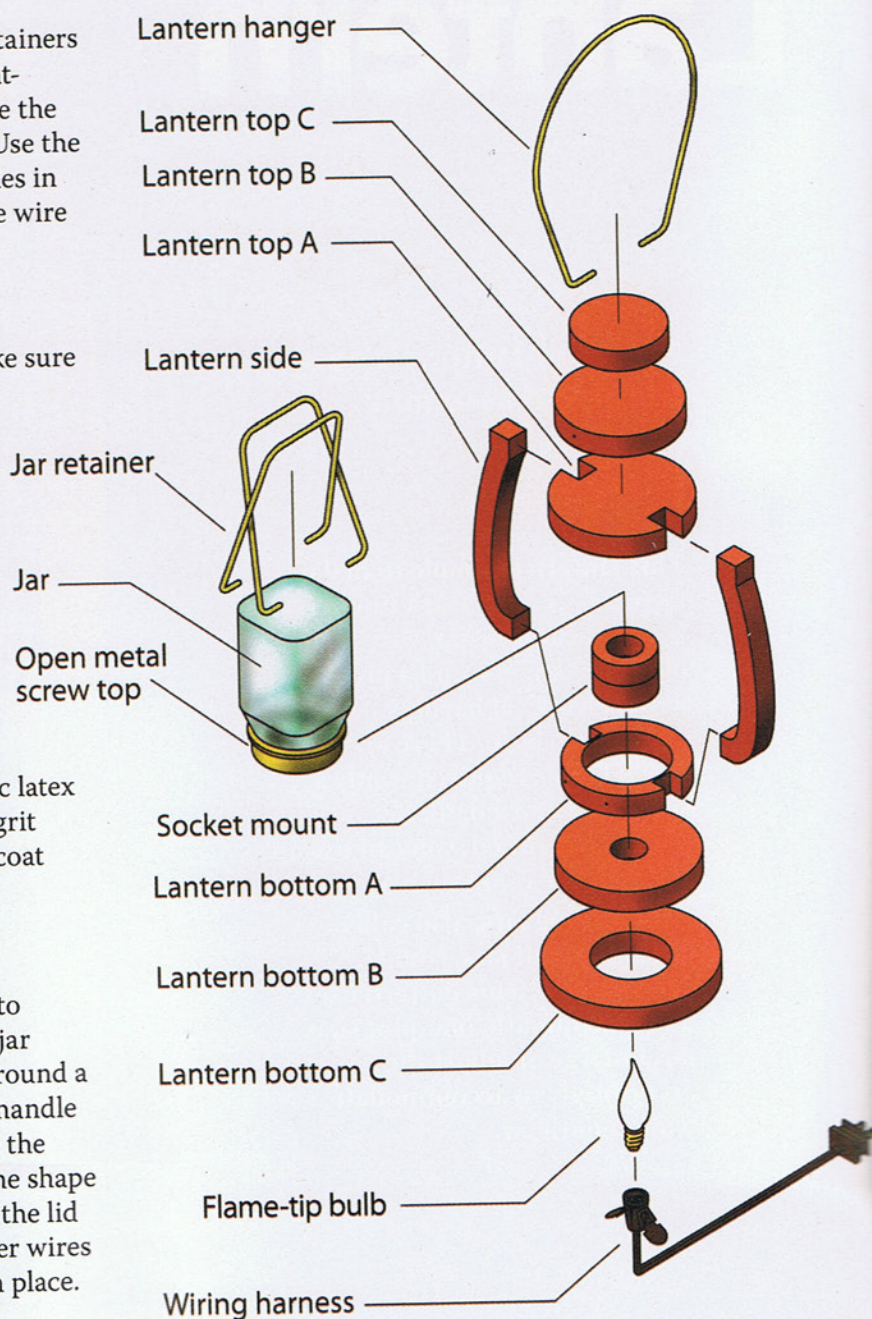
Adding the Wire and Electrical Parts

Cut the coat hangers to length and bend them to match the patterns. Make one handle and two jar retainers. For smooth corners, bend the wire around a piece of $\frac{3}{4}$ " (20mm)-diameter dowel. Bend the handle first to get used to working with the wire since the exact shape of the handle is less critical than the shape of the jar retainers. Screw the canning jar into the lid and bend the jar retainers to fit. The jar retainer wires are cosmetic; they don't actually hold the jar in place.

Install the pre-assembled wiring harness. The harness consists of the lamp cord with plug, an on-off switch, and a candelabra-style socket with a spring mounting clip. Screw the flame-tip bulb into the socket and push the socket into the lantern from the bottom. The top of the socket should be about $\frac{1}{2}$ " (13mm) above the top of the socket mount.

Because the lantern is designed to be suspended from a hook, the lamp wire simply hangs down from the bottom. To rest the lantern on a flat surface, add wood or rubber feet to the bottom. The feet should be $\frac{1}{4}$ " (6mm) high to provide room for the lamp cord to fit under the project.

Assembly drawing



Mason Jars

The Mason jar is named after John L. Mason, who invented and patented it in 1858. These jars have been used for preserving fruits and vegetables for more than 100 years.

Patterns for the **MASON JAR LANTERN** are in the pattern pullout section.

Lantern handle bending guide

23½" coat-hanger wire

Jar retainer bending guide

15½" coat-hanger wire - Make 2

Materials & Tools

Materials:

- ¾" to 1" x 8" x 24" (20mm to 25mm x 205mm x 610mm) pine or wood of choice
- 3 each wire coat hangers
- Candelabra wiring harness (#8716)*
- Frosted flame-tip bulb (#8955)*
- Pint-size, regular-mouth Mason jar with outer-ring cover
- ¾" (20mm)-diameter wood dowel (to bend wire)
- Wood glue
- Assorted grits of sandpaper
- Acrylic latex primer
- Delta Ceramcoat paint: opaque red: (#02507)*

Tools:

- #7 skip-tooth blades, such as Olson #448-F, or blades of choice
- Drill with a ⅜" (2.5mm)-diameter bit or bit sized to match the coat-hanger wire
- Paintbrushes

SPECIAL SOURCES:

Items marked with an asterisk (*) are available from Meisel Hardware Specialties. To order parts or to request a catalog, call 800-441-9870 or visit www.meiselwoodhobby.com.



Paul Meisel of Mound, Minn., designed more than 3,000 woodworking plans. For more projects, visit his website (see special sources).

Seaside Serenity



Simplify this intarsia beach scene with a backing board that doubles as the sky

By Judy Gale Roberts

This relaxing beach scene is a great way to celebrate summer. The peaceful portrait serves as a snapshot of those lazy days on the shore in the warm sun.

Nearly all of the pieces in this project can be cut from western red cedar fence pickets. The fence pickets are usually 5½" wide by 6' long. Western red cedar comes in a variety of shades and can be found in lumber yards. The wood is commonly used for fence material and siding because it resists decay and bugs.

Make at least five copies of the pattern. When cutting the pattern into pieces, cut about ¼" outside of the lines to provide better adhesion to the wood.

Cutting the Pieces

Cut the larger sections into pieces about the size of your hand for easier handling. Remove any tear-out or burrs on the bottom of the sections with sandpaper so the pieces sit flat on the saw table.

Use a #5 skip reverse-tooth blade to cut most of the pieces. For a better fit, switch to a #0 skip reverse-tooth blade to cut the interior lines and to separate the pieces with the same grain direction and color.

Accuracy is key. Experiment with the speed of your saw. I run my saw between 60 and 70% of the maximum speed. Align the center of the blade with the center of the line so your cut removes the line.

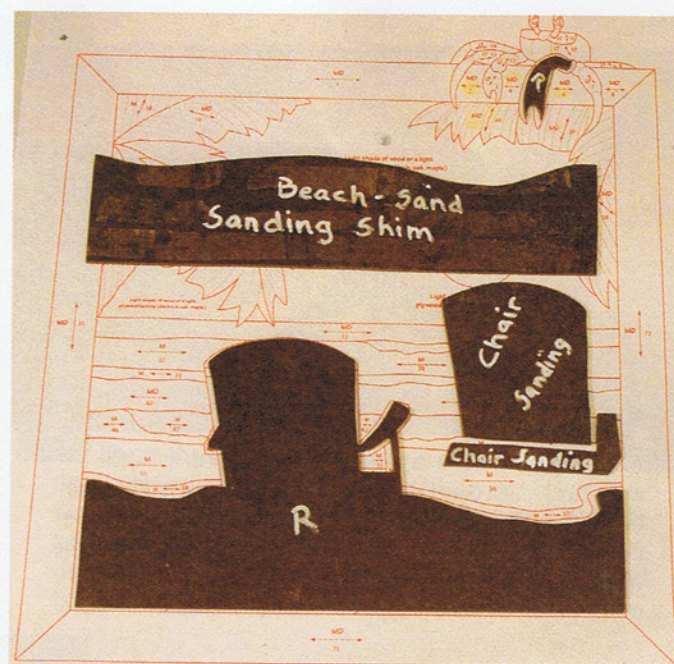
Stop often to remove any tear-out from the back of the pieces. Check cut pieces to make sure your blade is still square with the saw table. Plan your cuts so you can cut small parts free from a larger block.

When all of the parts have been cut, remove any tear out from the back of the pieces. Assemble the pieces and check the fit. Do not sand the sides of the pieces. Use a new sharp blade to trim pieces if necessary. Write the number from the pattern on the back of the piece and remove the patterns.

Sanding and Shaping the pieces

I use a soft Flex Drum sander and two pneumatic drum sanders to shape the pieces. I remove most of the wood with an 80-grit sanding drum. I smooth out the pieces with a 120-grit sanding drum and finish sand with a 220-grit sanding drum.

Rough in the levels of the entire project before shaping details. Start by lowering the background and parts that would be the farthest from the viewer. Cut

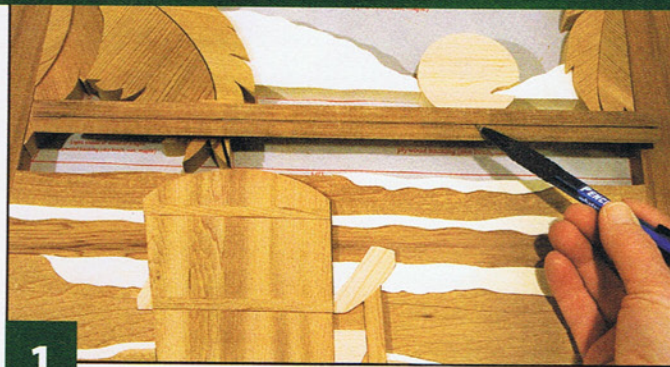


Use sanding shims to shape pieces in sections.
Use rising shims to add dimension to the project.

pieces of scrap plywood or tempered hardboard to the size of the sections to be sanded as a unit. Use light-duty double-sided carpet tape to attach the parts to the sanding shim. I use a sanding shim for the sand area, including the shadow under the chair. Some of the chair sections can be sanded as a unit to help ensure the angles match up.

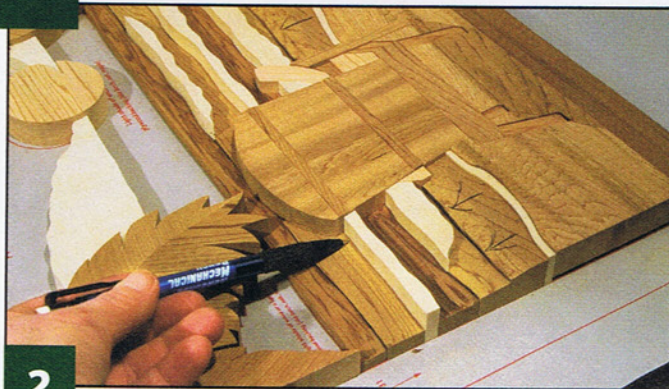
Use rising shims to elevate sections of the project. Cut the shims slightly smaller than the shaded sections on the pattern. Place the rising shims in place under the pieces before you begin shaping the project.

SEASIDE: SHAPING THE WATER



1

Sand the darker water. Start with the topmost wave (33), which is farthest from the chair. Sand the piece down to $\frac{1}{4}$ " (6mm) thick and place it back in position. Mark the thickness of this piece on the adjacent pieces (32 and 38). Work toward the sand, sanding each section slightly thicker. The pieces closest to the sand (51, 53, and 56) should be about $\frac{1}{2}$ " (13mm) thick.

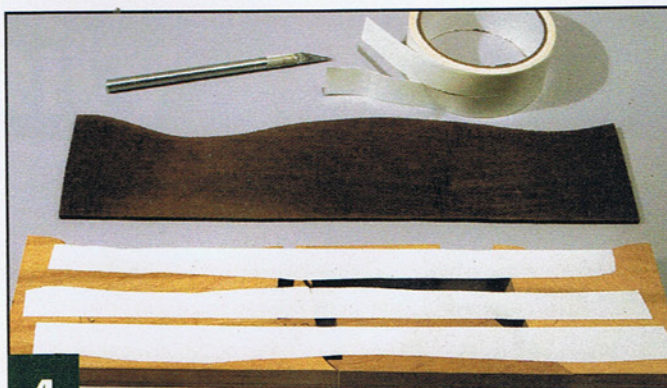


2

Lower the wave caps. Mark the thickness of the surrounding dark water on the white wood and sand the pieces down so they are $\frac{1}{16}$ " (2mm) above the lines. The white wood represents the water bubbling up on the tops of the waves. Do not sand the white waves closest to the beach yet.

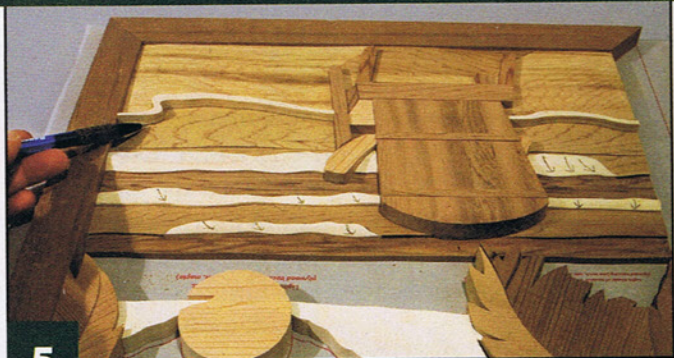


3 Shape the wave caps and mark the sand. Roll each wave-cap section down along the top edge, leaving it thicker on the bottom edge. Position the last two sections of the dark wave (51 and 56) tightly against the sand and mark the thickness of the waves on the sand. The angle of the sand must match the angle on the waves so the wave appears to be washing up on the shore.

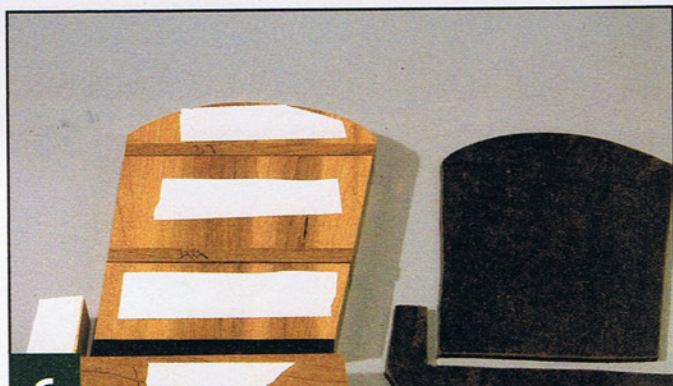


4 Attach the beach pieces to a sanding shim. Turn the beach and chair shadow sections upside down and remove any dust or burrs from the back. Cut double-sided tape into 1" (25mm)-wide sections and apply the tape to the back of the pieces. Remove the paper from the tape and attach the sanding shim. Turn the pieces right-side up and press the pieces down on the tape.

SEASIDE: SHAPING THE BEACH & CHAIR



5 Sand and shape the beach. Taper the beach section so it is thicker where it meets the frame and tapers down to meet the water's edge. Then sand some dips in the beach with a soft-edge sander for a slightly textured look. Remove the pieces from the shim and place them in position. Sand the white foam of the wave washing up on shore. These pieces are thicker than the surrounding sand.

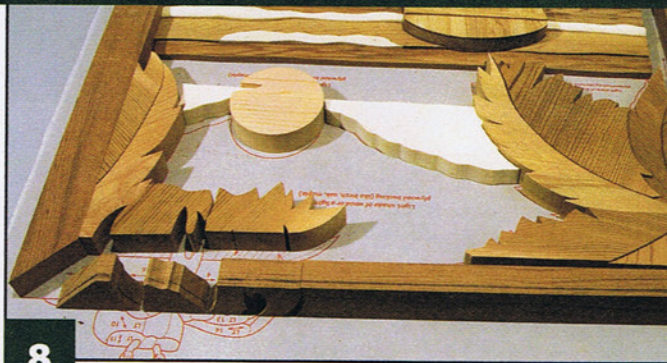


6 Attach the chair pieces to the sanding shims. Mark the thickness of the sand on the chair parts. The legs (60, 62, and 66) taper down $\frac{1}{16}$ " (2mm) where they meet the chair. Mark the thickness of the legs on the chair. Attach double-sided tape to the L-shaped chair seat and the wide sections of the chair back. Do not apply tape to the thin sections of the chair back. Attach the chair back and seat to separate sanding shims.



7 Shape the chair. Taper the small section of the seat (54) down toward the water. Taper the right side of the chair seat down to create the correct angle. Mark where the seat joins the chair back. Sand the chair back at an angle tapering down toward the seat of the chair. The chair back is slightly thinner than the chair seat. The horizontal parts (37 and 49) are slightly thicker than the chair back.

SEASIDE: SHAPING THE FRAME & SKY



8

Sand the frame. Sand the top frame down to a thickness of $\frac{1}{2}$ " (13mm) to give the crab more dimension. Use a sanding shim and sand the top sections as flat as possible. Lightly sand the bottom frame and then taper the sides from the thickness of the bottom frame down to meet the thickness of the top frame.



9

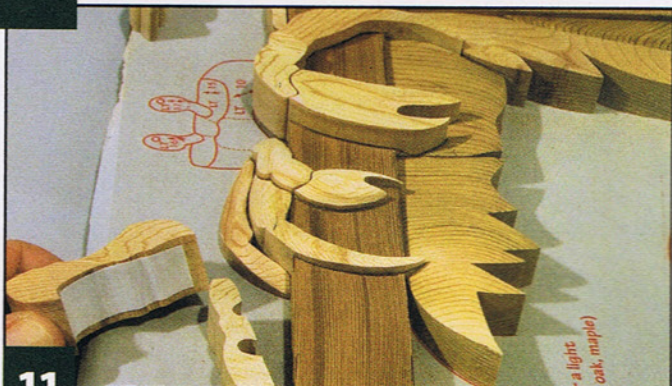
Shape the clouds and sun. I use $\frac{1}{2}$ " (13mm)-thick stock for the clouds. Shape the larger cloud and mark the thickness on the sun. Sand the sun, leaving it thicker than the large cloud. Mark the thickness of the sun on the smaller cloud and taper the smaller cloud almost down to the sun. Mark the thickness of the clouds on the palm fronds. Keep the fronds thicker than the clouds.

SEASIDE: SHAPING THE FRONDS & CRAB



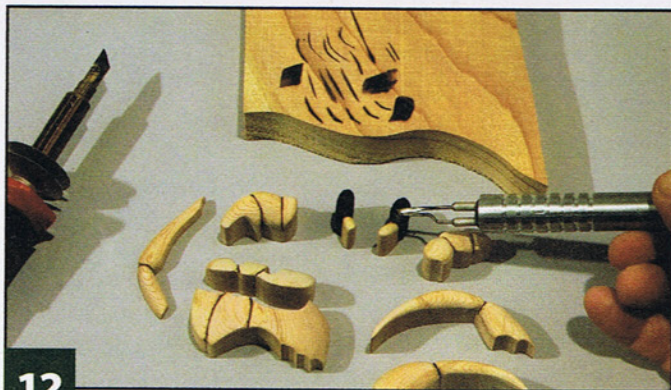
10

Shape the fronds. Mark the level of the frame on the fronds. The fronds are slightly thinner than the frame. The center ridge is thicker and the outside edges taper down. Start with parts 18 and 19. Parts 20 and 21 are thicker than the first frond. Parts 22 and 23 are thicker than the middle frond, but thinner than the frame. Keep the fronds on the right thinner than the crab and the frame.



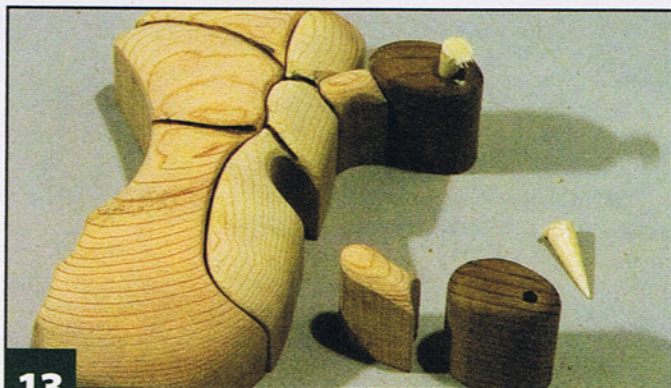
11

Shape the crab. Make the back legs (14 and 9) about $\frac{3}{8}$ " (10mm)-thick. Keep the other legs thicker than the frame, but taper them down to meet the body. Leave the claws (3 and 5) the full thickness. The legs on the left side taper down thinner than the body. Use double-sided tape to attach the body sections (10 and 15) together and shape them as one unit. Angle the bottom section down toward the legs. Round and shape the eyestalks and eyes.



12

Carve and burn in the details. Sand the pieces with 220-grit sandpaper. Use a pencil to mark the detail lines on the chair, palm fronds, and crab. Add the details with a Wonder Wheel dressed to a V-point, carving tools, or a woodburner. The Wonder Wheel carves and burnishes the wood in one stroke. You can cut the eyestalk and eye from one piece of wood and use a woodburner to darken the eye, but it can be difficult to burn the wood evenly.



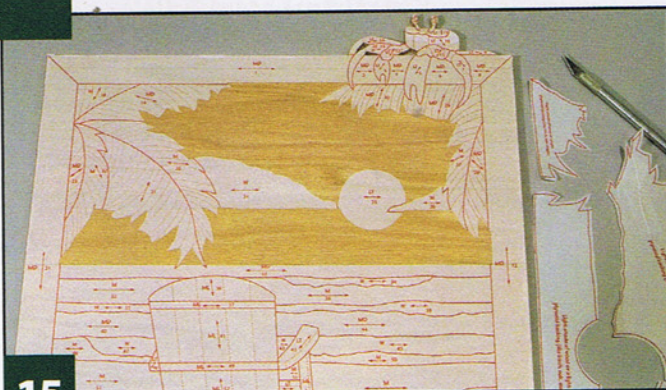
13

Add highlights to the crab's eyes. Sharpen the ends of a piece of aspen in a pencil sharpener. Drill $\frac{1}{8}$ " (3mm)-diameter holes in the top part of each eye. Glue the aspen in the holes. When dry, sand the aspen flush with the rest of the eye. Use a small sander and avoid the darker wood to prevent the dark wood dust from staining the aspen. If the aspen does get stained, drill out the aspen and start over.



14

Apply the finish. Apply polyurethane wiping gel to the top and sides of each piece with a disposable foam brush. Apply a heavy coat, allow it to dry for less than a minute, and wipe off the excess with a paper towel. Buff the pieces completely dry with a clean paper towel and let them dry for 6 to 8 hours. Apply a lighter coat using the same technique. When dry, rub any areas where the grain raised with fine steel wool and apply a third coat.



15

Make the backing. Attach the pattern to clear plywood. Cut $\frac{1}{16}$ " (2mm) inside the perimeter pattern lines. Use a hobby knife to cut the pattern away from the exposed sky areas. Cut $\frac{1}{8}$ " (3mm) on the side of the lines that will be covered by the intarsia. The remaining pattern acts as a mask. Apply clear spray acrylic finish to the sky and back of the plywood. Apply dark stain on the edges.



16

Attach the project. Place the pieces in position on the backing board. Lift each piece individually and apply a little yellow wood glue to the back. Place the piece back in position. Use hot glue to lock a few key pieces in place. Use a level as a straight edge on the bottom of the project. Attach a mirror hanger or eyelets and wire to the back.



Judy Gale Roberts, born in Houston, Tex., has long been recognized as the leading authority on intarsia. Judy was one of the first ten people to be inducted into the Woodworking Hall of Fame. For more of her work, information on classes held at her

home studio in Seymour, Tenn., or to purchase a Wonder Wheel, visit www.intarsia.com. Judy's numerous intarsia books are available at www.FoxChapelPublishing.com.

Materials:

- $\frac{3}{4}$ " x $5\frac{1}{2}$ " x $36\frac{1}{2}$ " (20mm x 140mm x 930mm) medium-dark wood, such as western red cedar, mahogany, or American beech
- $\frac{3}{4}$ " x $5\frac{1}{2}$ " x 20" (20mm x 140mm x 510mm) medium wood, such as western red cedar, aromatic cedar, cherry, or red oak
- $\frac{3}{4}$ " x $5\frac{1}{2}$ " x 9" (20mm x 140mm x 230mm) medium-light wood, such as western red cedar, maple, or white oak
- $\frac{3}{4}$ " x $5\frac{1}{2}$ " x 14" (20mm x 140mm x 355mm) light wood, such as western red cedar, cypress, or white oak
- $\frac{1}{8}$ " to $\frac{1}{4}$ " x 16" x 18" (3mm to 6mm x 405mm x 460mm) Baltic birch, oak, or maple plywood (backing board)
- $\frac{3}{4}$ " x $5\frac{1}{2}$ " x 12" (20mm x 140mm x 305mm) white wood, such as aspen, basswood, white pine, holly, or poplar
- Assorted scraps of $\frac{1}{4}$ " (6mm)-thick tempered hardboard or plywood (rising shims, sanding shims)
- Repositionable spray adhesive or re-stickable glue stick
- 5 photocopies of the pattern
- Yellow wood glue
- Double-sided light-duty carpet tape

Materials & Tools

- Polyurethane wiping gel or finish of choice
- Paper towels
- 1" (25mm)-wide disposable foam brush
- Mirror hanger or hanger of choice
- Clear acrylic spray finish
- Dark stain (backing board)
- Assorted grits of sanding drums and sandpaper

Tools:

- #5 and #0 reverse skip-tooth blades or blades of choice
- Pneumatic drum sanders, Flex Drum sanders, or sanders of choice
- Drill with $\frac{1}{8}$ " (3mm)-diameter bit
- Pencil sharpener
- Woodburner (optional)
- Wonder Wheel or carving knife (optional)
- Hobby knife
- Saber saw or circular saw (optional for backer)

Pattern for **SEASIDE SERENITY** is in the pattern pullout section.

Victorian Fretwork Mirror Frame

Classic Victorian design incorporates the mirror into the fretwork frame

*By John A. Nelson
Cut by Ben Fink*

This vintage design, circa 1885, is a perfect way to display your fretwork skills. Highlight the fretwork with a piece of mirrored acrylic which doubles as a backing board. The design can easily be adapted for use as a picture frame.

Cut the frets first and then cut the rectangular opening for the mirror. Attach the mirrored acrylic to the wooden blank and cut around the perimeter of the pattern. Separate the stack and apply your finish of choice to the fretwork. Use cyanoacrylate (CA) glue or epoxy to attach the mirrored acrylic to the frame. Drill a pilot hole for the hanger screw and attach the hanger to the back of the mirror.



Materials & Tools

Materials:

- $\frac{1}{8}$ " to $\frac{3}{16}$ " x $10\frac{3}{4}$ " x 14" (3mm to 5mm x 275mm x 355mm) Baltic birch plywood or hardwood of choice (frame)
- $\frac{1}{8}$ " to $\frac{1}{4}$ " x $10\frac{3}{4}$ " x 14" (3mm to 6mm x 275mm x 355mm) mirrored acrylic
- Mirror hanger
- Cyanoacrylate (CA) glue or epoxy
- Danish oil or finish of choice
- Masking tape (to stack acrylic and wood)

Tools:

- #3 reverse-tooth blades or blades of choice
- Drill with assorted small drill bits
- Brushes and rags to apply finish



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



Floral Butterfly Scene



Intricate fretwork adapted from an Asian papercutting design

From the Dover Pictorial Archive
Cut by Ben Fink

Butterflies always seem to congregate near the most beautiful blossoms. This project, based on a traditional Chinese papercut design, is an ideal way to showcase your scrolling skills. The delicate blooms are sure to brighten your home all year long.

Cut the design as a straightforward wall hanging and experiment with different colored backing boards to dramatically change the feel of the project. Stack cut the perimeter of the blank with a piece of colored transparent acrylic for a stunning suncatcher or use mirrored acrylic for a unique and eye-catching mirror.

Materials & Tools

Materials:

- $\frac{1}{4}$ " to $\frac{3}{4}$ " x 7" x 10" (6mm to 20mm x 180mm x 255mm) Baltic birch plywood or hardwood of choice (fretwork)
- $\frac{1}{4}$ " x 7" x 10" (6mm x 180mm x 255mm) colored or mirrored acrylic, or painted Baltic birch plywood (backing)
- Wood glue or cyanoacrylate (CA) glue (to attach fretwork to backing)
- Assorted grits of sandpaper
- Hanger of choice
- Finish of choice

Tools:

- #3 reverse-tooth blades or blades of choice
- Drill with $\frac{1}{16}$ " (2mm)-diameter bit

Further Reading

Chinese Cut-Paper Animal Designs, Dover Pictorial Archive Series

Although often regarded as simple folk craft, paper cutouts constitute one of the foundations of Chinese art. This bold assortment features an original selection of 125 rare black-and-white cuts. Consisting exclusively of animal motifs, it offers unusual renderings of fish, dragons, butterflies, horses, cranes, and other creatures.

Available for \$8.95 + s&h from Dover Publications,
www.DoverPublications.com, 516-294-7000.





Custom Scrolled Trophies

You don't have to be an antique car buff to appreciate the trophies awarded at the annual Sugarcreek, Ohio, Fabulous Fifties Fling car show. These unique trophies are designed and created by longtime scroll sawyer David Borter.

"I'm not a collector, but I do admire old cars," said the 70-year-old member of the Sugarcreek Community Arts Council. "They are definitely in a class of their own."

"The Fabulous Fifties Fling committee gives me a general concept of what they want and I design a different trophy each year based on their suggestion," David added.

One year, the concept was to build a memorable trophy that doubles as a desk clock. So David created a 1940 Willys Coupe pulled up beside an antique street clock.

"Last year I did the Vintage Gas Station trophy by mounting a photo onto a piece of $\frac{3}{8}$ " wood that was scroll sawn to match the outside perimeter of the gas pump, station, and cars," David explained. "Then I painted the edges and back of the wood with craft paint to match the colors in the picture."

David prefers using Baltic birch plywood for the body of his trophies because it does not expand or contract as readily as other woods, which helps keep the pictures adhered to the surface. The trophies are mounted on either maple or walnut bases finished with three coats of clear satin polyurethane.

Email David Borter at cousyborter@yahoo.com. For more information on the Fabulous Fifties Fling visit <http://bit.ly/bZa5a0>.



David Borter creates unique scroll-sawn trophies for a local car show.



Portrait Artist Takes To The Mall

Information technology (IT) professional Gary Hall discovered a way to combine his IT talents with his love of woodworking. The result was a website featuring his custom portrait scroll saw work combined with interactive photograph upload features. Later, while strolling through a Michigan mall, a promotional idea struck.

"It was a bit of an epiphany actually," Gary said. "I thought of combining a kiosk in the mall with the interactive website."

Unfortunately, kiosk costs proved too prohibitive. Then Gary discovered Hodge Podge, a mall store whose business model allows crafters to set up individual kiosks or booths to sell their products.

"The month-to-month rent was much lower than setting up a conventional mall kiosk, and there were no contracts," Gary explained. "At the end of each month, Hodge Podge sends out a check reflecting the sales minus a 15% commission fee."

"I believe in-store booths are an excellent way to advertise and sell products, especially visual arts and crafts type products like mine," Gary explained.

Dennis Nagy, owner of Hodge Podge, is also pleased with the venture.

"We've very excited about it because Gary's custom scroll saw portrait service has attracted a whole new level of customers to our store," he said.

At Gary's kiosk, you place your photograph in one of the promotional envelopes and give it to a salesperson. The envelope has a tear-off promo code you use when you log on the website. There, you can view exactly how your portrait will look in wood. If you decide to purchase the piece, you can do so online and choose to have it shipped to the store or directly to your home.

For more information on Gary's Photos to Wood portrait service, call 248-747-0215 or visit www.photostowood.com. For more information about Hodge Podge, visit www.hodgepodge09.blogspot.com.



Gary Hall displays a finished project at his kiosk located within Hodge Podge, an artists' cooperative store at his local mall.

SCROLLSAW

Woodworking & Crafts

Woodworking & Crafts

Summer 2010 - Issue 39

1970 Broad Street
East Petersburg, PA 17520

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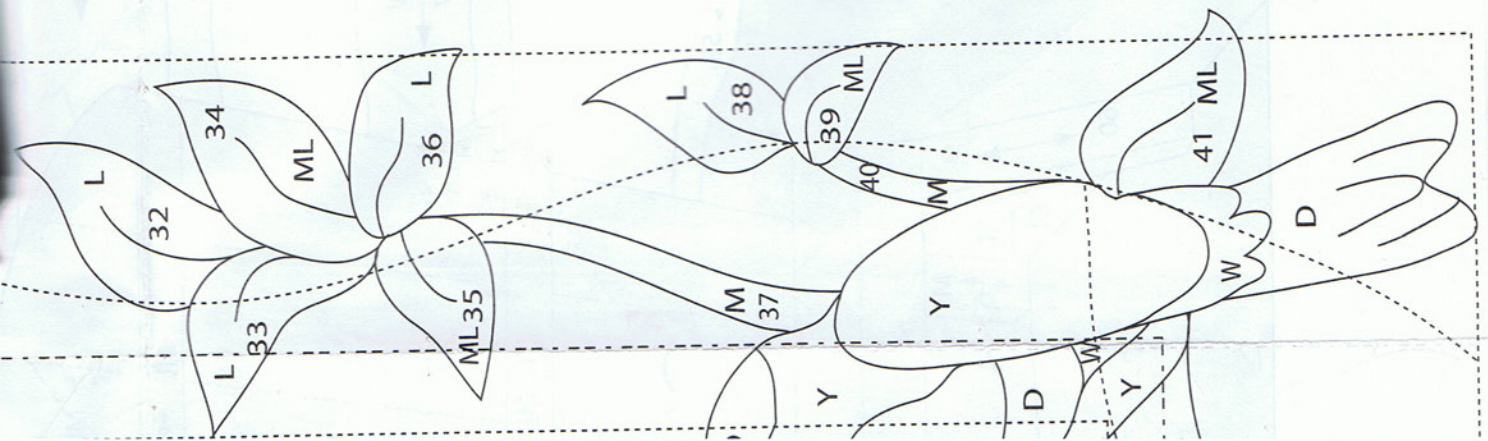
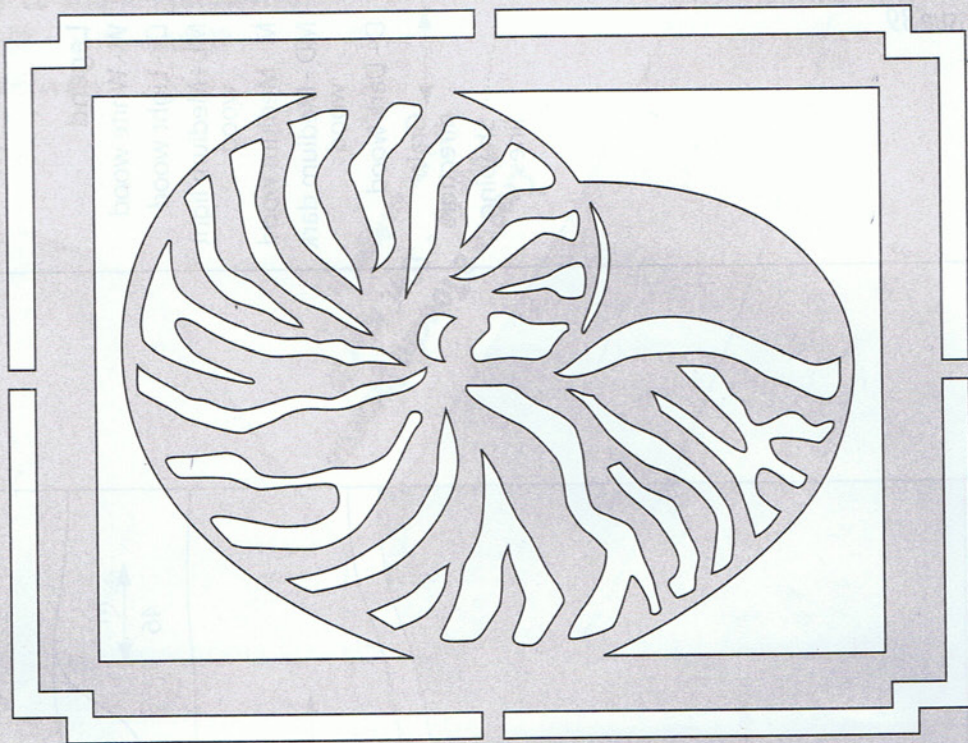
Treasures of the Sea.....	30	Create a Toucan Intasia.....	60
Custom-framed Moses Portrait.....	33	Creating Colorful Butterflies.....	62
Building an Elegant Sailing Ship.....	36	Building a Mason Jar Lantern.....	65
Make a Goldfinch Frame.....	54	Seaside Serenity.....	68
Easy-to-make Luminaries.....	58	Note to professional copying services. You may make up to ten copies of these patterns for the personal use of the buyer of this magazine.	

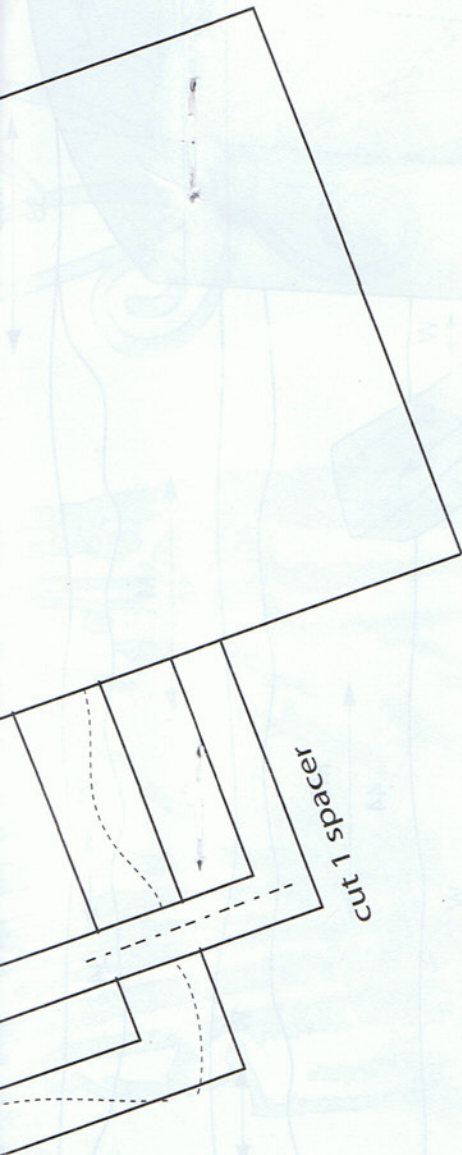
Note to professional copying services. You may make up to ten copies of these patterns for the personal use of the buyer of this magazine.

Treasures of the Sea

Page 30 - SSWC Issue 39

Designer: Gloria Cosgrove





Legend

Start with 1/2" wood

← Grain direction

D.....Dark shade of wood

M.....Medium shade of wood

W.....Any white wood

L.....Light shade of wood

Y.....Yellowish wood

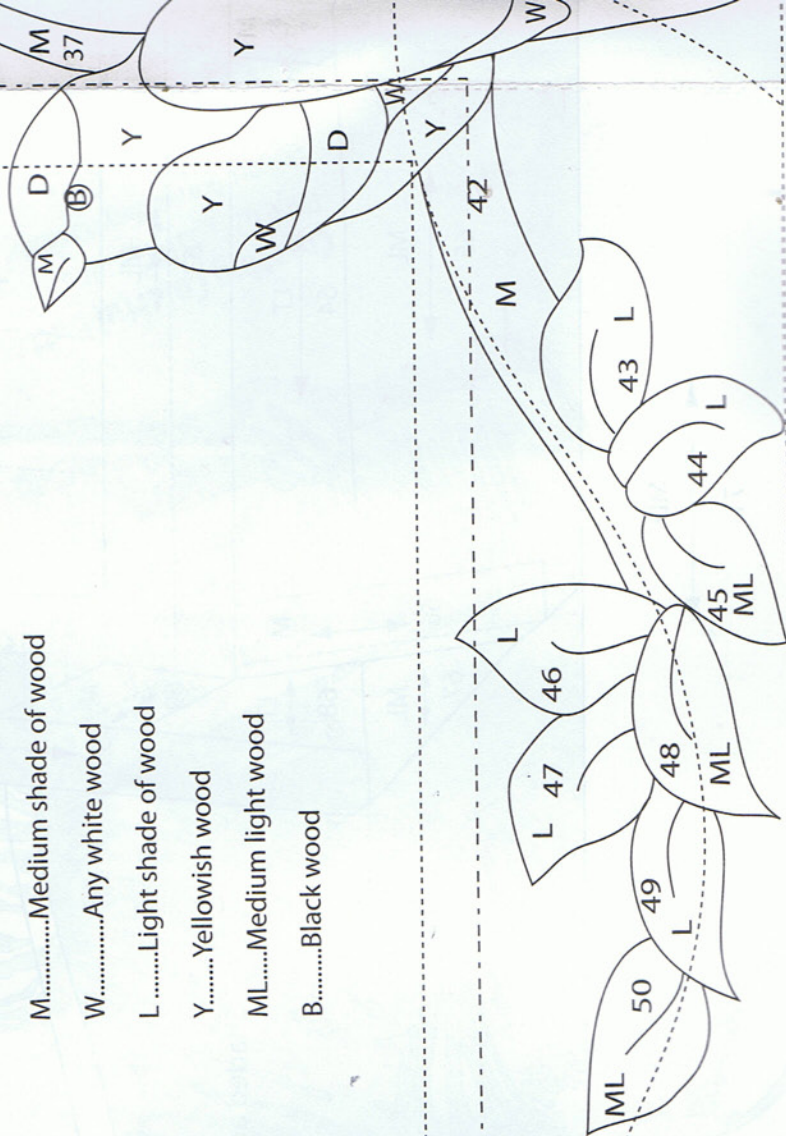
ML.....Medium light wood

B.....Black wood

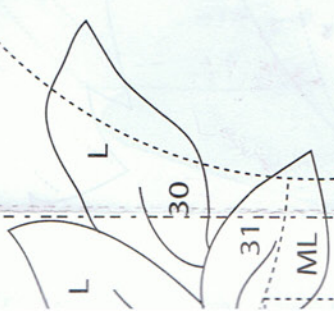
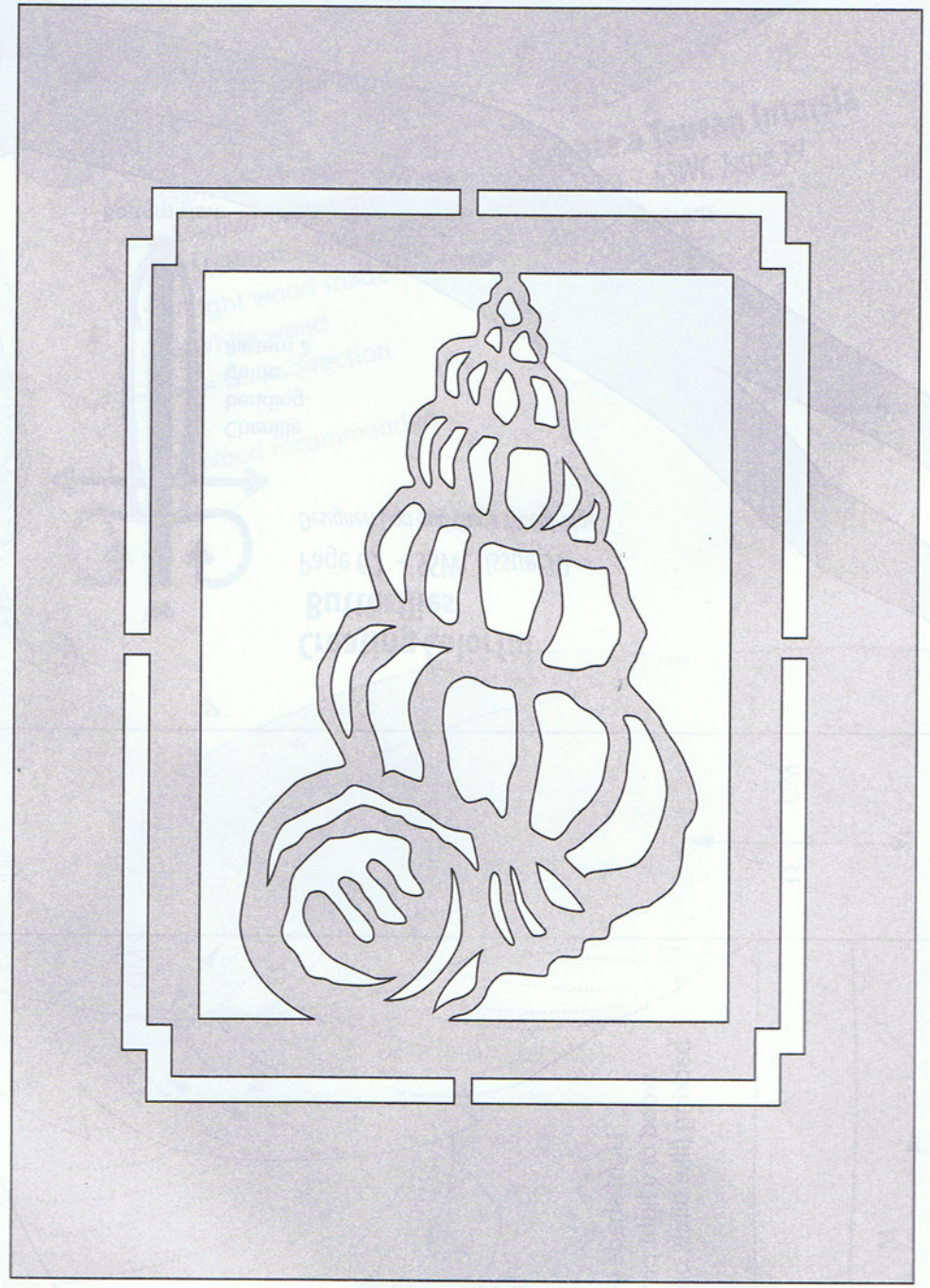
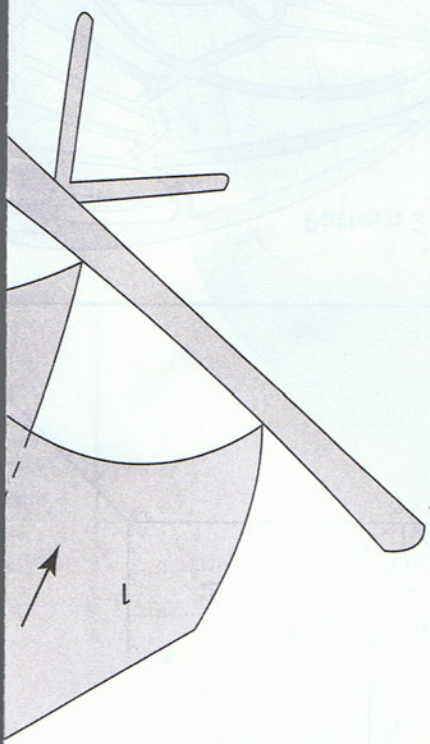
Make a Goldfinch Frame

Page 54 - SSWC Issue 39

Designer: Kathy Wise

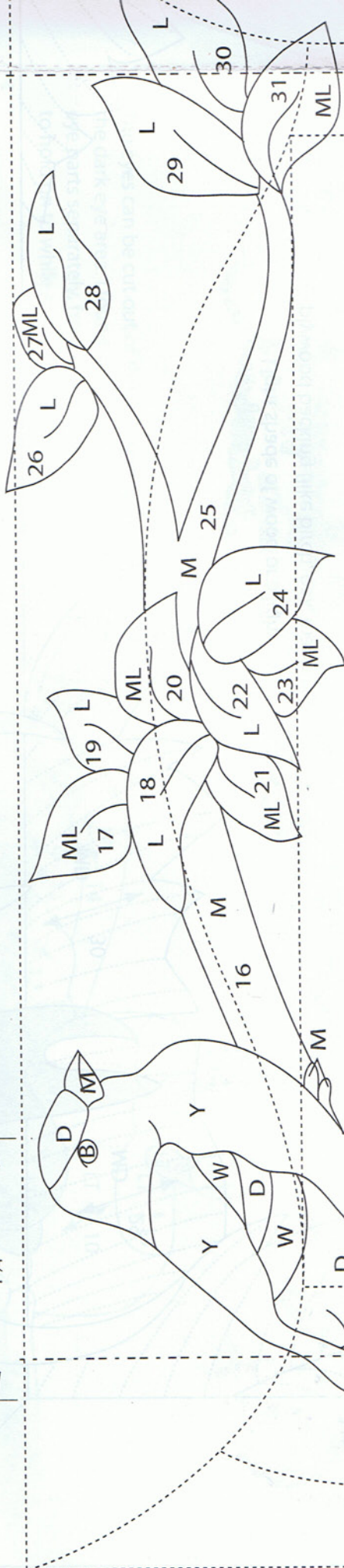


Building an Elegant
Sailing Ship
Page 36 - SSWC Issue 3
Designer: Carol and Homer Bish

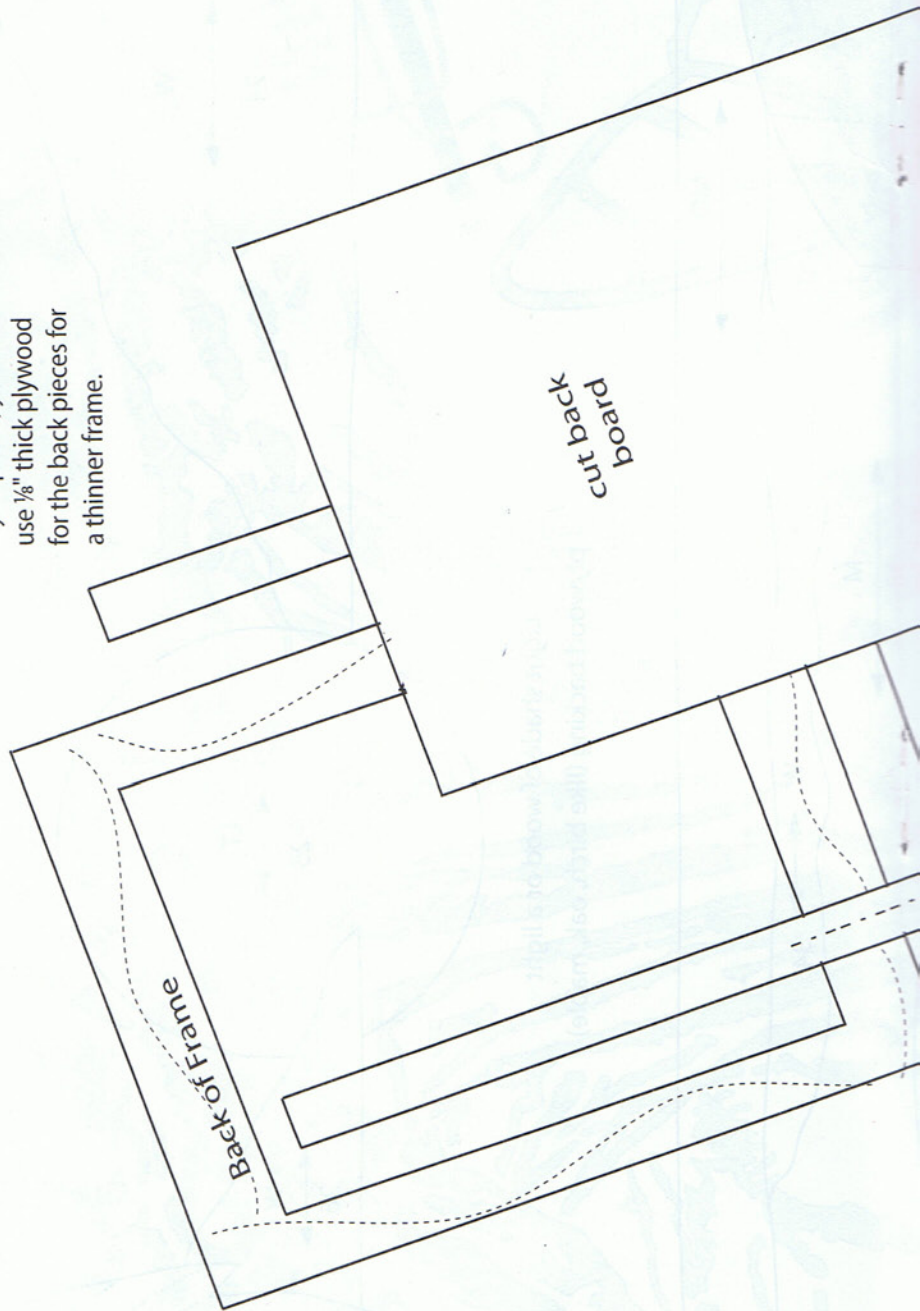


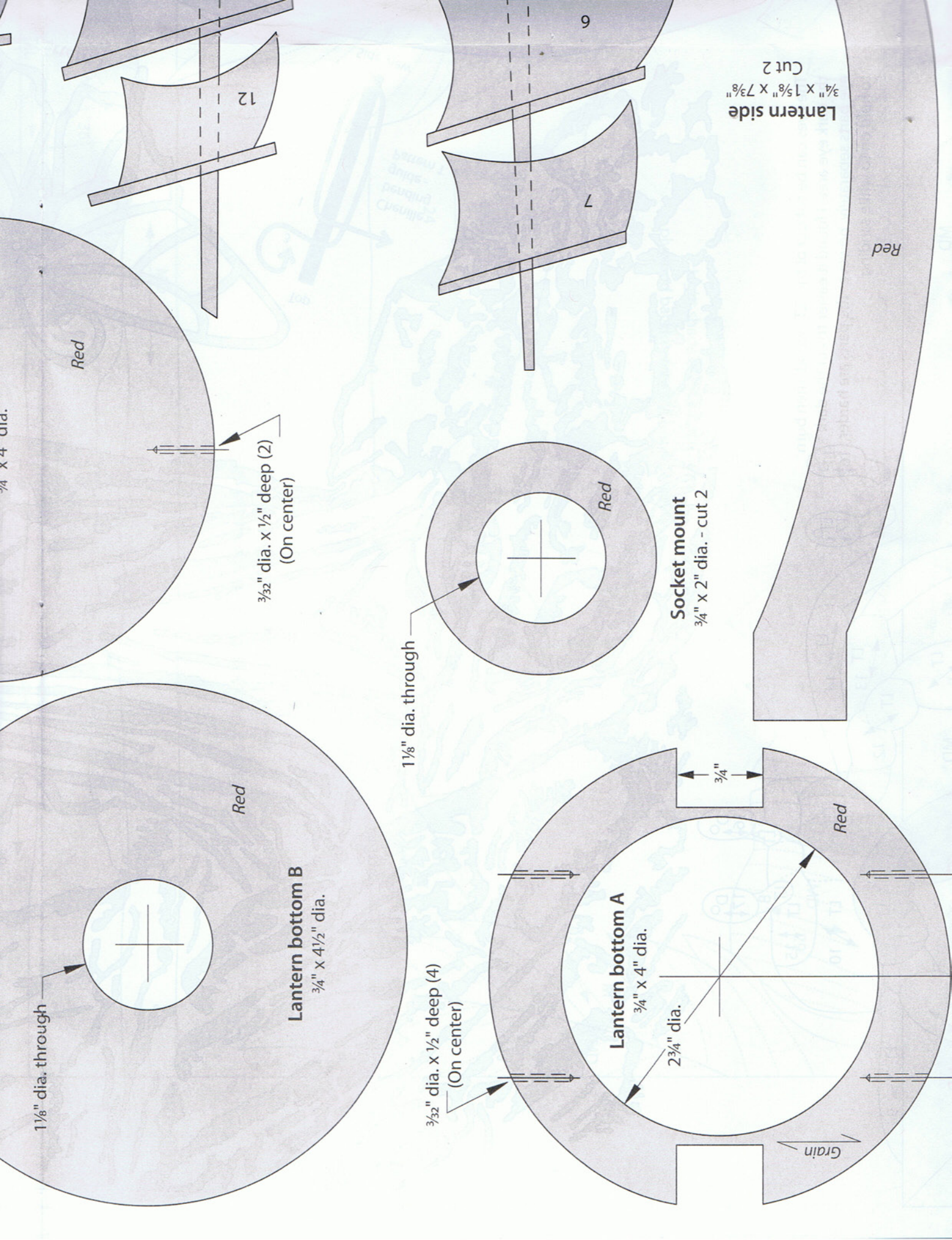
Tre
Pag
Desi

7/8" 1 3/4"



If you prefer, you can use 1/8" thick plywood for the back pieces for a thinner frame.





Lantern side
3/4" x 1 5/8" x 7 3/8"
Cut 2

Red

Socket mount
3/4" x 2" dia. - cut 2

1 1/8" dia. through

3/32" dia. x 1 1/2" deep (2)
(On center)

Lantern bottom B
3/4" x 4 1/2" dia.

1 1/8" dia. through

Red

Lantern bottom A
3/4" x 4" dia.

3/32" dia. x 1 1/2" deep (4)
(On center)

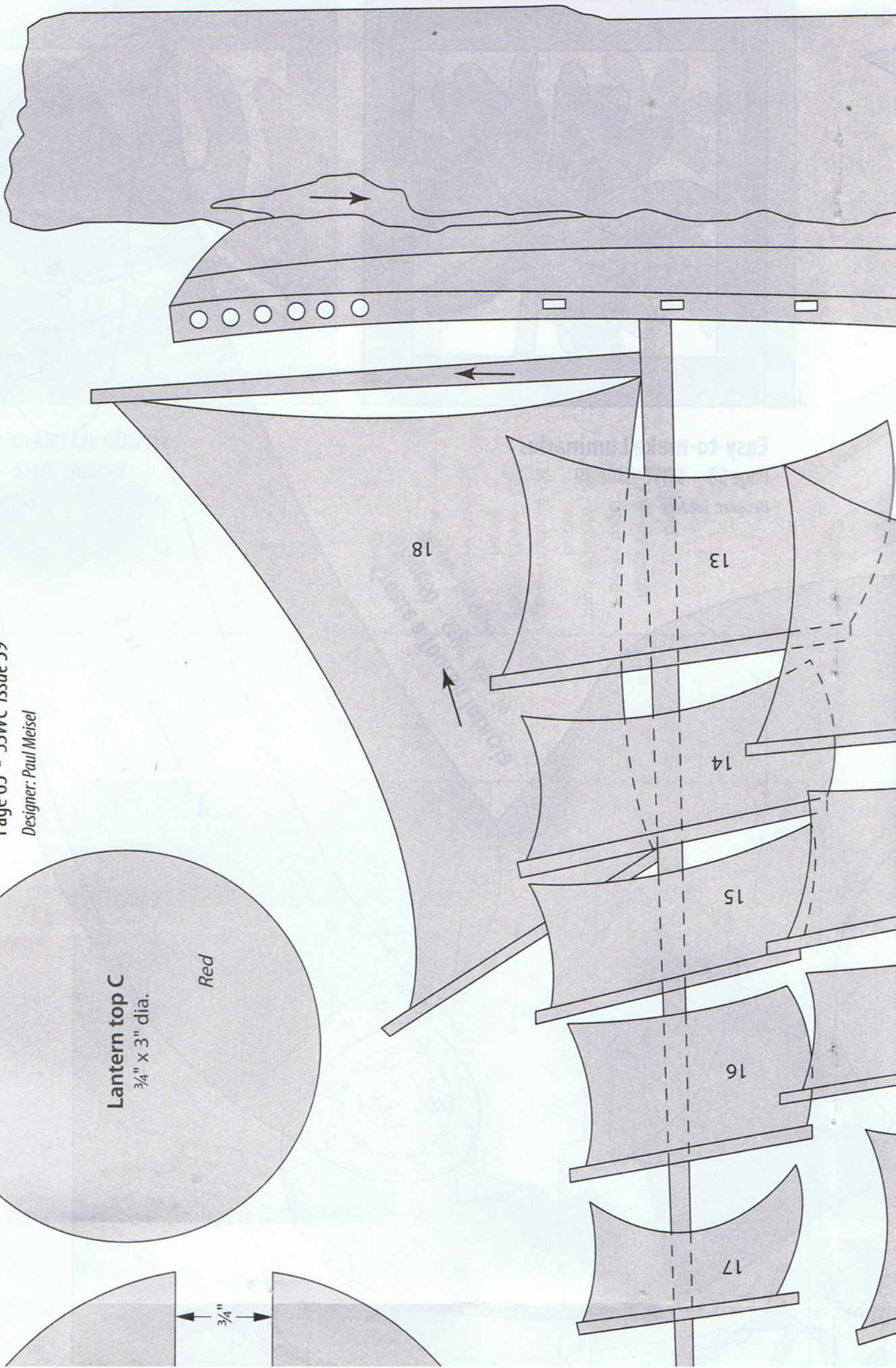
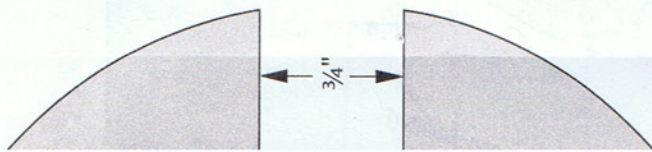
Red

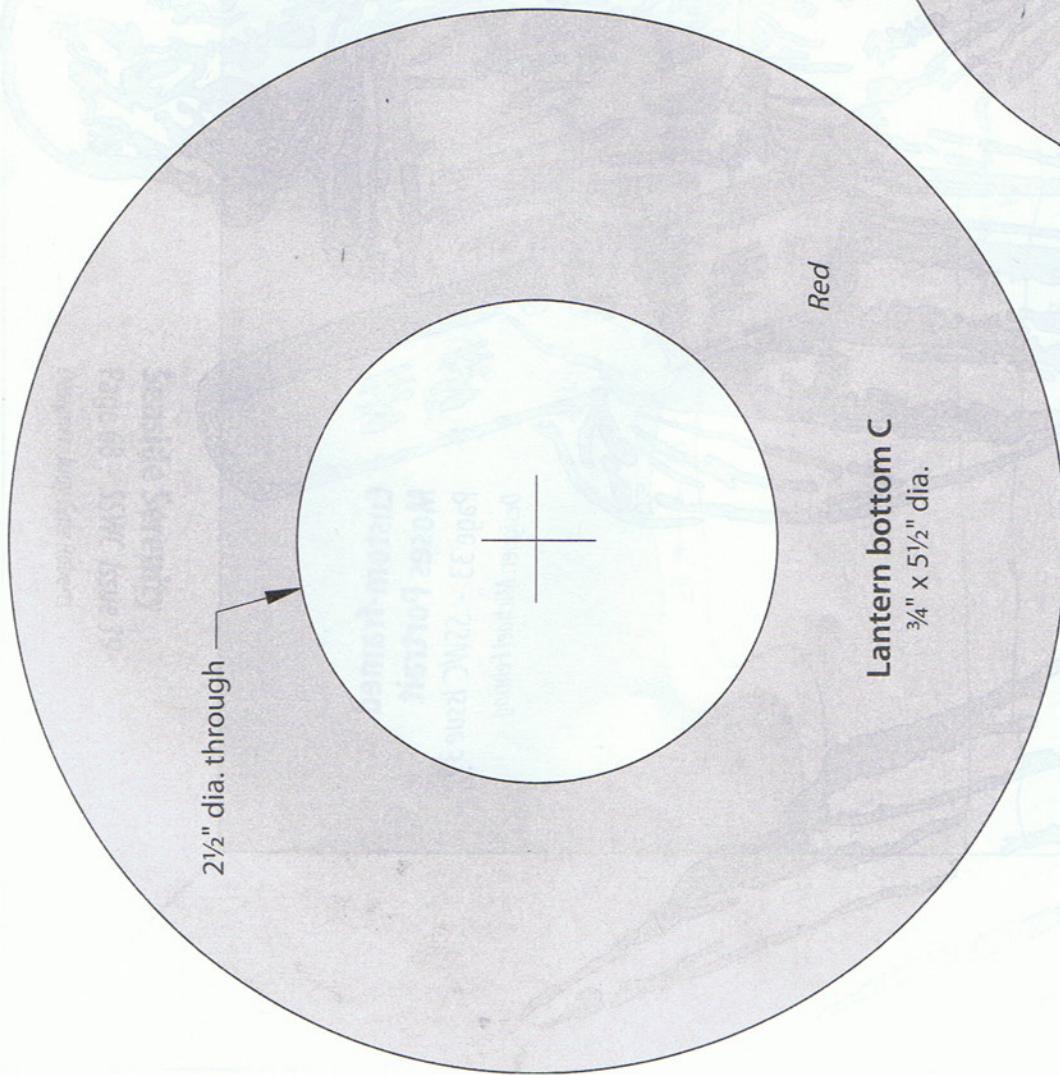
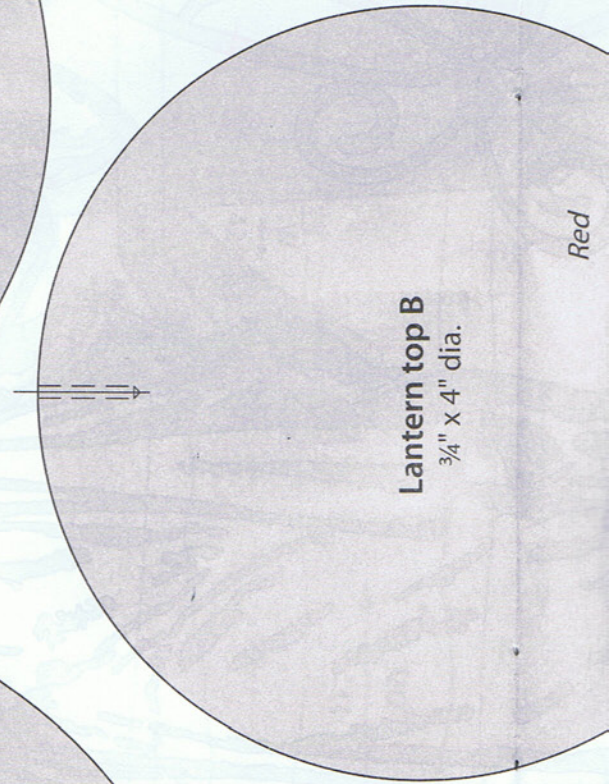
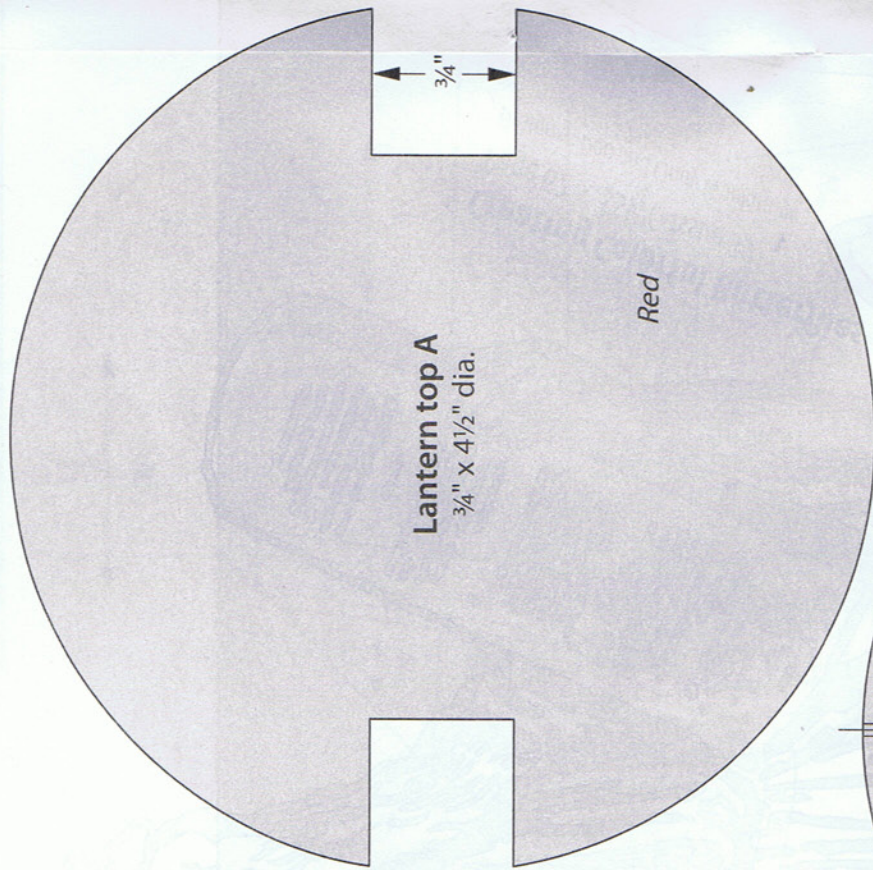
Grain

2 3/4" dia.

3/4"

**Building a
Mason Jar Lantern**
Page 65 - SSWC Issue 39
Designer: Paul Meisel





ing Colorful erflies

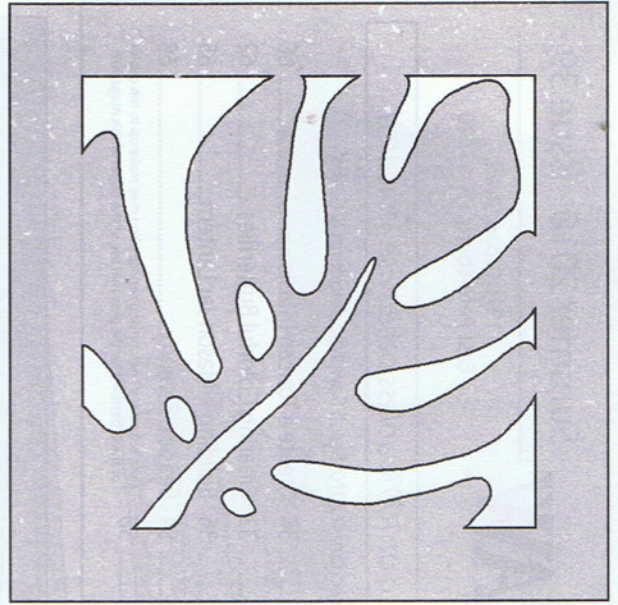
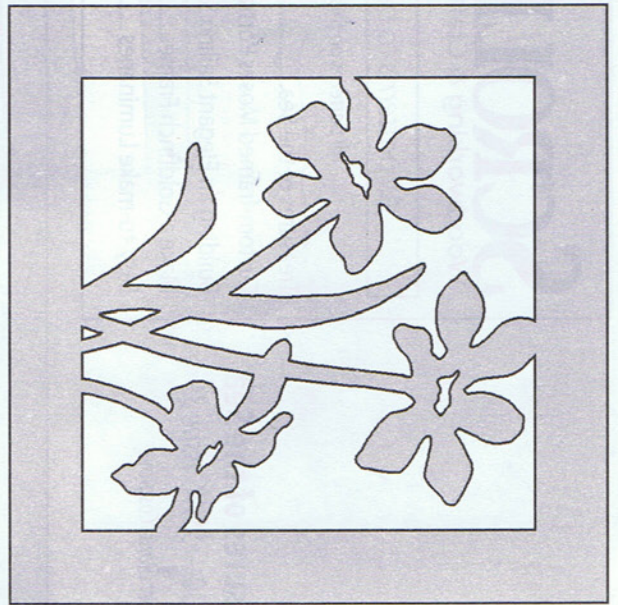
2 - SSWC Issue 39

Don and Cindy Woolbridge

MD 31

18 M

Legend
W - White wood
LT - Light wood
ML - Medium light wood
M - Medium wood
MD - Medium dark wood
D - Dark wood
Grain direction
Shaping lines

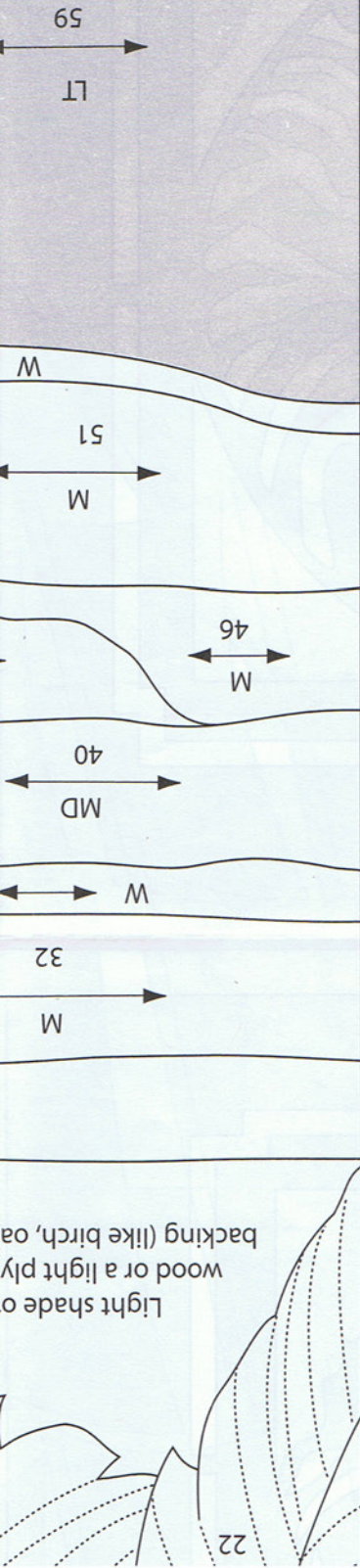


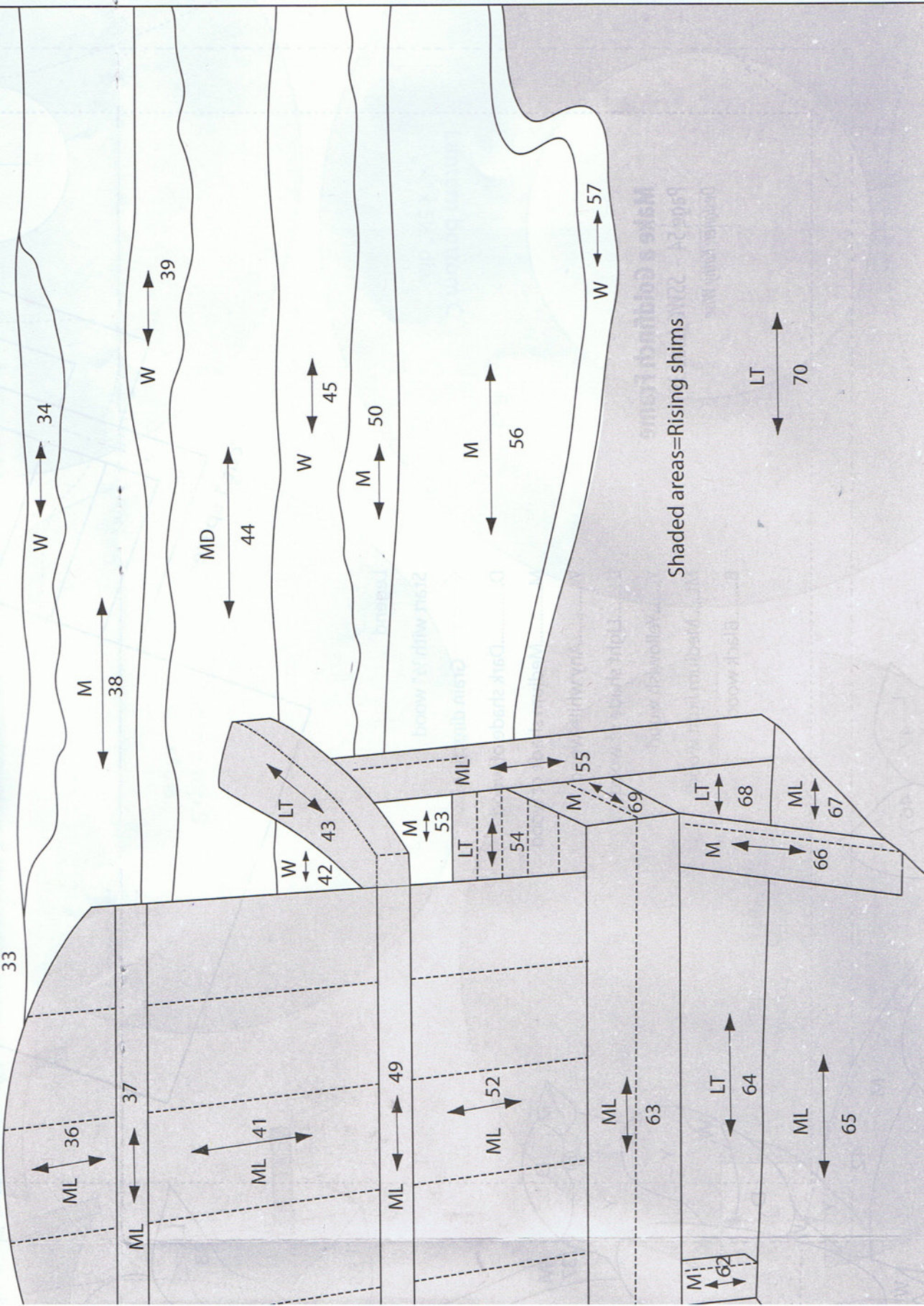
Easy-to-make luminaries

Page 58 - SSWC Issue 39

Designer: Sue Mey

Light shade of wood or a light ply backing (like birch, oak)

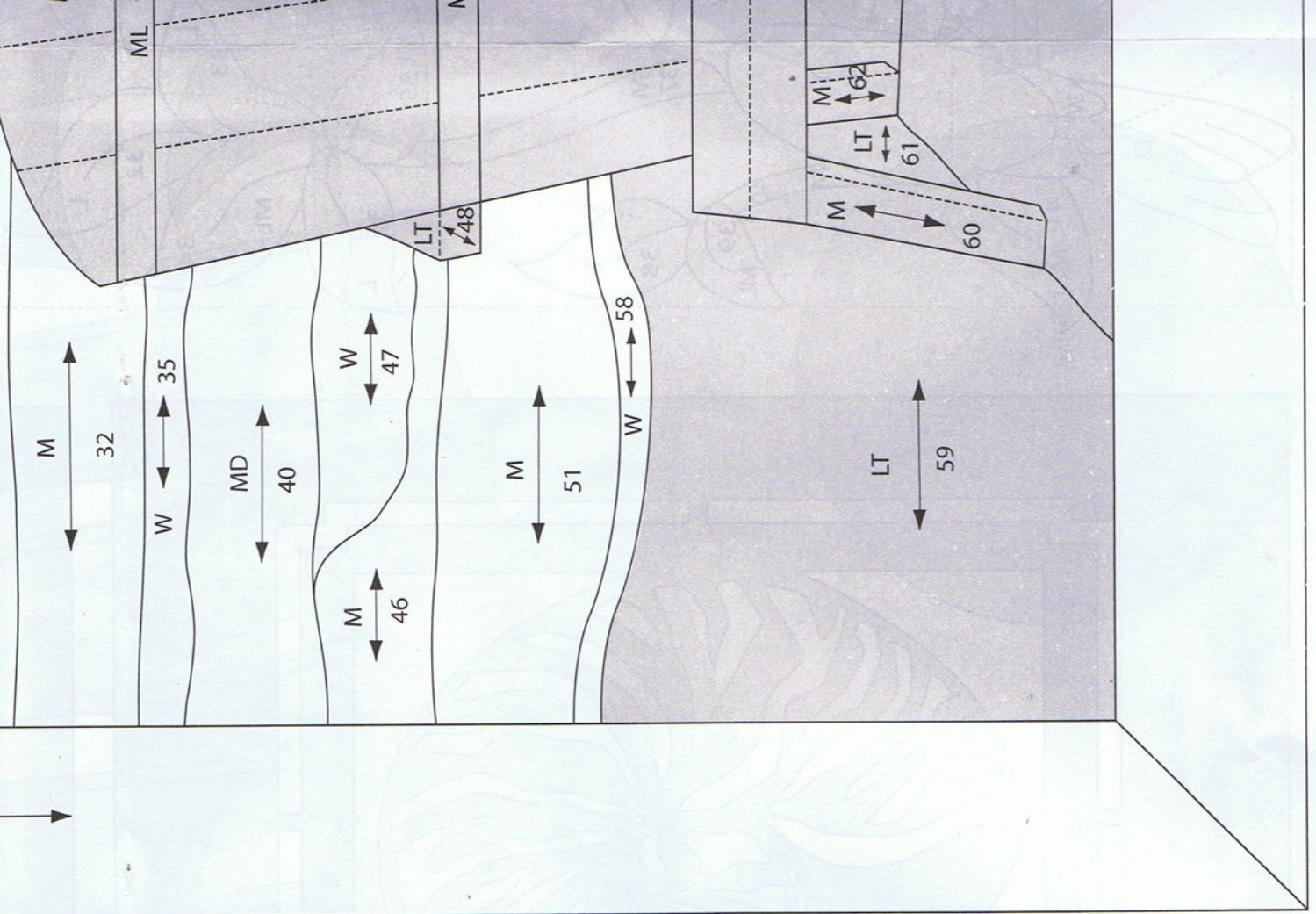
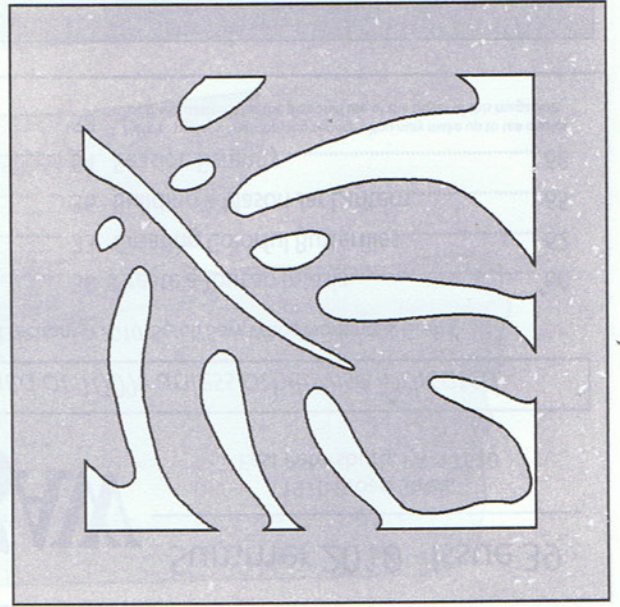
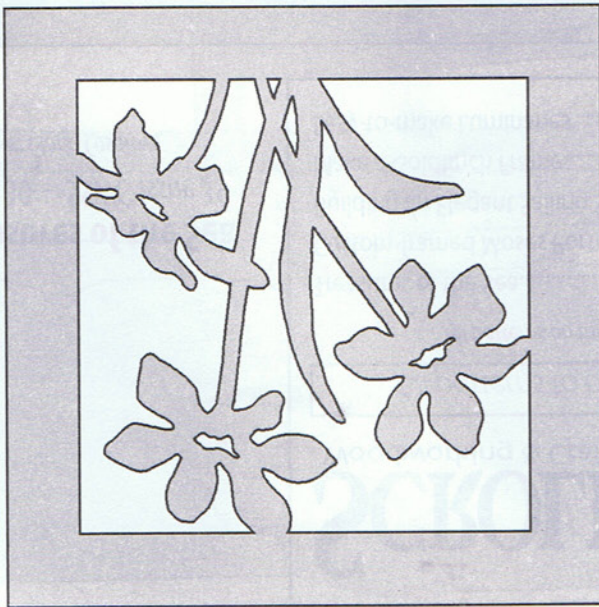


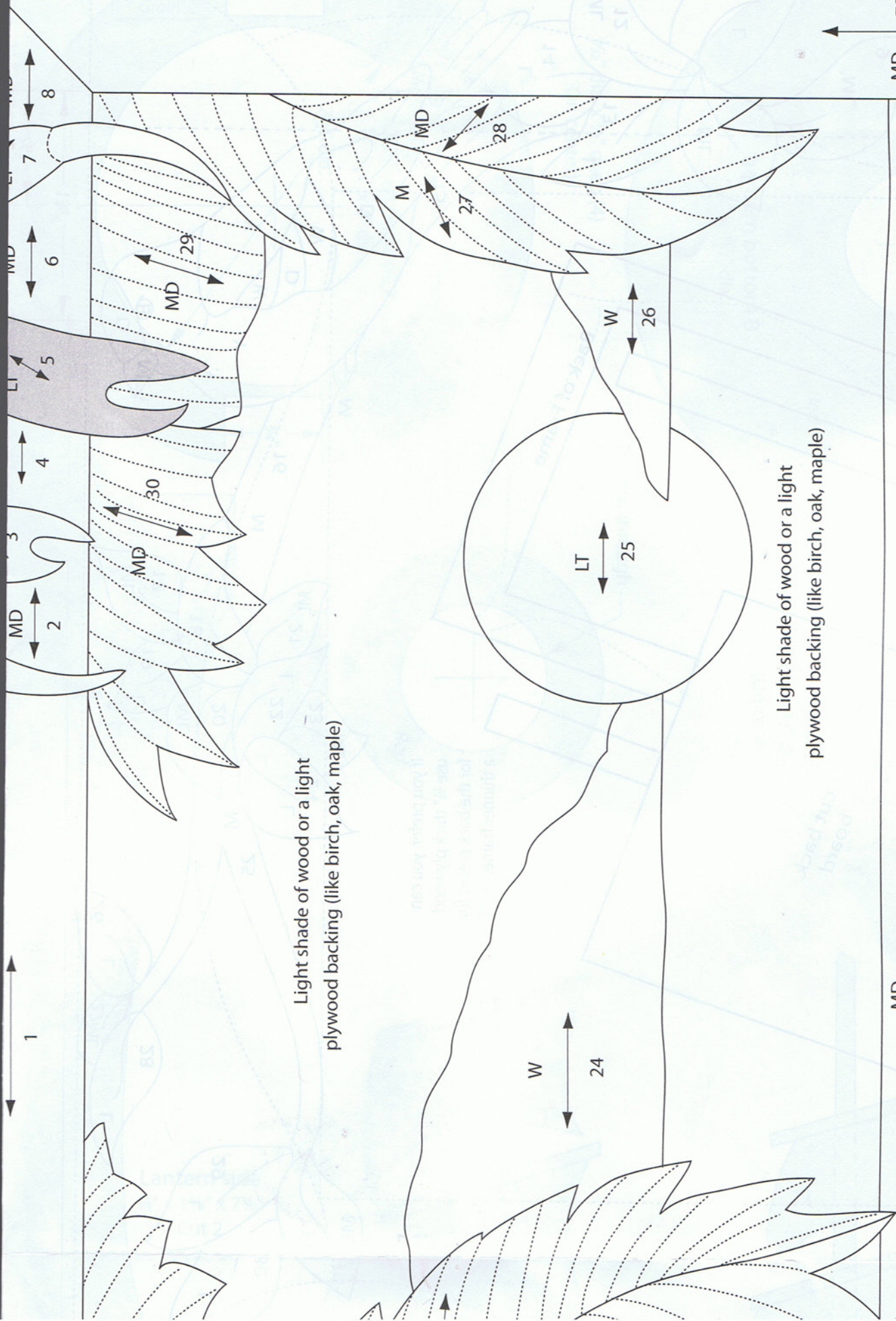


Easy-to-make Luminaries

Page 58 - SSWC Issue 39
 Designer: Sue Mey

- Legend**
- W - White wood
 - LT - Light wood
 - ML - Medium light wood
 - M - Medium wood
 - MD - Medium dark wood
 - D - Dark wood
 - Grain direction
 - Shaping lines





Light shade of wood or a light
plywood backing (like birch, oak, maple)

Light shade of wood or a light
plywood backing (like birch, oak, maple)

MD 72

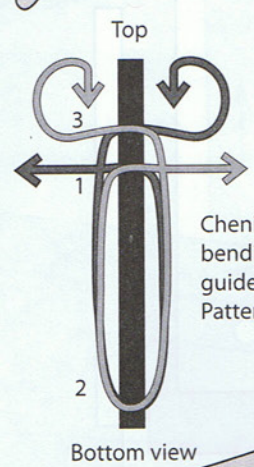
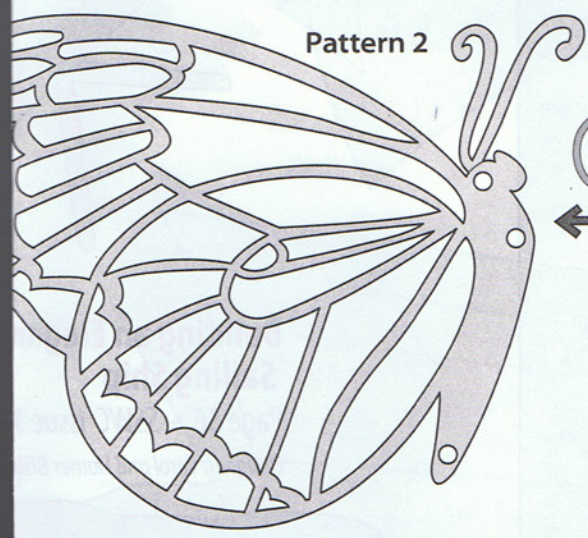
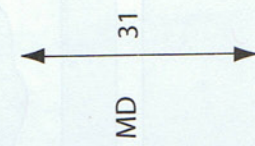
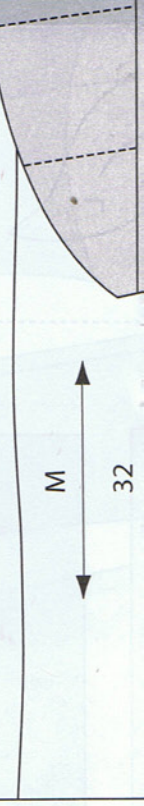
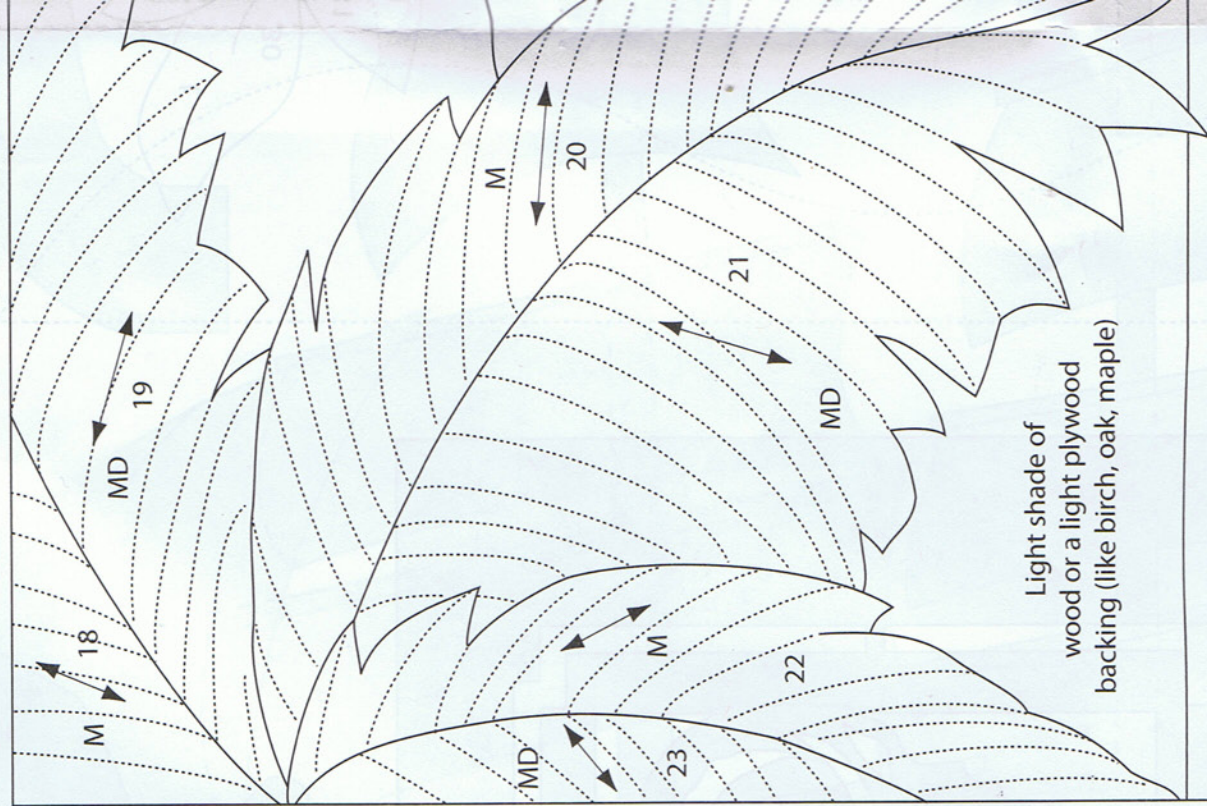
MD 33

W 34

M 38

ML 36

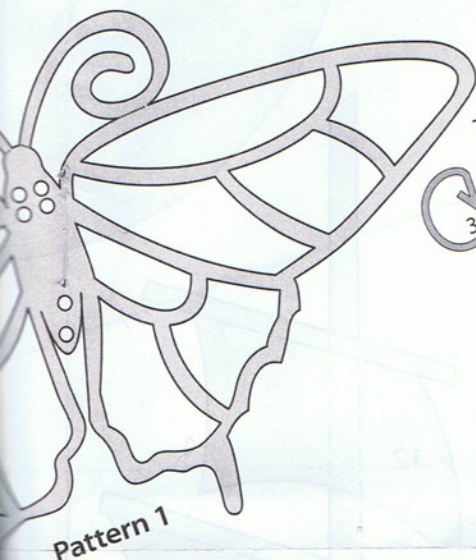
MI 37



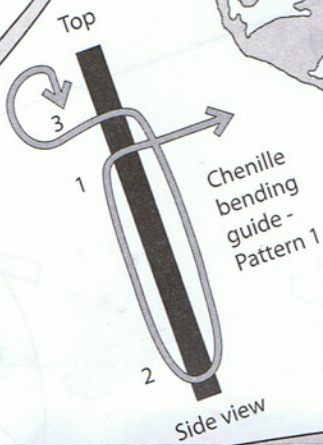
Creating Colorful Butterflies

Page 62 - SSWC Issue 39
 Designer: Don and Cindy Wooldridge

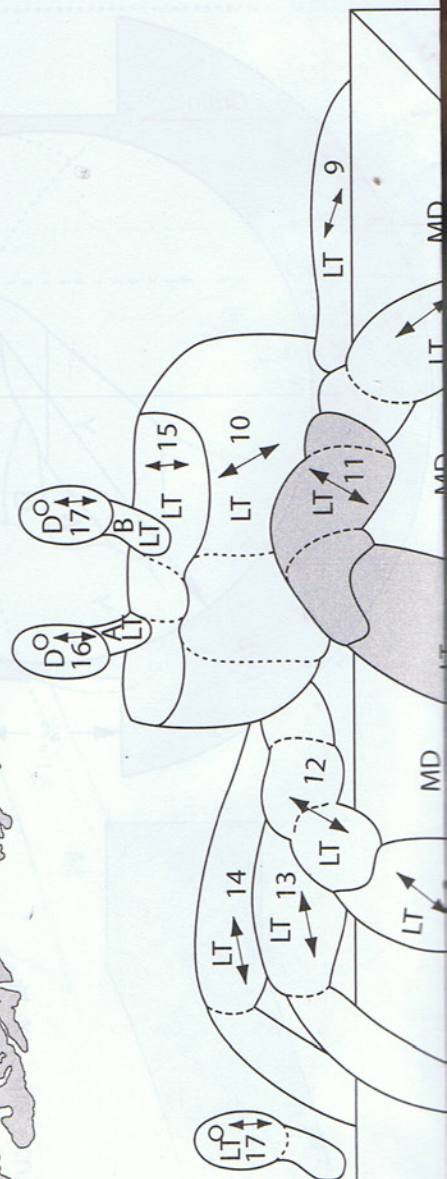




Pattern 1

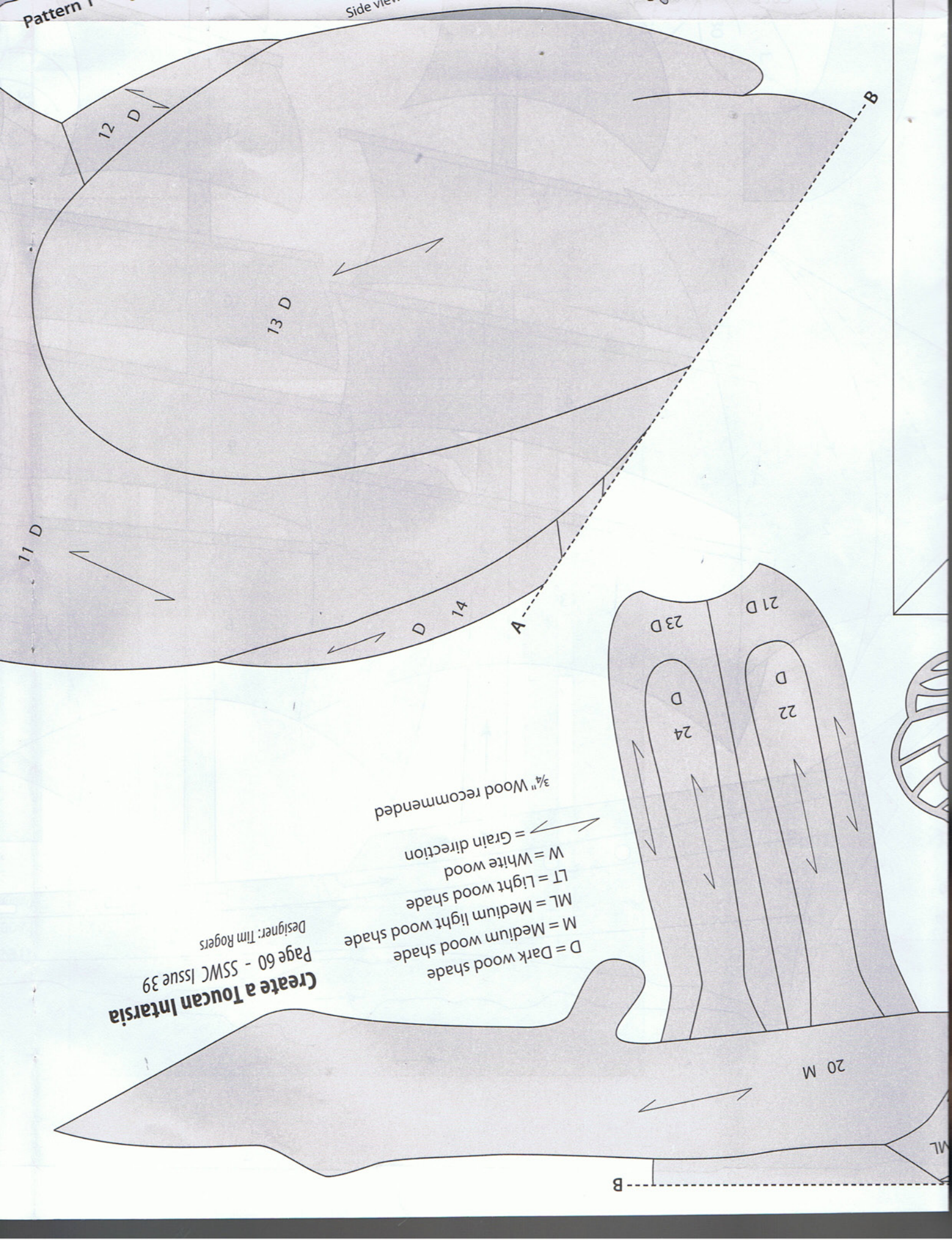


Chenille bending guide - Pattern 1

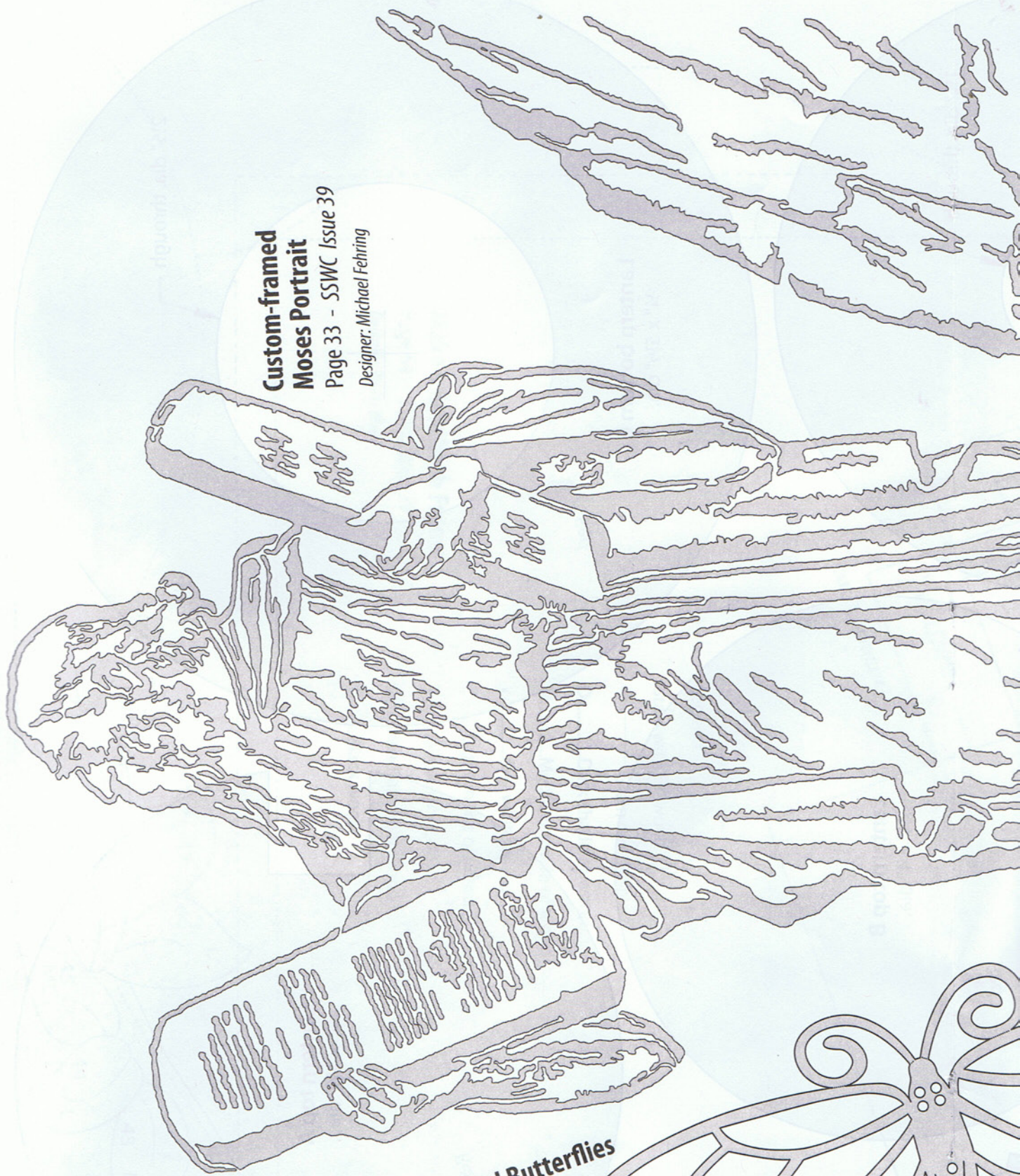


The eyes can be cut out of the "LT" wood, then burn the dark eye area. I found it easier to cut the dark eye parts separately, however the parts are harder to hold on to while sanding.

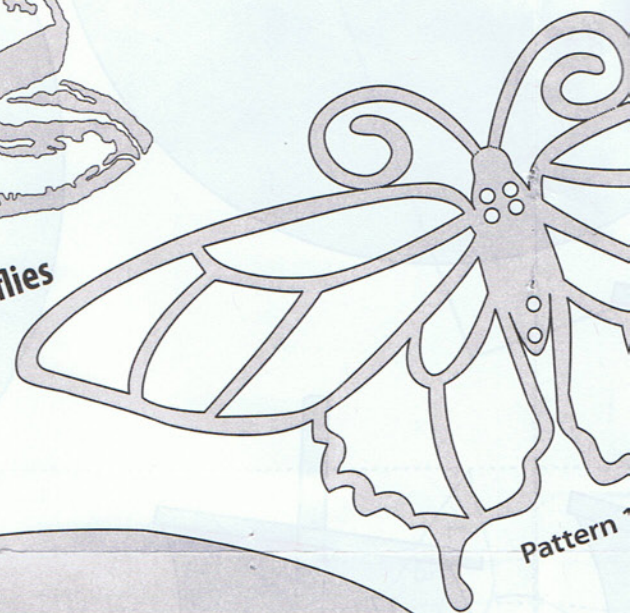
D = Dark wood shade
 M = Medium wood shade
 ML = Medium light wood shade
 LT = Light wood shade
 W = White wood
 = Grain direction
 3/4" Wood recommended



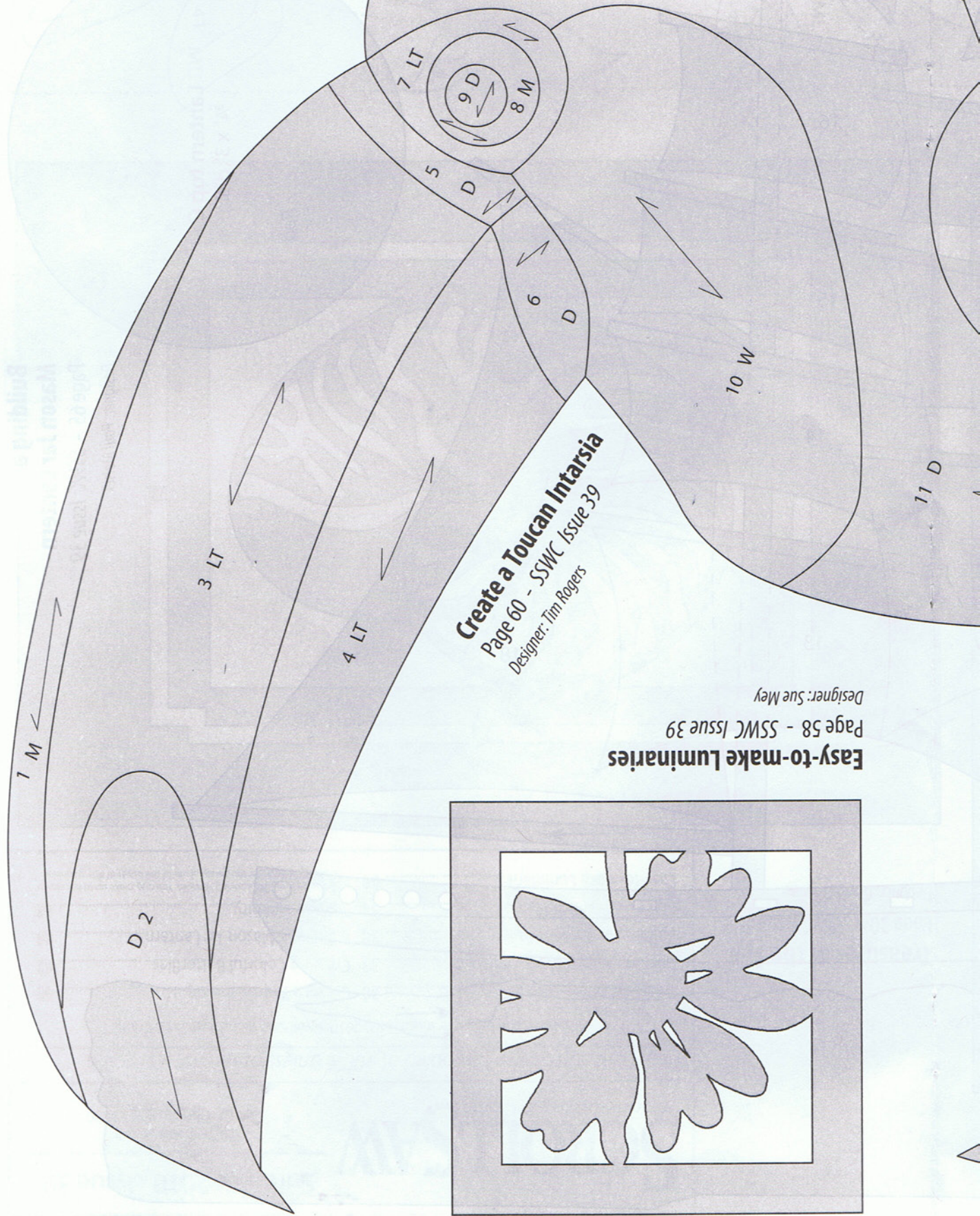
**Custom-framed
Moses Portrait**
Page 33 - SSWC Issue 39
Designer: Michael Fehring



Creating Colorful Butterflies
Page 62 - SSWC Issue 39
Designer: Don and Cindy Wooldridge



Pattern 1



Create a Toucan Intarsia
 Page 60 - SSWC Issue 39
 Designer: Tim Rogers

Easy-to-make Luminaries
 Page 58 - SSWC Issue 39
 Designer: Sue Mey